



University of HUDDERSFIELD

University of Huddersfield Repository

Sakalasuriya, Maheshika Mennike

A Framework to Analyse the Consequences of Post Conflict Reconstruction Intervention; The Case of Road Infrastructure in Sri Lanka

Original Citation

Sakalasuriya, Maheshika Mennike (2020) A Framework to Analyse the Consequences of Post Conflict Reconstruction Intervention; The Case of Road Infrastructure in Sri Lanka. Doctoral thesis, University of Huddersfield.

This version is available at <http://eprints.hud.ac.uk/id/eprint/35330/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

A FRAMEWORK TO ANALYSE THE CONSEQUENCES
OF POST CONFLICT RECONSTRUCTION
INTERVENTION; THE CASE OF ROAD
INFRASTRUCTURE IN SRI LANKA

MAHESHIKA MENIKE SAKALASURIYA

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

The University of Huddersfield

Resubmission after minor corrections

10 Jan. 20

Copyright statement

- i. The author of this thesis (including any appendices and/or schedules to this thesis) owns any copyright in it (the "Copyright") and s/he has given The University of Huddersfield the right to use such copyright for any administrative, promotional, educational and/or teaching purposes.
- ii. Copies of this thesis, either in full or in extracts, may be made only in accordance with the regulations of the University Library. Details of these regulations may be obtained from the Librarian. This page must form part of any such copies made.
- iii. The ownership of any patents, designs, trademarks and any and all other intellectual property rights except for the Copyright (the "Intellectual Property Rights") and any reproductions of copyright works, for example graphs and tables ("Reproductions"), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property Rights and Reproductions cannot and must not be made available for use without the prior written permission of the owner(s) of the relevant Intellectual Property Rights and/or Reproductions

Abstract

Conflicts destroy the livelihoods and infrastructures affecting in economic development and stability of countries. Once a conflict comes to an end, post-conflict reconstruction (PCR) forms an important part of the recovery process. In the current practice of PCR, although much attention has been paid to physical reconstruction, there is a lack of coordination among PCR projects and their alliance with national PCR agenda. The PCR interventions may create unexpected and sometimes negative consequences, that could worsen the vulnerabilities and inequalities that already exist in the post-conflict societies. Therefore, it is important to consider different forms of consequences of PCR interventions, both at the individual and holistic level. This study highlights the importance of analysing potential consequences of PCR interventions, in the context of post-conflict road infrastructure reconstruction in Sri Lanka.

Due to the lack of existing research and guidance on analysing post-conflict road infrastructure, the research was aimed at developing a framework to represent the potential consequences of road infrastructure reconstruction and its linkages to post-conflict context. In order to achieve these aims, understanding potential consequences and identifying the methods used in analysing were defined as the first two objectives. The final objective was to provide a guideline for practitioners and policy makers to analyse the consequences of post-conflict road infrastructure intervention and their linkages to the context.

The literature review was conducted to identify the research gap, which is the absence of a framework to analyse a range of potential consequences of a PCR intervention and its links to the post-conflict context. Accordingly, the research question addressed through the study was formed as "How to analyse the potential consequences of a post-conflict reconstruction intervention". To answer the research question, the study was aimed at providing a guideline for PCR project implementers to analyse the potential consequences of a PCR intervention involving physical infrastructure. A conceptual framework was developed using the literature review to guide the methodology formation and the data collection process.

Taking a subjective ontological stance and an interpretivist perspective, the author attempts to understand the behaviour of the stakeholders involved in the research from their point of view. A constructive approach is adopted to build the analytical framework. The conceptual framework built using the existing theory was used as a tool to use data collection and develop

the basis of data analysis. The qualitative methodological choice is used and the case study method is chosen as the research strategy. The thematic analysis method is used to build the novel analytical framework introduced through the study.

The framework presented in the study is a detailed analysis of the context within which the road infrastructure intervention takes place and how the intervention has resulted in a range of consequences. These consequences are strongly affected by and also feedback into the context within which the reconstruction has taken place. There are complex linkages among the consequences, and between those consequences and nature of the intervention. The analytical framework is novel in its holistic approach and bringing together the context, intervention and the consequences to give a comprehensive perspective of the PCR process. This framework also forms the theoretical contribution of the research study and opens doors for new areas of research within the analysis of PCR interventions as well as in transport infrastructure evaluation.

Keywords: analytical framework, consequences, intervention, reconstruction, post conflict

Table of Contents

- Abstract.....3**
- Table of Contents.....5**
- List of Tables.....12**
- List of Figures.....12**
- Acknowledgements15**
- List of abbreviations17**
- Research publications of the author18**
- 1. Introduction19**
 - 1.1. Background21**
 - 1.2. Sri Lanka23**
 - 1.2.1. The ethnic conflict in Sri Lanka.....23
 - 1.2.2. The root causes of the conflict in Sri Lanka.....24
 - 1.2.3. Post-conflict Sri Lanka29
 - 1.2.4. Reconstruction and infrastructure in post-conflict Sri Lanka.....30
 - 1.3. Aim and objectives.....32**
 - 1.3.1. Problem statement and research question.....32
 - 1.3.2. Aim and objectives32
 - 1.4. Novelty and contribution to knowledge.....33**
 - 1.5. Chapter outline.....34**
 - 1.5.1. Chapter 2.....34
 - 1.5.2. Chapter 3.....34
 - 1.5.3. Chapter 4.....35
 - 1.5.4. Chapter 5.....35
 - 1.5.5. Chapter 6.....35

1.6. Key definitions used in the study	36
1.6.1. Concept	36
1.6.2. Framework	36
1.6.3. Conceptual framework.....	36
1.6.4. Analytical framework	37
1.6.5. Post-conflict reconstruction	37
1.6.6. Soft and hard infrastructure.....	37
1.6.7. PCR strategy	38
1.6.8. PCR intervention	38
1.7. Summary	39
2. Literature review	40
2.1. Introduction	40
2.2. Context.....	41
2.2.1. Conflicts.....	41
2.2.2. Ethnic conflicts	42
2.2.3. Post-conflict characteristics and challenges	43
2.3. Post-conflict reconstruction	44
2.3.1. PCR – A general approach	44
2.3.2. PCR strategy	44
2.3.3. PCR intervention	45
2.3.4. Actors involved in PCR intervention.....	46
2.3.5. Local and community participation in PCR.....	48
2.3.6. The correct time for PCR interventions.....	48
2.3.7. PCR of infrastructure	49
2.4. Consequences of PCR intervention	50
2.4.1. Economic consequences	51
2.4.2. Environmental consequences	52
2.4.3. Social consequences.....	52
2.4.4. Political consequences	54
2.5. Linkages of PCR consequences to the context in the long-term.....	57

2.6. Transport infrastructure construction	59
2.6.1. Consequences of transport infrastructure	60
2.7. Frameworks used in analysing the consequences.....	63
2.7.1. Frameworks in PCR intervention literature.....	64
2.7.2. Frameworks in Transport infrastructure construction literature.....	65
2.7.3. Proposed Conceptual framework	67
2.8. Problem definition	70
2.9. Summary	70
3. Methodology.....	71
3.1. Introduction	71
3.2. Aim and objectives.....	71
3.3. Research Methodology	71
3.3.1. Approach.....	72
3.3.2. Methodological choice.....	73
3.3.3. Strategy	74
3.4. Case study design.....	76
3.4.1. Pilot data collection.....	76
3.4.2. Unit of analysis	77
3.4.3. Number of cases.....	81
3.4.4. Depth of analysis	84
3.4.5. Nature of case analysis.....	86
3.4.6. Quality of research design.....	86
3.4.7. Connection to theory	86
3.4.8. The final research design for data collection	87
3.5. Data collection process	87
3.5.1. Semi-structured interviews from case study DSs.....	88
3.5.2. Key Informant Interviews (KIIs)	91
3.6. Risk mitigation strategy and ethics	92
3.7. Data analysis	93

3.7.1.	Data coding	93
3.7.2.	Reporting the results and analysis	95
3.7.3.	Building the analytical framework	96
3.7.4.	Reliability and validity of data	97
3.7.5.	Generalisability.....	97
3.8.	Summary	98
4.	Results	100
4.1.	Introduction	100
4.2.	Coding of respondents and their profiles	100
4.3.	Case A – Oddusudan DS division	103
4.3.1.	General	103
4.3.2.	Post conflict/ preconstruction context	103
4.3.3.	Nature of road infrastructure intervention.....	107
4.3.4.	Consequences	113
4.3.5.	Long term impacts.....	122
4.4.	Case B - Kalmunai Muslim DS division.....	125
4.4.1.	General	125
4.4.2.	Post conflict/ preconstruction context	126
4.4.3.	Nature of road infrastructure intervention.....	127
4.4.4.	Consequences	129
4.4.5.	Long-term impact.....	139
4.5.	Case C - Padavi Sripura DS division	140
4.5.1.	General	140
4.5.2.	Post conflict/ preintervention context	141
4.5.3.	Nature of road infrastructure intervention.....	143
4.5.4.	Consequences	147
4.5.5.	Long-term impact.....	150
4.6.	Case N - Key Informant Interviews (KIIs)	151
4.6.1.	Post conflict/ preconstruction context	151
4.6.2.	Nature of road infrastructure intervention.....	152
4.6.3.	Consequences	161

4.6.4.	Long term impact	168
4.7.	Summary	170
5.	Discussion	172
5.1.	Introduction	172
5.2.	Pre-intervention context	172
5.2.1.	The extent of damage and nature of roads during the war	173
5.2.2.	Conflict and natural disasters.....	175
5.2.3.	5.3.3. Difficulties in travelling and limited access	175
5.2.4.	Closely knit families and less cultural issues	177
5.2.5.	IDPs, resettlement and housing	177
5.2.6.	Livelihoods and economic development.....	179
5.2.7.	Environment.....	181
5.2.8.	Social and cultural issues.....	181
5.2.9.	Fiscal ease of the government	182
5.2.10.	Sub-framework for the pre-intervention context in Sri Lanka	183
5.3.	Nature of road infrastructure intervention	184
5.3.1.	Actors involved in PCR of roads	184
5.3.2.	Physical construction/completed parts of the reconstruction	188
5.3.3.	Incomplete/ lack of reconstruction.....	191
5.3.4.	Material resources	193
5.3.5.	Land acquisition and community corporation	194
5.3.6.	Community participation	196
5.3.7.	Local employment.....	197
5.3.8.	Deforestation/ gravel extraction.....	197
5.3.9.	Political influence (national and community level).....	198
5.3.10.	Central government's PCR strategy	201
5.3.11.	Horizontal and vertical coordination.....	202
5.3.12.	Financing the construction.....	203
5.3.13.	Soft and hard elements of reconstruction	205
5.3.14.	Sub-framework for nature of road infrastructure reconstruction intervention	206
5.4.	Consequences of road infrastructure intervention	207

5.4.1.	Economic.....	207
5.4.2.	Environmental.....	215
5.4.3.	Social.....	218
5.4.4.	Political.....	225
5.4.5.	Sub-framework on consequences of PCR of road infrastructure.....	230
5.5.	Long-term impact on the post-conflict context.....	231
5.5.1.	Sustainable development.....	231
5.5.2.	Environment.....	233
5.5.3.	Cultural impacts and influence on the young generation.....	234
5.5.4.	Ethnic harmony.....	234
5.5.5.	Inequality.....	236
5.5.6.	Political isolation and mistrust towards the government.....	237
5.5.7.	Peace and Reconciliation.....	238
5.5.8.	Sub-framework for long-term impact on post conflict context.....	240
5.6.	Final analytical framework.....	241
5.7.	Summary.....	243
6.	Conclusion.....	244
6.1.	Introduction.....	244
6.2.	Aim and objectives.....	244
6.2.1.	Objective 1.....	244
6.2.2.	Objective 2.....	245
6.2.3.	Objective 3.....	245
6.3.	Theoretical contributions.....	246
6.3.1.	Conceptual framework.....	246
6.3.2.	The analytical framework.....	246
6.4.	Practical contributions of the analytical framework.....	247
6.5.	Strengths and limitations of the analytical framework.....	247
6.6.	Generalisability of the analytical framework.....	248
6.7.	Novelty.....	249

6.8. Challenges and limitations	250
6.9. Future research.....	250
6.10. Reflection.....	251
7. Appendices.....	252
7.1. Appendix 1 – Guideline for semi structured interviews	252
7.2. Appendix 2 – Ethics form used in the study.....	254
7.3. Appendix 3 - Participation Information sheet used in the study.....	261
7.4. Appendix 4 - Participant Consent Form used in the study	264
7.5. Appendix 5 – Ethics approval from university	266
References.....	268

Word count; 83, 289 (Excluding appendices and references)

List of Tables

Table 3.1. The details of pilot data collection

Table 3.2. The details of divisional secretariats selected as cases

Table 3.3. - Classification of roads in Sri Lanka

Table 3.4. - Interview participants from selected Divisional Secretariats

Table 3.5. - The participants in key informant interviews

Table 4.1. - Respondents' profiles and the coding used in reporting the results

List of Figures

Figure 2.1. The conceptual framework to analyse the consequences of PCR interventions (Version 1)

Figure 2.2. The conceptual framework to analyse the consequences of PCR interventions (Version 2)

Figure 3.1. The elements and process of constructive approach

Figure 3.2. The Hierarchy of administrative areas in Sri Lanka

Figure 3.3 – Organising the interviews for data analysis (NVivo software)

Figure 3.4 - Nodes used for coding (NVivo software)

Figure 3.5 - Coding stripes within the interviews (NVivo software)

Figure 5.1. Pre-intervention context in the post conflict state

Figure 5.2. The nature of post conflict road infrastructure reconstruction intervention

Figure 5.3. Potential consequences of post conflict road infrastructure intervention

Figure 5.4. Long-term impact of the consequences on the post conflict context

Figure 5.5. Analytical framework for analysing the consequences of PCR intervention of road infrastructure

Dedicated to my loving parents!

Acknowledgements

This PhD thesis would not have been possible without the support of many individuals who stood by me, guided me and gave me strength throughout the past four years of my life. It is with immense gratitude that I acknowledge my supervisor Professor Richard Haigh, who guided me through the research process and allowed me to learn from my mistakes and experiences. His guidance encouraged me to have an enjoyable, yet challenging PhD journey, and gave me valuable lessons to be useful not only in academic work but also in real life. I am as very thankful to my co-supervisor Professor Dilanthi Amaratunga, who also gave guidance and support throughout my study.

I owe my deepest gratitude to the University of Huddersfield, and particularly to School of Art, Design and Architecture for giving me the opportunity and the studentship to peruse my PhD studies, while also allowing me to gain experience in teaching and other research experiences. My appreciation goes to all the academic and support staff of the School of Art, Design and Architecture. I am also thankful to the library and IT support staff of the University, who helped me and worked tirelessly to solve technical and related issues that I faced throughout the study period. My gratitude goes to the Wellbeing and Disability Services of the University, for guiding me through tough times. I am especially thankful to my specialist study mentor Richard Barron, who supported me through not only stressful periods of study but also difficult hurdles in my personal fight against depression and anxiety.

Although I cannot individually mention any of the thirty respondents who participated in the interviews, I appreciate their time and energy by contributing to my data collection. I am deeply grateful to friends and colleagues who helped me for data collection, for helping to find the respondents from the case study areas, for facilitating my stay in field visits, ensuring my safety during the field visits and stays, accompanying me to the field and arranging translation facilities. I would also like to thank Professor Amal Kumarge, from the University of Moratuwa, for putting me in touch with the officials from Colombo who participated in the interviews.

To thank my parents would be an understatement, and I cannot find enough words to how much they have supported, sacrificed and dedicated their lives for me to be where I am now.

Although living away, a single day didn't pass in the last four years without a call from my parents, who made sure I am in good mental and physical health and sent me blessings and love. I am thankful for my sisters and brothers, and all my nephews and nieces who form our big family, and keeps me happy and feel loved. There is a large number of relatives and friends who supported me to complete this thesis and looked after me in difficult times, and I am blessed to have you in my life. And finally, I am more than just thankful to my love and my partner Ian Bray, who held me in his heart, wiped away my tears, tolerated my tantrums, lifted me when I was down and gave me a nudge to move forward, and above all making me believe in myself. Thank you for bringing out the best in me and for allowing to be who I am.

List of abbreviations

ADB	Asian Development Bank
CBA	Cost Benefit Analysis
DS	Divisional Secretariat
GDP	Gross Domestic Product
GND	Grama Niladari Division
HI	Horizontal Inequality
IDPs	Internally Displaced Persons
LTTE	Liberation Tigers of Tamil Eelam
MP	Member of parliament
NGO	Non-Governmental Organisations
NRCP	Northern Road Connectivity Project
PCR	Post Conflict Reconstruction
SAM	Social Accounting Matrix
PEIDP	Pro-poor Eastern Development Project
RDA	Road Development Authority
RDD	Department of Road Development
TEDIS	Transportation Economic Development Impact System
WB	World Bank

Research publications of the author

Sakalasuriya, M., Haigh, R., & Amaratunga, D. (2016). The consequences of post conflict reconstruction: a review of literature. IIIRR.

Sakalasuriya, M. M., Haigh, R. P., & Amaratunga, D. (2018). A Conceptual framework to analyse consequences of post conflict reconstruction interventions. *Procedia engineering*, 212, 894-901.

Sakalasuriya, M., Haigh, R., & Amaratunga, D. (2016). Analysing the consequences of post conflict reconstruction. Massey University/The University of Auckland.

Sakalasuriya, M., Amaratunga, D., Haigh, R., & Hettige, S. (2018). A Study of The Upstream-downstream Interface in End-to-end Tsunami Early Warning and Mitigation Systems. *International Journal on Advanced Science, Engineering and Information Technology*, 8(6), 2421-2427.

Haigh, R., Hettige, S., Sakalasuriya, M., Vickneswaran, G., & Weerasena, L. N. (2016). A study of housing reconstruction and social cohesion among conflict and tsunami affected communities in Sri Lanka. *Disaster Prevention and Management: An International Journal*, 25(5), 566-580.

1. Introduction

“The tragedy of war is that it uses man’s best to do man’s worst”

Henry Emerson Fosdick

The world has witnessed violent conflicts or what is generally referred to as “wars”, among states, within states and within communities since the beginning of the time when humankind has started claiming land and making boundaries. The death, destruction, permanent physical and psychological illness, loss and trauma are just some of the consequences of violent conflicts. Even if a conflict comes to an end its direct and indirect impacts on communities can often last for years and decades to come, and sometimes even passed onto the next generations. While the reasons for conflicts to emerge can differ depending on specific circumstances, it is often the weakest and the most vulnerable in society that gets worst affected by its violent outbursts.

While there are different arguments on the beginning to conflict in Sri Lanka, its technical eruption into violence is recorded to have happened on 23 July 1983. I was born just five days after this historical event, and have heard the story of how my mother walked to the hospital through empty streets to give birth to me, as there were no vehicles to be hired and no one was willing to give her a ride during those terrifying days. Growing up, the war stories on newspaper, television and radio was my norm. Seeing dead bodies (and parts of the bodies) did not occur as a shock to me back then. I have returned home from school in the mornings when there were terror alerts, constantly trained to be aware of my surroundings and to be suspicious of every stranger. Although living far away from the conflict zone, I have heard explosions from my home and would constantly dream of explosions, death and injury throughout my life. It didn’t come as a surprise when I am recently diagnosed with post-traumatic stress disorder (PTSD) as a result of the fear, uncertainty and trauma that I experienced for the first twenty-six years of my life.

After entering the University for my Undergraduate Studies and specialising in Economics, I started becoming more politically aware of the issues that Sri Lanka was facing. New political ideologies were formed and political economy became my favourite area to explore within

Economics. Partly driven by own passion and sensitivity to conflict related to issues, I delivered a successful undergraduate dissertation on "Government Policy Intervention and Livelihoods of People in a Situation of Conflict and Political Instability". The war in Sri Lanka was ended through military intervention in 2009, the same year in which I graduated from university with a first-class honour's degree. Without a political reconciliation and a path for sustainable peace, Sri Lanka moved to a phase of infrastructure development. Meanwhile, my interest in conflict-related issues and hopes for long-term peace increased, and I was determined to peruse my higher studies in the field of conflict and development.

The government in power in Sri Lanka from 2004 till 2015 has maintained an interest in developing the physical infrastructure of the country, especially expressways and highways. The investments took place much before the end of the conflict, mostly concentrating in the south, where the political support of the then president, Mahinda Rajapakshe was based and where his hometown is located. These investments were largely funded from the bilateral and multilateral loans from foreign governments, banks and international organisations. After the end of the war in 2009, the road infrastructure projects were implemented in large scale in war-affected North and Eastern provinces. While there is a large amount of controversy regarding the prioritisation of road construction among other needs, and its costs and benefits to the country at large, the impact the road reconstruction had on the lives of conflict-affected communities remained an area unexplored and unknown to the outside world.

After graduating I have become a lecturer of Economics and Transport economics, at the department of transport and logistics management at University of Moratuwa, Sri Lanka. This not only allowed me to enhance my knowledge and engage in discussions about transport policy with students but also contribute to projects at the department which had direct links to policy implementation of the country. My decision to undertake an analysis of post-conflict road infrastructure reconstruction for doctoral studies was a result of combining my passion for conflict-related issues and the ongoing situation of the country, with the knowledge, connections and opportunities I came across while working as a lecturer.

This first chapter is an introduction to the present research. Although the first-person narrative is used up to this point to relate the background that led to undertaking this research, from this point onwards the style will be maintained in the third person. A brief background is provided as to choosing the research problem of analysing the consequences

of post-conflict reconstruction (PCR) intervention, and the justification for its particular focus on road infrastructure reconstruction in post-conflict Sri Lanka. The first section provides the research background and introduces the context within which the research is taken place. It was important to introduce the context in which the research took place, and therefore, an overview of the conflict in Sri Lanka, its root causes and nature of PCR is provided in section two. Next, the aims and objectives of the research are given, followed by the problem statements. In the fourth section, the novelty of the research and the expected contribution to the theory are defined. An outline of each chapter is presented in the subsequent section to prepare the reader for material within the research and easy navigation. Section six is dedicated to highlighting the key definitions used throughout the thesis. The chapter ends with a summary and introducing the reader to the following chapter.

1.1. Background

Violent conflicts that lead to mass-scale death and destruction are classified as a form of man-made disaster and a complex emergency (Combs, Quenemoen, Parrish, & Davis, 1999; The United Nations International Strategy for Disaster Reduction, 2009). Among the violent conflicts recorded in recent history, ethnic conflicts have become an important subject of discussion due to their protracted nature and the intensity of violence involved (Angstrom, 2001; Eck, 2009). While the violent conflicts are known to have caused a large number of deaths in the recent history, the destruction brought upon by them on natural and constructed environment is also a significant issue faced by affected societies (Gleditsch, 2015; Gobat & Kostial, 2016; Jiang, He, Long, & Liu, 2017). As a result of the enormity of destruction, the communities suffer from economic and social crises not only during the conflict but also after the conflict and often for decades after cessation of violence (Devarajan & Mottaghi, 2016; Zilberfarb, 2018). Furthermore, the social and psychological impacts of a complex ethnic conflict can linger for a long period, even after physical and economic recovery is restored (Slone & Mann, 2016; Stukalo & Simakhova, 2018).

The violent conflicts within the states are sometimes ended through agreements or memorandums of understanding (MoUs) between the responsible parties, as in the case of Aceh conflict in Indonesia (Gaillard, Clavé, & Kelman, 2008). In other cases, and often in the history of conflict, they were concluded through the external or internal military interventions. A recent example of external intervention is the case of Libya, where a coalition led by North

Atlantic Treaty Organisation (NATO) and eventually resulting at the end of Gaddafi regime and a series of civil crises, which have not been resolved to this date (Okyere & Abdallah, 2011). The British intervention in Sierra Leone in May 2000, is often sighted as a success story, yet the sustainability of the peace imposed by external intervention is still under question (Brattberg, 2012).

The end of a violent conflict does not ensure a peaceful environment within the country (Dayton & Kriesberg, 2009). Political and social instability, added by the lack of economic infrastructure and livelihood support can lead to restlessness among communities (Paris, 2004; Pinstруп-Andersen & Shimokawa, 2008). Post-conflict states are typically characterised by failed state condition and lack of resources, which requires international intervention and support (Jabareen, 2013). On the other hand, these countries are at the risk of reverting to conflict, due to the government's inability or unwillingness to address the grievances that caused and sustained the conflict (Collier, Hoeffler, & Söderbom, 2008). It is within this context that post-conflict reconstruction (PCR) takes place in these states, typically in the form of soft and hard infrastructure.

PCR strategy is defined as a holistic approach to reconstruction which involves integrating different interventions and policies while maintaining political stability and promoting peace (see page 40 in the literature review chapter). PCR intervention refers to a single project intervention within the PCR strategy, undertaken by one or more of the stakeholders involved in the PCR process (see page 41 of the literature review chapter). In the current practice of PCR intervention, there is a trend to focus on physical infrastructure reconstruction, while the issues of state-building and political reconciliation are postponed to the later stages of reconstruction (Stewart, 2005). In post-conflict Sri Lanka, the government's focus was mainly on rebuilding physical infrastructure, and a large amount of the local and foreign investments were used to rebuild transport infrastructure (Uyangoda, 2010). Rebuilding of roads and improving connectivity was a major component of these investments (Schwartz & Halkyard, 2006). The reconstruction efforts in post-war Afghanistan was initiated in 2002, with the participation of a large number of local and international stakeholders (Auerswald & Saideman, 2014). However, the political agendas behind reconstruction efforts are often criticised by the scholars and practitioners, especially when it comes to external aid and assistance (section 2.4.4 in the literature review).

On the other hand, compared to the efforts made in physical reconstruction there is lack of knowledge and information on the aftermath of reconstruction, especially in the field of conflict-related research (refer more than one). The physical infrastructure reconstruction after the war is carried out to provide better livelihood opportunities and living conditions for people affected (refer). Physical reconstruction is also believed to be contributing positively to conflict transformation and reconciliation processes through the recovery process (refer). According to (refer), economic stability and better community living standards achieved through physical infrastructure could provide conditions suitable for political reconciliation. The nature in which the reconstruction carried out and the benefits that people receive after the reconstruction can influence the attitudes of war-affected communities towards the government. It is important to address the specific vulnerabilities and grievances of people in cases where marginalised communities are drawn into conflict (refer).

The conflict in Sri Lanka is believed to have resulted from issues of grievances of marginalised Tamil communities, and their mistrust towards the government. The nature of reconstruction and its consequences can be linked to the recovery of the war-affected communities and the political reconciliation necessary to avoid future conflicts. As it was mentioned earlier in section 0, this research is based on the context of Sri Lanka. Therefore, at this point, it is useful to introduce the background of the conflict in Sri Lanka, the events that followed after the end of the conflict and the nature of post-conflict reconstruction.

1.2. Sri Lanka

1.2.1. The ethnic conflict in Sri Lanka

Sri Lanka is an island located in the Indian Ocean, right below the southern tip of the Indian subcontinent. It is well-known in the world for its natural beauty and warm hospitality, ranking as one of the best vacation destinations in recent years (Xinhua, 2018). It has a maximum length of 268 miles (432 km) and a maximum width of 139 miles (224 km) (Arasaratnam & Peiris, 2019). As of the latest information available the population is estimated to be 22.24 million. The ethnic composition of the Sri Lankan nationals are outlined as 75 per cent Sinhalese, 11.2 per cent Sri Lankan Tamil, 9.2 per cent Sri Lankan Moors (also known as Muslims), 4.2 per cent Indian Tamil and 0.5 per cent of other minority groups (CIA, 2019).

Sri Lanka suffered from protracted violent ethnic conflict for more than 25 years, which was ended through government military intervention in 2009 (Uyangoda, 2010). In his study on the relationship between ethnicity and an increased risk of intensified violence, Eck (2009) finds through empirical evaluation that ethnically mobilized conflicts are more likely to create intense levels of violence. The conflict in Sri Lanka can be classified as a civil war due to an increased level of violence similar to the cases of Sudan and Afghanistan (Eck, 2009). The number of fatalities during the period of conflict was estimated to be between 80,000 and 100,000 (IISS, 2015; UCPD, 2015). However, the actual figures are likely to be much higher than recorded due to the restrictions that prevailed during the final years of conflict (Harbom & Wallensteen, 2010). By the time the conflict ended in 2009, 280,000 people became internally displaced (UCPD, 2015) and the damage to constructed and the natural environment remains unaccountable. By the mid-1990s, the economic cost of the war was accounted to be double the size of country's 1996 Gross Domestic Product (GDP), which is approximately equal to US \$20.6 billion (Arunatilake, Jayasuriya, & Kelegama, 2001). However, Sri Lanka was able to maintain an average annual growth 5% during the 30 years of war which is relatively a better standard compared to other similar war-affected states. Yet, the war had significant, negative impacts on the output of the country and, thereby the investments physical capital was not able to produce positive externalities (Ganegodage & Rambaldi, 2014).

1.2.2. The root causes of the conflict in Sri Lanka

While the conflict in Sri Lanka developed to a large-scale war in the early 1980s, its roots lie in the post-independent socio-cultural environment, fuelled by the politically controlled economic endowments. The uprisings of both the Liberation Tigers of Tamil Eelam (LTTE) and Janatha Vimukthi Peramuna (JVP) had their roots in the economic disadvantage faced by rural communities in the late 1970s due to import substitution policies and politicisation of public sector employment (Athukorala & Jayasuriya, 2013). However, it can be argued that the roots stem from the colonial era where British gave priority and overrepresented Tamils in the government sector employment, and this was followed by Sinhalisation by a post-independent government (Price, 2010). Although Sri Lanka's conflict is often viewed through the narrow window of ethnic issue, some argue that it occurred as a result of a closed trade regime of the welfare state and the open economy that followed, excluding the youth from bright future prospects. The Tamil separatist movement profited at the youth unrest, exploiting the ethnic

identity as a means of mobilizing the youth (Abeyratne, 2004). The conflict in Sri Lanka is recorded as one of the most violent in recent history, and nearly 7000 people were killed during the final months of the conflict (Orjuela & Höglund, 2011).

It is generally known that the conflict in Sri Lanka was caused by a variety of reasons working together in a complex social and political context (Perera, 2001). Although the country was a great example as having a high potential for economic development at its independence, the succession of events has led it to become the home for one of the most violent conflicts in the region (Abeyratne, 2004). The purpose of this section is to give a general understanding of the social and political situation before the beginning of the conflict, and provide a summary of chronological events that led to the eruption of violence in 1983. The conflict is generally defined to be ethnically motivated and to be having caused by domestic and nationalistic roots, although some argue that the colonial ruling of the British has planted the seeds of separatism (DeVotta, 2009; Keethaponcalan, 2001). However, the external actors may also have played a role in changing the intensity of conflict through direct interventions and covert supporting (Manor & Segal, 1985). The efforts of the Sinhalese government and nationalistic plural to confine the protracted violent conflict to a terrorist problem is often criticised by researchers as well as international organisations (DeVotta, 2009; Spencer, 2002). On the other hand, it is important to understand and recognise the underlying problems and grievances in society when planning for sustainable recovery and reconstruction (Collier, 2000).

1.2.2.1. Pre-independence era

During the period of ancient kingdoms, the different ethnic communities were believed to have existed without persistent hostilities, except when disturbed by the invasions from their south Indian neighbours (Perera, 2001). Sri Lanka was invaded by three western colonial rulers since the sixteenth century, namely Portuguese, Dutch and British (Keethaponcalan, 2001). Certain parts of the country were continuously under tension and violence caused by colonial rulers, and it was the British who were able to gain the control of the whole country in 1815 (DeVotta, 2009). According to Spencer (2002), religious identity politics were more prominent in the society than ethnic divisions, as Catholics were viewed to be part of the colonial problem. He goes on to explain how conflicts were created among the same ethnic group based on religious divisions (Spencer, 2002). On the same grounds, there were also hostilities between the Muslim community and all other religious groups. These conflicts were

also clearly visible in political agendas as early as 1885 when the Tamil political leaders dismissed the separate identity of Muslims from Tamils, and denying their right to have a representative in the legislative council (Imtiyaz & Hoole, 2011). Also, the Indian Tamils who were brought in by British since 1830 to work in the plantation sector were present in the country (DeVotta, 2009). Although the economic contribution of plantation workers was immense, under the tight British colonial rule and poor living conditions they were not able to form an identity of their own (Caspersz).

The tensions between Sinhalese and Tamils began in the early 1920s with the increase of educated Tamil elites in higher government positions (Keethaponcalan, 2001). The Sri Lankan Tamil community historically occupied the northern part of the country and were able to climb up in social and economic ladders during the colonial period. As a result, the number of educated Tamil elites in well-paid government positions was much higher compared to their ethnic proportion within the population (Spencer, 2002). DeVotta (2009) argues that during this period, the Tamil and Sinhalese politicians considered themselves to be equal to each other. However, the dynamics between the Tamil and Sinhalese political elites have dramatically changed with the granting of universal franchise in 1931. The competition to win a place at the legislative council have then become a battle between the local politicians who needed to gain the support of their respective communities (Spencer, 2002). Some Tamil politicians even feared to lose their power within the government and called for equal ethnic representation for all ethnic groups, creating unrest for Sinhalese leaders (DeVotta, 2009). S.J.V. Chelvanayakam is one of the very first politicians who demanded regional autonomy for Northern Tamils through non-violent struggle, and paved way for Tamil nationalism (Keethaponcalan, 2001).

Taking advantage of the situation, the British continued to apply the divide and rule principle during the rest of the colonial era (Singer, 1992). The school education was provided in English language favouring the Tamil population in Northern parts of the country, which also made them perfect candidates for the university entrances, civil administration and government sector employment (DeVotta, 2009; Perera, 2001; Singer, 1992). The non-Sinhalese groups also had the major control of the trade activities within the country, allowing fear and jealousy to rise among the Sinhalese community (Perera, 2001). However, the Sinhalese and Tamil elites corporate within the political sphere during the last few years of independence (DeVotta, 2009). The ruling class that the British handed over their powers to

consisted of Christian, educated and English-speaking elites from both ethnic groups, and they were able to successfully negotiate to form the constitution of newly independent Ceylon (Keethaponcalan, 2001).

1.2.2.2. Post-independence; before 1956

When Sri Lanka reached its independence in 1948, it was left with a competitive pluralistic political system (Jupp, 1978; and Kearny, 1973) and was expected to become a model democracy among the commonwealth countries due to its peaceful transmission from colonial to independent rule (Abeyratne, 2004; Perera, 2001; Snodgrass, 1999). However, the Tamils had the absolute majority in political power in both Northern and Eastern provinces, leading the Tamil politicians to consider these parts of the country as their homeland and pushing for greater autonomy within the Tamil majority areas (Keethaponcalan, 2001). On the other hand, the Sinhalese who disliked the favoured position of Tamils under British rulers started to promote nationalism and aspired for cultural transformation (Perera, 2001). The disenfranchisement of Indian Tamil plantation workers in 1948 was one of the first revengeful policies of the nationalistic government (Bajoria, 2009). During the few years after the independence, minor political parties were formed based solely on ethnic identity, which aggravated ethnic divisions and conflicts of interests among the different communities (Abeyratne, 2004). Despite the open, representative political system the power was largely centralised at the national level, and progress in rural areas were left mainly unattended (Manor & Segal, 1985).

1.2.2.3. 1956 – Sinhala only act

The 1956 general election brought in to power the Sri Lanka Freedom Party led by S.W.R.D. Bandaranayake, who promised to change the colonial social and economic policies (Manor & Segal, 1985). Discarding the proposals for replacing English official language with both Sinhala and Tamil, Bandaranayake focused on Sinhala only language policy to win the majority in the election (DeVotta, 2009). The legislation was passed to make Sinhala the only official language within months of new government election, causing violence to erupt among the Sinhala and Tamil communities (Spencer, 2002). The consequent disempowerment of Tamil minority within all state institutions and dominance of Sinhalese led to escalating the situation of unrest over the coming years leading to both Tamil riots against the state and anti-Tamil riots by Sinhalese groups (DeVotta, 2009). The Sinhala only act affected the court

system, development assistance to Tamil majority areas, education and arts, and university entrance and foreign education for Tamil students (DeVotta, 2009; Manor & Segal, 1985; Spencer, 2002).

The settlement of Sinhalese families in the Northern and Eastern provinces starting from 1961 created a reaction from Tamil communities, as the latter believed that it was aimed at reducing the Tamil majority in these areas (Keethaponcalan, 2001). The settlements changed the demographics of the Tamil heartland and were viewed as an attempt to promote the Sinhala nationalism. The peaceful opposition protests were met with military interventions of the government resulting in increased nationalistic aspirations among the Tamil community (DeVotta, 2009). The repatriation of about 350,000 Indian estate Tamil workers in 1964 fuelled their uprising (Perera, 2001). Although the separatism was not as strong in the late 1960s the Tamil nationalism grew stronger with the support from the Tamil Nadu political leaders (Keethaponcalan, 2001).

1.2.2.4. The youth unrest in the 1970s

The Sinhalese settlements in North and East escalated after the Mahaweli development plan was launched in the 1970s (Mahaweli Authority of Sri Lanka, retrieved 2019). The landmark 1972 constitution, under which the former Ceylon was named as Sri Lanka (Spencer, 2002), was formed without significant input from the minorities and gave priority to Buddhism over others (DeVotta, 2009). The 1970s also marked rough economic conditions for people, due to the closed and restrictive trade policy of the regime that operated until 1977. It was argued that rather than the social and political exclusion, it was the economic difficulties that ultimately led to the creation of Tamil youth movement and ethnicity was used as a tool for political mobilisation (Abeyratne, 2004). The Tamil youth uprising was taking place parallel to the rebellion movement in the south led by the radical leftist group known as Janatha Vimukthi Peramuna/people's liberation front (JVP). This was an armed resistance against the government led mainly by Sinhalese youth, and ultimately led to about 14000 deaths throughout the country over the coming decades (Manor & Segal, 1985). The concept of 'Eelam', a separate homeland for the Tamil community, has emerged and populated within this context (Spencer, 2002). The Liberation Tigers of Tamil Eelam (LTTE) which dominated the separatist Tamil movement in Sri Lanka for the next 30 years, was formed under the leadership of Velupillai Prabhakaran in 1976 (Bajoria, 2009). The several Tamil youth groups that formed in the 1970s was regarded as a rebellion against the suppressive policies of the

Sirimavo regime (Abeyratne, 2004). The successive Jayawardena government failed to address the grievances of the Tamil youth, but instead introduced the Terrorism Prevention Act (TPA) to increase the military interventions in the Tamil majority areas (Abeyratne, 2004; DeVotta, 2009).

1.2.2.5. The eruption of violent conflict and beyond

The conflict which was limited to minor incidences of violence and political disagreements in the early 1980s took a dramatic turn in the July of 1983 and is marked as the beginning of the war in Sri Lanka (Perera, 2001). LTTE guerrilla attack took place in Jaffa killing thirteen army soldiers. Consequently, violent anti-Tamil riots erupted in other parts of the country, allegedly supported by the government politicians, resulting in thousands of deaths and a large number of Tamil people fleeing from Sinhalese majority areas either to the North-East or abroad (Manor & Segal, 1985; Spencer, 2002). The president's failure to address the situation rapidly and inability to make an immediate stand were viewed as deliberate actions to allow escalation of violence (DeVotta, 2009). Before long, Tamil militant groups escalated the targeted attacks on security forces, high-rank government officers and state politicians, and massacred Sinhalese villages as a reaction to state violence on Tamil communities (Spencer, 2002). Among several militant groups, LTTE managed to gather the support of most and became the lead of the guerrilla war against the government, which continued for more than two and half decades in the country (Abeyratne, 2004). Sri Lanka suffered from protracted ethnic conflict for more than 25 years, up until the government crushed the opposing rebel group through military means in May 2009 (Uyangoda, 2010). The period that followed was a challenging environment for Sri Lankans both in terms of reconstructing physical infrastructure and building reconciliation (Athukorala & Jayasuriya, 2013).

1.2.3. Post-conflict Sri Lanka

Though the means by which the government ended the war was highly criticised by internal oppositions and external governments (Uyangoda, 2010), the immediate period after the conflict was marked by political stability for the government with the majority support, a large inflow of aid and assistance, a boom in the tourism industry, increased capacity to borrow and renewed investor confidence. It is generally common for countries to show immediate growth soon after the conflict, as was the case in Sri Lanka, but most fail to sustain this trend. Athukorala and Jayasuriya (2013) highlight the fact that contrary to the high level of resilience

visible throughout the years of war, Sri Lanka failed to overcome key economic barriers during the post-conflict period. The same political coalition that enabled the military victory went on to weaken Sri Lanka's economy and hindered the potential development. Uyangoda (2010) suggests that external economic relations also became extremely politicised and reflected a bias in foreign policy.

The end of a conflict, especially through military intervention, does not guarantee peace, and the post-conflict societies are in danger of being drawn back to conflict (Orjuela & Höglund, 2011). While the Sri Lankan government received considerable external support during the final phase of the conflict, the international community was also hopeful of the post-conflict political reconciliation and economic reconstruction process (Uyangoda, 2010). In the absence of efforts to address the root causes of the conflict, the government relations with prominent international governments and organizations became hostile, including the United States, European Union, India and the United Nations. This was followed by a resolution by the United Nations Human Rights Council to investigate against the alleged war crimes by the Sri Lankan government and military forces (Uyangoda, 2010). Thus, the government turned towards those international agents who would not interfere in governance issues, but instead support the hard infrastructure reconstruction programme. The provision of infrastructure became the development priority in the post-conflict reconstruction phase of the government (Hyndman & Amarasingam, 2014).

1.2.4. Reconstruction and infrastructure in post-conflict Sri Lanka

Sustaining peace and conflict prevention were the biggest challenges faced by the post-conflict society in Sri Lanka (Orjuela & Höglund, 2011). Among the other major challenges faced were reversing the nationalistic economic orientation, a lack of financial capital and resources, reforming the policies and governance structure, corruption, rent extraction and nepotism in the political system, and addressing the grievances of ethnic communities through a political solution (Athukorala & Jayasuriya, 2013). At the same time, it was essential to take steps towards reconciliation and build trust between government and Tamil community, with an aim for a political solution for the ethnic conflict (Arambewela & Arambewela, 2010). However, it was necessary to invest in a large-scale reconstruction effort, not only to rebuild the neglected and destroyed physical infrastructure, but also to strengthen the productive base and improve trade (Athukorala & Jayasuriya, 2013). The government

chose reconstruction and economic development as the main path of sustaining peace and preventing conflict (Orjuela & Höglund, 2011). These reconstruction initiatives were undertaken with a highly centralised and militarised approach, with the involvement of military forces (Goodhand, 2012). Instead of increasing the role of provincial councils in development efforts, reconstruction was planned and carried out by central government, again demonstrating the centrality of authority. Development may decrease the poverty, but the overflowing authority of central government can increase the powerlessness and insecurity felt by the communities in a war-torn region, and thus may create new conflicts (Orjuela & Höglund, 2011).

Construction of infrastructure, especially roads and houses, has played a major role in forming the emergence of conflict in Sri Lanka after colonisation (Peebles, 1990). It is necessary to include peacebuilding aspects and conflict transformation into infrastructure rebuilding in the case of Sri Lanka (Rajasingham-Senanayake, 2009). In this context, the government opted for infrastructure development as the major priority after conflict. Whether it was an immediate priority was widely questioned as international organisations had increased concerns about the immediate resettlement of the internally displaced persons and reconciliation among communities through a political solution (Uyangoda, 2010).

Several major infrastructure projects, including the harbour and airport, were concentrated in the south, the electoral base of the president at the time the war ended, Mahinda Rajapakse (Athukorala & Jayasuriya, 2013). Road construction and reconstruction were undertaken throughout the country, including the north and east, parallel to the resettlement programme and growth incentives in the region (Goodhand, 2012). Due to the extensive use of resources, the large infrastructure reconstruction contributed to the growing fiscal deficit of the country (Athukorala & Jayasuriya, 2013). While the under-usage and the absence of benefits from reconstruction remain to be investigated, the actual effect of such reconstruction in the post-conflict context has not been analysed to this point. It is in this context that this research is focusing on the consequences of post-conflict reconstruction, with particular attention on Sri Lanka's post-conflict road reconstruction efforts.

A deeper analysis of whether these massive road infrastructure investments created any benefits to communities and region remains to be investigated. On the other hand, it is important to understand the contribution of these infrastructures to sustainable development,

stability and reconciliation after the war. Due to the complexity of the post-conflict context, the different impacts of infrastructure reconstruction are interlinked with each other, and they can influence the context itself in the long-term. In order to make successful PCR interventions, it is important to understand how the infrastructure reconstruction interventions create a range of different consequences and change the dynamics of the post-conflict context.

1.3. Aim and objectives

1.3.1. Problem statement and research question

During the literature review of the study, it was understood that previous researchers do not adequately analyse the overall potential consequences of PCR interventions (Section 2.4). The frameworks that incorporate interventions, in general, do not capture a range of potential consequences (section 2.7). Interventions, in general, lack a framework that could guide the interveners as to what consequences their actions could create. On the other hand, the PCR context requires a detailed analysis of the potential consequences that are often not considered in general infrastructure projects, particularly concerning the physical infrastructure reconstruction (section 2.8). Thus, the research question to be addressed by this study is "How to analyse the potential consequences of a post-conflict reconstruction intervention". The present research aims to address this problem by building a framework to analyse the potential consequences of PCR intervention of physical infrastructure and validate the framework through post-conflict road infrastructure in Sri Lanka.

1.3.2. Aim and objectives

Based on this research problem, the aim of this study is to.

- To develop an analytical framework to represent the potential consequences of PCR interventions and their linkages, focusing on road infrastructure reconstruction

In order to fulfil this aim, three objectives are identified:

1. To understand the potential consequences of a PCR intervention
2. To understand the methods, models and frameworks that are used and can be used to analyse the consequences of a PCR intervention involving physical infrastructure
3. Provide a guideline for PCR project implementers to analyse the potential consequences of a PCR intervention involving road infrastructure

1.4. Novelty and contribution to knowledge

The present research looks into a relatively unexplored area of research within post-conflict-related literature. Although several previous researchers highlight issues on the impact of conflict and the need for reconstruction, the aftermath of physical infrastructure reconstruction is less explored (section 2.8). The existing research on PCR provision often isolate the infrastructure interventions and discuss the impacts of the particular intervention concerning the context. The PCR literature lacks an analysis of potential consequences within a single study. On the other hand, the transport infrastructure in general focus on economic, environmental and social consequences separately, but does not necessarily integrate the different consequences. On the other hand, the frameworks used in transport literature are not sensitive to the socio-political dynamics that can be typically seen in post-conflict situations. Therefore, it is difficult to apply such frameworks in a post-conflict context. The existing frameworks in PCR are mostly conceptual and have limitations for application at a practical level. On the other hand, the applied frameworks currently used by decision-makers do not have a strong theoretical justification. This study aims to bring together the potential consequences of PCR intervention and their analysis into a single framework, which effectively embodies the linkages among the different consequences and their connections to the larger post-conflict context. A framework that includes a range of potential consequences is itself a unique approach to looking at the consequences of PCR intervention. This framework will be primarily based on literature and case studies from road infrastructure in Sri Lanka. Therefore, it will be mainly focused on the analysis of the consequences of physical infrastructure reconstruction, looking specifically at road infrastructure reconstruction. Typically, road infrastructure interventions are analysed through narrow lenses of economic, social and environmental impacts. This study will bring in a new perspective to the analysis of road infrastructure reconstruction by integrating different potential consequences and connecting them to the post-conflict context. Although the framework is developed based on road infrastructure reconstruction, there is a potential to widen its use to other forms of physical infrastructure, especially in the post-conflict setting. The effort to bring together the post-

conflict analysis and road infrastructure analysis into a single framework is also a new contribution to knowledge. The current theory and practice of PCR application lack the analysis of conflict-related issues in infrastructure reconstruction. The framework being developed through this study attempts to fill this knowledge gap by integrating the potential consequences of PCR intervention and highlighting their complex relationships to the post-conflict context. The final analytical framework introduced through the research can be considered as an extension of the conceptual framework, and yet it is introducing several concepts, issues and themes that were not discovered in the literature review. The themes are presented in detail with their linkages to several other concepts in the framework and relation to their significance within the overall context. The framework is practically significant due to improving and re-establishing using the primary data rather than relying on the previous research findings.

1.5. Chapter outline

1.5.1. Chapter 2

The literature review undertaken to understand the research gap and derive the research problem is presented in chapter two. Some of the models and frameworks used in previous research to analyse the consequences of PCR interventions and transport infrastructure in section eight. It also highlights the need for a novel framework to understand the overall nature of consequences caused by physical infrastructure provision within the post-conflict context. The conceptual framework developed through the literature review is visually presented in this chapter. The literature review chapter covers the first two objectives of the research by providing an understanding of the potential consequences of PCR interventions and the methods used in analysing them.

1.5.2. Chapter 3

The methodology used in the research study and the research design is explained in detail in the third chapter, together with the aims and objectives of the research. Research onion originally developed by Saunders, Lewis, and Thornhill (2016) is used as the basis for developing the research design. In this chapter, the justification for selecting a subjective ontological stance and interpretivist epistemological viewpoint was also presented. The

conceptual framework developed in chapter two by analysing the existing theory is used as a tool to use data collection and develop the analysis which led to the formation of the novel analytical framework introduced through the research. The qualitative methodological choice is used and the case study method is chosen as the research strategy. The data collection process, reporting and analysis methods are also described in details.

1.5.3. Chapter 4

The results of the data analysis are reported in chapter four, under each of the cases. Initially, the respondents' profiles and the coding used in reporting the resulting is given in a table. The results of the data analysis prepared using the NVivo software is presented under four cases in the sections that followed. The results are reported under the main and sub-concepts identified through the conceptual framework. The issues are identified under each of the concept, supported by evidence from data analysis.

1.5.4. Chapter 5

The issues identified during the reporting of results are analysed in the discussion chapter connecting them to the previous research identified through the literature review. The issues are also discussed within the big picture of the post-conflict context, and also concerning each other. The evidence from results from all cases are drawn together to highlight the patterns, connections and new findings emerging through the study. The discussion chapter is also a verbal presentation of the analytical framework introduced through the study. Four main components of the framework; pre-intervention context, PCR intervention, consequences and long-term impacts; were provided in detail at the end of each section with the issues within each component and their linkages to other components of the framework. The final analytical framework which was built and edited throughout the whole study was visually presented at the end of chapter five. In the final framework, the four components were brought together highlighting the significant links between each of them.

1.5.5. Chapter 6

In the first section of the conclusion chapter, aims and objectives are reminded again to the reader while describing how each of them was achieved during the study. The main findings of the study are highlighted in the fourth section, while in the fifth section the theoretical contributions are outlined. The novelty of the research study is explained in section seven. The final two sections are allocated to bring attention to challenges and limitations encountered, and to outline future research potential created through the study.

1.6. Key definitions used in the study

1.6.1. Concept

In simple terms concept is defined as a word or a label, that mentioning of a word creates an object, event or a picture in someone's mind (Pintoi & Zeitz, 1997). People use concepts in everyday lives to form connections between things based on similar properties (Safayeni, Derbentseva, & Cañas, 2005). Wolff (1993) argues that a concept consists of two parts; the extension and the intention, the former referring to all objects belonging to the concept and the latter consisting of the attributes of those objects. Hence, for the present study, a concept is defined as a word carrying a set of attributes, that when mentioned in similar situations the same set of attributes are formed in the reader.

1.6.2. Framework

A framework is generally defined as a guideline of activities or items that are systematically linked to each other to support achieving a defined goal (Dafikpaku, Eng, & Mcmi, 2011). Verbrugge (2016) suggests that in contrast a model is formed to symbolise or present a scenario that already exists in the real world or may occur in the future. In research, a framework may consist of one or more models. In this research, the framework is referred to as a set of guidelines that are set towards achieving a defined goal. Hence, the framework developed through this research is aimed at setting a guideline to analyse the potential consequences that can occur as a result of road infrastructure reconstruction intervention.

1.6.3. Conceptual framework

Conceptual frameworks are used as a process of theorisation in qualitative research. According to Kivunja (2018) the conceptual framework in a research project provides its logical orientation and underlying thinking that help plan and structure the research. The present research draws from Jabareen's work, which defines the conceptual framework as a network of interlinked concepts that brought together gives a comprehensive understanding of a given phenomenon (Jabareen, 2009). Each concept within the framework plays an integral role within it and linked to each other providing an interpretative approach to the social phenomena described through the framework (Jabareen, 2013). The conceptual framework presented in chapter two is based on the above definition by Jabareen and brings together the concepts discovered through the literature review to provide a comprehensive understanding for PCR intervention.

1.6.4. Analytical framework

Analytical frameworks are guidelines that facilitate the understanding of a phenomenon and helps logical thinking in a systematic manner (Fray, 2018). It helps to develop an understanding of how a certain phenomenon can be analysed and they are defined by their goal of being able to analyse (Pacheco-Vega, 2018). The main aim of the current research is to develop an analytical framework to represent the nature of PCR of road infrastructure and its potential consequences. Thus, the framework presented in chapter five of this research is aimed at providing a guideline on analysing the nature of road infrastructure intervention and its consequences in a logical and a systematic manner.

1.6.5. Post-conflict reconstruction

PCR is a complex, holistic and multidimensional process aimed at political, economic, social and security conditions of society after conflict. This includes the restoration of law and order, rebuilding the governance sector, rehabilitation and development, and justice and reconciliation (Tzifakis, 2013). It is widely used in the context of international interventions for 'nation-building' (Hamre & Sullivan, 2002) and transforming the failed state condition that can be typically seen in post-conflict societies (Jabareen, 2013). The reconstruction interventions can occur within the overall PCR strategy, and these interventions can include both soft and hard infrastructure interventions as defined in the section below.

1.6.6. Soft and hard infrastructure

In Chapter Two, the author further discusses hard and soft infrastructure and its relevance within the context of research. According to Hamutuk (2014), hard infrastructure is the physical networks essential for the functioning of economic, social and cultural standards of a country. The soft infrastructure consists of institutional aspects that support this functioning, such as financial, educational, health and governance systems. Hard infrastructure could aim at providing basic utilities such as water, electricity, waste management and transport infrastructure, or built to meet the development, recreational and social needs of the community (Casey, 2005). Hard infrastructure is often understood in association with its physical and tangible characteristics (Omer, Mostashari, & Lindemann, 2014). On the other hand, soft infrastructure is intangible and hard to define and often associated with the provision of human services (Casey, 2005). Soft infrastructure is crucial components for social and economic development (Omer et al., 2014) and enables the communities to get the maximum outcome for their economic, social and cultural activities (Khan & Weiss, 2006). While acknowledging the fact that soft and hard infrastructure are interlinked with each other in delivering the best outcome for the communities, the author treats roads as a type of hard infrastructure in the context of this research.

1.6.7. PCR strategy

Anand (2005) suggests that it is necessary to assess each post-conflict strategy in terms of its impact on conflict prevention, good governance and poverty reduction. In Anand's study, strategy refers to individual plans to achieve long-term infrastructure outcomes. Jabareen (2013) explains strategy as the grand agenda based on which individual reconstruction projects are built. PCR interventions come as a part of the greater economic or political strategy. Bender (2011) claims that a PCR strategy should be coordinated with peacebuilding through individual projects with the involvement of local communities. Lack of coordination in a PCR strategy leads to disturbances in reconstruction. Drawing from these studies, this study defines the PCR strategy as the holistic approach taken in reconstruction by integrating different interventions and policies.

1.6.8. PCR intervention

The term 'intervention' in a post-conflict context generally refers to exogenous intervention by a foreign country or an international organisation. According to Jabareen (2013), when an intervention is externally driven, it is important to involve both the local communities and non-government organisations (NGOs). However, he adds that in general, the present context of PCR interventions is more focused on hard rather than soft infrastructure. He also refers to political and economic reconstruction aimed at achieving different goals as PCR interventions. Vervisch, Titeca, Vlassenroot, and Braeckman (2013) focuses on the impact of individual reconstruction project interventions by NGOs in supporting livelihoods of communities. This study defines PCR intervention as an individual project intervention undertaken by the government, foreign actors or NGOs. It is a part of the overall PCR strategy and designed to achieve a specific set of objectives.

1.7. Summary

This chapter was an introduction to the research and provided the background context for the study. The research aims and objectives were also introduced, together with the key research question addressed throughout. The novelty of the research and the expected contribution to the theory were defined. An outline of each chapter was also presented, together with the key definitions used in the study. Following chapter is the literature review, within which the exploration of previous research related to this study is presented and the research gap is identified.

2. Literature review

2.1. Introduction

Among the disasters that affect communities extensively, conflict is one of the most significant due to its impact, not only on livelihoods and physical infrastructures but also on governing institutions, social cohesion and trust. A post-conflict reconstruction (PCR) intervention, therefore, should aim not only at rebuilding shattered livelihoods but also at restoring governance and trust, to avoid future conflicts. However, in the present application of PCR interventions, there are several examples of failed intervention and of achieving negative outcomes.

This review analyses the current context of literature related to PCR intervention, their consequences, and frameworks used for analysing consequences. It looks at what is referred to as 'consequences' of intervention in general as well as in PCR context. The review begins by introducing the context in which the study is taking place, where conflicts and particularly ethnic conflicts play an important role. This section also explains the characteristics and challenges of the post-conflict period. Section three is an analysis of PCR literature within a broad spectrum and brings about a discussion related to several PCR concepts such as strategy, intervention, stakeholders and infrastructure. The consequences of PCR interventions are analysed in four broad categories in section four. Section five highlights the linkages between these consequences and the post-conflict context in the long run. To bring out a different perspective beyond the PCR analysis, the consequences of the construction of transport infrastructure is presented in section six. Section seven briefly discusses some of the significant frameworks in the existing literature used to analyse consequences, both in post-conflict and non-conflict contexts. This section also proposes a conceptual framework built using the concepts discussed throughout this literature review. Finally, the research problem that is created due to the gap identified during the literature review is presented as well as the summary of the chapter.

2.2. Context

2.2.1. Conflicts

Conflicts are a form of disasters. The United Nations defines a disaster as an event that critically disturbs the functioning of a society. It can cause human, material and environmental damage, making it difficult for societies to restore to normal conditions on their own (The United Nations International Strategy for Disaster Reduction, 2009). In his typology of disasters, Robinson (2003) includes conflicts and wars within the category of complex emergencies, which is often caused by human actions and results in large scale mortality, displacement, human rights violations and food insecurity. Generally, within the two kinds of natural and manmade disasters, conflicts fit into the category of manmade disasters because they cause equally adverse effects on society through human actions (Combs et al., 1999).

The researchers and scholars from different fields have been explaining and unfolding the issues related to conflicts over a long period. According to Angstrom (2001), a conflict emerges when two or more sections of the society are having disagreements over the usage over a scarce resource during the same time. Such a conflict can convert into an armed conflict when these parties use military power to resolve the disagreement. For a conflict to be termed as a war it should involve organised, intensified, large-scale violence. While the appalling number of deaths is an evident outcome of conflicts around the world today, they also cause a variety of economic, social and political consequences that have a long-term impact on communities. Due to destruction of resources and infrastructure, the conflicts can undermine development by interrupting the production process (Oji, Eme, & Nwoba, 2015; Smith, Houser, Leeson, & Ostad, 2014). At the same time, they can have a significant impact on the education and health sectors, and also slow down investments in such key sectors due to prioritising war expenditure over other essentials (Merrouche, 2011; Ugalde, Selva-Sutter, Castillo, Paz, & Cañas, 2000). Besides, the conflicts often cause significant damages to cultural heritage and the natural environment (Defreese, 2009; Islam, 2014). In his work, Jabareen (2013) highlights the drastic impacts that internal conflicts can have on the social, economic and political conditions of people from the national to the individual level.

A rebellion movement that leads to internal conflict, which is also referred to as civil war, can be explained by greed and grievances that result from inequality, lack of political rights, and division in society due to ethnicity and religion (Collier & Hoeffler, 2004). In contrast to the view of political science, which describes rebellion in terms of motives driven by grievances, economists claim that rebellion is a result of opportunity driven by greed. Using a logit regression model to predict the comparative risk of war resulting from greed factors and grievance factors, Collier and Hoeffler (2004) find that opportunities referred to as greed factors act as stronger explanatory variables than grievances.

The interstate conflicts of recent history, that result from the aforementioned greed and grievance factors, are mostly political, as they are either 'about the rule of the state' or 'about the state' itself (Angstrom, 2001). Quoting Weber, Breiner (2004) claims that politically induced conflicts are primordial, 'all prefigured in the beginnings of political community'. Modern conflicts are a continuation of the historic struggle for power and party politics. According to Weber, nationalism, a major force behind contemporary conflicts, is a method of survival adopted by the political community. It is an endless motivation to mobilize people to the extent of sacrificing life for the 'state'. It is the logic by which the political community legitimize politically driven capitalism; the struggle for wealth and prestige (Breiner, 2004).

2.2.2. Ethnic conflicts

Angstrom (2001) identifies four Weberian types of internal armed conflicts as leadership, ideological, resource and ethnic conflict. However, features of all these four types of conflicts exist in the real world. Such a typology is useful to analyse the extent of the ethnic or ideological foundation of conflict, especially in addressing the root causes and finding the solutions. Among these types, ethnic conflicts have gained a larger significance and attention due to being common across civilizations and overtime and being universally applicable to human behaviour (Vanhanen, 2012). Also referred to as ethno-political conflict, they are characterised by mobilising large groups of people based on ethnic grounds, often demanding a separate state and ultimately resulting in large-scale war (Angstrom, 2001; Eck, 2009). The cases of Rwanda and Bosnia are more commonly used examples of ethnic conflicts (Angstrom, 2001; Arrous & Feldman, 2014; Eck, 2009).

Most of the communities in the world today are ethnically diverse, and not all of them are in conflicts. There is no causal relationship between ethnic identity and war, but rather this identity is being politically used and socially constructed as an instrument to create conflict (Angstrom, 2001). Due to the state's ethnopolitical configurations of power, the ethnic elites of the state exclude a large portion of the population based on ethnicity. Violence results from high degrees of exclusion, segmentation and incohesion (Wimmer, Cederman, & Min, 2009). Due to the high degree of violence and due to the significance of addressing root causes, ethnic conflicts have gained much attention in the academic as well as general discussion. The war in Sri Lanka is an example of ethnic conflict.

2.2.3. Post-conflict characteristics and challenges

Conflicts affect poorer countries and communities at large, as most conflicts prevail in the developing world. They influence development priorities through crowding out investments from essential sectors to war supplies (Anand, 2005). Once a conflict comes to an end, the area could be physically occupied by military forces. Zabyelina (2013) describes how the post-conflict period is often characterised by negative peace, a condition in which there is reconciliation without violence, yet very little justice. However, due to international intervention in promoting democracy and economic recovery, there is a greater potential for the public sector to contribute to peace and stability. This potential could be hindered by the failed state condition which is often associated with post conflict countries, where the state is incapable of providing for national aspirations, security and the interest of people (Jabareen, 2013).

At the same time, the communities affected by conflict can be fragile and vulnerable due to massive destruction and resulting in poverty (Cole, 2014). The war economy, which provided a means of living during war times, may prevail in the post-conflict period. People who sustained through war economy may resist the emergence of new alternative economies and central regulation by the state (Cramer & Goodhand, 2002). Furthermore, certain components of a post-conflict society tend to engage in corruption as an illegal means of living (Zabyelina, 2013). The effective operation of reconstruction projects can be affected by the incidence of corruption (Earnest, 2015). Although external aid tends to peak soon after the conflict, it is difficult for these societies to benefit from them due to political and administrative limitations (Schwartz & Halkyard, 2006). Most importantly, the post-conflict societies are at the risk of reverting to violence as most of the root causes

remain unaddressed soon after the conflict (Collier et al., 2008). Destruction of resources, damage on health and education sectors, vulnerable communities, weak and corroded government institutions are some of the significant economic, social and political dynamics within a typical post-conflict context (Sakalasuriya, Haigh, & Amaratunga, 2018).

2.3. Post-conflict reconstruction

2.3.1. PCR – A general approach

The term “Post Conflict” has been loosely defined and sometimes confused with on-going conflicts (Jabareen, 2013). This confusion occurs due to a lack of comprehensive theory in Post Conflict Reconstruction. Anand (2005) highlights nine issues related to PCR, including the complexity of post-conflict context, its significance and difference from other scenarios, the displacement of people, and the governance dilemma. He also emphasises that coordination among different policy interventions and stakeholders could bring successful PCR solutions. The weaknesses that exist in a post-conflict setting justifies the exogenous intervention in reconstruction. The reconstruction, in general, is assumed to reduce the risk of conflict (Jabareen, 2013). Brun and Lund (2008) refer to reconstruction as an innovative system of giving development solutions after destruction. In a post-conflict context, reconstruction demands the rebuilding of the destroyed environment to achieve sustainable peace, while maintaining security, political governance, socio-economic development, gender equality and justice (Theron, 2011). It is necessary to use a broader approach of involving communities and empowering them to handle their vulnerabilities through the recovery process (Brun & Lund, 2008). To bring about successful PCR solutions and achieve economic recovery, it is necessary to coordinate among different policy interventions and stakeholders (Jabareen, 2013). While doing so, the reconstruction process should ensure the involvement of communities in the recovery process and be sensitive to the root causes of the conflict (Price, 2010).

2.3.2. PCR strategy

According to Theron (2011), the overall PCR strategy of a post conflict state must have clear goals within a specified time frame. This is guaranteed to be challenging due to the large scale of reconstruction that is likely to be required and the complexity of the post-conflict environment. It typically takes a holistic approach of promoting and integrating

political, economic and social reconstruction, while providing security to people (Jabareen, 2013). It should also be environmentally positive, properly planned with clear specifications about the design, technology, resources, and maintenance (Brown, 2005). The opportunity provided by the end of World War II was viewed as a way to modernise and build whole new cities that bring in significant reforms to social, economic and political systems in Europe (Dale, 2015). The PCR strategy should encourage the development of productive forces because peace depends on the economic independence at national and international levels (Cramer & Goodhand, 2002). This does not mean that all countries should follow a single PCR model. The strategies that do not consider the dynamics of the local political and cultural environment fail to achieve the specified objectives (B. Jones, 2014).

2.3.3. PCR intervention

A PCR intervention generally aims at rebuilding shattered livelihoods and preventing the communities from resorting back to conflict. The intervention should centrally aim at transforming a failed state into a new entity addressing social, political, economic and cultural aspects of life (Jabareen, 2013). Reducing the political and economic risks through intervention could attract new investments and lead to faster growth (Schwartz & Halkyard, 2006). According to Anand (2005), any intervention should be assessed in terms of its consequences on three dimensions: conflict prevention and peace, good governance and poverty reduction. However, a single intervention often does not address all three dimensions. For instance, addressing state-building and good governance may not address the issue of poverty. On the other hand, a policy aimed at reducing poverty may have adverse effects on peace due to equity issues (Anand, 2005). In post-conflict Lebanon, the post-conflict reconstruction was in line with the western and government agenda of building a new middle east and establishing the central authority (Hourani, 2015b). PCR can also be used as a mechanism of rebuilding social capital, especially in the case of community-based reconstruction initiatives (Vervisch et al., 2013).

The previous studies identify certain trends of PCR interventions and bring out the context of PCR as it happens in the world. Aid is one such form of intervention, and there is a trend of peaked aid soon after the end of a conflict that results in high growth. However, due to political and administrative constraints, the conflict-affected communities cannot absorb

aid and are not able to attract private investments (Schwartz & Halkyard, 2006). Anand (2005) claims that present PCR interventions are dominated by 'hard' investments (defined in chapter 1, section 1.6.6) while the role of intervention in strengthening 'soft' infrastructure (defined in chapter 1, section 1.6.6) is postponed to the later stages of reconstruction. He also highlights that there are three major challenges to be addressed through PCR intervention: governance, conflict prevention and poverty reduction. It can be agreed that each intervention is inevitably linked to these three aspects and can be assessed based on the impact of the intervention on them. Anand's analysis is a useful tool for looking at long term impacts of PCR interventions.

Referring to PCR intervention in post-conflict Lebanon, Hamieh and Mac Ginty (2010) state that while Arab and Gulf states were concerned with the provision of hard infrastructure, western states focused more on governance programming and soft infrastructure. Although the latter was essential in the reconstruction process, the Arab intervention of physical infrastructure was able to connect with local political culture more effectively. However, according to Howorth (2013), humanitarian intervention by Western states in several African and Arabic countries has been disordered and lacked strategic objectives. In Sri Lanka, the reconstruction process was linked with a high military presence, emergency law and government autonomy, which contributed to social exclusion and insecurity of people living in a war-torn region (Goodhand, 2012).

2.3.4. Actors involved in PCR intervention

In the current discourse of literature, three main significant groups of actors can be identified in the PCR process. They are the government, foreign donors and non-governmental organisations (NGOs). In the modern post-conflict agenda, education, health and food security are identified as major driving forces towards trust, reintegration and reconciliation (Zabyelina, 2013). Two of the major challenges faced by post-conflict societies are economic recovery and preventing future conflict (Collier et al., 2008). The end of war by military intervention does not guarantee peace. According to Mack and Nielsen, 31.2 per cent of terminated armed conflicts relapse into violence within five years (as cited in Höglund & Orjuela, 2011). Therefore, conflict prevention must be a major focus in the post war economic and political agenda. Within the norms of western idea of stability, democracy is considered to be central to post conflict peace building which is

required to be established by the state (Lappin, 2010). At the same time, a strong state is key in changing the war economy and taking a centralised approach to economic development (Cramer & Goodhand, 2002). Therefore, it is important that the state intervenes in PCR with a view to preventing conflicts and achieving economic development.

On the other hand, there is always a lack of private investment in conflict-affected countries due to the high risk and sensitivity to political and economic instability. Large-scale private investments are almost non-existent soon after conflict. However, certain sectors like telecommunication are promising for private investors. Yet, transport, irrigation and governance infrastructure has to be provided through either government or external state intervention (Schwartz & Halkyard, 2006). The private industries are interested in investing only in market-driven reconstruction, and thus the governments and NGOs should prioritise people in reconstruction (Hourani, 2015a). From a historical perspective, state intervention to public goods provision and resource allocation was fundamental in building nation-states (Cramer & Goodhand, 2002).

Post-conflict states lack the institutional capacity to carry out reconstruction by themselves and have to rely on several external and internal actors to support the reconstruction programme. Due to the high level of uncertainty that prevails, the intervention of the international community is required to prevent any potential future conflicts (Earnest, 2015). Saul (2012) also argues that the post-conflict state requires the intervention of the international community to achieve progress due to the limited stability of the local government. The concepts of 'failed state' and 'security' are central to the PCR context and identified as two major reasons for external intervention (Jabareen, 2013).

Aid is one such form of intervention. There is a trend to receive a large inflow of aid soon after the end of the conflict that results in high growth. However, due to political and administrative constraints, the conflict-affected communities lack the ability to absorb aid and when they reach the state where they can absorb aid, the trend of foreign aid declines (Schwartz & Halkyard, 2006). Foreign aid is significant in preventing the fragile states from going back to violent conflict by promoting sustainable recovery, economic reforms and growth (Toh & Kasturi, 2012). However, when providing aid and assistance, the donors typically tend to determine a set of preconditions. Donor conditionality prioritises the motivations of the donor rather than the needs of the beneficiaries (Earnest, 2015). It

acts as a barrier towards development as the objective and the will to develop is imposed externally to the context (Brown, 2005). In trying to reconstruct, the countries become vulnerable to donor agendas. The donors carry a set of assumptions when interfering with the reconstruction of infrastructure, particularly when these infrastructure projects are connected with their objectives. The western donors are often supported by the local westernised elites in putting forward their agenda and blind to local customs (Gellman, 2010).

On the other hand, post-war reconstruction can allow external parties to influence and exploit the war context. In post-conflict Lebanon, the different actors, namely Hezbollah, Arab and the Gulf States, and Western states competed among each other in different types of assistance. The different interests and approaches to intervention resulted in a complex donor environment. Aid and reconstruction activities of the donors were dominated by their self-interests and political strategies (Hamieh & Mac Ginty, 2010).

2.3.5. Local and community participation in PCR

The scholars continuously highlight the importance of community participation in PCR. Anand (2005) claims that reconstruction efforts should involve local communities and NGOs in internationally driven PCR projects. Successful reconstruction can be yielded through making use of the people's will to participate in productive activities after years of deprivation and chaos (Dale, 2015). The role of NGOs is instrumental in capacity building, recreating social and political norms, and shaping behaviours in a post-war context (Gellman, 2010). Resources provided by NGOs is a strong indicator of the success or failure of community-based reconstruction (Handrahan, 2004). Although community participation and involvement of NGOs is viewed as a way of increasing social capital, it can also pave the way to empower the elites in society. Gellman (2010) states that most of the funds of NGOs are utilised according to the will of local elites, resulting in a neo-liberal westernisation process.

2.3.6. The correct time for PCR interventions

There are different arguments as to what is the best time to do the post-conflict reconstruction. Immediate recovery assistance is required based on humanitarian grounds soon after conflict. Often it is difficult to get the state institutions to act quickly to address

the humanitarian needs of PCR and thus interventions take place prior to state-building. However according to Dale (2015), to achieve sustainable growth and economic development the planners and policymakers should come together with a long-term vision to rebuild the cities. On the other hand, if the reconstruction is protracted over a longer period, so will be the endurance of war impact. However, Schwartz and Halkyard (2006) explain that since the post-conflict societies lack the ability to absorb aid and achieve growth at once, it is important to invest initially in improving the economic conditions and minimising risks, rather than investing in large scale infrastructure. Earnest (2015) claims that delays in infrastructure projects can create frustration among community members who are already divided and contribute to the complexity of the context. This can act as a barrier to peacebuilding. It is essential to complete the project within the promised time in a post-conflict setting. Project managers should be able to allocate resources accordingly and prioritise needs.

2.3.7. PCR of infrastructure

Anand (2005) claims that infrastructure is an important part of the PCR process. However, due to the weak institutional capacity that prevails in a post-conflict setting, it may be difficult to manage resources for infrastructure reconstruction. He also adds that due to high transaction cost and lack of information, the unit cost in PCR can be higher than the normal. The erosion of trust among communities weakens the capacity for collective action and thereby affects efficient functioning of market activities. Therefore, the markets may not be able to provide goods that are normally supplied in peace times. Due to weak and eroded institutions in a post-conflict setting, the infrastructure may not be sufficiently provided if left to be supplied by the market.

The extent of infrastructure damage is often an indication of the severity of war (Brown, 2005). When discussing the role of infrastructure in promoting social capital, Handrahan (2004) emphasises that infrastructure and public service provision can positively influence the social fabric of community life. Generally, there is a trend to focus more on restoring infrastructure and to re-establish a market economy (Stewart, 2005). According to B. Jones (2014), the decision to focus on infrastructure reconstruction stems from the liberal thinking of democracy that aims at peace through market-oriented development. Infrastructure includes both hard and soft means to restore the livelihoods of people to normal conditions. Present infrastructure interventions in PCR seem to be dominated by

'hard' investments while the role of 'soft' institutions, participation and building coalitions for change are postponed to the later stages (Anand, 2005). This trend to rely on physical infrastructure to achieve post-conflict stability is often viewed as failing to understand the social, political and cultural dynamics of post-conflict context (B. Jones, 2014).

Water, sanitation and infrastructure are vital for the fulfilment of basic human needs (Weinthal, Troell, & Nakayama, 2011). When a vast amount of infrastructure and resources are destroyed by war, only slow progress can be achieved through reconstruction (Dale, 2015). According to Anand (2005), any infrastructure intervention can be measured against three main dimensions of the post-conflict agenda; governance and state-building, conflict prevention and peace, and poverty reduction. Although the ultimate objective of reconstruction is to produce sustainable infrastructure, past research has questioned if the interveners actually prioritise sustainability in reconstruction, as it was in the case of Iraq (Brown, 2005). Dale (2015) also gives an example of unplanned reconstruction in the post-world war period. Unlike in Europe, post-war reconstruction in soviet Russia after World War II lacked an ideological vision to reform the socio-economic and political structures due to the immediate pressure to reconstruct physical infrastructure and build urban cities.

According to the above analysis, the PCR of infrastructure and coordination among different PCR interventions is a key element in addressing the challenges faced during the post-conflict period. The following section is dealing with the potential consequences of such PCR interventions, dividing them to four main categories; economic, environmental, social and political.

2.4. Consequences of PCR intervention

Planned management of resources, making informed decisions and a clear focus is key in building a nation-state after conflict. However, ineffective project planning and preparation, coupled with limited funding and resources are typical to post-conflict reconstruction (Earnest, 2015). When reconstruction takes place as a response to the emergency requirement, the cities that develop as a result turn out to be unplanned and lack a clear agenda for development. This often happens due to the restrictions and complex procedures of agreeing on a single master plan for a new city (Dale, 2015). The

lack of comprehensive strategic planning in PCR interventions will likely result in reconstruction not being optimised. Due to these reasons certain PCR interventions can fail or create negative consequences.

2.4.1. Economic consequences

Although reconstruction is essential for development after the war, there is no causal relationship between PCR and development. Therefore, linking these two with strong policies is important (B. Jones, 2014). Interventions should encourage the development of productive forces. Although peace is a precondition to development, it will not be sustainable without appropriate policies towards economic development. Peace and economic stabilisation require strong state formation, which should be understood within the historical and regional political analysis of the conflict (Cramer & Goodhand, 2002).

In Sri Lanka, the government that was in power soon after the war considered reconstruction and economic development as a major tool of sustainable peace by the government (Höglund & Orjuela, 2011). Although countries reach considerable levels of growth soon after conflict due to the high inflow of aid and large investments on reconstruction, many fail to sustain the growth for a long period (Athukorala & Jayasuriya, 2013). Improving the factors that influence political and economic risk can lead to faster growth (Schwartz & Halkyard, 2006). To address the development challenges of post-war reconstruction, the post-conflict programmes should be supported by a clear vision based on sustainable infrastructure (Brown, 2005). However, imposed notions of development that comes through external intervention may not be compatible with the local culture and may not be able to realise their goals within the local context. The local customs and practices may hinder the ability to capitalise from enforced infrastructure and development initiatives. Thus, indigenous knowledge must be understood and used in the development of the local economy (Gellman, 2010).

Athukorala and Jayasuriya (2013) claim that after the war it is necessary to invest in large-scale reconstruction, not only to rebuild the neglected and destroyed physical infrastructure but also to strengthen the productive base and improve trade. Infrastructure reconstruction has direct and indirect relationships with reducing poverty and improving the investment climate for private businesses (Anand, 2005). Mundial (2005) suggests

incorporating infrastructure reconstruction as a part of the poverty reduction programme. It is necessary to invest in infrastructure to rebuild the livelihoods destroyed by war and create new livelihoods to replace the ones maintained by a war economy (Collinson, 2003).

Infrastructure reconstruction improves access to resources and creates links between different markets and economies. The success of peace after World War II resulted from the economic interconnectedness between European nations (Dale, 2015). Due to its planned nature, the post-war reconstruction in Europe was focused not merely on achieving economic development, but also improving social and political damage that took place during the war. The linking of the strategies has led to achieving overall better living conditions for people, as well as strengthening themselves as powerful nations in the world. However, a possible negative consequence of the economic improvement in certain areas is industrial relocation. According to Chandra and Thompson (2000), certain industries grow as a result of improved infrastructure, whereas others shrink as economic activity relocates. Highways affect the spatial allocation of economic activity. They raise the level of economic activity in the regions that they pass directly through but draw activity away from adjacent counties. Such an approach to development has the potential to increase any inequality that already existed in post-conflict societies and can have a negative impact on extremely poor rural societies.

2.4.2. Environmental consequences

The environmental impact of PCR is a subject that needs more attention in post-conflict studies. The environment suffers extensively during the war and often becomes a target during war operations (Islam, 2014; Kengni, 2013). Nevertheless, its significance is often underestimated in a post-conflict agenda. For example, the infrastructure reconstruction in post-war Iraq did not consider its impact on the environment, resulting in large-scale damage in terms of irregular oil discharges in the desert, widespread contamination of water and destruction of marshlands. As a result of marshland destruction, people had to migrate from the marshland areas (Brown, 2005). It is important to consider the environmental effects in advance of implementing a PCR project and take measures to minimise the damage.

2.4.3. Social consequences

The people who suffered from a shattered identity, especially during protracted ethnic conflict, can further experience inequality of resource distribution among different communities after the conflict. This is called horizontal inequality (HI) (Stewart, 2008). If the interveners do not consider the distributional consequences of PCR, it can result in HI and cause conflicts to re-emerge (Anand, 2005; Stewart, 2008). Correcting the HI in terms of access to economic, social and political resources should be a major focus during reconstruction since the same is frequently deemed as a reason for conflict. Policies need to be adopted with political sensitivity. It is important to understand the roots of conflict before reconstruction policies are adopted. Equality must be maintained in political participation and the decision-making process (Stewart, 2005). Ensuring equality in PCR provision prevents future conflict (Anand, 2005).

Delivery of social services should be equitable and non-discriminatory to avoid conflict and is important for resettlement and sustainable peace (Zabyelina, 2013). However, the present practice of a post-war intervention often increases the vulnerability of people by exploiting resources and widening socio-economic inequalities (Bender, 2011). The political and economic inequality was not addressed during post-war reconstruction in Mozambique, which posed threats to the future economic and political stability of the country. In Guatemala, although HI policies were initially introduced, the results were not effective due to political and elite interference (Stewart, 2005).

Infrastructure reconstruction can play a significant role in promoting social capital after the war and can be used as a tool for distributing peace dividends (Handrahan, 2004). It can be used as a mechanism of rebuilding social capital, especially in the case of community-based reconstruction initiatives (Vervisch et al., 2013). Community participation is a key component in development as well as in sustainability. A participatory approach to reconstruction ensures that development is people-centred rather than project centred, which in turn contributes towards sustainability (Brown, 2005).

Community-based reconstruction has an increasing significance in the present practice of PCR activities (Vervisch et al., 2013). From the experience of Burundi, where community relations were strengthened through simple daily interactions using infrastructure facilities, it can be argued that a bottom-up approach to infrastructure reconstruction is suitable to promote social capital (Handrahan, 2004). The opposite of a community-based

approach is a centralised approach. In this approach, the opinions and experiences of community members are rarely considered during the decision-making process. Due to a lack of community participation, projects tend to be irrelevant and create negative impacts (Earnest, 2015). Most of the major reconstruction projects in post-war Iraq have taken a centralised approach, which lacked the understanding of the local capacity, technical and material resources (Brown, 2005). Similarly, during the reconstruction in Sri Lanka, people were not consulted about their needs, and community participation was almost non-existent. This was a missed opportunity to build trust between state and affected people, by increasing the participation of local people and provincial councils (Höglund & Orjuela, 2011). Although centrality in reconstruction is often viewed as disadvantageous at the individual project level, it is useful at the planning level. Lack of planning and coordination in reconstruction lead to reconstruction projects that do not contribute to the overall economic recovery. The reconstruction should be in line with the grand strategy of development and centrality plays a key role in placing the individual interventions within the PCR strategy (Dale, 2015).

One of the significant negative consequences of improved infrastructure is exploitation and increased violence. Unruh and Shalaby (2012) explain how road reconstruction and land rights in war-torn Afghanistan had strong linkages to land grabbing and exploitation. Road construction increases the value of land and dominant groups were involved in land grabbing, including terrorist and tribal chiefs. The increased access also allowed terrorist groups to exploit mineral resources. Reconstruction has negative impacts on local livelihoods due to involvement of terrorists, corruption of the government and the dominance of tribal chiefs. Due to increased tensions, local communities tend to view reconstruction as an increased threat to their security.

2.4.4. Political consequences

Post-conflict societies suffer from the corruption that prevails on a large scale, and from the central government to the local level (Earnest, 2015; Zabyelina, 2013). This trend spreads to the PCR intervention. During reconstruction in post-conflict Sri Lanka, transparency was almost non-existent and corruption prevailed significantly (Höglund & Orjuela, 2011). Corruption allows the political elites to tap the humanitarian and development aid into their own pockets. It causes the undermining of key peacekeeping

activities, leading people to seek alternative means of power, that can lead to renewed armed conflict (Zabyelina, 2013).

The end of conflict provides the country with an opportunity to benefit from peace dividends and bring development to rural areas. Nevertheless, sometimes reconstruction is centrally planned and carried out by the government, with little or no transparency or consultation of local communities. Such initiatives may create new conflicts and increase the grievances of minority groups affected by war. Reconstruction in Sri Lanka was centrally planned and carried out by the central government, and often involved armed forces. Transparency and community participation was almost non-existent. This resulted in increased distress and mistrust towards government and an increased sense of insecurity and marginalisation. A lack of conflict sensitivity, a lack of coordination among donors and not considering human rights issues in implementing development projects, further increases the tension among communities (Höglund & Orjuela, 2011).

While PCR can bring community building, communication and development, it can at the same time forcefully impose the foreign neo-liberal concepts of a "good life" on the post-conflict states (Gellman, 2010). PCR is often viewed as a process of western liberalisation leading to democracy by powerful states and peace as equivalent to democracy (Hamieh & Mac Ginty, 2010). Such imposing of external development models can disturb the progress of post-conflict societies. External actors often view westernisation as a way of "civilising" and "democratising" a local population, and that reconstruction should follow the western model of liberalisation (Jabareen, 2013). Democracy is often viewed to be central to intervention, assuming that liberal societies are peaceful than others. Thus, the market economy and rule of law are viewed as the only path to achieve sustainable peace (B. Jones, 2014).

Reconstruction is increasingly measured by the extent to which the policy is bounded by market globalisation. Due to the vulnerability of local communities, they accept any form of intervention even though such market reforms are not suitable for the context. As a result of this market-oriented development, the existing vulnerabilities and inequalities are aggravated (Hourani, 2015a). The reconstruction aimed at inducing development assumes that violence results from the lack of development and democracy. Thus, development is viewed as a way of conflict prevention and social reconstruction. Such

reconstruction efforts often include human rights as a main component, but fail to see the dynamics of the complex context of the conflict. Development must evolve through this context and take in to account the political and social dynamics. The politics of the conflict and the life after conflict characterised by war identities tend to affect the goals of the reconstruction intervention (B. Jones, 2014).

In post-conflict Lebanon, PCR was in line with the western and government agenda of building a new middle east and establishing the central authority (Hourani, 2015b). The western states and international organisations associated PCR with western notions of good governance, which assumed that western governance practices of democracy and neo-liberalism should be adopted by post-conflict Lebanon. In post-conflict Lebanon, the local people could not understand the significance of the government intervention, and thought physical reconstruction as most needed. The Western donors identified Peace as equivalent to good governance and state-building according to a western model of democracy. The notion of democracy, as it was developed and practised by neo-liberal western countries, are directly brought in and imposed on the post-conflict states, that may or may not respond positively to such implementations. This kind of intervention is understood to be inappropriate and ineffective in the local context (Hamieh & Mac Ginty, 2010). In Afghanistan, where the society is highly diverse and the cause of conflict is also partly a result of outside interventions, the western justice intervention has provoked local reactions. It is necessary to understand the local practices in PCR rather than trying to incorporate a completely new external system (Richmond, 2012).

As described earlier, local elites are often capable of capturing control over externally provided resources (Gellman, 2010). Handrahan (2004) identifies elite capture as the core problem that hinders community-based development. As 'development gatekeepers' or 'development brokers', local elites often act as mediators in the interaction between external actors and the communities at large. Thus, community participation has paved the way to strengthen the elite capture of social capital rather than weakening them in post-conflict societies. This is a result of the fragmented and opposing ownership and competition of reconstruction resources. However, according to Kyamusugulwa and Hilhorst (2015), the control of elites over resources can be beneficial because they can ensure the provision of public goods. Conflicts that occur among elites from different groups can benefit the project outcome.

In post-conflict Lebanon, the competitive nature of assistance provided by Arabian countries demonstrates that reconstruction assistance was used as a tool to show political dominance. Iran sponsored projects in majority Shia areas while Saudi Arabia supported Sunni areas, which demonstrates political biasedness. At the same time, reconstruction demonstrated the internal divisions within Lebanon as well as the competitiveness of regional interests. Western states were mostly interested in intervening in governance and state-building while the Arab and Gulf States were prominent in providing large scale assistance in physical infrastructure (Hamieh & Mac Ginty, 2010). The divisions that exist in PCR interventions among different donors create a competitive and dynamic environment.

2.5. Linkages of PCR consequences to the context in the long-term

The above mentioned economic, environmental, social and political consequences have linkages to long-term outcomes in the post-conflict context. According to Höglund and Orjuela (2011), the cessation of violence achieved through military intervention does not guarantee sustainable peace. It is necessary to take actions to prevent future conflicts and ensure sustainable peace. The process of conflict prevention involves both aspects of peacebuilding and reconstruction, which are essential for long-term stability.

If the reconstruction is unable to achieve the specified economic objectives, poverty and underdevelopment may prevail in the society causing conflicts to re-emerge. Renewed armed conflict and its fallout can have a negative and long-lasting impact on development (B. Jones, 2014). On the contrary, if infrastructure reconstruction is supported by a clear vision for recovery and development, it has the potential to be a solution to the conflict. The development could be used as a tool to promote peace if it incorporates long term sustainability (Brown, 2005). As discussed earlier in this chapter, conflict prevention should be a major focus in the PCR agenda, which saves the lives of people and the cost of war. PCR contributes to preventing the post-conflict societies from going back to conflict and helps to ensure sustainable peace. Economic development achieved through PCR is crucial in achieving these objectives (Höglund & Orjuela, 2011).

However, PCR can often contribute to increased ethnic divisions in post-conflict societies. Reconstruction comes as a source of political exclusion for some communities as it was in the case of Shi'a in Lebanon (Hourani, 2015b), and for some as an assurance of power as it was for the previous government in Sri Lanka (Höglund & Orjuela, 2011). Development efforts that do not consider the dynamics of conflict tend to increase violence through supporting tensions and power imbalances (B. Jones, 2014). Furthermore, an inability to effectively address the need to reconstruct infrastructure during the PCR process can be used by the illegal combatants to question the functions of state and justify violence. This can discourage those who are involved in the development and weaken the state-building process. It can also worsen the situation of those who are in a vulnerable condition (Anand, 2005).

Although western influence on post-conflict countries has been criticised due to imposing a western model of democracy, it is necessary to incorporate governance building into the PCR process. According to ESCAP (2006), good governance has specifically eight characteristics; "participatory, consensus-oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law". PCR cannot be viewed in isolation from these characteristics that should be aspired by governments. Since there is no causal relationship between reconstruction and development, it is necessary to promote policies to achieve development through governance (Hamieh & Mac Ginty, 2010). On the other hand, it is necessary to have strong governance institutions to ensure security (Lappin, 2010). To this end, strengthening the political agency is important and the political stability should stem from local participation and political inclusion of marginalised communities. This approach entails respect and concern for each other within a community, and the technical facilitation of external actors is important to create a healthy political space (B. Jones, 2014).

Violent conflicts often occur as a result of political exclusion of large sections of society. The post-conflict period provides an opportunity to address these causes through political reforms (Höglund & Orjuela, 2011). The end of war is typically followed by international pressure to address the root causes of the conflict and provide a political solution (Uyangoda, 2010). The government can receive consolidated power through political and economic stability that occurs as a result of successful reconstruction. This power can be

used to introduce reforms to political systems and change the power-sharing methods to address the political grievances that caused the conflict (Höglund & Orjuela, 2011).

The above analysis was specifically dealing with the consequences of reconstruction within the post-conflict context, and how their long-term effects link to the context itself. To get a further understanding of the consequences that can occur as a result of reconstruction, it is beneficial to move beyond the post-conflict context and explore other areas of literature. This will also allow the comparison of the consequences of PCR with another context. While doing so, the focus of the below analysis is shifted to the consequences of transport infrastructure construction in a non-conflict context. The decision to limit the analysis to transport infrastructure is considered to be appropriate due to three reasons. Firstly, it is necessary to focus on one particular area to obtain a better understanding. Secondly, the literature in transport infrastructure is rich with models and frameworks used to analyse the consequences of construction or related concepts. Such a comparison is novel, and drawing the concepts and terms from transport infrastructure literature to PCR literature enriches the study with a new insight. Thirdly, this study is focused on using post-conflict road infrastructure reconstruction in Sri Lanka as its main case, and it will be useful to look at the models and frameworks used in a non-conflict transport infrastructure setting to analyse the consequences of such constructions. Therefore, to support the thesis of understanding potential consequences this review now focuses on the consequences of construction discussed in the literature related to transport infrastructure, particularly in non-conflict settings.

2.6. Transport infrastructure construction

Historically, construction of infrastructure is associated with long-run economic growth by providing the convenience for trade and other significant economic activities. Canning and Pedroni (1999) discuss in their study how long-term economic growth is affected in different ways by investing in different types of infrastructure. Transport infrastructure, in particular, is claimed to decrease the cost of trade and reduce prices, and thereby increase the income and welfare of people (Donaldson, 2010). There is evidence of long-run relationships between transport infrastructure investments and economic development. For instance, the investments the rapid growth in roads, highways and airports in Canada from 1950s to 1970s have direct and indirect effects on private capital growth (Gillen,

2000). However, it was always questioned whether this sort of economic growth is sustainable. Scientists and researchers around the world have been searching for ways of reducing the negative external effects of infrastructure on the environment, society and the economy (Strogen & Horvath, 2012; Ugwu & Haupt, 2007). Furthermore, infrastructure investments are used by powerful groups for political rent-seeking, rather than for actual growth or poverty alleviation (Khemani, 2010).

2.6.1. Consequences of transport infrastructure

An important observation made within the literature on transport infrastructure is that they give a greater weight for measuring economic consequences of the construction intervention. This is mainly because measuring economic costs and benefits is an essential part of the project implementation process. However, in addition to economic impacts, there is considerable focus on environmental impacts, health issues, energy consumption, land use pattern and relocation.

In most of the literature related to infrastructure interventions in general, impact measurement and benefit analysis have featured prominently. The models that are used for these purposes are largely quantitative since they are focused on economic aspects of the interventions (Farhadi, 2015; Gillen, 2000; Zou, Zhang, Zhuang, & Song, 2008). These models are primarily dealing with impact measurement or benefit analysis, and the relationship between the transport infrastructure investments and growth. However, a clear difference can be identified between impacts and benefits. Economic impact refers to a change in the flow of money to the economy of a country or a region, typically measured through economic growth, GDP or productivity (Weisbrod & Simmonds, 2011). The impact analysis uses a macroeconomic approach to capture larger effects caused by the infrastructure in terms of cost reduction and output expansion (Lakshmanan, 2011).

On the other hand, benefits refer to a broader aspect of welfare gain measured through the willingness to pay or opportunity cost (Weisbrod & Simmonds, 2011). Benefit analysis models originate from the microeconomic approach of evaluating interventions. Cost-Benefit Analysis (CBA) is a typical example of such an approach (Lakshmanan, 2011). However, the modern benefit analysis frameworks are much larger in scope than traditional CBA methods, since they account for both monetary and non-monetary gains

and losses. It is important to note that economic impact and benefit measures are often used in isolation from each other. This segregation is mainly because broad development effects cannot be included in benefits analysis. On the other hand, narrow benefits cannot be included in impact analysis, as the latter is not a benefit accounting system (Weisbrod, 2008).

Benefit and impact measuring models for transport infrastructure interventions can be identified parallel to microeconomic and macroeconomic models respectively. The recent research trend has been to use macroeconomic models to evaluate the impacts of transport infrastructure (Chandra & Thompson, 2000). Lakshmanan (2011) claims that the impacts of transport improvements must be examined in a general equilibrium fashion, which refers to the macroeconomic approach. However, the use of a particular approach largely depends on the circumstances. The effects on a regional or national economy can be measured through macroeconomic impacts, while the modern economic appraisals mostly deal with detailed analysis of microeconomic benefits (Weisbrod & Simmonds, 2011). The type of approach is often selected based on the objective of the appraisal and the users of the appraisal reports (Weisbrod, 2008).

Within the scope of impact analysis, one can identify several types of macroeconomic models. Weisbrod (2008) lists five such models, namely input-output models, land-use models, computed general equilibrium models, regional stimulus models and market access models. It is important to note that all these models deal primarily with quantitative analysis. The regional studies typically utilise more detailed information on travel time and access changes affecting different modes and industries than macro models (Weisbrod, 2008). Studying the effect of highway construction on earnings, Chandra and Thompson (2000) use a model to depict income as a function of highway spending, adjusting for national, regional and local factors. They use country-level earnings of workers as a proxy for income. Deng (2013) discusses network characteristics of transport infrastructure and its consequences using a macroeconomic model to demonstrate output elasticity for transport investment (Deng, 2013). In a study conducted on the Udawalawa irrigation project, the impact on output is measured through a social accounting matrix (SAM) (Wijerathna, Bandara, & Karunagoda, 2013). SAM is based on the seven-sector model in the circular flow of income that calculates regional income and expenditure. This model can also be used to measure the external shock of investment on income and expenditure

by finding the value of external shock multiplier (Wijerathna et al., 2013). Impact models can also be used to predict the demand for fuel through trend analysis and thereby calculate the effect on the economy and environment (Alam, Wadud, & Polak, 2013).

In contrast to impact measuring models, benefit models give a detailed analysis of intervention about several aspects. It can be used to measure the correlation between access and connectivity, and identify the relationship of access to various economic indicators (Weisbrod & Simmonds, 2011). Jacoby (2000) uses an econometric model to measure household benefits from rural roads, using the value of land and wages as proxies for benefits from infrastructure. In this study, household survey data were used to estimate different types of benefits from infrastructure in less developed countries, including economic, health, educational and environmental aspects (Jacoby, 2000).

However, all these models strictly look at quantitative impacts and benefits. The applicability of impact and benefit models, either macroeconomic or microeconomic, in the post-conflict context is limited unless they are adapted to post-conflict contexts. Further, due to measuring quantitative economic aspects these models are not able to capture the qualitative aspects that are largely present and significant in the post-conflict context.

Transport infrastructure has certain consequences that go through several channels to create several secondary and tertiary consequences. For instance, although improved infrastructure reduces congestion, less congestion increases traffic over time, which may increase congestion again in the longer term (Weisbrod, 2008). The high volume of traffic also has an increased effect on energy consumption and has adverse consequences on the economy, such as dependency on fuel, increased costs and a large share of output on transport expenditure (Alam et al., 2013). Once the road facilities are improved, people become heavily dependent on road transport and are discouraged from using public transport. This leads to large-scale air pollution, which in turn has negative consequences on health and the environment (Mothé et al., 2014). These consequences can be quantified in terms of greenhouse gas emissions by calculating the energy consumption for predicted traffic volumes (Tennøy, Øksenholt, & Aarhaug, 2014). Transport infrastructure that is planned without considering the environment also has negative consequences on natural habitats, as estimated by Zuberogoitia et al. (2014), in terms of the number of ungulates killed by vehicle collisions. The negative results can be minimised by properly planned

infrastructure. For instance, locating the workplace closer to the town centre can reduce traffic and minimise negative consequences on the environment (Tennøy et al., 2014).

The previous research about transport infrastructure was mostly aimed at weighing the infrastructure against certain socio-economic aspects. Weisbrod (2008) finds that there is a regular gap between theories, reality, empirical research and policy tools in the field, and applied models at decision-making level are often different from models adopted by scholars. Even the quantitative research of scholars demonstrates differences and at times contradictory results (Deng, 2013). This is because the models are aimed at measuring different parameters and the studies differ in a large variety of objectives.

In addition to the economic evaluations, previous work deals with several other consequences of transport infrastructure. Land use is closely connected with infrastructure provision since the pattern of land use changes due to building new infrastructure. This phenomenon is factual concerning transport infrastructure. Chandra and Thompson (2000) claim that certain industries grow as a result of reduced transportation costs, whereas others shrink as economic activity relocates. Highways affect the spatial allocation of economic activity. They raise the level of economic activity in the counties that they pass directly through but can draw activity away from adjacent counties (Chandra & Thompson, 2000). In the rural road sector, the new roads provide higher social benefits if the population living near the road is high, due to increased access to markets (Jacoby, 2000).

2.7. Frameworks used in analysing the consequences

In previous sections, the discussion was particularly focused on the consequences of reconstruction in both conflict and non-conflict settings. Although a range of different consequences is discussed in the literature, their interconnections and linkages are not clearly understood when they are presented in isolation. Therefore, it is useful to understand the frameworks that are used in existing literature in understanding the consequences of construction and reconstruction. This section particularly deals with understanding the frameworks used in analysing PCR interventions and transport infrastructure construction.

2.7.1. Frameworks in PCR intervention literature

This analysis deals with four frameworks widely used in PCR literature, with particular attention on analysing consequences or related concepts, such as impacts, effects and results. Jabareen (2013) introduces a conceptual framework that includes nine PCR concepts: failed state, exogenous intervention, sequencing, security, reducing conflict, westernization, multi-level actors, holistic and inclusive approach, and socio-spatial structure. He suggests the use of this framework to assess current and future reconstruction. Although this framework is useful in understanding any PCR context, it is not necessarily useful in analysing the consequences. Furthermore, the conceptuality in Jabareen's framework makes it difficult to be applied in a real-world scenario, and therefore it does not act as a useful tool for decision making in a practical context.

Anand (2005) presents a framework of vicious and virtuous cycles, which evaluates a particular intervention in terms of its impact on poverty reduction, effective governance and state reconstruction, and conflict prevention and peace. He also presents a matrix to score the policy intervention for its impact on these three dimensions. The key is to place the particular policy intervention at the right place in the vicious and virtuous cycle and analyse the policy based on its position. Anand's framework promises to be useful as an analytical tool for policy but again fails to have applicability in the real world due to being conceptual. The positioning of the policy in the cycle is highly subjective and does not guarantee the expected impact. Besides, Anand considers only three dimensions for his policy analysis framework, whereas there could be several other consequences that are significant in the post-conflict context.

The Do no harm framework is a well-known framework in PCR literature, which provides a checklist of impacts on war and peace, and can be used by aid organizations before intervention (Anderson, 1999). It provides two sets of questions, and the PCR intervention decision should be taken according to the answer received by each question. Nevertheless, the framework weighs the intervention only in terms of its impact on war and peace. It does not deal with other potential consequences such as economic, distributional and environmental. Further, although Do no harm is widely used as an applied framework, it lacks theoretical justification.

Collinson (2003) developed a sustainable livelihood approach to be applied in situations of conflict and political instability, based on livelihood framework initially developed by the Department for International Development. It incorporates local and wider political-economic implications of changing livelihoods during and after a conflict, and is useful in the application of humanitarian programming in a complex environment. This framework is widely used as an applied tool for livelihood analysis both in research and decision-making spheres, as it links the macro-political economy down to the local level of vulnerability. It is useful in analysing livelihoods of communities but does not deal with interventions and their consequences in particular.

The PCR literature lacks a framework that deals with impacts of PCR, and the existing frameworks are also limited in their dimensions as they focus on a selected number of impacts such as war, peace and poverty reduction. The applied frameworks lack theoretical justification and the theoretical frameworks are highly conceptual and lack applicability. Furthermore, almost none of the frameworks or models individually could capture the full range of potential consequences that may result from a PCR intervention. As mentioned earlier, the literature on transport infrastructure is fairly rich with frameworks and models that analyse the impacts and effects of such construction. Therefore, it is useful to look at the frameworks used in transport-related literature for analysing the consequences.

2.7.2. Frameworks in Transport infrastructure construction literature

Among the frameworks that capture the consequences of transport infrastructure, Transportation Economic Development Impact System (TEDIS), developed by Weisbrod (2008), is noteworthy because it allows the simultaneous analysis of both impacts and benefits. It highlights eight criteria to select among different predictive impact and benefit models and incorporates a guideline on what criteria to prioritize based on the objective of the appraisal (Weisbrod & Simmonds, 2011). Although TEDIS is a useful tool in analysing the consequence of infrastructure, it does not take into account the context-specific circumstances as in the case of a post-conflict scenario.

Lakshmanan (2011) develops a framework to demonstrate the linkages between rail investments and economy, and shows how the same framework can be adopted to explain

links between transport investments and their broader economic consequences. This framework is so highly concentrated around the economic linkages and consequences that it lacks the ability to capture other potential consequences. However, this framework is significant in understanding how a transport investment is crucial in achieving economic development and promises adoption in a post-conflict context.

As mentioned earlier, SAM is a framework built on economic wide data to represent a circular flow of income (Wijerathna et al., 2013). Its major advantage is that SAM uses a bottom-up approach allowing the framework to be built on available data. Although Wijerathna et al. suggest the application of SAM in post-conflict analysis, the suitability of any of these frameworks in measuring PCR interventions is questionable, as they do not pay attention to the conflict specific consequences. Furthermore, SAM is also highly quantitative and relies on regional GDP to depict impacts, whereas in a post-conflict setting there is a number of other significant indications of impacts.

The key factors that are considered in evaluating transport interventions are cost differences in mode, quality differences, and transport network and access conditions (Weisbrod, 2008). These studies primarily deal with the economic aspects of transport infrastructure investments. Weisbrod and Simmonds (2011) identify three key factors affecting economic growth: travel cost and reliability, market access and connectivity. Improved transportation affects economic development through inter-industry trade, reduced costs and enhanced reliability, and increased markets and productivity (Weisbrod, 2008). The augmented concentration on economic aspects decreases the applicability of these frameworks in the post-conflict setting.

Although the frameworks and models used in non-conflict literature have a limited capacity to be applied in the post-conflict setting, the above analysis was useful in understanding the significant dimension of consequences in construction, with particular emphasis on transport infrastructure. It is evident, that some of these factors, such as macroeconomic, energy consumption and environmental consequences are rarely considered in the post-conflict literature. On the other hand, poverty impacts and distributional impacts are considered in both conflict and non-conflict literature. The researchers have focused on a particular dimension of consequences even in non-conflict literature, and there is no single framework to analyse a range of potential consequences at the same time.

2.7.3. Proposed Conceptual framework

Due to the above-mentioned shortcomings that can be seen in the existing frameworks used in both PCR and transport infrastructure literature, this research is focused on introducing a framework that can be used to analyse a range of potential consequences from a PCR intervention. As the first step of building such a framework, a conceptual framework of analysing consequences of PCR interventions is introduced below (figure 2.1), which can be used as a basis for further analysis. It should be noted that this conceptual framework draws from both PCR and non-PCR literature, as discussed in the review detailed earlier in this chapter.

The post-conflict context is unique and different from a non-conflict context. It is characterised with failed state conditions, negative peace, and presence of military forces, vulnerable communities, post-war tension, poverty, displacement, corruption and existence of war economies. The PCR intervention takes place within this context in the form of soft and hard infrastructure. The main stakeholders involved in implementing PCR projects are state, foreign governments, international organisations and NGOs.

The consequences generated by these PCR interventions can be broadly categorised into four groups: economic, environmental, social and political consequences. These consequences can be both negative and positive, and lead to long-term outcomes in the post-conflict environment. Conflict prevention should be a major focus in the post-conflict agenda and against which all consequences must be weighted. The positive consequences that can prevent conflict lead to stability. In the long-term, political solutions can be introduced to a stable society, which will lead to sustainable peace. On the other hand, the negative consequences may not be able to prevent violence and instability may remain in the longer term. It is difficult to introduce political reforms in such a context and therefore exclusion prevails. Thus, society may revert to the previous conflict or new conflicts may be created.

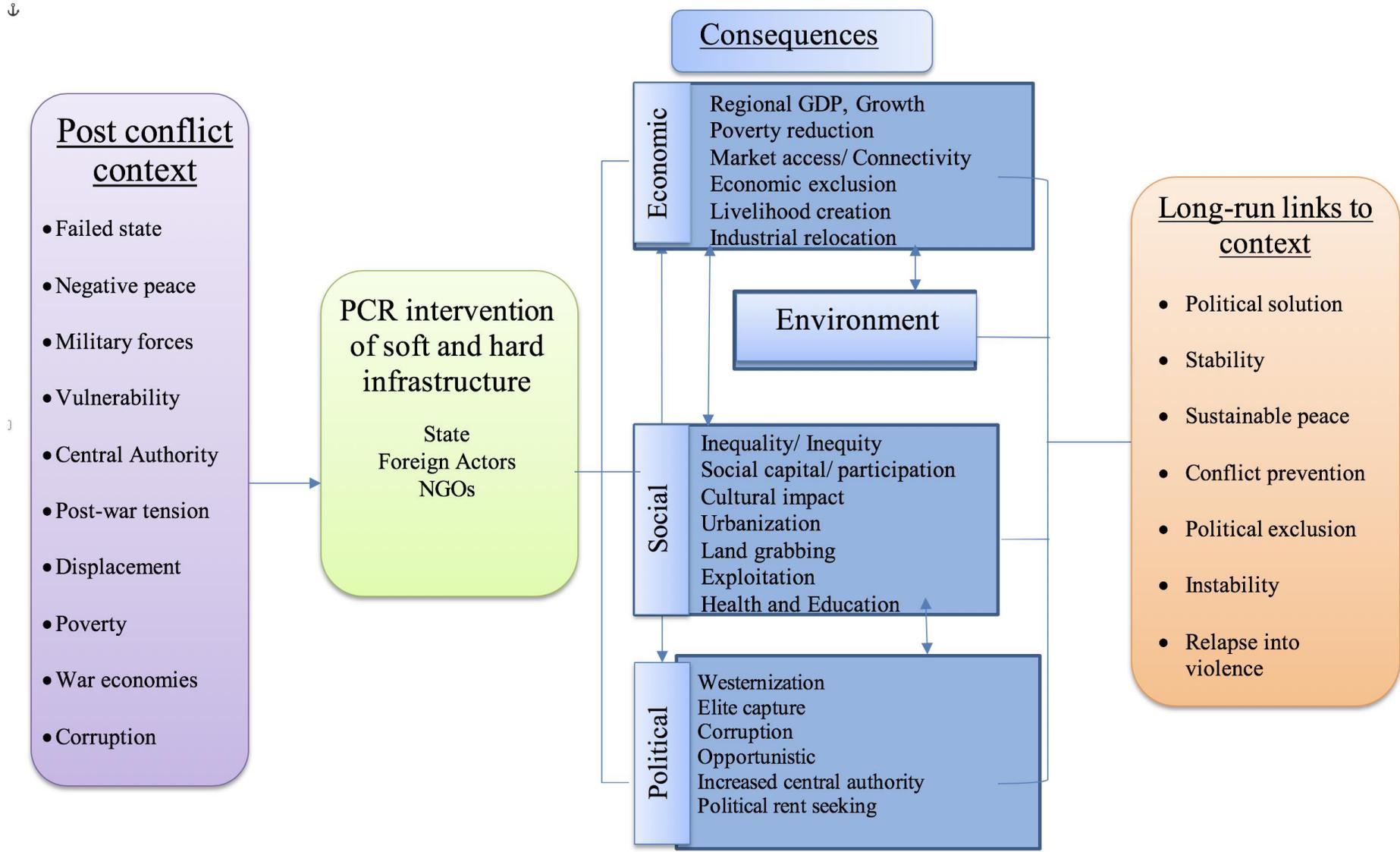


Figure 2.1. The conceptual framework to analyse the consequences of PCR interventions (Version 1)

After the above framework is developed, the researcher has updated the literature review to reflect additional issues about the nature of PCR interventions and their consequences (Sakalasuriya et al., 2018). Thereby, a second version of the conceptual framework was developed incorporating those additional issues and presenting the concepts in a further organised manner. This framework is based on the concepts collected through all the literature used for the study. They reflect the situation not only in terms of road infrastructure, but also all PCR interventions in general and other types of transport infrastructure. The conceptual framework is used as the basis for collecting data, analysing data and also building the final analytical framework presented in chapter 5 of the study.

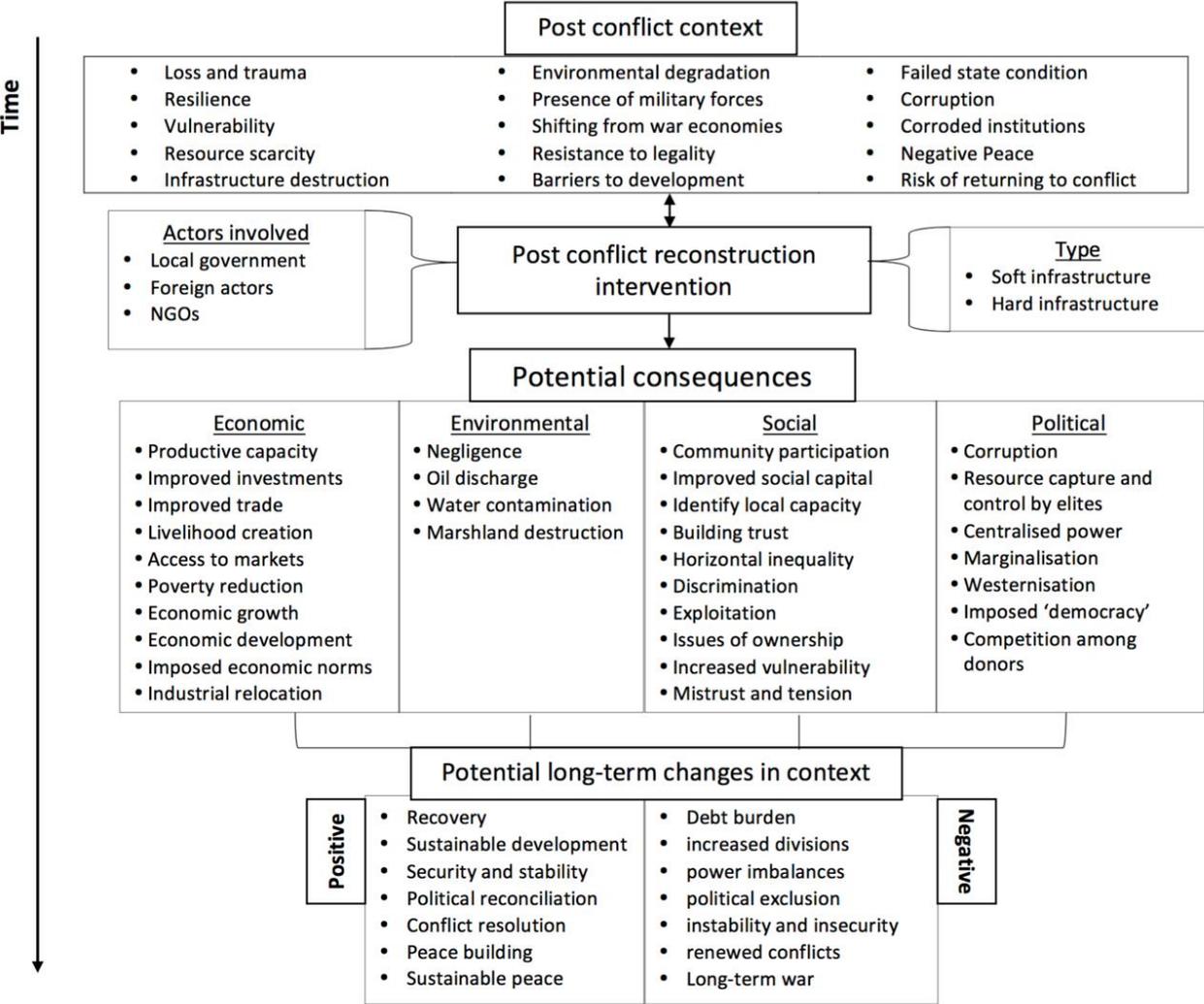


Figure 2.2. The conceptual framework to analyse the consequences of PCR interventions (Version 2)

2.8. Problem definition

As it was set out in this chapter, previous research does not adequately discuss the full range of consequences that may result from a PCR intervention, and the frameworks that discuss interventions, in general, do not capture all the potential consequences. An intervention, in general, requires a framework to guide the actors in terms of what consequences their actions could create. On the other hand, the PCR context requires a detailed analysis of the potential consequences that are often not considered in general infrastructure projects. Thus, the question is “How to analyse the potential consequences of Post Conflict Reconstruction Interventions”. This research aims to address this problem by building a framework to analyse the potential consequences of a PCR intervention and to strengthen the framework through studying cases from post-conflict road infrastructure in Sri Lanka.

2.9. Summary

In support of the thesis of building a framework to analyse the consequences of a PCR intervention, this review highlights the gap in the existing literature about consequences of PCR and the need for such a novel framework. Although in previous research, the scholars discuss the consequences in isolation, they are not presented in relation to each other and to the context. A comprehensive analysis of potential different consequences of PCR intervention is not carried out in those researches. The frameworks in PCR, are mainly concerned with understanding the challenges and the context of PCR. On the other hand, the research in transport infrastructure is mostly highlighting the economic and environmental impacts of construction. However, previous research shows examples of failed PCR interventions and creating negative consequences. Therefore, this review highlights the significance of understanding the potential consequences of PCR, their relationships with each other and their linkages to the post-conflict context. Based on the concepts and information gathered through existing literature in PCR and those in the transport sector, this review presents an initial conceptual framework pertaining to the analysis of consequences of PCR and their linkages. This framework is used as the basis for data collection and analysis of those data in the future, and the basis on which the framework of analysing PCR consequences was developed.

3. Methodology

3.1. Introduction

This chapter provides a detailed explanation of the methods undertaken for the research on “A framework to analyse the consequences of post-conflict reconstruction; the case of road infrastructure in Sri Lanka”. After the aims and objectives of the research are introduced, section three and four of the chapter are used to give a detailed explanation of the research methodology adopted for the study, including the philosophical, approach, methodological choice, and case study design. It also includes information on the experiences of pilot data collection that was carried out and the improvements made to the research design after the pilot phase. In section five the data collection process is described in detail. Research ethics and risk mitigation strategies are discussed in section six. Section seven is an outline of the data analysis process, together with the arguments for reliability and generalisability. The final section is a summary of the overall research methodology used in the study.

3.2. Aim and objectives

Based on the research problem identified in chapter two, the aim of this study is defined as below.

- To develop an analytical framework to represent the potential consequences of PCR interventions and their linkages, focusing on road infrastructure reconstruction

In order to fulfil this aim, three objectives were identified:

01. To understand the potential consequences of a PCR intervention
02. To understand the methods, models and frameworks that are used and can be used to analyse the consequences of a PCR intervention involving physical infrastructure
03. Provide a guideline for PCR project implementers to analyse the potential consequences of a PCR intervention involving road infrastructure

3.3. Research Methodology

This section explains the research methods employed in achieving the aims and objectives highlighted above. The selection of methodology has been guided by the research onion, as described by Saunders et al. (2016). Philosophy

According to (Saunders et al., 2016) subjective research assumes that social phenomena are created by a given context and is undergoing continuous change. On the other hand, objectivism believes that reality exists external to the social actors and does not change according to the context. The present research assumes that social phenomena are created from perceptions and depends on the actions of the individuals, those who are involved in the social phenomena, rather than it being independent of social actors. Thus, it takes an ontological stance of subjectivism. Although it makes an effort to keep a value-free position concerning the phenomena under consideration, a certain extent of value biasedness is unavoidable due to the nature of subjects being examined. The epistemological viewpoint is also closely associated with interpretivism since social actors and social activities are interpreted according to their context. In terms of axiological position, the research attempts to understand the behaviour of the stakeholders involved in the research from their point of view.

3.3.1. Approach

Deduction and induction are considered to be the two mainstream scientific approaches used in research. The deductive approach involves building theory that can be proved by scientific testing, and typically starts from theory and ends with testing with the use of actual data. On the other hand, an inductive approach begins with actual data and ends with building theories (Saunders, Lewis, & Thornhill, 2012). The present research is concerned with building an analytical framework based on both actual data and theory. Rather than relying on a single approach, it is beneficial to use both approaches in this research. The framework was initially developed using prior theoretical knowledge, taking a deductive approach. In doing so the first two objectives of the research were achieved: understanding the potential consequences of PCR and the methods of analysing them. This initial theoretical understanding was used as a basis for collecting ground-level data. Thus, rebuilding the framework based on primary data has taken an inductive approach.

Lukka (2003) defines the constructive approach as a research procedure for producing innovative constructions, intending to solve the problems of the real world and make a theoretical contribution. A novel construction, the analytical framework, in this case, can potentially have an infinite number of realizations. A certain construction by a researcher means to be different from such constructions that occurred before (see figure 3.1). The

framework under consideration is considered to be novel in terms of knowledge, linking the practitioners with researchers. The constructive approach makes backward and forward connections between prior theoretical knowledge and practice as well as the new findings. Such framing of knowledge can have significant theoretical contributions, even if they have failed at the practical level. Currently applied frameworks in the context of post-conflict reconstruction are built in practice, but do not have a theoretical justification (S. Jones & Howarth, 2012; O'Driscoll, 2018) (also refer to section 2.7.1 in literature review chapter). This research was aimed at filling this gap by adopting a constructive approach, which is also methodological in nature.

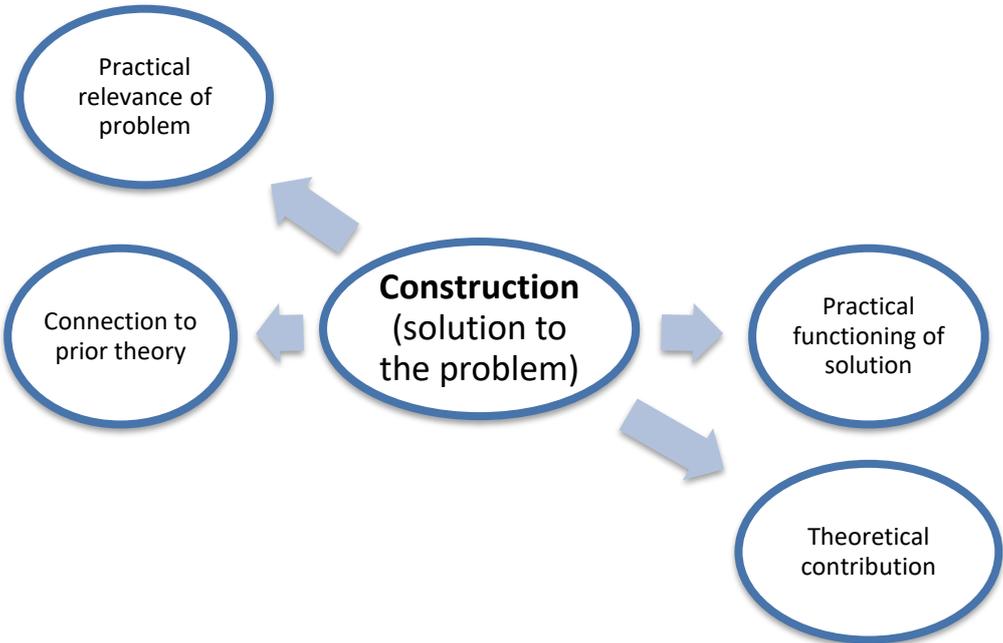


Figure 3.1. The elements and process of the constructive approach. Adopted from Lukka (2003)

3.3.2. Methodological choice

According to Dasgupta (2015), qualitative research is more suitable for theory building than quantitative research, as the latter is more suitable for theory testing. The issues that are indistinctive and difficult to measure are best examined using qualitative methodologies including grounded theory, event histories and case studies (Dasgupta, 2015). On the other hand, quantitative research is more commonly associated with a positivist philosophy and typically used to examine relationships among different variables. The researchers often use experimental and survey research strategies with quantitative research designs (Saunders et al., 2016).

Based on the research question and philosophy adopted in this study, it was decided to use a qualitative method. Qualitative research allows the researcher to be subjective and interpretive, and express phenomena as socially constructed. The constructive approach used in the study is also supported by the decision to use a qualitative method (Yin, 2014). A qualitative choice examines the meanings and relationships between the subjects being researched using a range of data collection and analytical tools (Saunders et al., 2016).

The present research is focused on building a framework to analyse the consequences of a PCR intervention and examine their interrelationships and linkages to the context. It does not attempt to estimate every consequence individually or develop methods of analysing isolated consequences. The research specifically deals with understanding the nature of the consequences and their linkages within the essence of a post-conflict context. Therefore, the quantitative methods to estimate the consequences are not required in this study. Thus, the methodological choice was essentially mono and qualitative. The research has undertaken a cross-sectional study, looking at the phenomena at a particular, limited time. A longitudinal study was not undertaken particularly due to time constraints (Saunders et al., 2016).

3.3.3. Strategy

Based on the nature of the research question and the nature of research philosophy, three main qualitative research strategies were initially considered: ethnography, grounded theory and case studies. Below is an account of the aforementioned strategies, and how the case study approach was finally selected as the most appropriate strategy for the present research.

Cases are used for building theories and frameworks in a diverse discipline of research. Case studies are defined as a detailed description of a contemporary aspect in a historical perspective, based on which new construction is formed (Eisenhardt & Graebner, 2007; Yin, 2003). In social sciences, case study refers to reporting and engaging with the complex social issues in order to interpret such social contexts concerning the social actors. While ethnography is centred around deciphering meaning from people and their cultural constructions from people's point of view (Goldbart & Huster, 2005), case study assumes that truth is constructed through social interactions throughout histories (Stark & Torrance, 2005).

According to Yin (2014), three conditions can be used to choose a methodology for research: the type of research question, the control of researcher over behavioural events and contemporary or historical focus. 'How' and 'why' questions can be answered by case studies, histories and experiments. Historical studies are more commonly used for past events and researcher have no control over the events. Experiments are suitable when behaviours can

be highly manipulated. Since the present research is focused on identifying operational links over time and examining contemporary events case study is preferred. On the other hand, case studies are capable of in-depth analysis beyond a typical historical study, and behaviours can be manipulated to a certain extent.

The case study research method can be adopted when examining broad and complex issues and when the existing body of knowledge is not adequate to provide the background. The case study is also suitable for an in-depth study of a context-specific analysis (Dasgupta, 2015). It is considered to be appropriate in research studies that involve theoretical constructions based on ground data. It is useful in studying the phenomena, without isolating them from the context of the real world. It forces the researcher to adhere to facts, making the research honest and authentic. Furthermore, the construction that results from a case study is testable using actual data, by which it links inductive and deductive reasoning (Eisenhardt & Graebner, 2007). Therefore, the case study approach is considered to be more appropriate for this study.

Another reason for selecting case studies is that it allows the integration of quantitative and qualitative approaches. The framework in question is aimed at analysing consequences. Therefore, the data and analysis methods included in the framework could potentially be both qualitative and quantitative. The case study method is not simply a qualitative approach; it can use a mix of quantitative and qualitative data and can be used to explain causal relationships in real-world interventions. Case studies can represent a certain type of mixed-method research. Although they take a holistic approach, they can rely on different data collection and analysis techniques. Thus, other research methods can be embedded in the case study analysis (Yin, 2014).

Ethnography is typically defined as an investigation and explanation of culture, society or community through an in-depth study of its members. People and the cultural aspects constructed by people cannot be interpreted or predicted like natural phenomena. Therefore, the researcher needs to engage in interpreting the meanings of those constructions and finding a means of doing so. Ethnographic research tends to focus on a single case since an in-depth analysis is required for a sound ethnographic study. Ethnography typically requires observation and participatory research over a long period. Due to the time constraints faced by the study, such an approach would not suit the purpose (Goldbart & Huster, 2005; Saunders et al., 2012). This study is focused on building a theoretical framework based on causal relationships between the PCR intervention of road infrastructure and its consequences. The consequences of infrastructure may take many years, or even decades to

be fully realised. Therefore, studying these causal relationships using an ethnographic approach was not practical for this research.

Grounded theory is also a theory generating research methodology, but the researcher is not guided by a predefined theoretical construction when going to field data collection. The theory is built based on actual data at a very practical level, and thus requires a large number of resources and adequate time to implement. A constructionist viewpoint also involves certain elements of grounded theory (Corbin & Hold, 2005). Therefore, like ethnography, the grounded theory may be used where appropriate within the main strategy of case study in order to build causal relationships based on actual data. Another positive flexibility that can be seen in the case study approach is the ability to use other approaches within a case study, which is known as a multiple-method (Yin, 2014). Therefore, a multiple-method case study approach was used in this study.

3.4. Case study design

According to (Yin, 2014), there are five main components in the research design.

01. Study questions: As discussed above the case study method is selected as the research strategy based on the nature of the research question.
02. Study proposition: This component answers what should be studied within the scope of the study. The research question guides the researcher to decide if the case study method is appropriate. Yet the scope and direction of the research are guided by the propositions. The present research proposes that there is a need for a guiding framework to analyse the consequences of PCR intervention.
03. Unit of analysis and bounding the case
04. Linking data to propositions
05. Criteria for interpreting findings

The steps 3, 4 and 5 are discussed in the following sections.

3.4.1. Pilot data collection

After determining the main methods of data collection and designing the guidelines for semi-structured interviews, it was decided to start the pilot data collection which took place between July and August 2016 in Sri Lanka. According to the predefined methods, semi-structured interviews were used as the data collection technique. Initially, two post-conflict road projects undertaken by the Road Development Authority (RDA) were chosen as case studies. The financial lenders were the Asian Development Bank (ADB) and World Bank (WB) respectively. Three officers were interviewed concerning both projects and representing the aforementioned three institutions, and several documents were examined. One academic expert in the field of transport reconstruction sector in Sri Lanka was also consulted with regard to the pilot data collection process. At the same time, pilot visits were made to two of

the war-affected areas in North and East of Sri Lanka, namely Puthukkudiyiruppu and Padavi Sripura. The visits were made to two of the areas in Northern and Eastern provinces where reconstruction have taken place, and interviews were held with 3 local officers. Table 1 below summarises the participants of the semi-structured interviews and the significance of their contributions to the research (see table 3.1).

Table 3.1. The details of pilot data collection

Participant	Contributions
2 officers from RDA	The two officers were chosen from the two different projects, which were initially selected as case studies. Their experience in dealing with the project both at the institutional and local level was useful in reshaping the research design
1 officer from ADB	The consequences of reconstruction and their linages to the context were revealed within a broader context
1 academic expert	This was useful to understand how the reconstruction process and their consequences are connected with the overall government policies regarding recovery after the war.
1 local officer from Maga consultancy firm	The constraints and consequences occurred at the practical level during and after reconstruction were revealed through the interview.
2 local officers from selected DSs	Consequences and their impacts at the local community level were revealed and their significance to the communities at large was also discussed.

Based on the circumstances faced and information collected during the pilot data collection, it was understood that some of the criteria previously selected for research design are not suitable for the study. Therefore, while the philosophy, approach, methodological choice and research strategy remain the same, the case study research design significantly changed after the pilot phase. These changes were made to the unit of analysis, number of cases and depth of analysis, and thus the bounding the case is also different after the pilot. Each of the sections below discussing the case study design is therefore focused on presenting the planned methods before the pilot data collection and the changes after the pilot.

3.4.2. Unit of analysis

Defining the case and bounding the case are two important steps of research design. The alternatives that can be considered as the unit of analysis vary depending on the nature of the research question (Yin, 2014). As discussed above, the research will primarily focus on the road infrastructure built in post conflict Sri Lanka. Therefore, the roads and the consequences will be within the particular unit of analysis. Several alternatives were considered for the unit of analysis in this study: the community; the funding or implementing organisation; the reconstruction project; and an administrative area. Initially, the post-conflict reconstruction project was chosen as the unit of analysis. However, after conducting pilot data collection in Sri Lanka, the practical difficulties and limitations of using the reconstruction project were identified. Therefore, an administrative area was used as the unit of analysis within the research. Below is a discussion of the advantages and disadvantages of using each of the above-mentioned units of analysis, and the justification for using the selected unit of analysis for this study.

3.4.2.1. Before pilot data collection

01. A Community

A community can be used as the unit of analysis if there is a high involvement of the community (Yin, 2014). It can be argued that communities are ultimately affected mostly by the consequences of PCR intervention. It will be useful to select community as the case in order to understand the consequences to an in-depth extent. However, in this study, the involvement of communities in deciding the consequences is minimal compared to that of government and other policy-level actors. On the other hand, communities who are affected by reconstruction cannot be clearly identified since a single road project can have consequences for those beyond community boundaries. Therefore, a community is not considered as the unit of analysis for this study.

02. Funding or implementing organisation

The funding or implementing organisation can be considered as the unit of analysis so that analysis can be limited to consequences of the roads handled by the particular organisation. The roads in post-conflict Sri Lanka are funded by many international organisations, including ADB, WB, China Exim Bank, Japan International Cooperation Agency, Korea International Cooperation Agency, and several foreign governments. The implementing body is in most cases an authority attached to a governmental ministry, either ministry of highways or ministry of provincial councils and local authority (Ministry of National Policies and Economic Affairs, 2009). Since a single organisation is attached to several post-conflict projects of

different nature, it is difficult to identify the roads and consequences based on the organisation. Therefore, it was not practical to use an organisation as the unit of analysis.

03. Administrative area

The road network within a particular area can be considered as the unit of analysis, and it can include different types of roads irrespective of attached organisations. However, in certain areas, some roads are not necessarily constructed during the post-conflict period. On the other hand, the consequences can be distributed beyond geographical boundaries. Therefore, this option was not considered to be viable.

04. The reconstruction projects

If a single reconstruction project is considered as the unit of analysis, defining the roads and consequences within a single unit will not be a problem as in other cases. It will also be easier to identify the funding and implementing organisations for a single project. Therefore, a single reconstruction project is considered as the most appropriate unit of analysis for the present research. As discussed in the literature review, the road reconstruction in post-conflict Sri Lanka will be the main concern of the research. Thus, the road reconstruction projects taken place in war-affected northern and eastern Sri Lanka after the end of the war was selected as the unit of analysis.

3.4.2.2. Change in the unit of analysis after pilot data collection

Halfway through the pilot data collection, it was revealed that there are certain disadvantages of using the reconstruction project as the unit of analysis. Although it was initially assumed that the reconstruction project is easier to be defined as a case, it was difficult to identify the case clearly at a practical level. The projects are typically defined by either funding or implementing organisation based on their requirements. Therefore, the size and coverage of projects vary significantly. Some projects are very large in scale whereas some are small. The two projects being considered were the Northern road connectivity project (NRCP) and pro-poor Eastern infrastructure development project (PEIDP). NRCP is a large project which covered in and out of Northern Province of Sri Lanka, and it has both national and provincial components. The PEIDP is a single project funded by different project partners and includes different infrastructure components in addition to roads. The roads that come under PEIDP are mainly national roads. The projects are very different in nature, scope and scale making it difficult to compare them to each other. Some projects are not limited to the conflict-affected areas, and some project components are not necessarily addressing post-conflict

needs. Some projects are already completed, while some are still under completion and some are yet to begin.

The next best alternative for the unit of analysis was an administrative area. Two disadvantages of using the area as the unit of analysis were mentioned earlier. One is that all the roads within a certain area are not necessarily built after the end of the war. However, during the pilot data collection, it was discovered that some areas were completely destroyed due to the severe fighting, and it was only after the cessation of military activities that people were able to access these areas in Sri Lanka. The reconstruction of infrastructure including houses and roads started from scratch. On the other hand, although there were main roads in some of the war-affected areas, there was no connectivity. The lack of connectivity resulted from both the prevalence of violence and unavailability of rural roads that makes the last mile connection. The last mile problem is a common issue faced in conflict-affected zones, as the government focuses on building national roads rather than small rural roads, through which the people can reach the final destination. During the interviews in the affected areas, it was revealed that connectivity is more important than the actual project for the communities. Therefore, to receive a better picture of connectivity from a community perspective, it was more logical to choose an area as the unit.

The second criticism mentioned above for using the area as the unit of analysis is the possibility of consequences spreading beyond the geographical boundaries. In order to address this issue, the roads strictly within the selected area, and the consequences particularly relevant for the area, were considered. Nevertheless, the study was later taking a more communal approach as opposed to the national approach it was designed to take earlier. Therefore, the consequences that are more relevant for the communities at the ground level were of significance for the study. However, these consequences that occur within the area can have regional and national implications that affect socioeconomic and political factors beyond the defined geographical limits. Furthermore, the narrowing down to consequences within the area was essential to keep the study focused and manageable within the given time.

Thus, a particular geographical area was chosen as the best alternative for the unit of analysis. In Sri Lanka, geographical areas are defined by how they are categorised in the administrative structure. The hierarchy of administrative areas in Sri Lanka is given below (see figure 3.2).

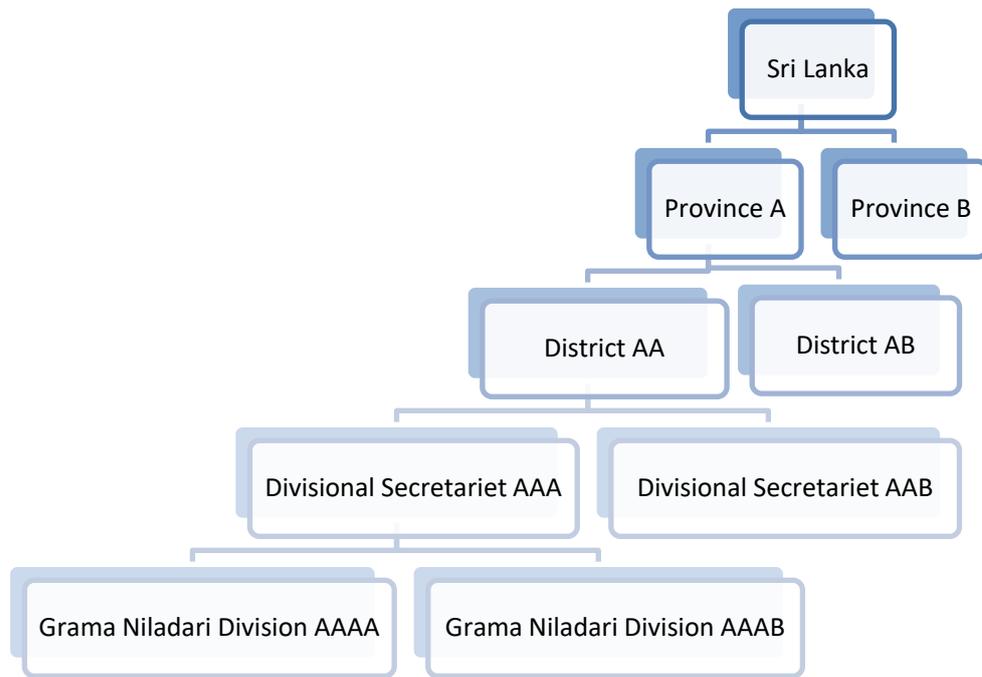


Figure 3.2. The Hierarchy of administrative areas in Sri Lanka
Source: United Nations (2004)

Sri Lanka is divided into nine provinces making them the largest administrative divisions. Within a province, there are several districts. Given the nature of the analysis and the time constraints of this study, it is not practical to choose a province or district as the unit of analysis. Within the district, there are divisional secretariats (DSs) which include several Grama Niladari divisions (GNDs). DS includes a mix of different types of roads constructed at the national and provincial level, with the participation of different stakeholders. A GND includes a fairly small area and often does not include different types of roads. Since the present research focuses on road network and connectivity, it is appropriate to choose a DS as the unit of analysis. Due to being a collective of GNDs, there is more possibility for DS to include a variety of ethnic groups.

3.4.3. Number of cases

According to Yin (2014), access to data is also an important criterion in determining the number of cases and types of cases. But most importantly the type and number of cases should be able to illuminate the research questions. Among the two methods of single and multiple case studies, a single case study can give a better insight and in-depth understanding of a certain phenomenon and its context than multiple case studies. A single case can be chosen when the case is critical to the theory, unusual or extreme, very common in all aspects, revelatory of a certain phenomenon, or longitudinal. On the other hand, multiple case studies can be used to provide a strong base for new construction (Dasgupta, 2015). Examining several cases provides an authentic base to build a theory (Eisenhardt & Graebner, 81

2007). It is advantageous to study more than one case to get a clear understanding of the issue in the question, especially as it allows comparisons among cases and draw conclusions based on several examples (Stark & Torrance, 2005). A variety of cases can be used to ensure that all the related contexts and issues of a particular problem are thoroughly understood (Eisenhardt & Graebner, 2007). As the purpose of the research is to build theory, it is necessary to provide substantial evidence to derive information. Although the conceptual framework is used as a basis, the context-specific data related to road infrastructure will be mainly gathered through primary data collection using case studies. Furthermore, the multiple case studies provide more compelling evidence, and increased robustness (Yin, 2014). Based on these reasons, it was decided to use multiple case studies for the present research. It also allows comparison among different areas which embodies communities with different socio-economic situations.

3.4.3.1. Before the pilot of data collection

Due to the nature of the consequences that are being examined and the wide scope of the research, it was decided to limit the analysis for RDA projects. They have a higher national and regional impact on consequences, and most importantly on conflict specific consequences of conflict prevention, peace and governance. RDA has implemented 'Northern road connectivity project' in the conflict-affected northern part of the country, under which six sub-projects were undertaken. The project was funded by ADB and has taken place during the period from 2011 to 2013 (S. L. Road Development Authority). RDA has also undertaken road development in war affected eastern province under several donors, and one of them was A6 road from Kanthale to Trincomalee, in partnership with WB. The present research was planned to employ the aforementioned two projects as the cases, as these two are the main RDA projects that are available for the study. These two cases were considered as highly critical for the study and also as revelatory of the phenomena under consideration. At the same time, these projects being financed by two agencies, namely ADB and WB, were assumed to give a diverse donor context which allow comparison between the two projects.

3.4.3.2. After pilot data collection

Since it was decided to change the unit of analysis after the pilot data collection, the number of cases also had to be rethought. At the same time, it was no longer reasonable to use only two case studies, given the amount of data that can be gathered. One of the main reasons for choosing only two reconstruction projects was the assumption that they will be able to provide a large variety of information based on which the framework can be developed. The two reconstruction projects were covering a considerable amount of land, and thereby involved a variety of stakeholders and reached different ethnic communities. In order to have

a similar variety of information, it is reasonable to select more than two cases. Therefore, for the data collection purpose, the three divisional secretariats and Key informant interviews were selected, accounting for a total of four cases.

According to Yin (2014), replication is a method used in selecting cases for multiple case study research. The priority is to replicate the findings using many cases. Sampling method, on the other hand, uses similar cases to come to conclusions about a single phenomenon. This research uses replication as a method of choosing the cases. All the selected administrative units were chosen from war-affected areas of Sri Lanka, and they have either partially or completely gone through the post-war road reconstruction process. The extent of damage in each area is different based on the severity of war. Thus, selecting the different cases from diverse settings provided more compelling and universal applicability to the framework being constructed. One DS was selected from the North because the Northern Province was severely affected by war and most areas were severely damaged. The selected area from the North was completely newly reconstructed after the war. Two cases were selected from eastern Province, to represent different ethnic groups. It should be noted that war-affected areas in the North are primarily occupied by Tamil communities, while in the East all three ethnic groups were affected. Eastern Province is also different in terms of war damage; thus, the selected areas would be partially reconstructed after the war. All cases were from the post-conflict context, but have different contexts in terms of ethnic diversity, war damage, connectivity and donor environment. Therefore, they had the potential of being both similar to each other and contradictory.

Within a single case study design, different levels of analysis can take place based on the researcher's interest. According to Yin (2014), an embedded case study design can be used when different units of analysis are considered within a single case, to achieve different outcomes. On the other hand, if the case study carried out in an all-encompassing manner without analysing individual units that occur within the case, it is regarded as a holistic analysis. In this research, the road network within the selected DS was considered as the case. Although different consequences and different groups of people within the DS are understood at large within the DS, they were not analysed as separate units due to constraints of time.

The following DSs were selected for the data collection. The variations of ethnic composition and being affected by war are the main criterions by which different areas were selected. However, among the several DS divisions affected by war, the particular areas selected were based on snowball sampling. The researcher had to rely on personal contacts and community gatekeepers to identify the participants for interviews. However, it was necessary to include

three areas representing the three main ethnic groups in Sri Lanka. Thus the majority population of each selected DS division was either one of the three ethnic groups; Tamil Muslim and Sinhalese. Please see table 3.2 for the population of each DS selected for the case study analysis, and how they are different in terms of ethnic composition.

Table 3.2. The details of divisional secretariats selected as cases

Divisional Secretariat	District	Total population	Ethnic composition			
			Sinhala	Tamil	Moor	Other
Oddusudan	Mullathivu - Northern province	23,824 (2011)	64	26,174	1,727	43
Padavi Sripura	Trincomalee - Eastern province	11,882 (2011)	11,860	20	1	-
Kalmunai (Muslim)	Ampara - Eastern province	42,852 (2007)	48	109	42,852	6

Sources: Department of Census and Statistics (2012)

Ministry of Public Administration & Home Affairs (2011)

Department of Census and Statistics (2007)

Pilot study

3.4.4. Depth of analysis

3.4.4.1. Before pilot data collection

Three levels of depth of analysis were initially identified for the study based on the nature of consequences revealed through the literature review. The consequences in conflict and post-conflict literature include consequences on war and peace, conflict prevention, poverty reduction, livelihoods, vulnerability and gender issues, effective governance, state reconstruction and sovereignty. All these consequences have a significance that spreads beyond the communal level and has regional and national relevance. On the other hand, the consequences that are typically discussed in non-conflict literature include macroeconomic impacts, efficiency and productivity, investment and expenditure, energy demand, traffic volume, health impacts, environmental effects, equity impacts, and land use and relocation. All these consequences tend to have high national and regional significance. Therefore, initially, it was decided to consider the consequences that are significant at the national, regional and community level. Before the pilot study, the focus was on post-conflict reconstruction projects, which is useful to derive information at national, regional and

community level. The consequences below the communal level were not considered for the study.

3.4.4.2. After pilot data collection

Due to the change of unit of analysis and number of cases, after pilot data collection, it was necessary to change the depth of analysis as well. Before the pilot, only national roads constructed and managed by RDA were planned to be considered. However, since the project is now focused on road connectivity, the case study was carried out about the total road network within the selected DSs. Therefore, the study was more in favour of a bottom-up approach where more detailed analysis has taken place at the individual and community level.

Within a single DS, the road network consists of roads that belong to national, provincial and local authorities. All the road constructed by those different stakeholders will be considered for the analysis. There are mainly three institutions who implement road projects in Sri Lanka, namely RDA under Ministry of Highways, Departments of Road development (RDDs) run by separate Provincial councils and local government institutions. The details of the road classification in Sri Lanka and the relevant authorities who are responsible for construction and maintenance are provided in Table 6.3 below.

Table 3.3 - Classification of roads in Sri Lanka

Ministry	Institution	Responsibility level	Class of roads
Ministry of higher education and highways	RDA	National	A and B
Ministry of provincial councils and local authorities	RDDs of provincial councils	Provincial	C, D and E
	Local authorities	DSs and GNs	Unclassified rural roads

Sources:

- Ministry of Higher Education and Highways (2016)
- Road Development Authority (2016)
- Ministry of Local Government and Provincial Councils Sri Lanka (2016)
- Ministry of Public Administration & Home Affairs (2011)

The road network considered for the study will include all classes of roads mentioned above. Therefore, the breadth of the case has significantly increased compared to the situation before the pilot phase. The study was focused on the consequences of reconstruction that occurs

within the specified area, and their national and regional impacts. This also helped to provide a clear, specialised and a more detailed investigation of the consequences. However, the consequences would inevitably have regional and national implications, which promises to be highly significant in the post-conflict context. Such implications would improve the universal applicability of the findings derived from the study.

3.4.5. Nature of case analysis

The approach adopted was both retrospective and historical. This is because this study was aimed at studying the previous reconstruction efforts and building the framework based on the consequences that have already occurred, rather than based on future prediction. A retrospective approach also allows a clear and detailed analysis of the cases (Dasgupta, 2015). Defining the time frame is an important component in the design of the framework (Yin, 2014). Thus, the consequences that occurred since the construction activities within a certain area were considered. Starting from the day of on-site construction, the consequences that occurred until the date of data collection were considered for the case study analysis.

3.4.6. Quality of research design

In every research design, four criteria are generally used to ensure standard quality. They are construct validity, internal validity, external validity and reliability (Yin, 2014). The construct validity is aimed to achieve by using multiple sources of evidence and identifying causal relationships between project interventions and consequences at the national, regional and communal level. Internal validity is achieved based on the operational links derived from the framework built using the initial literature review. The external validity was ensured through the data analysis process and the continuous updating of the framework. Reliability was aimed to achieve by rigorously following guidelines of case study research and operational procedures (also refer to sections 3.7.4 and 3.7.5 of this chapter).

3.4.7. Connection to theory

Having a prior theoretical construction before starting the actual case study is a significant component of case study research. This requirement also necessitates the understanding of all theories related to the research. Having a theoretical background also allows the application of the novel construction in different contexts as well as its generalization within the bigger field of research (Yin, 2014). In this study, the framework of analysing consequences was initially developed using the literature, based on which the case study was carried out.

It is important to identify and understand the case before building a particular theory, rather than generalizing for the whole population. Thus, the case study strategy borrows heavily from ethnographic research. However, unlike ethnography, the case study has the advantage of using multiple methods, including qualitative and quantitative techniques, and data sources to explore the given phenomena. The construction built using the case study could be used to analyse similar contexts, and use as a basis for future theory developments. Interviews, documentary analysis and observation are more commonly used techniques for case study research. Interviews can give a clear insight into the memories and explanations of the respondents.

3.4.8. The final research design for data collection

The first stage of the research was focused on developing the initial conceptual framework through the information gathered through the literature review. It first involved understanding the consequences of PCR, and then establishing methods of analysis and synthesizing them into a single framework, covering the first two objectives of the research. This framework was used as a guideline in further developing and employing research techniques to collect primary data at the second stage of the research. A mono qualitative methodological choice was made based on the subjective philosophical stance and constructive research approach. Multiple case study strategy is selected for the data collection and analysis phase. During the pilot study, both semi-structured interviews and documentary analysis were used to gather information about the reconstruction projects. A few of the components within the case study research design was changed based on the information and experiences gathered during the pilot phase. The actual data collection took place based on improved research design. The above mentioned three administrative units and the key informant interviews were used as input for the data collection and analysis.

3.5. Data collection process

The data collection process has taken place in March and April of 2017 (seven months after pilot data collection). This period was necessary to evaluate the outcomes of the pilot study and rethink the research design as mentioned before. The semi-structured interviews were as the main data collection technique. The interview guideline used for the study is given in Appendix 1. This method was selected based on the nature of the data required to build the framework of analysing consequences. Interviews were conducted with community representatives (religious leaders, representatives from community organisations, village elders or leaders, heads of village schools), local government officers, RDA officers, experts and officers from funding organisations. Some of the participants were already identified during the pilot phase of data collection. The initial participants were selected through

purposive sampling method (Miles & Huberman, 1994), based on their potential contributions. The author's contacts through previous academic work were used to identify the initial participants. The rest of the participants were selected using snowballing as described in section 3.5.1. The diversity of the participants was ensured taking into consideration the factors regarding culture, language, disability, seniors, gender, sexuality and interests. A total of 30 participants were interviewed from different ethnic backgrounds, gender and age groups, and professions, from which four were key informants. All three languages are spoken in Sri Lanka (Sinhalese, Tamil and English) were used to interview the participants with the help of translators where necessary.

3.5.1. Semi-structured interviews from case study DSs

Altogether 23 semi-structured interviews were conducted with the participants selected from each DS. The snowball sampling method was used for selecting these participants, as it was difficult to obtain direct contacts with the participants. Waters (2015) suggests that snowball sampling method is appropriate when the populations are difficult to reach and subject matter studied is highly sensitive. Due to ethnic differences, being secluded from other communities for a long period, and military occupation the war-affected community was difficult to reach for the authors. At the same time, the subjects being discussed could be politically sensitive and the communities, in general, were still recovering from the war experience, making it difficult to reach out to the community without support. Hence, the snowball sampling method was used to select the participants. Initial contacts were made through the author's previous academic work connections related to transport infrastructure in Sri Lanka. They include lecturers who work in transport ministry projects, officers from Road development authority (RDA), and consultants in the transport infrastructure sector. The initial contacts made through the pilot data collection was also used to identify potential participants. Besides, in order to make contacts with community representatives from severely affected Tamil areas, personal contacts through family were used to contact army officers from the area, who acted as gatekeepers to the community.

The duration of the field visits was limited and was based around the time and availability of the gatekeepers and translators, as well as those of the author who acted as the primary interviewer. Additional interviewers could not be employed due to the cost constraints of the PhD study. The duration also varied depending on the cost, as the author had to make long trips to visit the field sites and stay overnight in the area. The gatekeepers discussed the requirement of potential contributors before setting out for interviews and suggested the participants based on their prior knowledge, experience and contacts within the community. Two to three days were spent at each field site, and the number of interviews within each

division was often determined based on available contacts and time. The accessibility was also made through the gatekeeper who would be familiar with the local setting, language and often personally known to the participants. Some gatekeepers, especially the army officers, also had a certain sense of power over the participants which could also be considered as a negative aspect. The details of all the individuals selected for the semi-structured interviews from DSs are given in table 3.4 below. These also include the ones that are excluded from the data reporting, and the exclusion criteria are explained in section 3.5.1.

Table 3.4. Interview participants from selected Divisional Secretariats

Oddusudan	A1	Father and deputy principal of Tamil school (Tamil Male). Was born and lives in Jaffna, and taught in different schools in war-affected areas. He has been teaching in this particular school for 2 years.
	A2	DS office engineer on road construction and maintenance under the DS division (Tamil Male). Has been living and serving in the war-affected areas, and been attached to the DS for one year.
	A3	DS office Assistant engineer (Tamil Male). Works under the main engineer in road construction and maintenance.
	A4	Member of community welfare society (Tamil Male). Elderly male, a father of two daughters and his wife has passed away. Used to be a farmer. Now lives on the day paid manual labour. Lived in the area since his birth, but moved to a different land after conflict.
	A5	Member of community welfare society (Sinhalese Male). Elderly male, living with his wife and autistic daughter. Was living in the area since birth, but moved away due to severe conflict. Now resettled in a different land.
	A6	RDA Engineer - Mulatiu District Maintenance division of RDA (Tamil Male). Has been serving in the RDA local office for 3 years, which is attached to the government and the Ministry of Highways.
	A7	Technical officer, Mulatiu District maintenance division of RDA (Tamil Male). Has been serving in the RDA local office for 2 years.
	A8	Forest officer (Sinhalese Male). Have been serving in the area within Oddusudan (Mankulam – Kokavil) since 2014.

	A9	Member of community welfare society (Tamil Female). Came to live in this area in 2005 from Kilinochchi. Left during the large stages of the war and lived in refugee camps, and came back after the war and resettled in 2010. Mother of 2 sons and 1 daughter. Husband works in Qatar.
	A10	An officer at the DS office (Tamil Male) – engaged in community issues related to infrastructure. Have worked and lived in several areas in Northern district
	A11	Grama Niladari (Tamil Female) - Village admin officer in one of the villages. Have worked and lived in the area most of her life.
	A12	Cite manager of reconstruction project (Sinhalese Male) – Works in a government reconstruction project and travels often to cite from Colombo.
Kalmunai	B1	Consultant of an international NGO (Muslim Male). Works in projects, dealing with both political and administrative figures, and the community. Was born and lives in Maradamunai, Kalmunai.
	B2	Deputy principal of a Muslim Girls’ School in Kalmunai (urban) (Muslim Female). Was born in Kalmunai and lived her whole life in the area.
	B3	The principal of a Muslim boys’ school in Kalmunai (urban) (Muslim Male), Lives in Kalmunai. A community religious leader in Maradamunai.
	B4	A senior officer at the Divisional Secretariat of Kalmunai Muslim division (Muslim Male). Working in the office since 2015. “Under Kamunai municipal council, there are 3 divisional secretaries – Kalmunai Muslim, Kalmunai Tamil and Sainadamadu. This is the Kalmunai Muslim division”.
	B5	The principal of a mixed school in within Kalmunai DS -rural (Muslim Female). Been working in the position for the last 15 years, and was the head of the primary section of the same school before that. Lived all her life in the area.
	B6	A senior officer in the education sector in Samanthurai and Maradamunai (Muslim male). Lives in Maradamunai, Kalmunai.
	B7	The teacher at a mixed school in within Kalmunai DS -rural (Muslim Female). Been working in the position for three years, and lived a few years within the area.

Padavi Sripura	C1	Grama Niladari (village admin officer) of one of the villages within Padavi Sripura DS (Sinhalese male). Living in the area his whole life
	C2	Upa sabapathi – A senior officer of a local council (Sinhalese male). Local to the area
	C3	The principle of a mixed school within the Padavi Sripura DS (Sinhalese Male). Serving and living in the area for 19 years. He first arrived in Padavi Sripura as a teacher in 1997 and became the principal of the school in 2007.
	C4	A Teacher/ Wise principle of a mixed school within the Padavi Sripura DS (Sinhalese female). Came to live in the area after her marriage and lived there for nearly 25 years.

As it is highlighted in Table 3.4, the number of interviewees selected from each case was different from each other, the reason being the availability of the participants and the ability of access by the gatekeepers. At the same time, four of these were left out from the data reporting and analysis process. However, the number of the participant from each case also tally with the extent of damage from conflict to the areas and the amount of road infrastructure reconstruction that took place within each. Oddusudan was completely destroyed during the conflict, and the roads, as well as other infrastructure, had to be started from scratch. The people were also completely displaced and their lives were severely affected due to destruction caused by the violence. Hence, the largest number of participants were selected from Oddusudan. On the other hand, the reconstruction after the conflict has taken place largely in Tamil majority areas of Northern and Eastern provinces. Selecting a large sample from a Tamil DS improves the generalisability of the findings to other Tamil communities affected by the conflict and potentially benefit from road infrastructure. The Muslim community was affected by the conflict more than Sinhalese people, but less than Tamils. Hence, the number of participants selected from Kalmunai Muslim DS was deemed as justifiable. Not only the Sinhalese people were least affected by conflict and reconstruction, but they are also an ethnic minority within the North-East part of the country. Therefore, the number of participants from Padavi Sripura DS, which is a majority Sinhalese area, was considered adequate for the study.

3.5.2. Key Informant Interviews (KIIs)

In addition to the three DSs, several KIIs were considered to receive a broader understanding of the social, political and economic context and the consequences of road construction.

According to Kumar (1989), KIIs involve interviewing selected individuals who have the potential of contributing the sorted information and expertise. Accordingly, KIIs made it possible to conduct national-level analysis as discussed in section 3.4.4.2. Several individuals were interviewed at the national level including the officers related to road construction at the national level and exerts in the field of road construction and its impact. This case was useful in obtaining a wide perspective of the nature of the intervention, the political and economic drivers of the intervention, the consequences that affect the country, and the long-term impact on the context. Altogether seven participants were consulted as KIIs, and their details are provided below in Table 3.5.

Table 3.5. The participants in key informant interviews

N1	An engineer for RDA -NRCP from Jaffna to Kites (Tamil female) Involved in the NRCP project from Dec 2013 to April 2015 (in the project area)
N2	An officer at RDA, Environmental and social impact Assessment Unit (Sinhalese female) Worked in the projects handled by RDA from prior to construction till after completion
N3	An executive-level officer of the Sri Lankan branch of an international multilateral donor agency (Sinhalese Male), involved in PCR road projects in both Northern and Eastern provinces
N4	An executive-level officer of the provincial component of NRCP project (Sinhalese Male), Was involved in planning, delivering and implementing the provincial road projects in post-conflict areas, based in both Colombo and war-affected regions
N5	A senior lecturer in transport economics (Sinhalese Male), Involved in research related to transport infrastructure and a policy advisor
N6	A senior lecturer in transport and logistics management (Tamil Male), Expert in engineering and transport management, originally from Jaffna, lives and works in Colombo
N7	A lecturer in sociology (Sinhalese male), an expert in post-disaster housing construction and its social impacts

3.6. Risk mitigation strategy and ethics

Key principles of good practices specified under ethical guidelines of the University of Huddersfield was followed throughout the research (University of Huddersfield, 2011). It is ensured that research is carried out in areas of safety and it would avoid conflict of interests.

Not recording the names of the participants and not taking their photographs have ensured the confidentiality and anonymity of the participants. Data was protected using the protection techniques of storing files, and the data files were stored only in personal devices. The ethical form approved for the study is given in Appendix 2.

The research is classified as being associated with risks since it involves interviewing and recording human subjects both as individuals and focus groups. Due to the vulnerability of conflict-affected communities, the data collection at the community level were not carried out. Therefore, individuals who were directly affected by the war were not interviewed. The research involved interviewing community representatives from the conflict-affected region, and the subject being discussed also included sensitive subjects of conflict-related issues. To address this issue, the participants were informed in advance about the nature of the data being collected, and they were given the freedom of refraining or stopping from giving data at any point of the data collection process. Moreover, research findings were disseminated in such a way that anonymity and confidentiality of the participants will not be compromised (Economic and Social Research Council, 2015). Original records were preserved from unauthorized access and the publication will not reveal the identity of individuals (Association of Social Anthropologists of the UK and the Commonwealth, 2011).

To minimize the risks to the researcher in terms of data collection, analysis and publication, the research was carried out within the legal and regulatory framework of the country, and with the awareness of cultural and social context. Informed consent was obtained from participants to minimize disturbances (8.4 - Appendix 4), and the researcher ensured being in a physically safe environment. The risk mitigation strategies were adopted through clarifying responsibilities, budgeting for safety, planning for safety, risk assessment, confidentiality and anonymity (Association of Social Anthropologists of the UK and the Commonwealth, 2011).

3.7. Data analysis

3.7.1. Data coding

After the transcription of interviews was completed, the NVivo software was primarily used for the data analysis process. The coding was done in two phases. The first phase has taken an exploratory approach and was used to understand the patterns within data, irrespective of the themes in the initial conceptual framework. The data was freely explored in order to be familiarised with the issues and to understand the concepts that were potentially new and was not found during the literature review.

During the second phase, data were coded under the main concepts of the initial conceptual framework, namely post-conflict context, PCR intervention, consequences of intervention and the long-term impacts. The consequences were further categorised under four subheadings of economic, environmental, social and political. The four cases were coded separately to allow a case by case analysis and for the convenience of comparison. The new concepts identified during phase one were built-in to the above main and sub-themes when reporting and analysing the data. The examples of coding cannot be reported due to the sensitivity of data, as some data is reported without attributing to any respondent in the results chapter. Screenshots from the NVivo analysis are provided in the figures below to provide an understanding of the nature of the analysis.

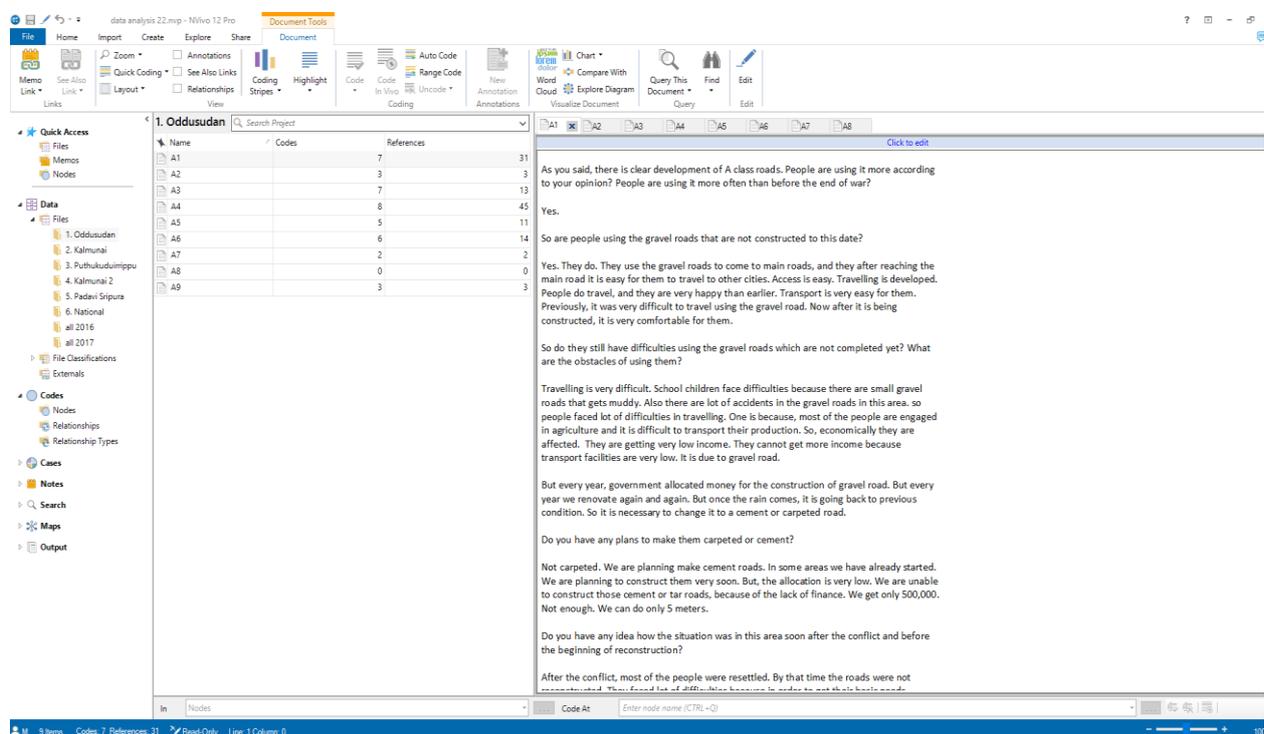


Figure 3.3 – Organising the interviews for data analysis (NVivo software)

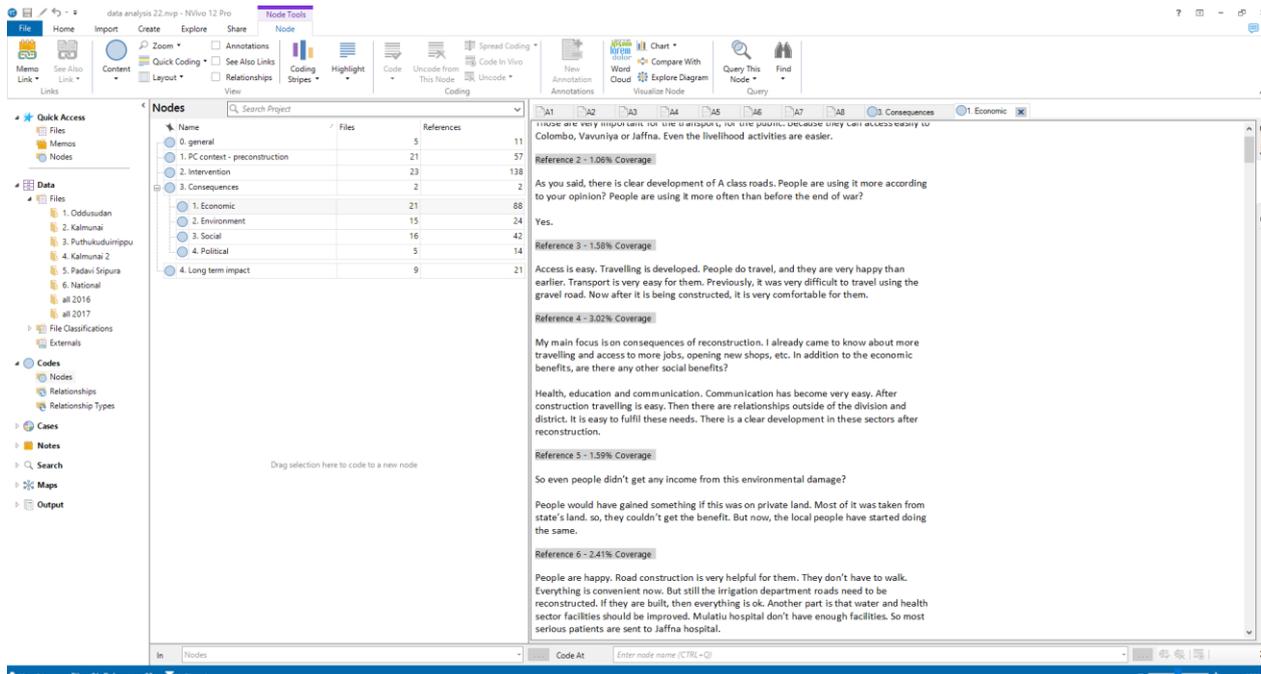


Figure 3.4 - Nodes used for coding (NVivo software)

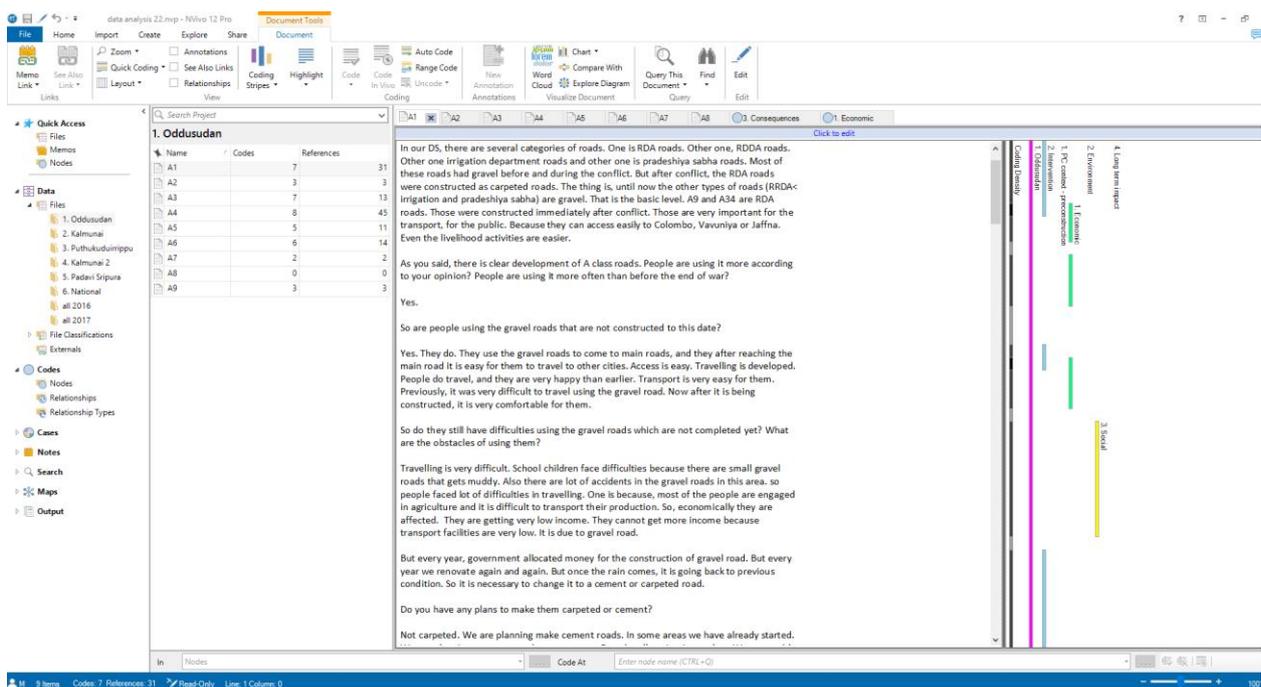


Figure 3.5 - Coding stripes within the interviews (NVivo software)

3.7.2. Reporting the results and analysis

From the 30 interviews originally selected and coded for the study, 25 were selected for the reporting and analysis purposes in order to avoid replication and for easy reporting of data. The analysis with 30 interviews was also unrealistic to achieve within the time frame of the

study, and the selected number of 25 interviews were deemed adequate for obtaining the findings. The quantity of data within each interview was large and it was necessary to leave out some of the interviews. The exclusion criteria were repetition and relevance of the information given by the participants. Accordingly, A10, A11, A12, B7 were left out from data analysis. Already a large amount of data was available from the case interviews, and most of the information was repetitive from the four that were left out. N7 was left out from the KIIs, as it was deemed largely irrelevant for the context of post-conflict road infrastructure. The details of the 25 respondents selected for the study are given in Table 4.1 in the results chapter, together with the codes used to report the results.

The results are reported under each case; four DSs and national case. The four main concepts used for coding were used for reporting purposes, as well as the four subheadings of the consequences section. The results are organised under each of these headings and subheadings, to highlight the themes, concepts and issues. The examples from the interviews are used as evidence in appropriate places to verify the results. Some of the results are presented without attributing to any individual respondent, due to political sensitivity and to eliminate any chances of identifying the data with the respondents.

The findings presented with the evidence in the results chapter are analysed in the discussion chapter using the thematic analysis method. According to Braun and Clarke (2006) thematic analysis is a theoretically flexible method of analysing qualitative data, and therefore, was deemed useful in building the framework based on common themes and issues. The patterns were identified within the data and reported in details, in order to describe various aspects within each main and sub-concept. The evidence from cases is pooled together under each main and subheading to discuss their significance with respect to theory from previous research and to highlight the findings. The issues are also analysed in relation to the bigger context, and how each of them is linked to several other concepts within the analysis.

3.7.3. Building the analytical framework

Based on the above qualitative analysis, the conceptual framework developed through the literature review was further modified and extended. The construction of the framework through case studies carried a large weight in the whole research process, and it covered the third objective of the research; to develop an analytical framework to represent the potential consequences of PCR interventions and their linkages, focusing on road infrastructure reconstruction. All together five frameworks are developed and presented in chapter five. For each main section, a framework was developed considering the main concepts, sub-concepts and their linkages to other concepts. Thus, subsections are presented in details in four

frameworks. The main framework is developed summarising those four frameworks, and highlighting the linkages between the four main components.

3.7.4. Reliability and validity of data

Reliability is ensuring that the findings of the research are free from error as much as possible. The lesser the probability of error in findings the more they are reliable (Muijs, 2004). Noble and Smith (2015) suggest that qualitative researchers can use a number of strategies to ensure the reliability of the findings such as accounting for personal biases, acknowledging for biases, record keeping, establishing comparisons, engaging with previous research and triangulation. The researcher has followed some of these strategies to ensure the credibility of the findings. The researcher's personal biases such as being a Sri Lankan, sensitivity towards conflict-related issues, ethnic identity, political ideologies and personal sympathies were identified at the outset of the research. The awareness of the biases and consciously checking for biases throughout the data analysis and writing were adopted as strategies to minimise biases. The researcher has kept records of the decision taken during the interpretation of data in a dedicated journal and kept track of the nature of interpretation to ensure consistency. Throughout the analysis, the references were made to previous research, conceptual framework (chapter 2) and the other findings of the literature review. The findings were analysed against the previous research concepts.

Triangulation is defined as the use of more than one approach to confirm the findings of the study. It increases the confidence and the credibility of the findings (Heale & Forbes, 2013). The researcher included documentary and other sources of published evidence to confirm the points made in the discussion as a method of triangulation. Validity is the precision in which the findings reflect the data accurately (Noble & Smith, 2015). In other words, testing whether the researcher has measured what was planned to be measured through the study (Muijs, 2004). Use of KIIs by the researcher, in addition to case study participants, can be considered to have strengthened the validity of the findings of this research. Peer debriefings and expert consultations were used throughout the study period as methods to ensure validity. The changes were made to the findings. The final analytical framework was based on the input from validation processes, as much as from the interview findings.

3.7.5. Generalisability

Generalisability is the ability to transfer the findings of research to other settings and apply them in similar contexts (Noble & Smith, 2015). According to Muijs (2004) generalisability is the extent to which the findings that are relevant to the sample can be applied to the wider population to which the sample belongs. The framework introduced through this thesis is

based on the road infrastructure in post-conflict Sri Lanka, and the researcher acknowledges the limited capacity of generalisability of the research findings. However, there is a potential for improving the analytical framework introduced in the study to be applied in post-conflict road infrastructure settings in other countries. The researcher also suggests that the framework could be tested in other types of infrastructure in Sri Lanka as a future study.

Snowden and Martin (2011) states that the constructivist approach and case study strategy are two important tools that help the generalisability of qualitative research. Using both these as a part of the research design of this study has hence contributed to the generalisability of the findings. Dealing with data in an in-depth manner and paying attention to detail through interview quotations and background descriptions can also enhance the generalisability of qualitative research (Labuschagne, 2003). To bring out a finding, each evidence is analysed by the researcher in-depth and in-detail, while making linkages between the evidence and other findings. The rich and contextualised nature of the evidence and the related concepts were used to increase the wider understanding and the generalisability of the findings.

3.8. Summary

During the first year, the literature review that was relevant to identifying the context and background of the research was completed, and the literature related to consequences of post-conflict reconstruction and transport infrastructure construction were also analysed. It also involved a process of identifying and categorizing the consequences to be included in the conceptual analytical framework. Together with these consequences, the tools currently used in analysing consequences were also be identified and categorized. At the first-year progression panel, the findings of the initial literature review were presented together with the detailed research question, research aims and objectives, and a methodology section.

During the first half of the second year, the initial conceptual framework on analysing PCR consequences was developed based on the findings of the literature review. The framework was refined and altered during several stages of this process. The objectives and methodology were further improved after the construction of the framework. The data collection tools were developed based on the conceptual framework, and the preparations for the pilot phase of data collection also took place. Several unexpected practical circumstances were encountered during the period of the pilot phase in Sri Lanka. Therefore, it was necessary to invest time in changing some of the elements within the case study design, and refining the methodology section. With the renewed research design, data collection was carried out in Colombo and other selected areas in Sri Lanka, between March and April of 2017. The data was analysed after returning to United Kingdom and the framework was refined using the thematic analysis

method. The analysis and the framework were validated through documentary evidence and expert interviews.

4. Results

4.1. Introduction

The results of the data analysis are reported in chapter four, under each of the cases. Initially, the respondents' profiles and the coding used in reporting the resulting are presented in a table, to be used as a guidance tool to identify the background of each respondent. The results of the data analysis prepared using the NVivo software are presented under four cases in the sections that followed. The results are reported under the main and sub-concepts identified through the conceptual framework. The new issues were identified under each of the concepts and were supported by evidence from data analysis. The analysis and the findings discussed in chapter five are based on the results presented in this chapter. Since the results are presented under each case, the apparent repetition was unavoidable. However, in the analysis chapter, these four cases are brought together and evidence from each case is used to provide the arguments. It was necessary to distinguish the cases separately in this chapter in order to facilitate the analysis process and allow for comparison between the cases.

4.2. Coding of respondents and their profiles

Table 4.1 below gives the details of the participants used for the case study analysis from each DS division, and the details of the KIIs. A code was used to identify each participant so that the reader can refer back to the table when going through the chapter and understand the background of the participant. However, some excerpts are quoted in this chapter as "identity preserved". This is used when highly sensitive information is given by the participant. It is used as a method of completely protecting the identity of the interviewee and ensure that no one can trace back through the given details.

Table 4.1 - Respondents' profiles and the coding used in reporting the results

Case name	code	Respondent's profile
Oddusudan	A1	Father and deputy principal of Tamil school (Tamil Male). Was born and lives in Jaffna, and taught in different schools in war-affected areas. He has been teaching in this particular school for 2 years.
	A2	DS office engineer on road construction and maintenance under the DS division (Tamil Male). Has been living and serving in the war-affected areas, and been attached to the DS for one year.

	A3	DS office Assistant engineer (Tamil Male). Works under the main engineer in road construction and maintenance.
	A4	Member of community welfare society (Tamil Male). Elderly male, a father of two daughters and his wife has passed away. Used to be a farmer. Now lives on daily manual labour. Lived in the area since his birth, but moved to a different land after conflict.
	A5	Member of community welfare society (Sinhalese Male). Elderly male, living with his wife and autistic daughter. Was living in the area since birth, but moved away due to severe conflict. Now resettled in a different land.
	A6	RDA Engineer - Mulatiu District Maintenance division of RDA (Tamil Male). Has been serving in the RDA local office for 3 years, which is attached to the government and the Ministry of Highways.
	A7	Technical officer, Mulatiu District maintenance division of RDA (Tamil Male). Has been serving in the RDA local office for 2 years.
	A8	Forest officer (Sinhalese Male). Have been serving in the area within Oddusudan (Mankulam – Kokavil) since 2014.
	A9	Member of community welfare society (Tamil Female). Came to live in this area in 2005 from Kilinochchi. Left during the large stages of the war and lived in refugee camps, and came back after the war and resettled in 2010. Mother of 2 sons and 1 daughter. Husband works in Qatar.
Kalmunai	B1	Consultant of an international NGO (Muslim Male). Works in projects, dealing with both political and administrative figures, and the community. Was born and lives in Maradamunai, Kalmunai.
	B2	Deputy principal of a Muslim Girls' School in Kalmunai (urban) (Muslim Female). Was born in Kalmunai and lived her whole life in the area.
	B3	The principal of a Muslim boys' school in Kalmunai (urban) (Muslim Male), Lives in Kalmunai. A community religious leader in Maradamunai.
	B4	A senior officer at the Divisional Secretariat of Kalmunai Muslim division (Muslim Male). Working in the office since 2015. "Under Kamunai municipal council, there are 3 divisional secretaries – Kalmunai Muslim, Kalmunai Tamil and Sainadamadu. This is the Kalmunai Muslim division".

	B5	The principal of a mixed school in within Kalmunai DS -rural (Muslim Female). Been working in the position for the last 15 years, and was the head of the primary section of the same school before that. Lived all her life in the area.
	B6	A senior officer in the education sector in Samanthurai and Maradamunai (Muslim male). Lives in Maradamunai, Kalmunai.
Padavi Sripura	C1	Grama Niladari (village admin officer) of one of the villages within Padavi Sripura DS (Sinhalese male). Living in the area his whole life
	C2	Upa sabapathi – A senior officer of a local council (Sinhalese male). Local to the area
	C3	The principle of a mixed school within the Padavi Sripura DS (Sinhalese Male). Serving and living in the area for 19 years. He first arrived in Padavi Sripura as a teacher in 1997 and became the principal of the school in 2007.
	C4	A Teacher/ Wise principle of a mixed school within the Padavi Sripura DS (Sinhalese female). Came to live in the area after her marriage and lived there for nearly 25 years.
KIIs	N1	An engineer for RDA -NRCP from Jaffna to Kites (Tamil female) Involved in the NRCP project from Dec 2013 to April 2015 (in the project area)
	N2	An officer at RDA, Environmental and social impact Assessment Unit (Sinhalese female) Worked in the projects handled by RDA from prior to construction till after completion
	N3	An executive-level officer of the Sri Lankan branch of an international multilateral donor agency (Sinhalese Male), involved in PCR road projects in both Northern and Eastern provinces
	N4	An executive-level officer of the provincial component of NRCP project (Sinhalese Male), Was involved in planning, delivering and implementing the provincial road projects in post-conflict areas, based in both Colombo and war-affected regions
	N5	A senior lecturer in transport economics (Sinhalese Male), Involved in research related to transport infrastructure and a policy advisor
	N6	A lecturer in transport and logistics management (Tamil Male), Expert in engineering and transport management, Originally from Jaffna, lives and works in Colombo

4.3. Case A – Oddusudan DS division

In this section, the data obtained from the interview participants of the case study A, Oddusudan DS division are presented. After giving a general introduction to the area, the situation before the reconstruction started is discussed using the evidence from interviews. The nature of road infrastructure reconstruction within the area was then presented as it was viewed by the participants. The consequences of that intervention are presented in the next section dividing them between four main categories. Finally, the participants' perception of long-term results of the intervention and consequences are discussed drawing from the evidence.

4.3.1. General

The Oddusudan DS division is located in the Mullaitivu district, of the Northern Province of Sri Lanka, and as per table 3.2, majority of the people living in the area are of Tamil ethnic origin. There are twenty seven GN divisions (village administrative units) within the DS division (Ministry of Home Affairs, 2020c). According to A1 and A3, Oddusudan is positioned in a geographically advantageous location, in the middle of the Northern Province and can be easily adopted as an access point to all the cities in the North. A1 also mentioned that the previous government planned to establish an economic centre in Oddusudan, but it was later shifted to Kilinochchi area. Low population, poverty and lack of livelihood opportunities were highlighted by all respondents as barriers to local development.

4.3.2. Post conflict/ preconstruction context

According to all respondents, Oddusudan DS division was severally affected during the last stages of the war, and therefore the roads were completely damaged by the time of the end of war in 2009. Before the end of the war, the area was under the control of LTTE for the most part of the conflict, and therefore, the usual developments that took place in other parts of the country never reached these areas.

4.3.2.1. Condition of roads

According to A1, A2, A4, A5, A6 and A8 roads were either made with gravel or were made before the conflict, and never reconstructed for the whole period of conflict. All the roads were in poor conditions making travelling difficult for people and causing health problems for daily travellers.

“You can ask the principal of this school and he shared his experience with me. For 30 years he has been a teacher and used to travel when the road was not in good condition. He has back pain from all that”- A1

However, A1 mentioned that the Liberation Tigers of Tamil Eelam (LTTE) have widened and built roads during the time of its ruling the area. Although after the conflict these roads were in poor condition mostly due to destruction caused by military operations, some respondents made it clear that LTTE was making an effort to maintain public services including roads.

“When LTTE was here, the main road was widened, and people built their houses interior to the road. So, there was no problem. They have already widened the town road”- A1

A4, A5 and A9 claimed that, the main road connecting the Northern Province with south, which passes through the DS, as completely destroyed during the war and there were no roads to reach the houses for a while even after settlements. A canal that runs near used to flood the main road making it completely unfriendly for travel. Some of the areas where people were resettled represented by A4, A5 and A9, were completely flooded during rainy season due to the overflowing of the canal.

According to A2, A3, A5, A6 and A8, passenger and goods transport were difficult, and people travelled less to nearer cities. It also acted as a barrier to access goods and services in cities and to bring supplies from other cities. All community respondents confirmed that, depending on the time of the year, it took about 3 to 4 hours to reach Jaffna using personal modes of transport and even longer by public transport. People faced difficulties even when accessing basic needs such as food, clothing and fertilisers for cultivation.

4.3.2.2. IDPs, resettlement and housing

All respondents confirmed that the road construction was started soon after the end of the conflict, and before building houses and finishing resettlement. Therefore, the housing construction and resettlement were taking place at the same time as road reconstruction. According to A1, A4, A5, A7 and A9, most people either lived in camps for internally displaced persons (IDPs) or were in the process of resettlement. A6, who is an engineer working for RDA, stated that the resettlement of IDPs in northern province finished in 2013, while the reconstruction of roads started in 2009 and carried out until today. He further claimed that those people who escaped to India and other nearby countries are gradually coming back to claim their lands, and were being resettled even during the time of the data collection.

4.3.2.3. Housing

Both A1 and A6 indicated that housing schemes were undertaken by both government and private sector actors to speed up the resettlement process. For some, the houses were constructed under these schemes whereas for others a fixed amount of money was given to build houses. According to A1, A4, A5 and A9, as soon as they were released from IDP camps, people started living in temporary houses and some started their cultivation. A6 and A7 claimed that people used footpaths and were faced with difficulties including snake attacks, which has become quite common. Even in emergencies like snake attacks or sudden health issues, it was difficult to get to hospitals due to lack of transport facilities and especially the unavailability of roads. Elderly people or women in labour had to be carried by several people by foot until a main road is reached, and even then, finding a vehicle from the main road to the hospital was challenging.

According to A1, People were settled back in the areas cleared of land mines, and not occupied by the military. A4, A5 and A9 Some people who lived and farmed in the permit lands of government before, were now resettled in different places where often they do not own the adequate land for cultivation.

A1, A6 and A7 said that the houses, both new and old, were built interior to the road, making it easier for constructors to acquire lands for road construction. The people were supportive of the construction and welcomed the new initiatives by the government to bring in development to the area.

4.3.2.4. Livelihoods and development

As mentioned before, all the respondents confirmed that the Oddusudan area was completely destroyed during the final stages of the war. A1, A2, A3 and A7m explained how as a result people who returned and resettled were left with nothing to restart their livelihoods. For a considerable period, they relied on government and NGO assistance for everything including food and clothing. A 1 and A2 also said that the support had to be provided to restart the livelihoods such as paddy farming and fishing.

“Almost 30 years, this area has been under LTTE control. In everything including communication, transport, education, people faced difficulties. They were exploited. After the conflict, now they feel freedom for the first time” - A2

During the period of war, some people were dependent on illegal activities such as cutting and selling trees from the forests as explained by A1 and A8. Some people occupied the

forest land for cultivation and cleared trees for paddy fields. A1, A6 and A7 stated that all these activities were stopped after the conflict, and most people who had illegally cultivated in the forest area were not able to continue after the war. A4, A5 and A9 complained that some of them were given little plots of land to cultivate and very little livelihood support.

All correspondents spoke of poverty prevailed in the area. Due to the destruction caused by the war and the new forms of lives presented to them after the conflict, most people were faced with severe poverty soon after the conflict which continues to this day. A1, A4, A5 and A7 mentioned that the primary mode of livelihood being agriculture and livestock farming, a main necessity for people is the land. Due to the lack of land, many were forced to rely on government support. A9 also said that, like her husband, some who relied on farming previously have opted to work abroad, especially in middle eastern countries, in order to support their families.

All local respondents mentioned that, although people were suffering from severe poverty and trauma from war, they were thankful for the end of the war and hopeful about the future. A1, A2, A6 and A7 said that during any reconstruction or development process, most gave their fullest support by working cooperatively with the government sector and welcomed any new interventions.

“The problems we have now are very less and almost nothing compared to what we faced during wartime. Facing the war during the final battle was the greatest hardship we had in our lives. Other problems that came after are not so critical when compared with the problem of war. We faced lot of difficulties during last 2 years of war” – A9

4.3.2.5. Forest, environment

A1 and A7 said that people have entered the forests especially for paddy farming and cattle feeding, before the end of the conflict. According to A1, A7 and A9, some people lived in the permit lands that belonged to the forest, so that they can easily access their paddy lands. Local correspondents said that this was not understood to be illegal by themselves or by LTTE carders, as there was no government rule in the area during the conflict. A1 and A8 mentioned that there was almost no industrial activity, and most of the agriculture was labour intensive making it less harming for the environment. Although, there were illegal tree cutting and logging, according to A8 this business was limited to the area due to lack of transportation and the scale of the destruction was small. On the other hand, some of the forests was controlled and denied access by the LTTE and they had strict regulations about the number of trees that can be cut.

“To be honest, during the LTTE time there was no significant forest destruction. It was only after the war, all these destructions started. LTTE had strict rules regarding the protection of forest, because their safety depends on forest. They protected the forest” – A8

4.3.2.6. Military presence

The military forces were present in all areas as expressed by A1, A4, A5, A7 and A9. According to A1 and A9, the military camps were built during and after the war acquiring large spaces of land that legally belonged to the government, but was occupied by the people before the end of the war. A1 also mentioned that clearing of land mines was continued, while the reconstruction was undertaken in the cleared areas where nothing but destroyed structures were visible. According to some respondents, whose identity is preserved, in some areas, the gravel roads were constructed only to reach the military bases or camps. The camps were fully established within government lands before starting the process of resettlement of people.

4.3.3. Nature of road infrastructure intervention

4.3.3.1. Physical construction

All respondents said that most main roads (A and B classes) in the area, which were mainly gravel before reconstruction, were carpeted during reconstruction immediately after the conflict. According to local government officers, the main roads under RDA that cover Oddusudan DS are A9 and A34. They were constructed either by the government or an organisation appointed by the government. According to A6 and A7, the reconstruction commenced in 2010, allowing only a small period to clear the debris and to remove the land mines after the conflict. They also said that the reconstruction continues until now, with continuous government intervention and budgetary allocations to maintain the main roads in a usable condition. There local RDA offices were established to deal with the maintenance of main roads, both periodic and seasonal. A6 mentioned that the local office is given an allocation at the beginning of the year for maintenance, and additional funds are allocated in case of damage from natural disasters.

Local respondents complained that the government has initially focused more on the reconstruction of main roads rather than the interior ones. Some of the respondents attributed the quick construction of main roads largely to the need of the government of providing transport for military purposes.

"Some roads are still not constructed because they are not used for military transport, and they are not located near the military camps. But all the main roads were constructed soon after the road to an extent that you cannot even realise there was a violent war taking place here before" – identity preserved.

According to the explanations given by A2, A3, A6 and A7, while the funds for main roads are allocated through the ministry of transport to RDA, the interior roads come under the ministry of local governments and provincial councils, and the funds are approved as a lump sum for the local authority. The local officials have to decide how the funds are allocated among different needs within the area.

A1 and A4 stated that, since the construction started from the main roads, the reconstruction of rural roads (C, D and irrigation roads) brought into attention much later in time. The local community representatives said that, after the initial construction of main roads, the spreading of construction to sub and rural roads was very slow. Some are constructed, and some are not. According to A1, A4, A5 and A9 Most of the interior roads in the area are still gravel roads, which are affected by normal weather conditions and become unsuitable for use. However, A2 and A3 mention that the funds are allocated through the DS office to maintain and reconstruct the gravel road every year. This deemed as unsustainable by local officers as the gravel roads are washed away by rains every year, and return to previous conditions. Even up to the point of field visits, the interior roads were in poor condition and mostly not suitable for frequent travelling.

"Main roads are good, but sub roads are not good. We cannot go anywhere at all during rain times. During rains, this soil starts releasing spring water from the ground. It keeps the ground moist and watery all the time. Since the road is not carpeted, there is only gravel, and the whole road becomes a muddy river. The whole of this area gets flooded. That includes the road" A9

According to A4, A5 and A9, the above-mentioned flooding near the main road, is also caused by the elevation of the main road, and the interior roads being in the lower ground. They claim that the canal is also filled with dirt and blocked, and not maintained by the department of irrigation. While building the interior road is essential for them, the construction of the canal and its proper maintenance is also needed to prevent flooding. They also mentioned that the lake to which the canal takes its water is also not maintained, causing more floods in the area.

"This area gets under the water during rains. It is better to build the road and the bridge. We are using a temporary bridge now. That bridge gets covered with water during rain. The officers keep saying the money has been passed. Even last year, when the rains came

and the whole road is flooded, they said the budget is passed and will concrete the road. But now, they are saying they are going to build next year. The bridge and culvert are built by the village people a while ago. But still, the water level rises above the bridge” A4

However, the local government officers have expressed their plans of constructing the interior roads as cement/concrete roads. According to them, this process has already started in other areas of the country, and the Oddusudan DS is waiting for the funds to start. Given the low amount of funds allocated for all the activities in the DS, the local officers are forced to prioritise according to the needs of the community. Also due to constant floods and droughts, the local funds are used in disaster relief every year, making it difficult to start any new development projects. As a result, the only alternative they are left with is to renovate the road with gravel each year, using the amount of Rs. 500,000 allocated for rural road development. They also mentioned that there are two main irrigation tanks in the area and a considerable number of roads that should be built and maintained by the department of irrigation. These are all gravel roads, and mostly in poor conditions as also confirmed by the local respondents. They get very muddy during the rainy season, blocking people from accessing the main road as well as other facilities in the village.

4.3.3.2. Political influence

The DS is a local authority that comes under the local government (figure 3.2). However, according to A1, A3 and A6, the local elections were not conducted to elect representatives to municipal councils and therefore, political parties are not represented in the local government. According to some local respondents, the local government is not functioning effectively due to not having any pressure from the community. Therefore, the local level politicians do not play a significant role in securing funds for the needs of the local community. A2 and A3 mentioned that there are plans to construct the interior roads using these funds, but the process is extremely slow according to local officers. The local community representatives who participated in interviews are also aware of the fact, that the slow progression of reconstruction is not similar in all parts of the country, and in some post-conflict areas the reconstruction activities are almost complete. Some of the respondents believed that political leadership and intervention are needed to speed up the reconstruction process.

“They are planning to construct, and I don’t know whether other parts of the country are completed or not, because till now roads are not completed here. Politicians should take a clear idea or knowledge about these construction works. I think they are not interested.

Most of the politicians are not interfering in construction work. They are not pushing the government in the allocation of funds” – identity preserved.

According to the local authority officials, A2 and A3, the local members of parliament (MPs) are entitled to request a fixed amount of money for the development of the areas they represent. These funds are usually used for rural development, and given for the local governments. The roads that need to be reconstructed are usually selected by MPs after consulting the community representatives. However, the local community members are aware of the influence of the MPs and other political figures have on allocating funds for different purposes. And some respondents also made concerns about how funds are misused by the political figures using their power.

“But at the same time, some influence of politicians is there. Some do take advantage of funds for political reasons. We are same as south in that case” identity preserved.

Due to the slow progress of reconstruction and some roads are not being reconstructed at all, some community representative expressed their mistrust towards local politicians. The lack of political will is a common theme discussed by all respondents, and some said that their needs are not being heard. A4, A5 and A9 mentioned that nothing much has changed since the end of war except the cessation of violence.

“People come here and go just like you do. Especially during the election times. But they never come back or never solve our problems. We also often hear that budgets are approved and money has been passed to the local authority to finish the road building and do rehabilitate the canal. But we don’t know what happened to that money or what has been done with that money. Each year they come and refill the holes of the road with new gravel and it doesn’t change anything. It floods each year. So, the only solution is to carpet and build a bridge over the canal crossing” – A9.

4.3.3.3. Community participation

Almost all respondents mentioned that people from the local community were not engaged in the reconstruction process, from planning to completion. Since the construction was planned and initiated before the resettlement of people, the decisions were taken by the central government. A1, A2, A3 and A4 stated that not only the construction companies and engineers but also labour came from other areas of the country. The community representatives expressed their dissatisfaction about this and mentioned that people, in general, are not happy that they didn’t have an opportunity to participate in construction activities. A1 specifically said that it deprived them of the employment opportunities and the incomes that could have been generated as a result. A4, A5 and A9 also confirmed

that there was no public consultation before the interventions, and the construction companies and workers came into the local area without informing the community in advance. All local respondents mentioned that, during the period of construction, most of the people were in the process of settling back to their normal lives and received livelihood aids from the government. A1 and A5 added that local people who received livelihood benefits were not entitled to be employed in the construction sector. It was also mentioned by A1, A2, A5 and A6 that there was no information available to the public about the nature of construction.

“But they could have worked at least as labourers. The project contract was given to another company. But the government should have forced those companies to recruit people from this area to get them an income. But it was not done, and people were brought from other areas” – A1.

However, according to some of the government officers in the road construction sector, people were very corporative with the workers and officers who worked in the local area. When there were issues of land acquisition or trees were being cut to make way for roads, those who affected had an opportunity to discuss with the GN and divisional secretariat. People were supportive and not aggressive, as they needed the roads for the local area. When there are maintenance issues, people come to the local DS office or the RDA office to discuss the issues directly. According to A6 and A7, if the problems are minor, officers attend to them immediately and if not, the issues are put forward to head office for approval. However, some local community representatives expressed their concern about the inability of the local officers and central government to attend the quick reconstruction of inner roads, including the ones which get flooded every year.

“We cannot build the roads ourselves. We cannot give away these lands and go somewhere else. We don’t have enough money for that. it is good if someone can do something about it. Only the government can do this. But we don’t understand why they don’t attend to it and seem to ignore us” – A9.

4.3.3.4. Local employment

According to A1, A4, A5 and A9, the reconstruction intervention didn’t provide much employment to the local community. According to the local community representatives, not only the contractors and the government officers but also all the manual workers were from other areas. They were mostly Sinhalese people but also included many foreigners who looked like East Asians by origin. The local people assumed them to be Chinese, as some of the roads were constructed by Chinese companies.

"For the construction, people came mostly from the South. Our people also worked there, but a very small number. Mostly from the South, Sinhalese people came for work. The engineers and all were also mostly from the South. Some from the north, and not particularly from this area" – A1.

On the other hand, the government officers claimed that after the initial reconstruction period and during the time of data collection, they made efforts to employ local people for construction and maintenance work in the area.

"Now we are giving the contract to the rural development society or farmer's associations to rebuild local gravel roads. Therefore, the income or profit goes to that society. Money goes to the village, and public participation is there. In that way, their income is increased, they are empowered and strong. They are also getting some livelihood" A6

4.3.3.5. Deforestation/ gravel extraction

As the reconstruction started before the resettlement and way before the other government departments were established in the area, there was little control over how the road contractors and the workers carried out their activities in the area. According to A1, A7 and A8, none of the environmental authorities was in place to monitor the way the resources are being extracted during the initial stages of construction. According to the local communities and forest officer who is now operating in the area, the gravel needed for road construction was extracted from wherever the workers had access to. The gravel extraction from roadsides as well as from the forest area is a common issue discussed almost by all the local community members. A1, A4 and A9 said that due to gravel extraction, roadsides have become lower lands resulting in flooding. According to the forest officer, the contracting companies are required to obtain the approval from the Geological survey and mining bureau before extracting gravels, which has not been done by the relevant contractors. He claims that the constructors have directly excavated from the easiest possible location in order to minimise the costs of construction, they didn't have to pay anyone for gravel. On the other hand, local representatives and forest officer said that there were no efforts made to rehabilitate the areas after the extraction, leaving hazards for both people who walk next to the roads and to animals occupying the area. Forest officer also mentioned that another easy source of gravel is forest, where large holes were dug and left without rehabilitation. This has caused an enormous risk to wildlife. According to him, some of the forest areas were completely destroyed to an extent there is no room for rehabilitation. The deforestation has taken place continuously since 2010, when the initial northern development programme was launched and under which the main roads were built. This was also confirmed by A1 and A5.

“They didn’t worry where it was. If there was gravel, they just excavated and left the mess behind. This was profitable for them as they didn’t have to pay anyone for gravel” – A8
On the other hand, trees were cut along the way to make way for roads as explained by A1, A5 and A8. Some international donors have set planting alternative trees as a donor condition when providing loans for reconstruction. However, this was not been practised in the area. According to the forest officer, his team has discovered that a large number of trees being cut even before the resettlement of people. When no people were living in the area, the workers were able to acquire people’s land and cut trees without any consideration for replacement.

“And for A9 and the railway, they have taken over the lands of people as well. During those days, they have just cut the trees and taken the land, as there were no people living in the area. they didn’t have a thought on protecting the trees and environment. You cannot expect that from entrepreneurs” - A8.

4.3.4. Consequences

4.3.4.1. Economic

01. Convenience of travelling

Easy and affordable transport is one of the key changes that was brought about by road reconstruction as was emphasised by all of the respondents. All the major cities, including Jaffna, Vavuniya and even Colombo, can be accessed easily due to the construction of main roads. According to community representatives, the road trip from Oddusudan to Jaffna which took nearly 4 hours before the construction of the main A9 road, now takes less than 2 hours, resulting in time savings and thereby allowing more productivity for those who travel regularly. A1, A4 and A5 mentioned that even during peaceful periods after the war, people didn’t use the roads due to poor condition and damage to vehicles. A1, A2, A3 and A7 said that people are using the roads more frequently and start using their vehicles, due to less damage from the new roads.

“There is no problem with travelling and no restrictions. Free movement is there. That is not a problem. The people are using the facilities than they used to” - A1

02. Main roads

Although most of the roads inner roads are gravel, it was mentioned that people still use the gravel roads to reach the main roads. All respondents appreciated the successful completion of main roads. A1, A2, A6 and A7 state that as a result, access to different kinds of goods and services has become easier. They also mentioned that the livelihood

activities have improved due to access to markets for materials as well as for production. A1 and A7 said that several small-scale businesses were started by the people in the local area. Community representatives claim that people are engaging in more agricultural activities in order to increase their production and reach bigger markets in other cities. People receive fertiliser subsidies and other forms of support for agriculture activities, which are managed by the local governments. However, there are almost no new visible investments taking place within the area according to the local community members. A1 and A9 mentioned that there is more tendency for people to move out of the local area, rather than initiating new businesses.

"I don't know in terms of economic benefits. Maybe due to low population, there are not many initiatives by the people. They like to stick to their lifestyle. It is same with children's education. There is not much effort. The attitude is lacking. So, we need some time for people to understand the need for improvement" – A1

03. Access to goods, services and markets

A1, A2, A3 and A6 claim that due to the ease of transport, other services of government and private sector have reached out to the area, including public transport, banking and telecommunication. A1 and A7 specifically mentioned that the housing reconstruction by the government has also taken a new turn after the main roads were constructed, as it was easier to transport the material from other areas. As of the time of data collection, all the people were resettled in the area and most of the houses built by the government were nearing completion (A3 and A6). A1, A6 and A7 claimed that the construction industry also received a small boom, and people are adding extensions to their houses and making new buildings for small businesses. A1 also said that some people are engaged in fishing, and it is common for people to engage in more than one livelihood activity.

04. Accidents

However, the number of accidents has increased since the reconstruction of the main roads as claimed by all community representatives. According to A1, during the very first few years after construction, the accidents were so high that there was one almost every week. Although the rate of accidents is decreasing at present, they believe the frequency is still higher than most of the areas in the south.

05. Health

Indirect benefits such as improvement in health and education sectors were also mentioned by the respondents such as A1, A6 and A7. According to all respondents,

difficulty in accessing hospitals and other medical services was a major issue people faced by local people during and after the war. A6 and A7 claimed that after the reconstruction of roads, there is more access to hospitals in the local areas as well as in other close by cities. However, according to A4, A5 and A9, people who live in inner villages still face difficulties in accessing hospitals as they have to pass through the incomplete gravel roads in order to reach the main road.

06. Improvement in education

A1 claimed that the education sector has benefitted from the road construction as more teachers were able to travel from other areas to schools in Oddusudan division. He also mentioned that the school system was properly established in the area after the war and there were not many qualified educators in living in the area. A1, A6 and A7 said that the teachers employed in the schools came almost entirely from other cities, especially from Jaffna. According to A1, students also have the opportunity to move between schools either in other villages or in cities. They can travel to other areas for private lessons and higher education institutions. They also temporarily live in other areas for education and visit their families during weekends or holidays. However, A1, A5 and A6 stated that the lack of facilities has encouraged the people to move out of the Oddusudan area to other cities, and visit families occasionally. For the same reason, the human resources for education are drawn in from other areas rather than generating them within the villages.

07. Incomplete inner roads

As mentioned earlier, all respondents confirmed that the inner rural roads were not completely built and most of them were gravel. Contrary to the impact of main roads, A1, A4, A5 and A9 claimed that the lack of facilities inside the villages has caused to slow down economic activities including education and trade. A2, A3 and A9 said that the children are unable to go to school during rainy days as the roads get flooded. A2, A4 and A5 discussed how farmers face difficulties in selling their products and accessing the markets due to lack of facilities to carry their production from their lands to the main roads, where they can travel to different cities to sell their products.

“School children face difficulties because there are small gravel roads that gets muddy. Also, there are a lot of accidents on the gravel roads in this area. So, people face several difficulties in travelling. One is because most of the people are engaged in agriculture and it is difficult to transport their production. So, economically they are affected. They are getting very low income. They cannot get more income because the transport facilities are very low. It is due to the gravel road” – A2.

08. Employment

As discussed under the nature of the intervention, local representatives, A2 and A3 mentioned that the reconstruction process didn't provide many employment opportunities for local people. As a result, no income was generated during the reconstruction process. Community representatives view it as a missed opportunity to better the living conditions of people. Furthermore, according to A2 and A8, the exploitation of local resources such as extracting gravel and cutting trees were done without the knowledge of the community, and no income was locally generated or compensation was paid for these resources.

"People would have gained something if this (environmental exploitation) was on private land. Most of it was taken from the state's land. so, they couldn't get the benefit. But now, the local people have started doing the same"- A2

However, a contradictory explanation was given by the local representative of RDA when asked about the lack of employment provision on the construction sector. According to him, people are not willing to work in the road reconstruction sector due to their engagement in other livelihood activities.

"Local people are not willing to be employed in project work. They like self-employment better than that. Earnings for self-employment is higher – in businesses, fishing and farming. They are not interested in government work. Once the reconstruction is done, there are more prospects to develop their own business. They have built and opened many new shops. Farming is very established. They come to project work as a second livelihood, only when they are free from their main livelihood in self-employment" – A7

4.3.4.2. Environmental

01. Tree cutting for road reconstruction

Most of the respondents discussed the vast environmental damage brought about by the road reconstruction process, and some of them were deemed to be legal. Few respondents whose identities are preserved explained that the widening of roads has resulted in a large number of trees been cut and also gravel extraction in the local area which was mostly done by contractors under the supervision of government officers. The officer at the forestry department also confirmed that tree cutting was taking place at a large scale during the initial stages of construction. According to him, the forest department was not established in the Mullaitivu district until after the initial construction period. Therefore, the contractors and the workers had much freedom to carry out tree cutting without any

supervision. However, the officials at the RDA deny the allegations made by the public about cutting trees during the reconstruction period and that they had a strict donor policy of planting ten trees when a single tree is cut. According to them, the environment was preserved and trees were planted to compensate the ones that were cut. Nevertheless, the community representatives claim that a large number of trees were cut and sold for timber by the contractors while making the roads.

02. Illegal logging

According to A1 and A8, at present most of the logging is done illegally in the forest areas where the general public cannot access.

“Actually, we don’t know much about what is happening inside. When you go along this road to Kokavil, there is non-accessible area. And we don’t know what is happening there and nobody seems to know. How much land they have, the trees they cut, what other resources are there – we know nothing. We only know that there is a path to go inside” – A1

A1 and A8 said that easy and quick transport facilitates the illegal logging and allow the logs to be transported out of the area before the forest officers could catch them. According to A8, the trees are normally cut from the outer circles of the forest for quick access to vehicles. By the time the officers reach the relevant place, the traders have gone from the area. The forest officers often seek the support of the local security forces and police to locate the places and catch the loggers on spot. Yet, the logging continues whenever the loggers see a potential opportunity. A1, A4 and A5 claim that sometimes local people engage in illegal logging to use the timber in the construction of their own houses. It was revealed that the allocation given to households to build houses was barely adequate, and people try to find alternative ways of supplying their material including timber. The road construction made way to local timber traders to cut trees and transport them quickly to be sold to households at a cheaper price.

03. Gravel extraction

As mentioned earlier, gravel extraction from forest areas was a common practice during the reconstruction period which was explained by both forest officer and community representatives. A1 and A8 stated that Mullaitivu district is a resource-rich area, where sand, gravel and metal can be extracted locally. They also said that the district even has the capacity to export these materials to other areas. The community members mentioned that gravel extraction has affected the local area and was left without rehabilitation. The quarries made by gravel pits get filled with water during the rainy season, and holes re-appear during the dry season. According to A8, there is also a metal quarry that was

established recently and metal is transported to other areas. Most respondents expressed their concern that the local environment keeps deteriorating due to the industrial level activities and metal extraction.

04. Wildlife and biodiversity

According to all community representatives and some government officers, local wildlife, the biodiversity of plants and animals, and the water resources are being adversely affected. A1 said that the public often complains to local authorities about lack of water, and A8 mentioned that cutting trees has drained out the water resources in the forest. Forest is also polluted due to logging, and the lack of drinking water has affected the wellbeing of wildlife and plants. A1, A5 and A8 mentioned the issue of wild elephants coming into the villages for food and water, as the forest resources are not adequate to sustain the elephant population. The elephant human conflict has become increasingly difficult for people to carry out their daily activities, and there were several incidences of people being attacked by wild elephants. According to A4 and A5, agriculture cultivation and harvest are also destroyed by elephants. On the other hand, A8 described that elephants also face the problems of falling into large gravel pits that were not rehabilitated. Although the community members are not aware of elephant deaths caused by gravel pits, the forest officer acknowledged that wildlife authority had to intervene to rescue the elephants who have fallen into the pits. However, according to A8, a positive outcome of gravel extraction is that some of the large pits are capable of collecting water during the rainy season. Most of the wildlife rely on water collected in gravel pits for drinking, even after several months into the dry season.

05. Flooding/erosion

From the conversations with the community representatives, it was derived that the unfinished roads and the gravel roads in rural areas are causing environmental impacts. A4, A5 and A8 stated flooding has caused soil erosion and destroy the agricultural cultivation. The culverts get filled with soil, causing the drainages to block. According to A1, A3, A4 and A9 flood water also have serious health implications, by polluting the drinking water sources and causes the spread of diseases.

4.3.4.3. Social

01. Brain-drain

Although the number of teachers has increased in the education sector and the transport of resources is easier, A1, A5 and A9 stated that most of the educated people do not stay within the Oddusudan area. Rather they move to other areas in pursuit of higher education or professional careers. As a result, educated community tend to live outside the area and the young people continue to travel to other areas for advanced level and university education. According to A1, this has become a vicious cycle of brain-drain, where the unavailability of the educated community within the area tend to force the next generations to move to other areas in a continuous sequence.

“That is a defect we have in this area, regarding education. Native people, when they study more, they will not stay here. They move to other places where there are more facilities. Because of the lack of interior roads, people don’t like to stay here. They leave and come home for vacation and visit their relatives and families ... There are not many educated people here. There only one or two educated people living in the area. Those one or two, if they get a good job, they will leave. Now recently, one boy got a teaching appointment. And he is also going somewhere else to teach.” – A1

02. Lack of government strategy

On the other hand, community representatives complained about the lack of government plans or strategies to retain the local resources and develop the area. According to A1 and A2, even when local people are employed in the government sector, they are not appointed to the local branches. A1, A2 and A7 mentioned that after university education, most young people leave to work in Colombo as there are not many opportunities left in the area in the private or government sector. A1 also added that for certain families whose livelihoods are based on farming and fishing, there is no adequate motivation to allow their children to continue education.

“They are mostly disordered families. And war-affected families. These people don’t know the value of education. Children, of course, realise the importance of education. And very few families only care about the children’s education. And those children are giving up education at much early stages” – A1.

03. Illegal activities

Contrary to the decrease in human resources, the illegal activities have increased in the area as mentioned by A1, A3, A5 and A8. According to A1 and A8, cutting of trees and transporting them for timber is one such common issues, and the access to main roads have made it easier to transport them quickly out of the area. Some respondents, whose identity is preserved here, suspect that the police are also behind the timber trade and they get commissions from the traders since not much effort is taken by police to stop

logging. Furthermore, the increased use of drug and alcohol use in the area, especially among the male youths, is seen as a result of new traders coming into villages using the newly available road infrastructure as highlighted by A1, A2, A3, A5 and A8. The community representatives also mentioned that increased access to phones and technology have caused unacceptable behaviour among young people.

“Young ones are increasingly getting corrupted and falling in bad lines. They are misused. They are given everything with no control. Police are not acting. They are supporting these exploiters. So, there is no peace of mind. We experience something more complicated. Earlier, in schools, we don’t find the incidence of misconduct. We had no phones and nothing of that sort. Even we had phones, there was no coverage and there were restrictions. We lived more happily without them. On our part, we don’t use them properly., and it is responsible for the fall of the society, I would say. More things are given to people, but not monitored. Facilities are given, but not the psychological support to use them. I am not supporting the war. But I am speaking about how people feel. People do think like that. and the government is not aware of this. And they have no control over it. Even now many illegal things are happening.” - Identity preserved due to political sensitivity.

04. Inter-ethnic relationships

When asked about the relationships with other ethnic communities, most respondents had nothing much to contribute. The population is mostly Tamil, and very few people visit the area from outside according to A1 and A5. A1, A4, A5 and A9 said that local tourists to visited the war scenes soon after the conflict and it has stopped after a certain period. However, according to A2, A3 and A7, due to increased transport facilities people travel to other areas such as Anuradhapura more often than they used, which helped to build relationships with Sinhalese and Muslim communities. The Sinhalese and Muslim people visit the areas for trade and other official purposes, which has contributed to improving the community relationships.

05. Difficulty in travelling on inner roads – health and education impact

When it comes to rural communities, lack of access to roads and difficulties in travelling in incomplete roads have become serious social issues as explained by A2, A4, A5 and A9. For example, when the road gets flooded during the rainy season, all the activities of affected people stop including the education of children. A4, A5 and A9 complained that they become displaced several times per year as the water flows from roads into the houses. They claimed that this has serious impacts on not only their livelihoods but also have an impact on a social and psychological level. A1 stated that these people who are

already traumatised by the war are trying to rebuild their lives, and the disturbances that occur as a result of flooding make them more vulnerable.

“In Jaffna, you should go and see the situation of the roads. They are all built very nicely and there is no difficulty for the people. Even inside the villages, you don’t find gravel roads. All are built with concrete or carpeted. It is not fair at all that they are treating us differently than from the people in Jaffna. In Jaffna, even the little roads that lead to houses are tarmacked. The same government is operating for us. Why is it not done? Why is it always delayed?” – A9.

06. Inequality

Community representatives such as A4, A5 and A9, view the inability to build inner roads as an issue of inequality rather than mere political unwillingness. They question the reasons as to why they are treated from any other community, which has become a common social concern.

4.3.4.4. Political

01. Lack of political participation

Many respondents acknowledged that political participation in the public eye is minimal, and they do not intervene in improving public infrastructure. The local government elections have not taken place in the area up until the time of data collection, and therefore, the local level politicians were not known to the public according to A1, A4 and A5. However, the local community members expressed their dissatisfaction about the political willingness to reconstruct the rural roads and their inability to influence the government decisions to speed up the construction process.

“We complained several times to ADA office, GN office, RDA office and all. But we got only temporary solutions. No one takes responsibility. People come here and go just like you do. Especially during the election times. But they never come back or never solve our problems. We cannot build the roads ourselves. We cannot give away these lands and go somewhere else. We don’t have enough money for that. It is good if someone can do something about it. Only the government can do this. But we don’t understand why they don’t attend to it and seem to ignore us” – A9.

02. Political motives/ cover-up war damage

According to one of the local respondents, there is a political motive behind completing the reconstruction of main roads, that is to cover up the fact that there was a violent

conflict taking place in the area. According to this respondent, few months into the period after the conflict, all the debris were cleared and new roads were built, that it was difficult to even imagine how the area looked like during the conflict. The local and foreign visitors to war-affected areas could see the massive development that took place in terms of road reconstruction, but no evidence of the destruction caused by the conflict. Some community members think that reconstruction of main roads was used as a main tool to tell the world the generosity of the central government and to make sure there is no evidence of violence left in the area. The lack of political will to reconstruct the inner rural roads, where almost no tourists visit, reconfirms this attitude of local people.

“But reconstruction took place to cover up things as well. You know what I mean? Just to say, nothing is there and it is all developed. It is a time to show the development ... But also, it is the way of government of showing the world that there was no war here. If it was not developed, you cannot stay in war-torn areas. That was the mind of the former president. Even in Kilinochchi, as soon as they finished the war, they started reconstruction. And after some time, they brought foreigners and said to them there is no war here. No demolition. No evidence of war. The buildings are all built and alright now. And the people in the area are doing well. That was the government’s idea” – Identity preserved due to political sensitivity

03. Favouritism

On the other hand, community representatives expressed their awareness that political representatives tend to favour the particular villages or towns they come from rather than working for the whole community they represent. The allocation of funds to the DS division and political willingness to develop the infrastructure in an area depends on personal connections of the politicians to local people.

“The members of the provincial council, Kinnaladi and Mankulam for example, there is one member of the provincial council. He is focusing on his area for development. In that situation, everybody is focused on him and he is invited to everything. If we are good with him only, we can get funding” - Identity preserved due to political sensitivity.

4.3.5. Long term impacts

4.3.5.1. Sustainable development

The development of the area was one of the long-term issues discussed by the respondents. According to A1, A2, A6 and A7, people were generally satisfied with the road reconstruction and it has eased their lives in various ways. However, most local

respondents highlighted that the difficulty of using inner roads and irrigation roads acts as a barrier to their activities. They also discussed several problems related to the availability of water and health facilities, without which any development activity seems futile to them. According to A1, A2 and A3, the local hospitals are not adequately equipped, that serious patients have to be always transferred to other cities. The local respondents cannot talk about any rapid development activities resulting from road reconstruction, and some said that they believe the development will unfold slowly over the next few years. However, with the educated people leaving the local areas, some respondents like A1 and A3 are doubtful of the local development. A1 also mentioned that the population is also low in the area, and likely to decrease, and as a result, new businesses and outside investors are unlikely to move to the area. Most of the respondents mention that government should intervene in promoting investments and developing all sectors of infrastructure, rather than merely focusing on roads. They also highlighted that other facilities such as water and electricity should also be developed as much as roads so that investors are encouraged to undertake new businesses. According to local representatives, the previous government Under Mahinda Rajapakshe, which was in power until 2015 had planned on developing the area and was working towards bringing more opportunities to the villages, although their main concern was road reconstruction. However, they added that with the collapse of the Rajapakshe government and the new government coming into power, most of the development work, including the road construction, were being halted.

4.3.5.2. Environment

Another long-term impact discussed by respondents is on the environment caused by gravel extraction and logging. According to A1 and A8, the impact on soil, water sources, balance in biodiversity and wildlife populations is quite significant, and the community members stated that these impacts are going to ultimately affect the wellbeing of the people. On the other hand, A1, A8 and A9 said that no action is taken to rehabilitate the destroyed natural resources, and in addition, new industries such as metal extraction have started in the area. The corruption within the police, which was mentioned by some respondents whose identity is preserved, is likely to encourage the illegal activities in the future. However, A8 mentioned that the forest officers operating in the area are planning to put an end to illegal logging with the help of government officers and security forces.

4.3.5.3. Flooding – environment, social, economic impacts

Flooding is also likely to create long-term environmental impacts in terms of reducing the fertility of the soil, and continuing soil erosion as explained by A4, A5 and A9. At the same time, A1 and A9 said that it also has an impact on the education of children and wellbeing

of the community as a whole, resulting in long term social and health issues. Due to the fact that some roads are not constructed, and rural communities face a number of difficulties in travelling, the community representatives have expressed a mistrust towards the central and local governments. They directly mentioned that they no longer believe in political promises or a potential change in life that local politicians can bring about in order to better their lives. On the other hand, representatives expressed their awareness of the facilities available in other parts of the country, and how other areas are developed. They compared their own situation with other communities and mentioned that they are facing discrimination. These mentions about inequality are not essentially based on ethnic grounds but rather based on the areas they live in. According to A1, people often travel to Jaffna and have direct relationships with the people in Jaffna, where again the majority of the population is Tamil. However, the respondents stated that facilities in Jaffna are far more advanced and convenient than the ones they get in Oddusudan.

4.3.5.4. Illegal activities, influence on young people

The increased use of drugs, alcohol and access to inappropriate content from the internet are also mentioned as the issues that can cause long-term impacts. A1 and A3 said that these can especially have negative guidance on the younger generation, who are vulnerable to be influenced by them. Some respondents said that during the period LTTE rule, such things never existed and the life was simple. People were living under strict rule, but the children were safe and not affected by the bad influence of the outside world. "Earlier, our youngsters were under big control. In fact, under LTTE there were not many issues. Only during the last few months of the severe war, they were living in fear. I'm not supporting the war. But I am speaking how people feel" – identity preserved

The same attitude was heard with regard to the environment preservation by the LTTE. According to some respondents whose identity is preserved, the LTTE controlled the access to the forests as their safety depended on it. As a result, forest resources remained safe and untouched. They also said that such preservation is not taking place under government control, and the exploitation has increased since the reconstruction of roads.

4.3.5.5. Ethnic harmony

When asked about ethnic interactions, the respondents spoke of having a peaceful relationship with other ethnic communities. A1, A2 and A3 said that people face the same problems and living conditions as any other community, and the ethnicity is not an issue for their daily activities. According to A2, A4 and A5, very few Sinhalese and Muslim families live in the Oddusudan area, and due to road reconstruction, few traders and officials of different ethnicities occasionally pay visits to the local area. A2, A3, A6 and A7

mentioned that many workers and officials who worked in the road construction were from Sinhalese areas, and according to the local representatives there were no issues between the workers and local people. According to local RDA officials, the local community gave their fullest support to construction activities and it helped to achieve the construction targets successfully.

4.3.5.6. Reconciliation

Although not necessarily due to road reconstruction, respondents expressed feelings of mistrust towards politicians. Some said reconstruction of roads or any kind of development has nothing to do with the reconciliation process and peace.

“There is clearly no connection between development and reconciliation. It does not depend on reconstruction” – identity preserved.

And some such as A1 and A2 stated that reconstruction is just one step towards reconciliation, but not sufficient. All respondents expressed their grief about the last few years of war, and how the memories are still haunting people. They said that they are grateful for the end of the war and do not want another war to start. But some whose identity is preserved explained that due to unsolved issues among the youth, and in addition people facing poverty and difficulties due to lack of development, some people are not satisfied with the government. According to one respondent, a lot of youth, including ex LTTE carders, are unemployed and facing difficulties in getting back to normal lives even after several years since the end of the war. The road construction alone is not adequate to solve these problems.

“Only roads and buildings and such kind of developments took place. But the hearts and minds of the people are still wounded. Still, we have hope, that someone will be able to understand the people’s minds. Understand the hearts of youngsters” – Identity preserved

4.4. Case B - Kalmunai Muslim DS division

In this section, the data obtained from the interview participants of the case study B, Kalmunai DS division are presented. Similar to the previous case, the information is presented under four main sections of preconstruction context, nature of the intervention, consequences and long-term impacts.

4.4.1. General

Kalmunai (Muslim) DS division is located in the Ampara district, in Eastern province of Sri Lanka. It includes 29 GN divisions and 4 small villages. Although occupied by Muslim,

Tamil and Sinhalese communities, the majority of the population is identified as Muslims (Ministry of Home Affairs, 2020b). According to B4, there are three DS divisions under Kalmunai municipal council; Kalmunai Muslim, Kalmunai Tamil and Sainadamadu. Kalmunai Muslim and Tamil divisions. They earlier belonged to one DS, but were divided due to issues related to administrative issues in managing activities of different ethnic groups. All respondents highlighted that Kalmunai Muslim DS is famous for its handloom weaving, and clothing products made using the handloom material.

4.4.2. Post conflict/ preconstruction context

4.4.2.1. Disturbances during conflict

According to all the respondents, Kalmunai DS was not directly under the threat of violence during the conflict, as the vast majority of people are of Muslim ethnic origin. Within the DS division, some of the border villages were exposed to violent conflict. However, there were violent incidents taking place at random points of time up until 2006, and the LTTE didn't want the local residents to have connections with or benefits from the central government. B3 said as a result of the conflict, the government could not carry out most of the development activities, including road construction. Although the projects were approved by the government and the funding was passed, they were delayed due to lack of peace. According to B5, the construction firms were not willing to start work in the area due to the threat posed by LTTE. B1, B3 and B6 said, the LTTE maintained the practices of kidnapping and trafficking to acquire money and material for their activities. All respondents described that they travelled less during the night and tried to avoid long-distance travelling due to fear of violence. According to B1 and B3, Muslim politicians from Kalmunai area maintained a close relationship with the central government, irrespective of the severity of the conflict. Therefore, the local politicians were able to secure funding to develop the roads within the area. The conflict and the continuous disturbances from the LTTE were the reasons for not implementing the projects.

"During the conflict, Muslim politicians maintained a close relationship with the central government. Due to that reason, whenever the need comes, the community leaders can request to the particular minister. They can allocate the money. The problem is when the contractors come for the implementation, the LTTE carders used to disturb the work. They used to come and ask for money, loot the equipment's and remove the vehicles. So the development work was not done properly" – B3

Due to the same reason, B1, B3 and B5 explained that people could not carry out their livelihood activities including private businesses, agriculture and fishery.

4.4.2.2. Condition of roads

According to all respondents, the peaceful environment after the conflict enabled the people to move freely even before the construction process started. However, most of the roads were damaged and not in proper condition to be travelled. B4 mentioned that people were reluctant to use private vehicles in the roads as the vehicles get damaged quickly. According to B1, travelling from Kalmunai to Trincomalee took about 8 hours due to the poor condition of the roads. B1 and B5 explained that Kalmunai is an area that got severely affected during the 2004 Indian ocean tsunami, and the road network suffered as a result. According to B5, the local people together with local authorities used the debris from tsunami to rebuild some of the roads before as the government could not get directly involved. Initially, most of the inner roads were reconstructed as gravel roads and they were used until the end of the war in the eastern province. B2 and B5 stated that proper reconstruction of all roads did not start until 2006 when the government took complete control of the eastern province. They said that most of the inner roads were muddy due to being gravel roads, and was difficult to move. However, B5 added that interior roads were not destroyed by the conflict. The lack of access to constructors and material made it difficult to construct the roads. B1 and B6 explained that as a result of the lack of road facilities, the trade activities were disturbed. People had to carry all of their items to other areas to be sold, and for some, it was difficult to find markets for their products.

4.4.3. Nature of road infrastructure intervention

4.4.3.1. Completion of reconstruction

According to B1 and B4, the roads reconstruction started soon after the conflict, and the main roads were completed rapidly. B3 said that main roads were completed by 2010 and 2011.

“Most of the reconstruction has taken place and already completed by the time I arrived. Village level roads are completed and constructed. Some of the reconstruction projects are still going on”. – B4

According to B4, who is a government officer, the road reconstruction has taken place smoothly after the conflict and was mostly complete by 2017. Some reconstruction and development projects were still taking place at the village level. While all other respondents agreed that road infrastructure is at a successful stage after reconstruction, B4, B5 and B6 said that there are few more areas to be completed. B4 and B6 said that after the end of the war, the government was able to allocate money through RDA and provincial ministry to complete the roads destroyed by the tsunami and not maintained during the conflict. According to B6, most of the main roads are completed with proper

draining systems and keeps developing slowly as new projects and funding are coming to the area.

“Even now, with the help of provincial ministry, the rest of the roads are being developed and some of the roads are yet to be developed. Even now we have a gap in our village in Maradamunai. But the main point is most of the damage was caused by tsunami” - B6
B1, B2, B4 and B6 stated that most of the inner roads are made with concrete. However, B2 and B3 complained that there are problems of drainage in some of the inner roads, which are constructed using concrete.

“But now the roads and drainage are there, but the water does not drain properly. With the construction, they should have done the drainage system properly as well” - B2

4.4.3.2. Political involvement

All respondents demonstrated their awareness that the Rajapakse government was behind the rapid road reconstruction process.

“After the conflict, Mahinda Rajapakse government started the construction. There are both advantages and disadvantages due to reconstruction. Mainly he concentrated on road construction after the conflict” - B2

“It was only after Mahinda Rajapakse came to power, that people got the benefits on the development side – especially the road. His involvement is the main reason for road development” – B1

According to B1, Members of parliament representing the Kalmunai area maintained a close relationship with the Rajapakse government, through which they were able to secure sums of money to carry out reconstruction. The road projects, covering both main and inner roads, were also funded by several international NGOs.

B1, B5 and B6 stated that most of the road reconstruction activities have taken place without the guidance of a national strategy or a master plan. While some roads were included in mega projects that focused on provincial development, others were mainly politically motivated and carried out by different institutions including provincial and local authorities, as well as NGOs. B6 said that there was no coordination among the different institutions and actors and B1 confirmed that political backing rushed most of the road construction into the area without any connection to the other development projects.

“They didn’t know what to prioritise and there was no coordination among different construction activities. They don’t know which roads need to be built first. Up to now, they are building the roads based on political decisions and influences. The kind of prioritisation they do is not participatory. It is like a one-man show” - B6.

Due to the same reason, B1, B3 and B5 claimed that the drainage is not properly constructed to match the road construction.

"Kamunai MC was established in 2002, and Akkaraipaththu MC in 2012. But in Akkaraipaththu MC they have a master drainage plan. But, the Kalmunai MC doesn't have anything of that sort. The drainage is not properly planned with the road building. That is why we have lot of flooding issues" - B5.

4.4.3.3. Incomplete roads

Although the government official, B4, stated that all roads are complete and construction is going at a smooth level, some of the local respondents complained about incomplete roads. Some of the inner roads and bridges were yet to be completed. B6 specifically mentioned that some of the reconstructed roads were not up to the standard, and in poor quality.

"Especially the road connecting the Navidamweli area to Kalmunai area, only a small portion of the bridge was rebuilt with the iron bar. Still, it is under repair. Maybe only 10 or 15 meters are built. The bulk part is still under repair, each year. That was damaged by the dump trucks. The completed part is also not good. Because when there is a flood, the road goes underwater" - B6

B1, B3 and B6 also said that some of the roads that were immediately rebuilt after the tsunami using debris are still in their original condition. They argue that more work is yet to be done. B1 added that most of the reconstruction activities have halted after the change of government in 2015, and new projects are not being launched since. He also said that the new government is engaged with opening the roads already completed by the previous government, but the road construction has stopped in real terms.

4.4.4. Consequences

4.4.4.1. Economic

01. Easy transport and access

All respondents agreed that they are satisfied with the reconstruction of the roads, which has made the transport easy and accessible. The respondents in the field of education, particularly mentioned that it is easier for students to come to school, and they almost face no problems in terms of transportation. The construction of inner roads with concrete was mentioned as a special development by B2, B3 and B4.

"Transport became very easy, especially after all the inner roads are paved and concreted. But at the same time, there are advantages. We can get to places easily and the damages to the vehicles are very low on paved roads" B2

Travelling to Kalmunai which took nearly 8 hours before the road construction, now take only 3 hours as mentioned by B1. While all credited the road reconstruction for the fast and free movement, B1 also mentioned that this is also due to absence of war.

Respondents also claimed that they travel more often to other parts of the country, and the access to resources in other areas has been made easier and comfortable by the availability of roads. B1, B2 and B5 also said that the availability of resources, goods and services in the local areas have increased since the reconstruction of roads.

"After construction, we got so many benefits. The bridges were widened. Many hospitals were constructed. Everything is properly constructed and we are really happy about it. There are more things available in the markets locally and we can easily buy anything" - B5

02. Accidents

B1, B2 and B6 also mentioned road accidents as a side effect of road reconstruction. The reason for this is explained by them as the vehicles are going faster after the reconstruction, and the roads are smooth. B2 particularly mentioned that accidents caused by vehicles have become higher among school children.

"Vehicles began to go faster and the accident level has increased, especially among the school children" - B2

B6 said that accidents were also caused during the reconstruction period due to the use of bigger vehicles for reconstruction and development activities.

"Because of the presence of a lot of heavy vehicles, and inexperienced drivers, the accidents are there. the contractors wanted to find drivers as soon as possible. There were no heavy vehicles or drivers here before, and I don't know where they came from when all these reconstructions took place. And there were no time restrictions as to when they can use the roads. They could come during school or office hours. Therefore, they were on the roads all the time. That sort of restriction was not on operation because they wanted to rebuild the roads as soon as possible. Due to these problems, accidents happened. The motor traffic department or the transportation ministry didn't care about it. Now only these laws are being implemented little by little' - B6.

B5 added that due to the use of heavy vehicles and dump trucks, the other roads that were previously built were also damaged.

"If you go into the interior areas, all the people affected by tsunami migrated to some other areas due to fear of another tsunami. They use other roads. They don't stay in the affected areas. when reconstruction started, the gravel was carried by some other areas. They used dump trucks for that. Those dump trucks and other heavy vehicles have damaged the old roads. This is a situation where the rebuilding of one road, led to the

damage of another road. Because they only focused on rebuilding that one road at that moment. Maybe, it was different people responsible for different roads. But it is actually a side effect of that construction” - B5.

03. Trade, income and expenditure

All respondents have mentioned that trade and communication facilities have increased since the road reconstruction. As mentioned in the introduction, Kalmunai area is popular for Handloom industry, and many local people are engaged in weaving sarees and selling them in other parts of the country. According to the respondents, the availability of roads has made it easier to take their products to other parts of the country. On the other hand, B1, B2 and B3 have mentioned that merchants from other areas like Colombo, Kandy and Kurunegala come to visit the local producers and buy the handloom products directly from them. This has minimised the costs for the producers and avoided the need to give commissions for middle persons in the business. All respondents agreed that the road reconstruction gave a boom to the handloom industry in the area, and as a result, more people are encouraged to engage in production. B3 also mentioned that there are hopes for businesses to grow in the future.

“The road is very important for people to communicate. It is very easy to go around the country and do businesses. A lot of people here have handloom businesses. Sinhalese people come to our areas and buy the products from the local people. It is much cheaper to buy here and sell them in Colombo and Kandy. Especially in the new year season. They take a lot of our products to their hometowns. It is easy to communicate with our traders and give orders. Especially this year, the business is very good compared to the previous year. So, I would imagine the businesses will grow” - B3.

B2 and B5 also mentioned that there are more items such as machinery and raw material, locally available in order to support the local businesses and industrial activities, whereas earlier they had to go to other areas to find them. According to them, the business owners from other areas come and sell the items in Kalmunai area providing a good range and choice for the local buyers. B2 and B5 also mentioned that the prices are also competitive as there are many sellers in the area and that new businesses have also started due to more economic activities and a large number of visitors. B1 added that due to trade activities more Sinhalese and Tamil people are coming into the area and it benefits all ethnic groups. B5 added that the reconstruction of roads has improved the reconstruction of roads, and more people are engaging in paddy production as well.

However, B3 mentioned the expenditure level has also increased for local people. He did not further elaborate on this situation.

"The transport systems, especially the roads are very good. But at the same time, reconstruction has also increased the expenditure level" - B3.

While the respondent B1 agreed that small scale traders have benefitted from the road reconstruction, he argued that relatively larger businesses are not entirely satisfied with the development after reconstruction. He blames it partly on the lack of incentives by the present government. According to him, although there was a sudden boom in businesses soon after the war and reconstruction, it was not maintained in consecutive years.

"But even with the present government, business people are not happy. You can check the bank balance for every owner. They mortgaged their old properties and pay the bank balance. 5 to 10 years ago, the businesses were at a very good level compared to now. Because they don't have a proper business. The other reason is if they purchase some items they have to pay in time for traders from Colombo or upcountry. They don't have a proper income to do that. Some people still have a good business. But that is very rare" - B1.

04. Tourism

According to B1 and B3, there are several tourist attractions located in the eastern province and some people from Kalmunai are employed in the tourist industry. However, within the Kalmunai division, there are no tourist attractions or hotels. Therefore, the direct benefits of tourism are not received in the area. Nevertheless, the local tourists who visit nearby locations come into Kalmunai area just to enjoy the beaches or go through the area when going to other destinations. Some roadside vendors benefit when they stop in Kalmunai. On the contrary, many respondents discussed the cultural and environmental cost of local tourism. This is explained in the corresponding sections below.

05. Employment

According to B1 and B6, during the reconstruction people were employed in the construction sector, especially in the construction of bridges. Some people who were relying on other daily wage and self-employed professions (such as fishery), shifted to the construction sector due to high demand and attractive salary. Some were also employed as drivers for heavy vehicles used in the construction industry and opened new ways of livelihoods. In addition, the employment opportunities increased due to the handloom industry and opening of new road-side businesses.

"Because of the roads. Handloom industry also developed. They were able to bring in customers for the products and take them to other cities. It was very important to rebuild

their livelihoods. They were also able to reorganise their lives around road facilities. And also there were a lot of new jobs created. Not only in road building, to maintain and clean the roads people were employed. They provide temporary and permanent jobs, to employ the local labour” - B6.

However, B1 added that the provision of employment in the road construction sector was highly politicised and most of them were employed temporarily. According to him, those who had links with the politicians were made permanent and most of the others had to find alternative jobs at the end of the construction period.

“Out of the 180-day programme, that surplus was also released by Mahinda Rajapakse – those who have completed 180 days of employment on a casual basis were made permanent – especially in the local government sector. Out of that, a lot of people got government employment. But that was also highly politicised. There was not the expected improvement for job opportunities” - B1.

However, B1 went on to add that reconstruction activities on its own, did not provide any specific benefit to the local people in Kalmunai.

“I can say this. Out of the road projects, it is true that the roads are developed came to my area. But one particular engineer and a senior project officer, one or 2 people closely connected to the project, are the only people who got the benefits. Out of that, their families also got benefits. It is same with the contractors who did the construction. And if the project belongs to a certain department, like RDA, RDDA, DS or MC, those people who work there were also personally benefitted. Other than that, the labourers were only able to work there temporarily and they got daily paid wages. I think they got about Rs. 900 or maximum Rs. 1000 per day. That is all. Nothing more than that” - B1.

As mentioned earlier, tourism did provide some indirect employment opportunities to those who worked in other areas, and B3 mentioned that tourism is not creating any employment opportunities locally.

“Are there any employment opportunities for local people around tourism? Normally, I don’t think it is creating new employment for local people. We don’t have any special hotels or any other facilities here. It is mainly from other areas who come to beaches. We don’t get any tourist income. But the bad impacts do come” - B3.

4.4.4.2. Environment

01. Flooding and heat due to concrete roads

B2, B3 and B6 have mentioned that due to the inner roads are paved using concrete, the heat level increases during the day time rising the temperature level of the whole atmosphere. This makes it difficult for people to carry out daily activities, and especially

the students are not able to concentrate on studies. They also added that these concrete roads become flooded during rains, as the drainage is not properly planned. Before reconstruction, the roads would get muddy, but as soon as the rain stops the water drains and dries easily. This has changed after reconstruction, as the water does not get rained from the concrete unless there is proper drainage.

“Did the flooding problem occur after the reconstruction or was it there at the beginning of the first place? Before that, it was muddy roads. The water will be there on the roads anyway. But they will dry out as the rain stops, and will not have floods. Because the soil absorbs the water. But now the water stays there for a long time without draining, because the concrete does not absorb the water. Then transportation is also very hard due to the high water level. Before that, there was no drainage either. But now the roads and drainage are there, but the water does not drain properly. With the construction, they should have done the drainage system properly as well” - B2.

B5 said that in the inner rural areas where there are plenty of paddy fields, the problem of flooding cannot be encountered, and normally happens in the urbanised and densely populated areas.

02. Sand mining

B1, B5 and B6 also revealed that large scale sand mining is also taking place in the area after road construction. It was also revealed by them there is no mechanism to control or monitor sand mining, and those who engaged in the business are mining sand in any location they find it. As a result, there are severe environmental implications such as damages to the canals and destroying biodiversity. Use of heavy vehicles for transporting sand is damaging the roads and affecting the health of people. B6 also mentioned that the paddy fields are also used for sand mining as it has become a more profitable business than cultivating.

“Most of them do (sand mining) without any licence. They want to dig and transport sand as soon as possible. There were preserved areas, but they didn’t worry about it. They are not concerned about anything other than a number of lorries they fill and the money they make. The same thing happened with heavy vehicles during reconstruction. They just wanted to carry much as possible and increase the number of trips. And that is how they are paid for. During the construction period, they even gave up paddy land for sand digging. Rather than cultivating, it was immediately profitable to sell the sand in the paddy fields. So, the paddy fields were also damaged” – B6.

03. Dust and health impacts

B2, B3, B5 and B6 mentioned that due to the rapid nature of reconstruction that was taking place everywhere at the same time and almost every day of the year, people were faced with problems of dust and related environmental issues. In some areas, where construction of roads are still carried out, people are continuously faced with this issue. "The construction creates a lot of dust and it is spread everywhere by vehicles. As a result, people suffered from cough and other forms of respiratory diseases. I can say that people ended up having wheezing issues because of construction activities that were endlessly going on everywhere" – B6

04. Tourism and pollution

B1 have mentioned that the tourism board and environmental agencies were established quite recently in the eastern province, and the councils do not have a proper environmental policy. As a result, there is an issue of pollution caused by tourists in beach areas. According to B3 and B6, although there are no hotels or tourist attractions in the Kalmunai DS, the local tourists who visit the nearby areas come to the beaches in Kalmunai. They also mentioned that they pollute the beaches by using alcohol, smoking and eating, as they leave all the waste behind them without cleaning.

"They use alcohol and smoke on the beaches. You might know that in the Muslim religion, it is not allowed and we didn't have that problem before. So most of the people oppose their behaviour. And the pollution level has also increased. Because of the beaches, a lot of visitors are coming to the area, and pollute the beaches" – B3.

4.4.4.3. Social

01. Inter-ethnic relations

All respondents have stated that the relationships with both Tamil and Muslim communities have improved considerably since the road reconstruction. Few of them have also stated that the problem of ethnic division is not among the normal people, but among the politicians who fuel the divisions for their own benefits.

"Now we have a very good relationship with the Tamil people. They don't have arms just like us. We have a very peaceful relationship. They are just like us. But the problem is the politicians are playing different roles. They are the ones who draw them to conflict. Not only that side. In our side as well" – identity preserved

B1, B2 and B3 also mentioned that the connections with the Sinhalese people have improved due to increased trade relations. More Sinhalese people visit the area for trade activities, including handloom purchases, and this has resulted in building friendly relations

between the local Muslim community and Sinhalese people. B1 also said that the peaceful situation that prevails in the country, in general, has allowed them to build trustworthy relationships, which is only facilitated by road connectivity. B5 also revealed that before, it was difficult to engage in trade or agricultural activities in areas close to Tamil villages, and now they engage in more activities together.

02. Education – comes under economic

B2, B3 and B5 said that there is no significant increase in the number of students in the schools or the number of schools. However, students feel safer when coming to school and more facilities are available for the students. The students can use a variety of transport facilities to come to schools in different areas. Nevertheless, B2 mentioned that the problems of heat and flooding caused by the concrete roads are adversely affecting the health and education of students.

03. Cultural – drugs, alcohol and tourism

B1, B2, B3 and B5 discussed the impact of tourism on culture. Although there are no tourist hotels in the area, the local (Mainly Sri Lankan) tourists who visit the nearby places or living in nearby cities come to visit the beaches in the area and use drugs and alcohol. They also claimed in Muslim religion they oppose the use of drug and alcohol, and therefore, didn't have such issues before the outsiders started visiting the villages. B2 have mentioned that he heard of incidents where children also have faced abuse from visitors from other areas

"Even kids have faced abuse, and we heard of children being abused by tourists. Those are also Muslim majority areas, and we didn't have problems like that before the increase in tourism. And fishery is also affected by tourism" – B2.

B5 also confirmed the social and cultural issues were intensified after the reconstruction. B3 have mentioned that the younger generation is exposed to the dangers of drugs and alcohol due to tourism and being exposed to visitors from other areas.

"There are different types of narcotics. There are very small ones, called 'Mawa'. Normally, they are selling in one or two places. It is very easy to buy from local vendors, and some of our school children are getting addicted to that. They use that for their entertainment. Not only in our school, but the other schools also have this issue. Those days, our town also go to sleep around 8.30 or 9 in the night. But now our neighbouring towns keep their shops open until 11 or 12 because there are special businesses after 11. They are not a normal commodity. Most of the Tamil people are coming to purchase some items like that. Not only drugs, but there are also many cultural issues that have come up due to visitors from other areas" B3

B1, B5 and B6 also mentioned that after reconstruction more disruption can be seen among the younger generation, especially among teenage boys. They blame it partially on road reconstruction and partially on urbanisation. B5 said that young men are riding bikes without a license and have adopted aggressive behaviours due to the increased exposure to the outside world. She acknowledged that although roads cannot be blamed for this behavioural change, the exposure brought about by the connectivity to other areas could be a reason. B3 said that increased access to goods and services, and increased communication facilities have caused harmful usage of technology.

"Phones and internet facilities are also a very big problem, especially among school students. Our people usually don't use cable TV. After the war, Tamil people are coming and they use a cable TV connection. So now, people are getting to watch a lot of Tamil programmes. Now kids are not doing work due to TV" - B3.

However, B2, who is a principle of a Muslim girls' school have mentioned that such issues are less among the young girls.

"Do you also face problems due to the inflow of technology and facilities?"

We don't have that problem here, because it is a girl's school. I think it is a problem faced by boys' schools" - B2.

4.4.4.4. Political

01. Corruption/ rent seeking

3 respondents have said that although the road reconstruction has eased the travelling for local people, those who benefit the most are the politicians and their supporters. The corruption and the rent-seeking among the political representatives and government officers have increased because of reconstruction.

"Frankly speaking, through these road projects the local politicians have benefitted. They are getting their percentage. Normally the local government members get the percentage – they don't have any connection or they didn't make any effort for these road development projects. In my hometown – I am living in Maradamunai 5, which comes under the Kalmunai municipal council. If the municipal council build or decide to build a new road in my area, my area council member goes and discusses directly with the local contractor. Before even starting the project, they get the percentage out of the total amount. For example, under NELSI project, the council can decide and do the work of nearly 5 to 10 million worth – at the municipal council level. If it is more than 15 million, I think the provincial council has to decide. Given that amount, they go and discuss with the contractor, and some people get a high percentage – especially the council members" - identity preserved due to political sensitivity.

Another respondent described the rent-seeking happening at the local government level as below.

"The reason is, through this municipal council mechanism they have to take the finance commission decisions, put the decisions through to the council and they have to finalise the council decision. The particular engineer and technical officer go to the field and collect the details for measurement and supervision work. So, when they put the bill to get the final payment, they need the support of those people – especially the commissioner, accountant, engineer and technical officer. So for this purpose, I think within the offices a minimum 5%. And for political side 5%. I am saying the normal and lowest amounts. But the actual amount is definitely more than that – more than 10%. For a road worth of 15 million, they are normally getting 1500,000. Under the special development of 1 million, they are allocated on per head basis. Those who are in the council, they can offer the local contractor and he can do the development through RDA. But the council members are concerned only about 10 or 15%. Those who are willing to pay that amount, that contractor can get the development work" - identity preserved due to political sensitivity.

02. Mistrust/ political isolation

Two of the respondents said that irrespective of the construction and development activities carried out by the central government, people were always dissatisfied with the Rajapakshe government and liked the UNP government led by President Sirisena.

"This is the case. People in the north and east, they like only the present government, not the previous government. Last week president Sirisena opened the Batticaloa airport for the local people. But, this development is initiated and funded by Mahinda Rajapakshe government. It was only completed recently. When they opened the airport, all Tamil and Muslim party members participated in the ceremony. But if the same activity was opened by Mahinda, they will oppose that. This is the mentality of the people as well. During Mahinda Rajapakshe period, he allocated a huge amount for development... these people, especially the Muslim people, they don't like to request Mahinda for development. "No. We don't want anything from Mahinda". That is the mentality of the people. He decided himself and did the development work. But now, they need development. But this government is not ready to provide the funds. Now people need development. But now only they have realised that only during Mahinda's period the country has developed. Now, there is no development. Even though they realise it, they will never vote for Mahinda. They are ready to compromise the development rather than having a nationalistic government" - identity preserved due to political sensitivity.

03. The politicisation of public affairs

Four respondents have mentioned issues regarding the politicisation of public affairs. One is related to rent-seeking above mentioned, as the political representatives have made links with the contractors to whom they give the contracts of road construction. Secondly, the authorities are approving the urban development plans that legally do not align with the environmental standards, based on political influence.

“Politicians tell them what to approve and what not to, based on personal connections with who runs the projects. The same thing happens with the official documents. For example, if it is a main road or a coastal road, if someone is building something where the road comes, they are supposed to handover a letter saying that they are willing to handover the land when the road work comes to the area. Based on that letter only, someone can obtain permission to build within the area. one or two weeks after receiving permission, that letter will be removed from the file. The letter will be missing. After that nobody can take legal actions against that person. Everything happens because of political influence”- identity preserved due to political sensitivity.

Thirdly, the coastal conservation standards and buffer zone regulations are not properly implemented due to political influence. The respondent said that coastal developments including road developments have taken place under the influence of the ruling political party. The respondent added that if the same development activity is undertaken by an opposition party politician, there will be legal procedures under coastal conservation standards.

4.4.5. Long-term impact

4.4.5.1. Improved connections with other communities

All respondents mentioned that they believe that improved relationships with Tamil and Sinhalese communities due to trade activities, will contribute to building trust and understanding. But B3 and B5 mentioned that they always lived in harmony with Sinhalese people irrespective of the war situation. Another respondent said that the absence of war and violence allowed them to trust and have connections with Tamil people, rather than the reconstruction of roads. B5 added that some intuitions are involved in promoting and implementing reconciliation and peace programmes and school, and the road network facilitates such education and resources coming from the outside areas.

4.4.5.2. Inequality, jealousy and mistrust

One of the respondents have acknowledged that Muslim areas such as Kalmunai are much more developed, and the businesses have improved immensely compared to the other areas affected by the conflict. The respondent said that this has created jealousy among other ethnic communities provoking them to spread false rumours about the Muslim communities.

“Due to the good road network facilities, there are some specific developments in our cities. Our businesses are improving and people earn a higher income. Even some developments activities are automatically coming to our villages due to improved businesses. So because of this development, other communities in other areas get jealous. That may cause some problem. Because of that, bad rumours are spread about Muslim people in social media. One was that we sell dog meat instead of beef, which was widely spread a few months ago. This was purposely done to harm our reputation as a community”- identity preserved due to political sensitivity.

4.5. Case C - Padavi Sripura DS division

The scope of this section flows the same pattern of the previous two. After giving general background information of the DS, the details of the participant interviews are given under four main headings of preintervention context, nature of road infrastructure intervention, consequences and their long-term impacts. The interview extracts are used as evidence to present the results.

4.5.1. General

Padavi Sripura is a majority Sinhalese DS division within Trincomalee district, in Eastern Sri Lanka (Ministry of Home Affairs, 2020a). There are 10 GN divisions within the DS, and the majority of the population is Sinhalese (Ministry of Home Affairs, 2020d).

4.5.1.1. Area and Demography

According to C1 and C2, Padavi Sripura is geographically the last Sinhalese village in the south to Mullaitivu district. The closest city is Anuradhapura, and previously, this area was under the administration of Anuradhapura district and was later changed to Trincomalee. The population is almost entirely Sinhalese except very few exceptions (Table 3.2). C1 and C2 also mentioned that Sinhalese settlements that took place under the Mahaweli irrigation scheme was an important aspect in history, and it is related to some of the violence took place during the conflict.

"These settlements were started in 1958, under the Mahaweli scheme. Those days our parents went for clinics that were about 10 Km away from here. There were no buses and no transport facilities. The bus journey starts from Singhapura and ends in Anuradhapura. There were no buses on the road. Slowly, after introducing Lanka transport buses and private bus services, and the roads slowly started developed" - C1

4.5.2. Post conflict/ preintervention context

4.5.2.1. Disturbances during the conflict

All four respondents said that Padavi Sripura area was not categorised as a war zone due to being completely occupied by Sinhalese people. They were often under the protection of the military forces, and there were paramilitary persons and police operating inside the DS division. However, they revealed that they lived in fear and people were often a target of LTTE attacks. C1 recalled the memories of earlier LTTE attacks inside the DS division.

"This area suffered from the very first experiences of conflict in 1984. The first bomb explosion targeted towards a military personal happened in this area. Even then, we didn't have a road to take him to the hospital. Later that road was named by villagers as Washington Gunawardena, the person who died from the explosion" - C1.

C3 and C4 said that some families have moved to other areas in the south during the conflict due to fear. C1, C2 and C3 mentioned that the road that leads from Padavi Sripura to Anuradhapura goes through the village Kebithigollawa, which often made headlines due to terrorist attacks and land mines. Although inside the Ds there was a fewer problem, the people couldn't travel to and from outside areas due to the dangers of travelling.

"In previous days, when we used the buses to go to Anuradhapura, there were times that we found wounded people on the road. They were being shot. And sometimes we are in the middle of a firing zone. The bus would be turned back and the journey would be cancelled. We take the patient on the buses and take to the nearest hospital in Padaviya. The conflict never gave us a chance to travel, let alone an opportunity to build the road. The LTTE always targeted the infrastructure and public transport, including buses, bridges, culverts and bus stands" - C1.

C3 and C4 said that as a result the education and health sector was also adversely affected, as people from other parts of the country would refuse to be employed in the area. However, according to C3 and C4, during the last years of conflict, many gravel roads were continuously built and maintained for military purposes. Padavi Sripura was used as one of the main entrance and a supply point to Mulatiu area, where the final battles were fought between the government and LTTE. C1 added that some of the roads leading to other cities could not be used due to being closed for security reasons.

4.5.2.2. Condition of roads

All respondents mentioned that before the beginning of reconstruction the roads were in poor condition. All the roads were gravel, including the ones used for military purposes. However, C3 said that they used to maintain the military roads in a good condition by refilling gravel even after the war to ensure the rule of law in the areas close by. According to C1, some of the areas were almost abandoned by people and the roads almost did not exist.

“There is a village called Singhapura at the end of the main road that I just mentioned. There is a road being constructed from Singhapura to Sripura. The area used to be full of trees and bushes, and almost like a forest. There are not many people living along the road, and very few houses... Before the construction, the whole area used to be almost haunted. And also, very difficult to live in and very difficult to go through any road” - C1.

C3 and C4 also revealed that they couldn't use most of the roads due to being destroyed and not being reconstructed during the conflict. Lack of bridges was a common problem discussed by all respondents. Most of the bridges were destroyed during the conflict, and people had to use alternative methods to cross rivers.

“Earlier, we used Bridge boats to cross the rivers. The people, goods and even vehicles will be loaded to a boat and carried across the river” - C2.

They also said that getting to the closest city of Anuradhapura was a long and tiring journey.

“It used to take about 4 to 5 hours to go to Anuradhapura. We used to go through potholes, with a lot of mud and crossing through waters” - C4.

4.5.2.3. Displacement and resettlement

C1 and C2 said that before the war, there were Tamil people living in the area. But they have moved to other areas due to conflict. According to C2, the Tamil people were resettled after the war in the nearest Tamil village.

“The Tamil people were resettled very recently. Thennamaramwadi is the only Tamil village nearby” - C2.

4.5.2.4. Economic condition after the war

C1, C2 and C4 said that the number of employments in the military sector has increased during the period of conflict, in all armed forces, police and civil protection unit. However, they said that the employment opportunities did not increase significantly after the war.

Poverty was a prominent issue discussed by all respondents due to difficulties of accessing outside resources and lack of opportunities within the area.

4.5.3. Nature of road infrastructure intervention

All the respondents mentioned that there is not much reconstruction activity that is worth mentioning within the DS division. However, they acknowledged that people benefitted due to the reconstruction that took place in other close by areas.

"We both know that the situation is like this before the war and after the war. There is no change worth mentioning to you. That is the first answer I can give you in terms of roads here" - C1.

4.5.3.1. Completed roads

Respondents said that most of the main roads in the district were constructed after the war, and some were reconstructed after the tsunami. However, they said that within the Padavi Sripura DS, only a small portion of the main road is carpeted and that too is just a single lane road, that only one vehicle can pass at a time. C1 and C4 mentioned that some of the roads which were reconstructed using tarmac were damaged due to not being maintained.

"I can take you and walk the whole distance in which the road is carpeted. It is only a very small distance. After that, the area that belongs to Padavi Sripura comes to an end. Even if not, only the old road is still there after that. The construction has stopped after that point. All the other roads are not carpeted, but some are made with stone and tarmac. All are damaged and full of potholes. Nobody comes to repair them" - C1.

C1 said that the main road reconstructed is a 13 ft wide road, and not up to the standard of other carpeted roads in Sri Lanka. According to C3, the carpeted distance is only three kilometres and the rest is not constructed.

"Only a little work has been done in terms of roads. Within the whole DS division of Padavi Sripura, only about 3 km were completed as carpeted roads. After that, there were few concrete roads, and that is all" - C3.

Respondents also revealed that some of the roads that were constructed during the conflict were not maintained after the war.

"The road coming from Padaviya up to Padavi Sri Pura was constructed together with the ongoing war, also with the purpose of getting supplies for war. But it is not within the DS

division. Through that, it is easy to get to A9. But that road is also not properly maintained, and it is full of potholes throughout the way. It is a main road that should be maintained by RDA - a B class road" – identity preserved.

4.5.3.2. Lack of reconstruction

According to C1 and C3, the road from Singhapura to Anuradhapura was made in the 1950s using tarmac and stones, and the same road is still in use without any change. They said that there is no difference between before and after the war.

"But to be honest, the main road is still the one built in 1958, except for minor repair work by the irrigation department. There are no roads in the area built according to modern technology, and up to the modern standards. There are no roads for you to do research here within the DS division, and even there are few there is not much development to talk about. We can only say about the history of our area, and how little it has changed from then. This community faced a lot of difficulties since its settlement" - C1.

All respondents said that roads are still in original condition or worse. C3 and C4 said that even some of the main roads are still gravel, and gets muddy and difficult to travel during the rainy season.

"The main entrance road connecting the Trincomalee main town and the DS division is still not completed. It is the main road in front of the school. The road is still made with gravel. When a bus came through Trinco carrying tourists, we needed to stop the bus on the way, and hire a van to get them here" - C3.

"Padavi sri pura - trinco road is also a B road, and it is a gravel road. It is the same with the road connecting to Mulathivu. You have to go to Parakaramapura, and go to Mulathivu which is taking a long time" - C4.

4.5.3.3. Incompletion of inner roads

All respondents complained that almost all the inner roads are not constructed, and still have gravel surfaces. C1 revealed that due to lack of funding from the local government and lack of political motivation, local people come together to build and maintain rural gravel roads.

"The internal sub roads, are built and maintained by us with the local manpower and the help of DS office. There are not enough facilities for the DS office as well. It is only very recently that the DS office had the possession of a JCB machine. They are doing what they can with the JCB, and it cannot cover a large number of square kilometres. The internal sub roads are maintained by people by community participation" - C1.

C1 and C2 added that the officers at the DS office are making efforts to rebuild the roads given the amount of funding and facilities available for them. According to C2, some of the roads were being constructed at the time of the data collection. C1, C3 and C4 mentioned that the area is maybe ignored due to being at the border of the eastern province and not being in the north-central province. C1 said that parts of the same road that were completed due to being in north-central, and the part within the eastern province and within the Padavi Sripura DS that were not reconstructed.

"The part that belongs to Trinco and to Eastern province is within our DS. Although the part in North-central province is rebuilt, the part in the eastern province is still not constructed" - C1.

C4 also added that some of the main roads were reconstructed, although not up to the general standard, but the internal roads are in a very poor condition. She added that due to there not being much reconstruction activity, there is no effort to maintain the gravel roads by the DS division.

4.5.3.4. Comparison with other areas – inadequacy

C1, C2 and C3 mentioned that even the completed roads are not up to the standard compared to other areas of the country. C1 mentioned that the only main road carpeted within the DS is 13 ft wide, and there is no drainage for that road.

Why can't we have it wider than that? 13 feet is only enough for one vehicle, and we have only that. There are two white stripes on either edge of the road to indicate it is one lane. Is it going to be developed to a two-lane road? We wonder if the road is going to be carpeted as 2 lanes according to correct standards, with the strip in the middle. When we go to other areas in Sri Lanka, even the ones that are considered as very rough (difficult to live in) areas, we see the development in those areas" - C1.

After giving lengthily lengthily about the lack of reconstruction and difficulty in travelling in rural roads that were made with gravel, C2 added,

"There are areas in which none of the authorities has done no work. It is difficult for buses to pass through. While the roads in all areas in Sri Lanka are carpeted, this small area is neglected" - C2.

C3 compared the Padavi Sripura to other close by towns where they can see a greater amount of road reconstruction work. He added that the government concentrated more on the areas directly affected by the conflict.

"If we look with compared to other urban areas like Trincomalee, there was no development here. The reconstruction that took place soon after war from 2009, was concentrated on the areas severely affected by conflict, like Mulathi, where a majority of Tamil people live. We didn't get any attention soon after conflict" - C3.

4.5.3.5. *Government policy failures*

Two of the respondents mentioned that since the transport of war supplies has stopped after the conflict, the roads were completely ignored by the government.

"The roads were better during war times than it is now. They were constructed and properly maintained to bring in war supplies back then. But now it is not necessary, and roads are also not constructed" - identity preserved.

C1 said that the authorities have started reconstructing the main cities and the main roads first, and it takes a long time for them to reach the inner areas like PadaviSripura.

"what the authorities have done so far is developing from Anuradhapura city towards Padavi Sripura, and not from Padavi Sripura to Anuradhapura. The development spread very slowly from the city to here. None of the reconstruction was initiated towards developing from the village and spreading that development towards the city" - C1.

4.5.3.6. *Land accumulation*

C1 and C2 mentioned that during reconstruction there was no problem of land accumulation since the carpeted road is not widened to accumulate the lands. However, C1 agreed that some of the houses are built very close to the main road.

"But there is a fault among people as well. People have accumulated the roads into the settlement lands. Therefore, the roads are very narrow" – C1.

C3 and C4 mentioned that people are willing to offer their maximum support if the government authorities wanted to widen the roads. C2 also said that during the little amount of road reconstruction that already took place, people were very supportive and welcomed any development activity coming into the area.

"If a government organisation come and say that they are going to build the roads, we are ready to mediate to get the relevant lands and support in the road building" – C4.

4.5.3.7. *Political intervention*

Three of the respondents said that the lack of political leadership in the area is a reason for not paying attention to reconstruction.

"The main reason is that there is no political leadership. This area belongs to Seruvila seat, and geographically, I think it is the longest seat in Sri Lanka. Kanathale also belongs to this seat. But this seat does not normally elect a parliamentary member that is responsible for the area. Even elected, that too is from the opposition and not in the government" - identity preserved.

Two respondents said that Sinhalese people are treated as a minority within the Trincomalee district. According to them, the politicians elected from the district are either Muslim or Tamil, and they take the development projects to areas represented by them rather than to Sinhalese areas.

In development activities, Sinhalese communities are treated as a minority. The eastern province has more Muslim and Tamil communities, and those areas are well developed compared to these areas. The same situation can be seen in terms of education" – identity preserved.

C3 mentioned that some of the reconstruction activities that were meant to take place in the local area were halted due to financial constraints.

"The only time the massive projects came through was when 'Dayata Kirula' (national celebration and carnival celebrating independence) was held in Ampara. But those were halted midway saying that there was not enough money. The companies who took the contracts started somewhere else, and at the last minute, they stopped the construction in these areas putting forward the financial constraints" - C3.

According to C4, NGOs also do not play any major role in the area after the end of the war.

"NGOs used to come during the war, but not now. Even if they come, they do not undertake big projects" - C4.

4.5.4. Consequences

4.5.4.1. Economic

01. Ease of transport

Although the roads within the DS are not completed, the respondents said that the transport has become convenient due to main roads being constructed in both Anuradhapura and Trincomalee districts.

"We can go to both Trinco and Anuradhapura without much difficulty. We are very thankful for that. It used to take about 4 hours to Anuradhapura, but now it takes only one and a half hours. And also, to Trinco we can go in less than 2 hours" - C1.

They also mentioned that both people and goods transportation have improved due to the roads that were completed. C2 said that the cost of transport has also decreased as the carpeted roads are less damaging to the vehicles. However, all respondents added that they still faced a number of difficulties when travelling within the DS division or when reaching a main road.

02. Development

C1 said that there are few new local businesses such as tea shops and service stations, started by people on the roadside where the roads are being completed. C2 added that the price of land near the roads has increased, and there is considerable growth in the population living on the sides of the roads. He also said that more people are building houses near to the roads that are completed. C3 and C4 stated that some trade activities have improved due to road reconstruction.

C1 and C4 mentioned that the reconstruction of roads has eased access to health and education services in other areas.

"The main hospital that we always go to is the one in Anuradhapura. People also go there to get goods and services, and it is the only close city for us to meet our needs. The only city that we can access for our children's higher education. After the reconstruction, we can go to Anuradhapura in one and a half hours using our own transport, and in 3 hours using public transport" – C4.

However, when discussing about development, all respondents mentioned that Padavi Sripura is not adequately developed due to lack of reconstruction and it is performing poorly compared to other areas of the country. Some of them blame the lack of road reconstruction for not being able to achieve development.

"When we go to other areas in Sri Lanka, even the ones that are considered as very rough (difficult to live in) areas, we see the development in those areas. We strongly believe such level of development can be achieved in this area as well" - C1

"Roads were also not constructed properly. And there is no additional development initiative worth mentioning... Compared to the development in the North, this area is still what it looked during the war. The areas directly affected by war are thousand times better than here" – C3.

03. Employment

C1 and C2 stated that the number of government employees has increased after the war. Other than that, all respondents said that there was no significant change in the employment situation after reconstruction. People are employed in the military sector. According to C2 and C4, most people rely on agriculture as the main livelihood since before the war period and traditionally practised paddy cultivation for a long period. C3 added that some people moved out of the Padavi Sripura area looking for better employment opportunities, and send their income to support their families.

4.5.4.2. Environment

Respondents didn't have much to contribute in terms of the environmental impact of reconstruction. C2 said that since the carpeted road was not new and not widened, there were the forests and the trees were not affected. C3 said that there was no environmental impact as no significant reconstruction activity took place within the area.

"There was not much impact, because there was not much construction. Only environment problem we have right now is the use of pesticides"- C3.

4.5.4.3. Social

01. Discrimination within the district

As mentioned earlier, the lack of reconstruction within the DS has led some respondents to reveal that they are discriminated within the district.

"I cannot say directly that our area is discriminated because it is a Sinhalese village or because it is in the corner of the district. There may be discrimination." - identity preserved

Some respondents said that in all development activities including road construction, Sinhalese communities are treated as a minority, they added that there are more development initiatives in areas where Tamil and Muslim communities live.

02. Connection with other ethnic communities

C2 and C4 discussed the improved relationship with other communities and said that Tamil people from the nearby village are coming into the area for manual labour. They also come to the area to sell their products such as milk, curd and potatoes. But they also added that that often more Tamil villagers go to other Tamil majority areas for work. However, one of the respondents added that Tamil or Muslim people are not allowed to purchase land in the area.

"But there are no Muslims or Tamils living in this village. And they are not allowed to buy land and build houses here. But the Muslim people come here on a daily basis from before the end of the war" - identity preserved.

Another respondent said that the local people do not have any need to build connections with the Tamil people as they have access to everything in Anuradhapura city.

" There is not much connection and there is no need for communication. We also feel safe because there is no other ethnic group. Muslim people come here from Pulmudai for trade purposes and other than that there is no one coming into the area" - identity preserved.

C2 said that there are only very few people living in the Tamil village, and they prefer to move to Tamil majority areas such as Mulathi and Vavuniya. He also revealed that most Tamil people are living in poverty and rely on manual labour for livelihoods.

“It is an isolated Tamil village, although economically good benefits for people. It is good for cultivation. There are lands that belong to people separated from each other. But there aren’t many people. Now it doesn’t look like a village, but more like a big land for sale. There are people who came and settled as well, but very poor. They are living on daily manual labour and those who are not capable of moving because of poverty” - C2.

4.5.4.4. Political

No political consequence was mentioned by any respondent. However, two of the respondents said that local politicians are not relying on the votes of Padavi Sripura division and that they do not pay attention to reconstruction in the area as much as they do to Tamil and Muslim areas.

“There was no major support from the government. The population is also around 12000, and it is not enough to build a voting basis, and people are not in a position to elect someone who can represent them. Usually, only one person is elected from all three areas – Sripura, Kanthale and Seruvila. Most of the time, a person from Kanthale gets elected. But for that person the area is too big to cover” – identity preserved.

4.5.5. Long-term impact

One of the respondents mentioned that even before the beginning of the war, the Sinhalese people in Padavi Sripura didn’t have strong relationships with Tamil people, and even the few official and trade connection they had were stopped during the conflict. Even though the connections have renewed after war and reconstruction, there is not much difference since before the war.

“In 1984, after the killing of Washington Gunawardena, that village (Thennamaramwadi) was completely destroyed, massacred and everything was looted. We don’t know who did it, whether it is the Sinhalese people, the army or the LTTE. Looking at what happened to them, their anger and violence are in a way justifiable. Those people underwent horrible violence and torture. Then those people left this area, and went to Vavuniya and Jaffna” – identity preserved.

When discussing the resettlement of Tamil communities after the war, another respondent added that they are living in poverty and struggling to get back to normal ways of living.

“After the war, those people have come and resettled. They also live in harmony with us. They engage in agriculture, and also come and work in our villages. We also share our labour with them. It is sad to see their condition now. They are very good people, and try to restart their lives from the beginning now” – identity preserved.

However, one other respondent revealed that some Tamil people still live in anger and fear.

“They suffered a lot due to wrong done by few people. We actually sympathise those people. But even now, there are Tamil people who look at us with anger and believe that their leader, Prabhakaran is still alive” – identity preserved.

In terms of road reconstruction, two of the respondents expressed their dissatisfaction and added that it was better during the war as roads were maintained for military supplies. They also said that people were better off due to being employed in the forces and providing food and other supplies to military forces.

“The only difference is that there is no war. Some people will say it was better during the war because the roads were built and maintained for the purpose of military supplies. And that had a lot of benefits to many people in these areas. People were employed in the army, and at least one member of every family have a civil protection unit (village protectors). The army is now engaged in trade and agriculture projects” – identity preserved.

4.6. Case N - Key Informant Interviews (KIIs)

In this section, the details obtained from the KIIs are presented. For the convenience of analysis, the data is divided and presented in the same order as previous sections; preconstruction context, nature of road infrastructure intervention, consequences and long-term impacts. The evidence from this section is used during the discussion, to bring out new arguments as well as to validate the points from other case studies.

4.6.1. Post conflict/ preconstruction context

4.6.1.1. Difficulty of access

N2, N3 and N4 revealed that most of the areas directly under the threat of conflict and also controlled by LTTE were facing difficulties in accessing other areas due to lack of road connectivity. According to N2, when the authorities in RDA visited the severely affected sites in 2009, there were no people and only military forces were present in the area. After Vavuniya, most of the places along the A9 road were deserted, and the roads were in a very poorly condition. She also added that initially, no one could go to war-affected zones

without the company of the security forces. Except for A9 which was also mostly destroyed, all the other roads were gravel roads. N3 and N4 said that due to land mines and the security situation, most of the areas were not accessible, which affected the planning and design process of the roads. N5 said that almost all the bridges were destroyed during the conflict, that people had to use boats as an alternative mode of transport. N3 also mentioned that due to the conflict situation and instability that prevailed for a long period, the development activities undertaken by the local governments in the northern province had no international partners. N6 added that due to restricted access, the resources were limited in the northern area and the prices of goods and services were higher than the rest of the country.

However, N6 added that lack of access and constrained movement kept the communities within an area close to each other, and the people were well connected within a single community. According to him, the people knew the activities and whereabouts of each other. At the same time, he revealed that there was limited access to alcohol and drugs as prices were high, and it was difficult to transport them both due to unavailability of roads and tight security conditions. N2, N3 and N4 also mentioned the high presence of military personals during the process of reconstruction.

4.6.1.2. Fiscal ease of national government

From a national perspective, N5 and N6 explained how the government had fiscal ease on spending in 2009, due to the victory in the war and reduction of major military expenditure. N5 mentioned that based on the relaxed fiscal environment, the government even went for loans at a high cost. According to N6, the government tried to do too many things small margin they received after the war.

“In terms of economic parlance, this is similar to the Dutch disease – When there was an increase in oil prices, the oil selling countries received a sudden boost.” – N5.

However, N5 added that due to the large spending inflation has increased and people were suddenly receiving large sums of money for consumption, yet the fiscal ease was not used to increase savings or investments.

4.6.2. Nature of road infrastructure intervention

4.6.2.1. Road construction

As explained by N3 and N4, the road projects in Sri Lanka were mainly undertaken by two ministries; main roads (A and B class) by ministry of transport and rural roads (C and D class) by ministry of provincial councils and rural governments. In addition, there are some

roads under the irrigation ministry, which provide access to tanks and reservoirs. The financing for road projects in North and East were lent by different international NGOs, and N4 added that Asian Development Bank (ADB) and World Bank (WB) loan projects were first launched to establish the main roads. Some of the road projects were commenced as early as 2006 and 2007, in terms of planning and feasibility studies. According to N3, N4 and N6, Northern road connectivity project (NRCP) and Pro-poor Eastern infrastructure development project (PEIDP) were two of the major road projects undertaken by the government in conflict-affected areas, under the mega projects Uthuru vasanthaya (Northern summer) and Nagenahira Nawodaya (Awakening East) respectively. N2 added that the RDA officials started the fieldwork in the Northern province in August 2009, after the end of the conflict. N3 mentioned that the international NGOs paid attention to give loans to all the areas that were directly and indirectly affected by the conflict, including Northern, Eastern and North-Central provinces. According to N2 and N3, the road construction started before the settlement of IDPs in the severely affected areas. They also stated that the selection of roads by the RDA was based on a weighted average method, and the rural roads were selected based on their priority by the provincial councils.

The experts' views on the process of reconstruction were different from the above view of the officials. N5 and N6 stated that main roads were prioritised based on political reasons rather than on the economic or social need. N5 said that most of the roads reconstructed by the loans of the bilateral partners used the wrong technology that is not suitable for the country. He also added that mostly minimum cost material was used by the constructors in order to make profits, making the roads unsustainable, and thereby do not add any value to the northern provincial infrastructure. N6 stated that the government's focus was more on the reconstruction of main roads under RDA, and the progress of rural road building is relatively slow. He pointed out that the provincial councils do not have the capacity to prioritise roads among their different needs, and therefore the rural roads are being built under a completely different strategic structure. He also added that once you move away from the main roads, the rural roads are still gravel and difficult to travel. Some of the main roads constructed were also highly eroded and not properly maintained, also due to use of wrong technology. N5 and N6 also pointed out that unlike in other areas of Sri Lanka, in Northern province the roads cannot be given priority due to other issues such as poverty, and lack of health and education facilities.

4.6.2.2. *Material resources*

The officials attached to RDA and provincial council roads discussed the difficulties they had to face during the reconstruction process. N1 said that water was an issue in some parts of the northern province where the constructors started taking water from underground sources, but due to community resistance started transporting water in bowlers at a high cost. N4 said that there were some issues during the engineering process due to lack of resources and tight security conditions faced by the constructors. N3 stated that due to the unavailability of facilities such as water, electricity and sanitation, the international contractors would refuse to go to the field for reconstruction activities. Therefore, the loaners broke the project grant into small packages so that the local bidders could compete for the contract. He also added it was difficult to find consultants to engage in the project for a continuous period.

“Even if we provide accommodation, a lot of international actors, especially from the consultant’s side, were reluctant to go. There was a lot of replacements, as consultants go there, stay for a few months and come back. So, we had to find local consultants” - N3.

N2 and N3 mentioned that they had to allow a high cost for all the construction material such as gravel, sand and aggregates due to their scarcity in the area. The contractors were not allowed to access places where the material was available, because of the threat of land mines and other security reasons.

4.6.2.3. *Land acquisition*

All the officials who are based in Colombo said that they didn’t come across any major issue during the land acquisition process. N1 and N2 said that people welcomed the road developments and were willing to cooperate with the officers in such cases. N1 added that during the NRCP, the officers made sure to pay compensation to all the rightful owners of the acquired lands. She added that it was easier to cooperate with the people in conflict-affected rural areas than in other parts of the country, as they valued the reconstruction of roads, and the constructors helped them back by giving the soil to raise their private lands. according to N1, the only issue was a difficulty of identifying the rightful owners of the lands, as many have migrated to other cities or countries during the conflict and never returned. N3 revealed that during the early stages of construction, land acquisition was not an issue as people were not resettled and had to deal with negotiations only at the later stages. N4 added that only very small strips of lands were acquired from private lands, as most houses were interior to the roads. He also said that in the case of provincial roads, mostly existing ones were rehabilitated without widening too much, so that there was no need to acquire private lands.

4.6.2.4. Language barrier

Among all the respondents at the national level, N1, a Tamil engineer, is the only one who discussed lengthily the communication problems faced due to the language barrier. According to her, the majority of the officers who worked in the conflict-affected areas were Sinhalese and didn't speak the Tamil Language, and the local people were not at all capable of speaking Sinhalese or English. The resettlement officers were also mainly Sinhalese, and as a result, N1 took on the additional task of translation where she was involved. She insisted that when dealing with people such as in resettlement and land acquisition processes, it is important to have someone speaking the local language and understand the local context.

"As RDA we should insist on providing a consultant who speaks the same language and same ethnic background. If I have to work in a Sinhala speaking area, it will be difficult. I can speak Sinhala, but I cannot deal with them. I can work as an engineer and a construction supervisor" – N1.

4.6.2.5. Public opinion and Addressing grievances

As mentioned earlier, the officials stated that the local people were very supportive of the construction process, and problems occurred only very rarely. N4 said that feasibility was completed and the reconstruction process has started before the resettlement process, and people were not there to voice their objections to anything. N1 revealed that one rare occasion when people objected was when the road was built through the lagoon, and fishing activities had to be halted during the construction period. N1, N3 and N4 discussed the 'grievance redress committees' (GRC) established in the local areas to deal with problems that occur on a daily basis within the DS. According to the officials, these GRCs contributed to solving the problems at a local level and also made the process accessible for people. N1 added that the officials from RDA collaborated with community representatives such as religious leaders, principals of schools, fathers in church, divisional secretaries, medical officers, MPs of the area, etc in order to address the grievances. She added that when negotiating with the fishing community, the fisheries department acted as a mediator. According to N3, the multilateral lending organisation represented by him provides a social safeguard policy which triggers when there is physical or economic displacement in the construction area

"We insisted the government to try their best to not to involve land acquisition in the process. Because people were already in a transition stage, and we didn't want to cause them more trouble" - N3.

However, according to N5, government officials do not come across any issues in the field as they do not get involved in the process of implementation. The officers based in Colombo are merely working as consultants, and handing over the actual projects to contractors.

“They don’t have any engineers anymore to implement. All they do is the management of the contracts. A true engineering and contract management are two different things. They only have a set of documents. No longer they have project-based experience” – N5
N6 also argued that public opinions were not considered during construction, and there was no community participation. Not only the engineers and consultants but also manual workers were coming from the outside the area and sometimes from outside the country.

4.6.2.6. Horizontal and vertical coordination

As mentioned earlier, the road projects were handled by two different ministries, namely the Ministry of transport and the ministry of provincial councils and local authorities. The officers revealed that during the time of road projects, additional infrastructure construction activities were carried out by other ministries such as water, electricity and telecommunication. N3 and N4 mentioned that there is problem coordination among different ministries both at national and provincial levels, resulting in damaging the completed roads to continue another project. For example, when a pipeline is built under the road, the newly built road will be dug and the more funding is required for rehabilitation.

“In Sri Lanka, the funding arrangements happen in different periods. For example, water projects get funding for pipes at a different time. Ideally, immediately after the water project is completed, there should be an arrangement for us to rehabilitate the road. We don’t have a proper master plan in Sri Lanka to address this problem and cover all aspects of infrastructure” – N3.

However, N3 added that at the funding organisation try to organise it in a manner that costs are minimised or there is a provision to make alternations in the later project. N4 also added that in certain cases water, electricity and telecommunication authorities try to coordinate with RDA for laying underground pipes. However, according to N4 coordination issues also arise at the provincial level since a number of projects are handled by different actors.

4.6.2.7. Financing the construction

All respondents stated that almost all road reconstruction in conflict-affected areas were funded by the loans from international multilateral and bilateral lenders¹. According to N3, the lending organisation also had limited funds, because of which the roads had to be prioritised based on a weighted average method. According to N3 and N4, a high cost of material was allowed due to the scarcity of resources in the area. N5 also claimed that more money is spent on road projects in the northern province than in other parts of the

¹ The main sources of funding for road infrastructure were loans provided by multilateral and bilateral lending organisations (Hyndman, 2003). Multilateral loans were provided by international NGOs such as World bank, Asian Development Bank and IMF. Bilateral lenders are the ones given by foreign countries and companies, and the terms of the loan agreement is usually circumstantial. Often the bilateral lender has more power to decide these terms (Kelegama, 2014a).

country. However, he added that due to the high capital-intensive nature of reconstruction, the cost in North-East is similar to that of difficult upcountry areas.

“If we take the difficult terrains of upcountry and war-torn areas, there is a slightly significant difference in the capital intensity. If we compare the given time for a unit construction in flat terrain and easy country with the same in upcountry or north-east, the coefficient, for the latter is more significant for the regression for the capital intensity” - N5

N6 attributed the incompleteness of rural roads to the lack of capacity of provincial councils to manage their funds. He said that the local governments were established only after the war, and the governance mechanisms are not strong. However, he added that the personal influence of politicians for financing can be seen even at the provincial council level.

“The authorities may have the power and may even have the funds to do it. But they seem not to have the capacity to decide the prominence of road reconstruction. Even if they do projects, they might be because of a personal priority like one of the local council members may have a house in a street and that street may be built” - N6.

According to N5, for many road projects in North and East, there was no competitive bidding at the national level. When the government opted for the bilateral loan, there was no room for competitive bidding and the contractors were already selected. N5 added that as a result, not only the loans were borrowed at a high interest rate but also the contractors were selected from lender countries such as China, Korea and India.

“But, when we go to international multilateral lenders, irrespective of Chinese, Korean, Japanese, UK, USA- they try to come to internationally competitive bidding. But now (in other projects), local competition is not there at all. Without going to ADB or world bank, and because of going to bilateral credit we are trapped with that country’s supplier. This leads to a monopolistic or oligopolistic situation, because of being restricted to few suppliers in that country” - N5.

According to N6, the loans obtained on bilateral conditions are affecting the country’s economy in the long-term. He also added the public funds are mismanagement in the post-conflict reconstruction process due to the way it was spent on not bringing any economically beneficial to the country.

4.6.2.8. Role of financial lenders

N3 mentioned that as a multilateral financial lender, the organisation does not get much engaged with the fieldwork, as most loan projects are different from grants. Most of the groundwork is done under the supervision of respective ministries and government

organisations. According to him, the lending organisation also does not entertain the interests of politicians and do not engage directly with them, but rather with the officials who handle the projects. Discussing the road projects in the northern province, he added that the overall aim is to provide infrastructure to war-affected areas and thereby improve the economic condition of the people. The lenders also set guidelines for the contractors, in terms of use of local resources and employment, social and environmental safeguarding systems, evaluation and assessments, and procurement procedures. N6 also confirmed that when it comes projects funded by multilateral lenders, the constructors and the officials are required to fulfil their standards. According to him, the lenders are interested in the wellbeing of the local people and often special funds are allocated to address the issues additionally faced by people. However, N6 added that the funds may or may not be utilised depending on local circumstances, and may be used for other purposes.

N5 stated that unlike bilateral ones, multilateral lenders insist on internationally competitive bidding, and it is difficult to misuse the finances. However, he added that it is necessary to do the feasibility studies before financing the project, which still does not happen with any of the loan projects. On the other hand, even the multilateral lenders do not act for the best interest of the local people and domestic needs, as they have their own agendas. Nevertheless, this is a better option than bilateral lending, which results in not only taking all the economies of scale to their own countries but also in applying the wrong type of technology.

“But in projects funded from bilateral loans, local competition is not there at all. We are trapped with that country’s supplier. This leads to a monopolistic or oligopolistic situation, because of being restricted to few suppliers in that country. As a result, we bring in the wrong technology and sometimes old technology, expensive technology” - N5.

4.6.2.9. Formal assessments and evaluations

According to officers interviewed from Colombo, there is a separate branch in RDA dedicated to environmental and social impact assessment. At the same time, the international donors have set certain standards and regulations regarding the environment and social impact, that has to be ensured by RDA during implementation. On the other hand, RDA is required to submit the timely reports regarding the pre and post evaluations of social and environmental impacts of the project. The officers are also required to visit the project sites to hold meetings with those who work in the areas including local RDA staff, consultants and the contractors. According to N3, the international donor representatives are also required to monitor the progress of civil work and report to the mother agency. He also mentioned that the government have to agree to loan conditions of the donors when signing the loan agreement. These conditions include social and

environmental aspects, local employment provision and calling bids for local suppliers. The feasibility studies, mentoring and evaluations are all done under donor agreements.

However, the manner in which the projects are appraised and implemented were criticised by the expert respondents, N5 and N6. According to N5, the method of choosing the reconstruction project before the feasibility studies allow corruption and political influence. Projects should be appraised using a pipeline, and evaluated before the decision to implementation is taken. Yet, within the Sri Lankan system, the projects and the areas for implementation are decided before the feasibility, and this does not serve the community needs. N5 and N6 also highlighted the difference between the multilateral and bilateral lenders. While the multilateral lenders may require the implanting institutions to follow conditions such as competitive bidding, local employment provision, and social and environmental impact assessments, the bilateral lenders do not follow such regulations. When the government opt for bilateral lenders there is no mechanism to ensure competitive bidding, resulting in foreign consultants and contractors gain the advantage of the construction. N5 also emphasised that road projects are implemented as isolated construction activities and not linked to a master plan; neither within the road network of the country nor within a post-conflict strategy aimed at recovery and sustainability.

4.6.2.10. Political influence

N5 mentioned that the absence of project appraisal mechanism, a PCR strategy and lack of community-based initiatives allow the politicians to influence in the process of reconstruction from planning and implementation to post-construction evaluation and maintenance. The politicians first come up with the project idea, often based on personal connections or favouritism, and put it forward for the government to be approved by the cabinet for funding. The politicians receive funding based on their personal influence and power within the cabinet. According to N5, if the feasibility is undertaken before the project approval and funding, that could void the political influence and the resulting favouritism and corruption. N6 also said that political influence is the reason that projects are incomplete, unequal across the country, and not up to the standards. As a result, road reconstruction fails to provide expected economic and social benefits to the communities.

4.6.3. Consequences

4.6.3.1. Economic

01. Ease of transport

According to N1, N2 and N6, the travel time was significantly reduced after the road construction in war-affected zones. The officers who worked in the construction sites also said that local people were happy about the construction due to ease of access to resources and markets. According to N1, local businesses have improved and people started opening new businesses even before the reconstruction was finished. N and N2 mentioned that in some areas in North and East, the tourist industry has boomed and local people make livelihoods from tourism due to road infrastructure facilities. N6 added that the movement between different districts and provinces have improved allowing people to visit places they never did before construction. N5 stated that although there are no multiplier effects through expenditure, people are directly benefiting from the outcome of the road projects. "The context might improve to the extent that you have a road now. Earlier, you didn't have a road. Now you have a road. ... Earlier, there was no railway connectivity, because of that people were paying more to go by air, or there were long delays in road transportation. Now the improved connectivity has given better transport, time savings and cost savings. That is the output benefit" - N5.

02. Employment

According to N1, N3 and N4, the RDA attempted to employ local community during the reconstruction process, because of the lender regulations to improve local livelihood opportunities through the projects. However, N1 and B4 mentioned that local people from some of the rural areas were not willing to work in road construction, and it was hard to persuade them to be employed as per loan conditions. Therefore, the employees in road construction were often brought in from other areas within and outside the district, mostly from urbanised cities. Those who work in the agriculture sector and rely on daily-wage manual labour were not willing to give up their livelihoods in order to work in the construction sector. N4 said that even if the income could be higher in road construction, the job security was low, resulting in people to carry out their traditional livelihoods. However, N1 revealed that some people who were employed in the road construction sector were given specific training on positions such as draftsman, storekeeper, etc. As a result, they were able to be employed continuously in the construction sector even after the roads in affected areas were completed.

N1 and N3 discussed the lender recommendation of including 15 per cent of women in the labour force, under standards of gender mainstreaming. However, according to N1 and N4, the achieved level of women employment was significantly less than the recommended percentage, due to cultural, social and economic barriers faced by the families. However, according to N5 and N6 local people were not given adequate opportunity to contribute and benefit from construction, as capacity building and local employment provision were almost non-existent.

03. Economy and livelihoods

According to most of the respondents, the economic situation has improved in conflict-affected areas after road construction. N6 said that the prices of goods and services were reduced to be in par with the rest of the country, whereas prior to construction the prices were much higher due to high transport cost and limited resources. The education, health, construction and information technology sectors were flourishing after the roads were built. N2 said that people are almost self-sufficient and have access to all their needs. Agriculture and fishing industries are also benefitting due to increased access to markets. According to N3, the studies conducted by the lending organisation provide evidence of increased production, high income, economic growth and improved living standards in northern and eastern provinces after road construction. N3 also added that unlike in cities, most of the rural areas affected by conflict benefitted immensely from roads as they improve the access to health and education facilities, as well as contributing to economic growth. N2 revealed that the plans to establish branches of the ministry of economic development in the conflict-affected zone were scrapped since the change of the government in 2015. She added that roads alone are not adequate to improve the living conditions of people, and incentives and support need to be continued by the government to use the road network for their betterment.

04. Lack of capacity building

The lack of capacity building was discussed as a negative economic consequence by N5 and N6. The way that the projects were implemented did not provide the opportunity for people to develop their knowledge and capacities.

“When it comes to the macroeconomic environment of a country - capacity building, know-how building, entrepreneurial capacity development, engineering know-how – all these are very important. If so, it is best if the industry is developed within the local context and contribute to the local development. We cannot expect this from foreign lenders... The projects were not implemented in such a way that the invested money leaks to the regional/local economy. People in those areas think the Sinhalese people from other areas

came and built the roads. But that was not what actually happened. Chinese, Indian and Korean people made roads through their own contracts. Even the railway was built by Indians” - N5.

According to N5, if the people participated in the construction process, it would not only give them a sense of ownership but also a supplementary income. People were not able to build within themselves due to lack of income, and the absence of opportunities to be employed and gain experience. Thus, the natural capacity development that takes place during a construction boom did not occur. According to N6, most of the funding from high-interest loans² went into other areas or other countries from where the consultants,

² High interest loans are often given by the bilateral lender (KIIs)

contractors, suppliers and employers came from. When it comes to projects undertaken through bilateral loans, the local people are only paying the loans and not receiving any benefits, and those roads were built using the wrong technology.

“The labour is also coming from outside of the country. Our people have become almost slaves just to pay the loans. No capacity building has taken place, for very few people there were benefited, only to those who were directly connected to reconstruction projects. But if the government played wisely, many people could have benefitted in many different ways. Even at the provincial level, if a project is there local people can be involved. Maybe they are not available and maybe not ready for that. But it is our responsibility to train them and make them ready to be involved in local projects” – N6

N6 added that a large portion of the affected population is still in poverty and no steps were taken to improve their livelihoods using the road facilities.

“Only one-third of the community have built their houses, one third is slowly moving. But the rest one third is not progressing at all. For them, there is no difference after the reconstruction and during the war, and sometimes it is worse than how it was. One reason is they have been moved away from their houses and were not settled back to their original lands” - N6.

Both N5 and N6 said that the lack of capacity building could negatively affect the economy and the people both at national and local levels, in short-term as well as in the long-term

05. National debt

According to N5 and N6, the projects not only took away the opportunities for local capacity and employment but also left people with a large amount of national debt. Some of the loans were taken at a high-interest rate and were referred to as ‘hard loans’ by N, due to their high-interest rate and absence of local capacity building.

“For example, if it is a Chinese contractor who is implementing the project, Rs. 100 is paid by a Chinese bank to the contractor in China. Only Rs. 10 come to Sri Lanka because only Rs. 10 is actually needed for the project. Even from that Rs. 10, the profit goes back to China. So, 90% of the loan was saved in the donor country itself. It didn’t even come to the local economy. We only received a paper saying you owe a debt amounting to this much. So, we keep paying debts according to that paper. In the end, we have become indebted to something that never actually happened. Therefore, post-conflict reconstruction, whether it is for the regional areas or the national economy – the way of implementation was very detrimental” - N5.

4.6.3.2. *Social*

01. Education and brain-drain

N2 and N3 mentioned that one of the objectives of building roads in rural areas was to improve access to education facilities, and students can travel to other areas for higher education. At the same time, N3 acknowledged that many people leave rural areas permanently after finishing education and starting their careers. The road projects were aimed at improving and maintaining the people's connectivity with their home towns.

"But after they graduate, how many people go back to the village? They have to stay in Colombo. Our vision is, if we have the connectivity – proper expressway network, then the national road network, and rural road network – at least they will visit once a week. At least, teachers from other areas will be willing to go there. We are trying to pick the difficult areas and improve them" - N3.

02. Ownership

Lack of ownership of road infrastructure is highlighted as a negative social consequence by both N5 and N6. According to N6, local people in war-affected areas do not feel the ownership of projects as everything was externally imposed, including the funding, the project ideas, the constructors as well as the workers. N5 said that, although the national economy did not benefit at large due to reconstruction, people end up feeling angry towards the government and Sinhalese community

"But the people think the government in the south have done it. In the end, they became angry with the government as well because those people in the area didn't get jobs. The projects did not belong to them. They did not feel like it was their own project. The belongingness was not given. And I think the government failed to do that. The government failed to implement the project in such a manner that the multiplier effect of that investment went into that area, or even at least to the national economy" – N5.

Both N5 and N6 said that the projects were alien to them, and the road infrastructure could not be considered as belonging to the community. The people tend to think that the rebuilding of destroyed infrastructure as if something is due to the government because in their eyes the government is responsible for destroying them during the war. N5 claimed that, even if the government's intentions could be genuine, the way the infrastructure intervention has taken place has made the situation worse and contributed to increasing the mistrust towards the government.

03. Tourism

According to N6, the increase of local tourists in the war-affected areas after the initial clearing and construction has left negative feelings with people affected by war.

“Soon after the war, people from the south came to the war-affected areas and it was open to people as a tourist spot. It was as showcasing the war, and people looked at the local Tamil people in a different way. Now it is much less. But after the war, there were too many people and it gave a negative feeling to the people. The local people were severely affected during the war, and when these people come from all over it wasn’t good for the locals” – N6.

Although the People from other areas might have had no understanding of the negative impact, N6 said that they were insensitive to the feelings of war-affected communities. He added that there was no effort from the government to control it or to manage the situation. When the people visited the war-damaged sites, their visits and stays were often facilitated by the military personals.

04. Drugs, alcohol and cultural issues

N6 also mentioned the increase of drugs and alcohol use, as well as the rise of cultural issues that occurred as a result of road facilities. The behaviour of some of the young men have become aggressive, and some of them are addicted to alcohol and drugs. They also get together and go on road trips using the newly built roads, and N6 called these as “liquor trips”, as they usually get involved in drinking alcohol and engage in dangerous activities such as swimming or hiking in unsafe environments. N6 also said that due to increased movement, the closely-knit families became distant and parents are not able to keep track of their children’s whereabouts.

“Earlier, the movement was constrained. But society was well connected. People know the activities of each other. If a family member is away at a particular time, the message will come to the home even before that person returns home. The parents and society don’t know much about the whereabouts of the young people. This leads to some social problems. Particularly young people have become alcoholic” – N6. According to N6, alcohol and drug use has become a major issue in war-affected Northern villages not only due to increased access but also due to sudden inflow of a large amount of these negative goods. Before the roads were constructed, they were highly expensive or locally produced without much success. For more than two decades, these goods were not brought into the areas controlled by LTTE from the rest of the country. Yet, after the road construction, the supply has suddenly increased, and people who had no prior experience were left exposed to its consumption. He added that rather than the availability of alcohol, the exposure to them within a very short time is the reason for its misuse.

“For more than 2 decades there was no such thing in those areas. but suddenly a huge amount of supplies of alcohol and similar things came together with all the other goods and services. And alcohol and travelling were financially affordable as well for younger people. As a result, even school students started drinking. There are family problems and there are many issues at the school level. Some of them lead to extreme cases such as sexual abuse” - N6.

4.6.3.3. Political

01. Political isolation

Both N5 and N6 claimed that the political isolation that existed during and after the conflict, have increased due to the nature of reconstruction intervention. According to them, issues that were created such as lack of capacity building and employment provision, absence of community participation and consultation, and unequal and incomplete construction, were used by minority political leaders to further isolate themselves from government activities. N5 said that the Tamil community could be more dissatisfied about employing Sinhalese people than employing foreigners due to the ethnic divisions that lasted for decades. According to him, the government was not sensitive to the historical tensions and fear rooted among Tamil communities, but rather fuelled those tensions through intervention. N6 claimed that the Tamil politicians, at both parliamentary and local levels, are purposely maintaining distance from the government and do not cooperate with the government to develop the affected areas.

“They (local political leaders) themselves do not want to take part in the process. They want to maintain the status as separate from the rest of the country, and not willing to cooperate with the government. If the politicians also cannot forget the past, forgive and move forward, what can you expect from the general public? They should be able to think wisely than people” - N6.

N6 stated that irrespective of the guidelines or regulations, it is necessary to have good personal relations in order to get benefits in the Sri Lankan political context. He added that since the northern province political leaders do not build positive relationships with government, they are not able to bring in effective development to the area. According to him, the main roads were built enthusiastically by the government to cover up war damage. The same enthusiasm cannot be seen when it comes to inner roads, and the local politicians are incapable of influencing the government.

Politicians from the north are not building positive relationships at least for the sake of getting some benefits to their areas. We need to come out of divisive mentality to see what is beneficial for the regions or province as a whole – and finally for the benefit of the

country. I think it is a long way to go. But the only thing is we at least need to move little by little” - N6

02. Impact on the national government

According to N5, the issues that came as a result of road infrastructure intervention also contributed massively for the defeat of Rajapakse government in 2015.

“We could not get the other benefits that could have done through the proper project implementation. If the Mahinda Rajapakse government properly did the road and railway projects, with the participation of local people in affected areas, they would have given him the votes and he wouldn't have lost the election” - N5.

4.6.4. Long term impact

4.6.4.1. Political isolation

According to N5 and N6, the political isolation maintained by the Northern province politicians can affect the development and ethnic harmony in the long-term. However, as mentioned above, they argued that the road construction contributed to increasing this political isolation.

4.6.4.2. Debt, lack of PCR strategy and wrong technology

According to N5, negative economic consequences such as national debt and lack of capacity building can lead to long term development issues at the national and local level. Since the infrastructure did not create any multiplier effects on increasing the income of people, there is no economic gain from the construction. Yet, the country is trapped in a long-term debt burden which all people in the country will have to pay in the years to come. N6 also highlighted that lack of capacity building through the projects and their isolated implementation have negative impacts on the economy. He added that the communities should be supported continuously to derive the economic benefits of reconstruction and to avoid the negative influences.

“The projects that concentrate on the local capacity building would have been welcomed by communities. They want capacity building more than anything else. It is a matter of sustainability. It will be a very long-term project. You cannot just implement it and go away and forget it. Starting from schools, including the school quality, school and administrative systems, it should spread into society. There is no long-term policy or strategy to derive benefits from road facilities – N6”.

N5 added that that the local technology, engineering know-how and entrepreneurial capacity was not developed within the projects. These disadvantages are worsened by the corruption of politicians, and as a result, people face more difficulties. At the national level, this can lead to a financial crisis affecting the whole population and increasing pressure from the international governments and organisations.

“The politicians rob out of these projects and use on political work. Long term debt burden and then comes the financial crisis. Nationally, you get pressure from international forces, more we become indebted to the, more the chances for them to put fingers in our internal affairs. There are so many national implications. All the regions are equally affected by them” - N5.

N5 also stated that due to wrong modality and irrelevant technology, the roads are not suitable for the local use and unsustainable. This can lead to high maintenance cost, and even to reconstruct them within a short period

“Because of the poor quality and poor performance of the project, the normal benefit required by the people will not be derived – at least in the long term if not in the short term. because of the management method that they have adopted, the quality of the projects is not sure. Sustainability of the project and its benefits is a question” - N5.

4.6.4.3. Peace and reconciliation

According to N6 road connectivity itself does not serve the purpose of social equity, development and reconciliation, but there may be indirect relationships between increased ethnic interactions and harmony among them. However, both N5 and N6 mentioned that without a long-term strategy for recovery, it is unlikely that road infrastructure can lead to peace. N6 added that there should be support networks to help people to adjust to rapid changes and to heal from the past wounds, or else the tensions could re-emerge.

“We should be able to identify the ways in which people can forward to express themselves rather than living in fear and anger. They have lost their family members, and sometimes their own arms and legs and left disabled for life. Many people are deeply and seriously affected. They are trying to recover and get on with their lives. They may not expect it but we should go forward and help them to recover. They will never ask for any of their needs but will silently suffer. We need to work out a way of helping them while empowering local communities and building capacities” - N6.

As per the views of the experts, the lack of ownership felt by people can also lead to ethnic disharmony and mistrust towards the government. N6 stated that those people who were under the LTTE control for a long time, did not have trust towards government at the start, and people still do not feel that the central government is their government. The negative

consequences brought in through the intervention have increased this mistrust. Both N5 and N6 stated that there is no effort from the national government to take steps towards peace and reconciliation, and there is no plan for sustainable development. N6 also stated that the government is only focusing on roads and such physical infrastructure developments, and that alone will not contribute to reconciliation.

“The road construction projects should be a part of a major strategy that works towards development and peace. With the post-war situation, it could have been definitely made into an opportunity to reconcile. Giving the physical and tangible things, in terms of money or infrastructure projects, is not adequate. It should be made into a mechanism of self-sustainable, self- development way of progressing the society by winning the minds of people” – N6.

N5 added that the lack of capacity building was also contributing to continued mistrust, by forcing people to live in poverty and by not giving adequate incentives towards financial stability. The people want to be felt as equally treated like the rest of the country, and construction projects are indirectly related to the issues of inequality and acceptance. N6 added that each province in the country should be treated equally, and allowed to participate in the development process.

“In Sri Lanka because of the policy structure I don’t think we have any challenge at the local level. Politicians like to have it in the central authority. It shouldn’t be the way. They should have certain powers at the central level, but all provinces should be given some level of power to manage their resources. Some provinces may not have equal resources like the other provinces, but that is their case. But within the resources they have, they should be able to compete with the other provinces. The competition will be a fruitful thing for the country. Now what happens is that nobody is motivated to do anything, and everyone is waiting for the central government to give something” – N5.

According to N6, the community needs independence and resources to build themselves rather than everything being imposed by the government which can lead to increase the unrest.

4.7. Summary

The results of the data analysis were reported in this chapter, under each of the cases and the KII section. The results of the data analysis prepared using the NVivo software were presented under the sections that followed. Each case was organised under the main and sub-concepts identified through the conceptual framework. The issues are identified under each of the concepts and were supported by evidence from data analysis. Some of the

evidence from the interviews were given without attributing to a single respondent due to political sensitivity. Based on the results presented in this chapter, the research discussion is built and is presented in the next chapter.

5. Discussion

5.1. Introduction

In the previous chapter, the results of each case study were presented with evidence from the data analysis. It is also the verbal and in detail version of the analytical framework introduced through this research. The issues identified during the reporting of results are analysed in this chapter connecting them to the previous research and the conceptual framework highlighted through the literature review. The documentary evidence is also brought in to support the findings of each section, as a method of triangulation. The issues are also discussed within the big picture of the post-conflict context, and also in relation to each other. The evidence from results from all cases are drawn together to highlight the patterns, connections and new findings emerging through the study. The discussion is organised according to the four main components of the framework; pre-intervention context, nature of road infrastructure intervention, consequences of road infrastructure intervention and long-term impact on the context. The themes, issues and new concepts are formed under each of these headings highlighting their significance within the context and with relation to each other. At the end of each section, a sub-framework of the main analytical framework is presented based on the findings. The final analytical framework presented at the end of the chapter is developed based on the components, concepts, themes and issues discussed throughout this chapter. It is also the summary of the four sub frameworks introduced in the four main sections.

5.2. Pre-intervention context

In literature, the **post-conflict** context was identified as different from **conflict** context, with post-conflict coming necessarily after the end of the conflict and before the beginning of reconstruction. But in practice, it is difficult to distinguish between the contexts of post-conflict and conflict, both for the officials and for communities, except for the fact that there was no violence involved (chapter 4 – sections 4.4.2, 4.5.2 and 4.6.2). For officials, the planning and funding applications for reconstruction started long before the end of the conflict. On the other hand, the termination of heavy violence happened at different points of time for different locations. For some communities, there is little difference between the conflict and post-conflict period due to the chaos they generally faced throughout the process of violence, displacement and resettlement. Rapid changes in the daily lives of people living in war-affected areas, starting from resettlement to establishing the local governments, made it difficult for the local people to understand the starting point of post-conflict period. Hence, this section in the analysis was updated as **pre-intervention**

context, meaning the periods close to the end of the conflict, after the end of the conflict and before starting the road construction. Generally, in the construction sector, the preconstruction phase is when the planning of the construction starts, and the costs and the inputs for the project are determined (Cantarelli, Molin, van Wee, & Flyvbjerg, 2012; Room, 2017). However, in this context, it refers to the period before the beginning of road infrastructure construction in the affected area, and the planning may or may not have happened during the period depending on the circumstances.

5.2.1. The extent of damage and nature of roads during the war

5.2.1.1. The difference in the severity of damage

The destruction of infrastructure caused by violent conflict is a topic discussed in previous research extensively (2.2.3). In the case of Sri Lanka, the three different DS divisions discussed in the study were differently affected during the conflict, and thus the severity of damage to each area is different. Oddusudan was destroyed fully during the war, and so were the roads. It is widely known that Oddusudan belongs to the area where final stages of the war took place and a large number of people killed. The media channels around the world have reported that the Tamil communities are the worst affected during the conflict, and are still struggling to get back to their feet (Seoighe, 2019; Tran, 2015). Hence, there was no opportunity for reconstruction before the end of the war in 2009. However, it was revealed that some roads were maintained by the LTTE to keep the law and order and for military purposes (4.3.2.1). Although there is no documentary evidence to prove the building and maintenance of roads by LTTE, it can be considered as a strong finding of the study due to being mentioned by many of the participants. Kalmunai is partly damaged and was under threat by both LTTE and the army. The main barrier to road development was the inability to carry out reconstruction (4.4.2.1). This reflects the situation faced by most Muslim communities in North-East Sri Lanka. They were neither the rivalry of the government nor of the LTTE, yet were caught between the fights and their lives were severely affected during the war (Korf, 2006; Lewis, 2007; Oberst, 1992). In Padavi Sripura, which was completely under government control, roads were still in a very poor condition (4.5.2.1). There is a clear difference between the areas in terms of the extent of damage to the roads at the end of the war due to the severity of violence, based on whether they were originally controlled by the LTTE or the government. As a result, the difficulties faced by people are also different in each case. The Sinhalese and Muslim communities under consideration managed to carry out their activities to a certain extent during the war and after, while the Tamil community were in a complete shutdown of their normal life, to an extent that they had to leave the area for safety (Bajoria, 2009; Eames, 2013; Unknown, 2002).

5.2.1.2. Roads built and maintained for military purposes

However, from the data from Sinhalese and Tamil communities, it was evident that roads were built by both government forces and LTTE merely for military purposes. The purpose of the roads during the war was transporting military supplies and supporting military operations. However, the people in each area benefited from these roads during the war as the public could also use them for day-to-day activities (4.5.2.4 and 4.3.2.1). The fact that the areas were under different powers also plays a pivotal role in deciding the condition of road infrastructure. Sinhalese areas under the control of government benefitted from roads built for government military actions and Tamil areas under LTTE used the ones built for LTTE's military operations. However, the military forces had the power to decide the opening and closing of the roads within its control during the conflict (Immigration and Refugee Board of Canada, 2006). The Muslim areas were not used as access points, although they were often caught in the centre of military actions. Kalmunai was not an access point for northern areas where severe battles took place and were not strategically useful for government. Therefore, roads for military activities were not a subject discussed by the respondents. This issue was not identified as a main component of the initial conceptual framework. As mentioned in the previous section, there is almost no documentary evidence to show the military use of the roads and thus can be considered as a finding of the study.

5.2.1.3. War economies of roads

War economies is a common theme discussed in previous research, as the existence of violence and armed conflict provide income and livelihood opportunities to certain groups of people within a society (2.2.3). The direct war economies that existed during and after the war are discussed in section 5.2.6.3 below. The way that roads built for military purposes being used by the public raises the question of whether roads have served as an indirect means of war economies for people. This is further evident when the respondents from Padavi Sripura mentioned that after the war, even those roads that were used for military purposes were not maintained and the conditions got worse (4.5.3.2 and 4.5.3.3). On the contrary, LTTE made an effort to build roads not only used for military purposes but also the public within the areas under their control. In addition to being used for military purposes, a respondent described that LTTE widened the main roads in town areas (4.3.2.1). It was evident from the interviews, that LTTE tried to organise the areas within their control to reflect modern developed cities and to maintain law and order (sourced from interviews). Roads were an essential component of this design. The fact that the

public also used these roads adds to the idea that they were not merely military roads but also built with the purpose of providing access to people.

5.2.2. Conflict and natural disasters

A special feature discussed by the respondents in the Kalmunai area is the inability to reconstruct roads due to the disagreements between LTTE and government. Despite the relationship between the government and the local Muslim politicians, the material and the resources needed to build the roads were blocked by the LTTE activities (4.4.2.1). The roads were affected not only by conflict and lack of reconstruction but also by being destroyed during the tsunami. The eastern province was severely affected due to the 2004 tsunami inundation and the road network was largely damaged (Reliefweb, 2005). Due to the violence that prevailed in the north and east as a whole, it was not possible to rebuild these roads. The shortage of supply in the eastern province due to the ongoing conflict was affecting not only the road reconstruction sector but also the daily lives of communities (International Crisis Group, 2007; Jayasundara-Smiths, 2018). This shows how different disasters such as violent conflict and tsunami, are interlinked with each other. Those who suffer from the war were facing further difficulties due to the destruction caused by the tsunami, and they were not able to recover from the tsunami destruction due to the existence of the conflict. The vulnerabilities faced by Sri Lankan communities due to the intersection of disaster impact and conflict are often pointed out by previous researchers (Beardsley & McQuinn, 2009; Enia, 2008; Hyndman, 2008). It is an issue that needs consideration before, during and after the reconstruction interventions.

5.2.3. 5.3.3. Difficulties in travelling and limited access

5.2.3.1. The vulnerability caused by lack of access

Restriction of access within the area and to other areas is another common issue discussed by the respondents. Even after the end of the war, the lack of road facilities, especially caused by the destruction of bridges and culverts, made it difficult for people to travel. This has caused a lack of goods, services, resources and even labour and material needed to rebuild and reconstruct. People were suffering due to lack of livelihoods to support themselves, especially in the severely affected Tamil areas (4.3.2.4). These are the signs of vulnerability that is commonly discussed in post-conflict literature (2.2.3). This form of vulnerability is not merely caused by poverty, but the poverty conditions imposed by the lack of access. The communities may have the ability to make a livelihood and better their living conditions, but limited access stands as a barrier. The people in all three areas were not able to access health and education services, markets for their products, employment

opportunities in other areas, as well as goods and services needed to carry out their daily lives (4.3.2.4, 4.4.2.2 and 4.5.2.1). In Kalmunai, difficulties in conducting agriculture and trade activities were prominent, on which the people in the area are mostly relying on. It was difficult to access the markets to sell the products, even if they had the capacity, labour and material for production. An example of this is the handloom products in Kalmunai, where people have the capacity to produce them but cannot access the markets to sell their products (4.4.2.2). Lack of access to health and education (Mampilly, 2012; Siriwardhana & Wickramage, 2014), markets and resources (Bohle & Fünfgeld, 2007; Korf, 2004), and absence of employment opportunities (Arunatilake et al., 2001) are the common themes discussed in literature as resulting from conflict in Sri Lanka. However, it can be argued that in areas where violence was less prominent, the same problems existed due to lack of transport connectivity. People in all three areas mentioned that it was difficult for them to access health and education services, which had an enormous impact on their wellbeing. At the same time, there were no adequate resources in health and education sectors within the areas under discussion (4.3.2.4, 4.4.2.2 and 4.5.2.1). A main reason for this is that human resources needed to run these sectors cannot be found in the local areas, and the people from other areas are either not able to or not willing to travel in to the war-torn areas to offer these services. International labour organisation reports that lack of human resources in war-torn areas of Sri Lanka has a long lasting effect on all sectors within the region (ILO, 2015). The vulnerabilities related to lack of connectivity can therefore, take different forms and could have different impacts on the lives of people.

5.2.3.2. Excessive travel time and cost

Taking a longer travel time to reach nearby towns or cities is another issue discussed in all three areas. It should be noted that this is common for all areas suffering from lack of roads or destroyed road infrastructure, irrespective of the war situation (2.4.3). People face travelling difficulties due to all kinds of natural and man-made disasters. The respondents also mentioned that depending on the time of the year the time taken to travel varies, due to floods and other forms of barriers to transport. At the national level, however, the high travel time and cost had a significant impact on the process of reconstruction. It was difficult and costly for the national level actors to travel to the areas for the evaluation and planning processes, and as mentioned also in 5.3.4 the funders and the government officers had to allow a high cost estimate for materials used in the reconstruction process. On the other hand, it was difficult to engage the national and international actors in local activities due to the difficulties that existed in the area, especially the lack of health facilities. Not only the materials used in road reconstruction

but the prices of goods and services in general were also higher due to the high cost of transporting in some of the areas in the northern province. While these issues are generally known to the public, there is a lack of documentary evidence and previous research regarding excessive travel time and cost imposed due to lack of road connectivity. A future quantitative study could be useful to compare the cost of living in war-affected communities before and after road construction.

5.2.4. Closely knit families and less cultural issues

The evidence from previous research often suggests that conflict has affected the family unity due to death, displacement, lack of opportunities and migration (Hart, 2002; Rajasingham-Senanayake, 2004; Ruwanpura & Humphries, 2004). Nevertheless, some of the respondents viewed limited access as a positive element as it keeps the negative influence of the outside society away from the local community. After the reconstruction of roads, the local communities were flooded with technological devices, access to internet and satellite television facilities, drugs and alcohol, and local and foreign tourists. (4.4.4.3, 4.3.4.3 and 4.6.3.2, also discussed in 5.4.3.3). Respondents, especially from Tamil and Muslim communities revealed that they had almost no access to such items and were living in a closed community before the reconstruction (4.3.2.4, 4.4.2.2 and 4.5.2.1). This also kept the individuals and families close to each other, and there was a feeling of safety within the community network. On the contrary, as people travelled often and to distant places than before, they became distant from their families and communities. People also believed that being able to travel had an impact on the younger generation getting involved in negative behaviours such as drug and alcohol use (5.4.3.3).

5.2.5. IDPs, resettlement and housing

5.2.5.1. Which comes first; Reconstruction or resettlement?

Out of the three areas under consideration, Oddusudan was the only area that was affected to the extent of creating IDPs. Although the people from the other two areas have mentioned the IDP issues, the respondents from Oddusudan have had direct experiences of being displaced. The issues related to resettlement and housing reconstruction were discussed mainly by them. The road reconstruction activities have affected the processes of housing and resettlement, as it was difficult to access the area and transport the housing material. On the other hand, the lack of established settlements made it difficult for some contractors to find local people to be employed in road work. This also seems to have created a misunderstanding between the constructors and the local people, or at least the constructors have made it an excuse that lack of settlements stood as a barrier for

employing local people (4.6.1.1 and 4.6.3.1). This raises the question as to what should occur first; resettlement of IDPs or the reconstruction of roads. Ideally, road reconstruction should be able to facilitate the housing, resettlement process and livelihood provision that leads towards economic growth in a war-torn area. However, in actual terms of road building process takes a long period from planning and evaluation to complete physical reconstruction, during which the affected people could continue to live in IDP camps under uncertain and restrained conditions. Living in IDP can cause not only physical but also mental and psychological illnesses causing long-term trauma for the survivors of war (Jamil et al., 2010). Therefore, the resettling people in the communities soon after the conflict and supporting to build their livelihoods is highly significant for the recovery process (2.3.1). Although people face difficulties after resettlement due to lack of roads, this could still be seen than a better alternative than living in the IDP camps. On the other hand, the governments and international organisations carry a responsibility of providing essential goods and services, and livelihood assistance to the resettled communities until all the infrastructure is completed and regular livelihoods are restored (2.2.3). As a good practice of resettlement, the European Bank for reconstruction and development suggest that any external intervention for development should take place after resettlement and livelihood restoration (EBRD, 2017). However, it is essential to carefully examine the local context before arranging the reconstruction or the resettlement processes after conflict.

5.2.5.2. Reconstruction, resettlement and vulnerability

It was evident from the data analysis that the resettlement, housing and road reconstruction was carried out at the same time (4.6.2.3 and 4.3.2.2). Adding to the previous discussion on what comes first, people faced difficulties even after resettlement due to lack of roads such as limited access to health and education, disturbances from wild animals, the high prices of goods and services, and limited access to markets and materials for livelihood support (4.3.2.2). It should be highlighted that these people have experienced the traumas of violent conflict, suffered losses of loved ones, endured the loss of property and displacement, and lived under difficult conditions in the IDP camps (4.6.4.3). In addition, they face a number of difficulties once returned to their previous settlements, which further increased their vulnerability. On the other hand, whether it is housing reconstruction, livelihood provision or road reconstruction, a variety of different actors from outside the local community are engaged in these activities, including government officers, employees, foreign government actors and volunteers from NGOs. It is important that policy makers from the governments and international organisations, as well as the practitioners in the field to be sensitive to the vulnerabilities of the communities and take measures to overcome and reduce these vulnerabilities. According to Donais

(2009) involvement of a large number of external stakeholders can result in the absence of accountability and power imbalances, as well as dilemmas about ownership to the local communities. It is necessary to plan and implement the post-conflict recovery process without bringing in further complications to communities.

5.2.6. Livelihoods and economic development

5.2.6.1. Poverty and vulnerability

Poverty was a prominent issue discussed in all three DS divisions, as well as at the national level. It should be noted that the reasons for poverty are different depending on the severity of war in each area and the power shift from LTTE to government. This is agreeing with the idea of Cole (2014), who stated that the communities affected by conflict can be fragile and vulnerable due to massive destruction and resulting poverty (2.2.3). As discussed in section 5.2.2.2, vulnerability can also be caused by a lack of resources and limited access to goods and services. On the other hand, people who returned to severely affected conflict areas had no means of starting the new livelihoods. In addition to lack of access to goods and services, they also suffered from poverty and loss of land. After the conflict, some of the people in Oddusudan were resettled in different plots of land and did not receive adequate land to continue agricultural activities (4.3.4.1). The recovery from poverty has been slow in the conflict-affected rural regions in Sri Lanka due to lack of trade and employment opportunities (Naranpanawa, Bandara, & Selvanathan, 2011). As a result, some people had to find alternative means of living, and working in middle eastern countries have become the only option for some families (4.3.4.1). It will be useful to gather information on the migrant workers from North and East of Sri Lanka after the war, which is currently lacking in the literature. At the same time, the respondents complained about the inadequacy of support and assistance to reduce poverty levels. The aid and assistance are essential, to reduce poverty and support livelihood creation, and to enhance the local capacity of the communities. Livelihood assistance can contribute positively to the communities to recover from conditions faced after conflict (Mallett & Pain, 2017).

5.2.6.2. Reliance on aid and assistance

However, there is a danger of communities continuing to rely on aid and assistance after conflict. This can often result from a limited capacity to recover from the economic shock caused by conflict (Korf & Silva, 2003). As a consequence of poverty, some families continued to rely on aid and assistance provided by the government and NGOs even after the end of the war, and resettlement. The continued reliance on aid was perceived as a weakness by some of the respondents (4.3.4.1), as it can lead to the disempowerment of

communities. On the other hand, there was no effort for capacity building through the reconstruction process at the local level (5.4.1.4). Capacity building should be undertaken with a long-term vision to be undertaken with the participation of national and local stakeholders (O'Driscoll, 2018). It can be argued that providing aid and assistance without the capacity building, can lead to an increase the vulnerability. Furthermore, Schwartz and Halkyard (2006) argued that, although external aid tends to peak soon after a conflict, it is difficult for these societies to benefit from them due to political and administrative limitations. Therefore, the aid and assistance provided after the conflict should strategically be targeted towards improving the long-term economic growth and community empowerment. It is important that while providing support, the communities should be empowered in order to be self-sufficient by building their capacity to support themselves.

5.2.6.3. Shifting from war economies

The war economies are discussed as a common symptom that exists in conflict-affected societies, and after the conflict people who relied on war economies may resist adjusting to new forms of livelihoods (2.2.3). In Oddusudan, people carried out illegal activities such as logging from the forest areas and clearing forest for agricultural activities (sections 4.3.2.4 and 4.3.2.5). Korf (2004) has highlighted in his paper, how the people had to find alternative means of living due to disturbances brought in by violence. These activities were used as livelihood support by families or individuals. It was also mentioned that people used the forest areas to feed the cattle and for farming activities, as there were no regarding entering the forests. Unregulated activities in war related areas in Sri Lanka is a common theme discussed by previous researchers (Bohle & Fünfgeld, 2007; Goodhand, Hulme, & Lewer, 2000; Korf, 2004). Due to displacement from war and occupancy of military forces, as well as most of the land being claimed as owned by the government (permit lands), these activities could not be carried out after the conflict (4.3.4.1). However, after the reconstruction of roads, the illegal activities such as logging and selling drugs have started at a larger scale, due to being facilitated by the availability of roads (also discussed in 5.4.2.2 and 5.4.3.3). The roads constructed for military purposes also served as a means of providing indirect benefits as explained in section 5.2.1.3. In Padavi Sripura, which is a Sinhalese DS division, employment opportunities were created in the government military sector during the conflict period. As most of the military occupations were offered on a permanent basis by the government, the people in the area still continued to benefit from the military employment after the war (4.5.4.1). It should be noted, that the military sector is not a major income generator for the Muslim community, and not at all for the Tamil community.

5.2.7. Environment

As mentioned in section 5.2.7, people used the forest areas in Oddusudan during the war as a means of livelihood support through logging, farming and cattle feeding. However, the environmental damage caused by these activities was very small compared to the damage caused by large scale illegal activities that occurred after the conflict (5.4.2.2). It was also revealed that during the time of their control, the LTTE protected the forests because it served as a means of protection from government military operations (4.3.4.2). The results of the study indicate that even with the purpose of military protection, there was less damage to the forests during the period under LTTE control (4.3.4.2). Due to having limited access to the resources and technology, the agricultural and fishing methods used in war-affected villages were traditional and labour intensive. The industrial activities were also at a minimal level, and the vehicles were not running as often as in other areas causing less air pollution. Thus, the environment was less damaged and protected during the preconstruction period than during the post-construction times.

5.2.8. Social and cultural issues

Although respondents did not necessarily discuss the socio-cultural context before road reconstruction, it is evident from the discussion in (4.3.4.3, 4.4.4.3 and 4.6.3.2) that people started to face with a number of issues after reconstruction in terms of drug and alcohol use, access to internet and television as well as due to tourism. It can be derived from their views, that before reconstruction they did not have problems of drug and alcohol abuse, and the cultural issues caused by tourism. The inability of the government to regulate such activities and to understand the socio-cultural context of the preconstruction community has made the adjustment process difficult, and almost unmanageable for the local community. The changes due to reconstruction came as a shock for the people, and they were not provided adequate tools or mechanisms to cope with such a shock. Previous researchers support that the Tamil community in Northern Sri Lanka was largely traditional and some based their decisions based on religious values (Pfaffenberger, 1990; Somasundaram & Sivayokan, 2013; Somasundaram, Thivakaran, & Bhugra, 2008). It is highly possible that the construction of roads and resulting connectivity could disturb the local community space and the existing traditions (Brush, 1983; O'Leary, 1976). Military presence

As discussed in the literature review (2.2.3), the presence of military forces and negative peace are two key aspects that can exist in the post-conflict context. The military presence was an issue discussed especially by the people in Oddusudan area. Although the

respondents did not directly discuss its impact on their lives, it was evident that some of the inner rural roads were built and maintained merely for military activities (4.3.4.1). Several researchers have identified the presence of military forces as an issue for the war-affected communities in Sri Lanka, especially those who belong to Tamil ethnicity (Azmi, Brun, & Lund, 2013; Rajasingham-Senanayake, 2011). However, when it comes to Sinhalese and Muslim areas the presence of government military was generally viewed as a positive influence, as it would provide safety from a potential threat from LTTE. On the contrary, the military presence is a sign of authority and central control for the Tamil community who were for years of conflict lived under LTTE. At the same time, there was no effort from the government for political reconciliation. In this context, the presence of military is a re-establishment of negative peace as described by Price (2010), because the grievances of Tamil people are not being addressed and they feel further alienated (2.2.3). It can be derived from these results that the government is trying to exercise power in the form of military forces on society, which is already at the risk of returning to violence.

5.2.9. Fiscal ease of the government

An important issue discussed at the national level in terms of pre-intervention context is the fiscal ease of the government (4.6.1.2). Fiscal policy is the way in which the government manages its income and expenditure, and how they are sourced. The national government was able to spend on major construction projects due to the small margin received by the cessation of military expenditure. As a result of the fiscal ease, the government obtained large amounts of debt and spent carelessly on projects that did not build local capacity (further discussed under 5.4.1.4). In literature, the failed state condition is attributed as a key characteristic of the post-conflict countries (Jabareen, 2013). It can be argued that in Sri Lanka the government has failed to manage the fiscal ease provided by the end of the conflict, and the process of expenditure was highly dominated by political motives (4.6.2.10). The government indicated the failed state features to a certain extent by being incapable of providing for national aspirations and interests of the people. The corroded institutions and the corrupted government operations would have also fuelled these decisions (Earnest, 2015; Zabyelina, 2013).

5.2.10. Sub-framework for the pre-intervention context in Sri Lanka

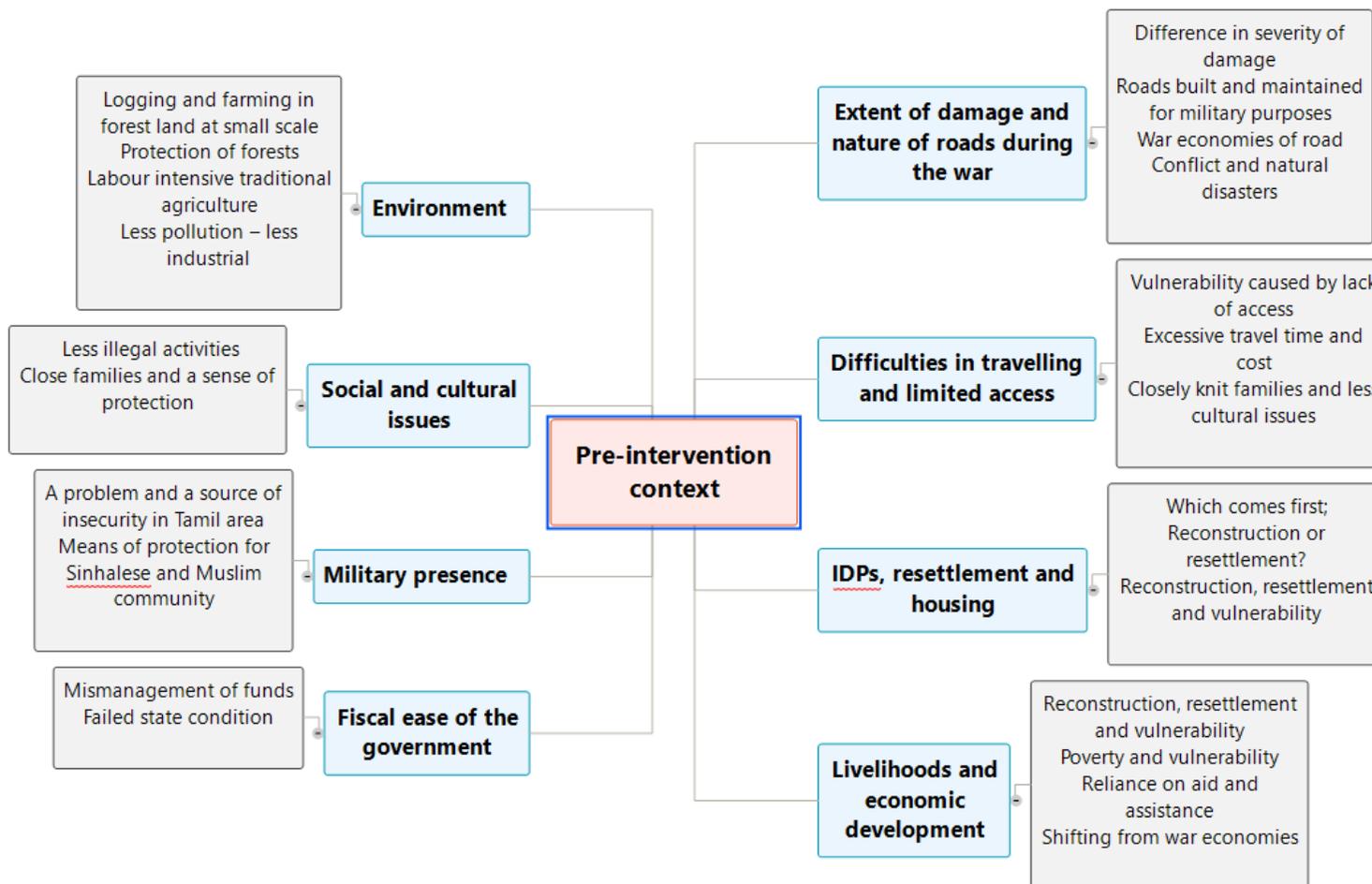


Figure 5.1. The pre-intervention context in the post-conflict state

5.3. Nature of road infrastructure intervention

In the original conceptual framework, the interventions were discussed in general, to get a broader sense of reconstruction interventions in all forms by all different actors. However, within this research, only the reconstruction of roads was considered, which is undertaken by the government often with the funding from loans given by international actors. Although road reconstruction can be considered as a physical form of hard infrastructure, several forms of soft infrastructure can be found within its implementation.

5.3.1. Actors involved in PCR of roads

During the literature review, three main actors were identified as key to the PCR process, namely the country's government, international actors and NGOs (2.3.4). Although these actors were observed to be important during the study, their roles were understood to be much more complex and specific to the context in the case of Sri Lanka.

5.3.1.1. Central government

The central government is important in making the decision to undertake road reconstruction and managing the fiscal policy pertaining to that decision. The intervention of government is also highlighted in the literature as a key to providing public infrastructure (2.3.4). The conditions of loan agreements from multilateral and bilateral lenders and the way in which those obtained loans are allocated among different projects are decided by the government. The two main ministries responsible for road construction, namely the ministry of highways and ministry of provincial councils and local authorities, are attached to central government and the budgets for each ministry is approved through the cabinet (4.6.2.1). This information is confirmed through the reports on government budget allocation by the government of Sri Lanka (Department of Treasury, 2018; RDA, 2020a). In addition, the ministry of irrigation is also involved in building and maintaining the roads connected to the department of irrigation (4.5.3.1). The rural roads necessary to access and maintain water resources are treated as a part of irrigation projects, hence, constructed and maintained under the water resources budget (Department of Irrigation, 2020). However, the role of politicians, particularly the ministers and Members of Parliament (MPs), in influencing the government decisions is an issue discussed by several respondents. Politicians were not understood to be a key actor during the literature review, yet in the case of Sri Lanka, they intervene in all decisions starting from choosing the lenders, funding allocation, calling for bids to monitoring and evaluation (4.5.3.7, 4.4.4.4 and 4.4.3.2, also discussed in section 5.3.9.2). The opportunities of public investments

are often used by Sri Lankan politicians as a means of gaining private profits (Bopage, 2017).

5.3.1.2. International organisations

The intervention of international actors is needed in PCR to strengthen the government's capacity and to prevent potential future conflicts (2.3.4). However, in the case of road infrastructure in Sri Lanka, the role of international organisations is limited to providing loans and there is no clear evidence of whether these loans are linked to conditions of building peace and reconciliation. International organisations such as World Bank (WB) and Asian Development Bank (ADB) are termed as multilateral lending organisations, who play a significant role in financing and monitoring the reconstruction process (also discussed in section 5.3.12). Additionally, there are bilateral lending organisations, whose loan conditions are based on the advantage the lender receives from the transactions. The borrowing from bilateral lenders is criticised by the experts due to high interest rates and the lack of local capacity building (section 5.3.12). The ability of the lending organisations to influence the local affairs and to force the government to comply with their own agendas are some of the potential risk discussed in the literature review (2.3.4 and 2.4.4). Although such loan conditions were not directly revealed during the study, the bilateral loans were found to be disadvantageous for the communities and to the country as a whole, while they benefit the lender's own country. Kelegama (2014b) reveals that the bilateral Chinese loans were not burdened with conditions like those of the multilateral lenders. There was mounting pressure from the international community about the human rights violations by the government and the Chinese lenders did not interfere in the internal affairs of the country.

In the literature review, foreign aid is discussed as an important source of funding and a form of external intervention in a PCR context. However, in the case of road infrastructure in Sri Lanka, the aids were almost non-existent as most funds were obtained as loans (4.6.2.7). A reason for this could be that most aids that in-flowed soon after the conflict were given to people as livelihood support and used in other poverty alleviation programmes. According to Amarasinghe and Rebert (2013), critical needs and rehabilitation have been the focus of the initial aid, and the inflow of aid and assistance have started to decrease over time. As there was a large number of IDPs, it was necessary to use financial donations to better their lives and for resettlement. Therefore, it is rational that aids were not used for physical reconstruction activities such as building roads. Although it is important to build roads, other essential needs such as food security, health and housing have to be fulfilled with the immediately available resources.

5.3.1.3. The role of NGOs

The involvement of other national and international NGOs was minimal in the road infrastructure reconstruction process. It was mentioned that they were engaged in road projects with community participation to reconstruct the roads destroyed by the tsunami (4.4.2.2). It is likely that NGOs played a key role in other PCR interventions such as housing and livelihood creations, and not in road infrastructure.

5.3.1.4. Other government institutions

In addition to the central government and ministerial level actors, there are other national-level actors involved in road construction from planning to physical construction, and monitoring and evaluation. Road development authority (RDA) is a key government institution operating under the ministry of highways and responsible for building and maintaining the main roads (A and B class roads) in Sri Lanka. Different branches of RDA engage in different activities such as planning, monitoring and evaluation, social and environmental assessment, and implementation of road projects. RDA is mainly based in Colombo, while district offices are established in order to operate the local level activities (4.6.2.6). This information is confirmed through the publications and website information released by RDA (RDA, 2020a).

Additionally, several national-level stakeholders are involved in road construction such as the department of irrigation and several ministries related to other supporting infrastructure such as water, telecommunication and electricity (Department of Irrigation, 2020; Ministry of Information and Communication Technology, 2020; Ministry of Power and Energy, 2020). The departments related to regional and rural development are also engaged in some road reconstruction activities. These are essential actors in the process of road infrastructure provision, but not integrated as central elements within the network of actors (4.6.2.6).

5.3.1.5. Private sector

As discussed in the literature the private sector does not directly get involved in providing public infrastructure, as they are not market-driven and do not generate profits (2.3.4). However, in the case of Sri Lanka, the road construction projects initiated by the government authorities are handed over to the private sector parties for consultancy and construction. After the decision to reconstruct is taken, the feasibility of the project is done by the private sector consultants, who also engage in the planning and evaluation process.

After the fund is approved, bids are called for private sector contractors to undertake the construction in the field. These contractors can be local or international. As also mentioned in section 5.3.12, the multilateral lenders insist on competitive bidding and often break the contract to several components to allow the local contractors. The list of contractors is usually openly available for the public to be seen on the RDA website for multilateral projects (RDA, 2020b). All the procedures followed for the Northern Road Connectivity Project are available through the lender in the ADB website (ADB, 2019). On the contrary, in the case of bilateral lenders, the contractors are chosen by the lenders based on their personal agenda and often the contracts go to the companies in their own countries. Zhu (2015) confirms that infrastructure development by Chinese companies in Sri Lanka was based on commercial interests. However, it should be noted, that the private sector contractors display profit maximising behaviours by exploiting the local natural resources and not accounting for externalities as discussed in sections 5.4.2.1 and 5.4.2.3. They are also believed to be related to rent-seeking politicians who influence the government decisions on choosing the bidders, and thereby receive commissions from the contractors (section 5.4.4.5).

5.3.1.6. Local governments

The local level government institutions are operating under the ministry of provincial councils and local governments, and are responsible for the construction of C and D class roads. The budget for these roads is approved as a lump sum to the provincial council or the office of the divisional secretariat, for all the activities taking place within the local authority and roads are only one of them (Ministry of Provincial Councils and Local Government, 2020). At the same time, there are other local level officers attached to different ministries and departments who are related to road construction through incidental links, such as department of forestry and wildlife conservation, Geographical mining bureau, police officers and officers attached to tri-forces (army, navy and air force) (Sri Lanka Army, Unknown year-a, unknown year-b). The local level officers from all these play a significant role in dealing with communities and working at the ground level, and demonstrate a better understanding of the PCR context and nature of reconstruction than the officers working in Colombo. They engage with the communities on a daily basis and have a practical understanding of the situation in the field (4.3.3 and 4.4.3). However, due to weak establishment of governance in post-conflict areas, the local institutions and the officers face problems related to institutional capacity and financial management (4.3.3 and 4.6). This could worsen the vulnerability of the communities and contribute to the failed state condition that post-conflict countries generally face (2.2.3). Therefore, it

is important to strengthen the local level institutions, by building capacities and allowing local democracy (Slater, 1997).

5.3.1.7. Local-level politicians

In the same manner that national-level politicians such as ministers and MPs are able to influence the national budget, the local level politicians influence the decisions related to the finances of the local authorities (4.3.3 and 4.4.3.1). The elite local politicians have the capacity of turning the infrastructure funding to private profits (Korf, Habullah, Hollenbach, & Klem, 2010). At the same time, if the local level politicians are not able to maintain a healthy relationship with the ruling party, it negatively affects the local financing for development (4.4.3.2 and 4.6.2.10). Some of the local level politicians are not powerful enough to negotiate with the government about the demands of the communities (4.5.3.7). However, it was also revealed that even the local level politicians often make decisions based on personal and financial gains (4.3.3.2), and based on the voting power of the community they represent (4.3.3.2 and 4.5.3.7).

5.3.1.8. Communities

it was evident through the literature review that the community involvement is key in PCR intervention (2.3.5). They are the ultimate beneficiaries of the PCR process, and community participation has the capacity to provide successful PCR solutions. The problems that occurred due to lack of community participation (5.4.1.4) and absence of local employment provision (5.4.1.3), highlight the need to integrate the communities in PCR activities, both at the planning and implementing stages. Although there were efforts during the road reconstruction process to address their grievances (5.3.5.2), issues such as language barriers (5.3.5.3), seemingly covering up the war damage (5.4.4.3) and exploitation of local resources (5.3.8) have further isolated and excluded the local communities.

5.3.2. Physical construction/completed parts of the reconstruction

5.3.2.1. Cover-up war damage

The government road construction activities are handled by different ministries and authorities based on the type of roads as highlighted in section 5.3.1. the roads constructed under RDA under the ministry of transport were the first to be initiated after

the conflict in all three DS divisions. However, the speed by which the roads were being constructed vary significantly based on the area. In Oddusudan, where all the roads were completely damaged due to war the reconstruction process of the main roads was very quick. The debris from the war was quickly cleared out, and as explained by the respondents very soon it was difficult to even explain the severity of war that took place in the area. International media criticised the clearing of war sites immediately after the war as it was used as a method to destroy evidence of war crimes (Davidson, 2014; Ong, 2014). The respondents also felt that they used the quick construction activities to cover up the war damage and to showcase to the international community that Tamil people are treated better. This could be related to aspects discussed under the literature review such as central authority, lack of political reconciliation and power imbalances (2.3.3 and 2.5.4). These areas were under LTTE control for a long period, and the whole experience of government domination in the area can be overwhelming for the community. Adding to this, their memories being wiped away and history is hidden in the name of construction could be a reason for re-imposing the view that their grievances are not addressed by the central government (Hyndman & Amarasingam, 2014). The construction of roads, in that case, is an exercise of central authority and imposing nationalistic domination by the government. The fact that the memories of war are wiped away also signifies that people's past is forgotten and there is no evidence of the grievances (also discussed in 5.4.4.3, 5.5.6 and 5.5.7).

However, people in all three areas appreciated the construction of main roads as it was easy to conduct their day-to-day activities (4.3.4.1, 4.4.4.1 and 4.5.4.1). However, the people in Oddusudan also pointed out that the speedy and enthusiastic approach taken for building the main roads could not be seen in building the inner rural roads, and the progress of building inner roads is slow (4.3.4.1). This makes them further question the motives of the government, as they claim there is not much benefit to the local people of the main roads without having access to it through the inner roads. If the government genuinely wanted to bring about development to the area, they would give similar priority to both main and rural roads. Thalpwila (2016) confirms that more attention should be paid to rural road construction in war-affected areas in Sri Lanka.

5.3.2.2. Military transport

The roads built for military purposes is a common theme discussed by respondents in both Oddusudan and Padavi Sirpua. In Oddusudan, the roads and camps were built alongside the war operations, and military camps were well established by the time of resettlement. The maintenance of roads is a key part of keeping the military supply as well as the military

authority in the area, to ensure there is no further outbreak organised rebellious activities. It was also strategically important for the government to keep the roads in good condition so that any case of an up-rise can be easily managed. This situation is the complete opposite of Padavi Sripura, as the Sinhalese community living in the area is not posing any potential threat to the government. Although it was necessary to maintain roads during the war to carry war supplies, strategic establishment of power after the war was not needed. Therefore, the construction and maintenance roads in Padavi Sripura was not a priority after the war (also discussed in 5.2.1.2).

5.3.2.3. Difference in completion

Orjuela (2010) explains that the differences in reconstruction in post-conflict Sri Lanka reflect the power dynamics that exist within national politics. It should be noted that there is a clear difference in the extent of completion among the three different areas discussed in the study. Out of them, roads in Kalmunai area are mostly complete except some of the inner rural roads that are near completion (4.4.3.1). Contrary to Padavi Sripura where only a small portion of the main road is carpeted (4.5.3.1) all the main roads were completed in Kalmunai by 2011. This difference in road reconstruction has made the Sinhalese communities think that they are discriminated within the eastern province (4.5.3.4). In Kalmunai, most of the inner roads are also completed, whereas in the other two areas most of the inner roads are in gravel and in poor condition (4.3.3.1 and 4.5.3.3). The only issues that came up in terms of physical construction in Kalmunai were problems of drainage and the heat caused by concreted roads (4.4.4.2). The completion of roads in Kalmunai was mainly accredited to the involvement of Muslim politicians representing the area in securing funds from the government (4.4.3.2 and section 5.3.9.2). On the other hand, Kalmunai is a more trade based urban area with a high population, and thus the community have a larger impact on the election of politicians to local and central governments (4.4). On the contrary, Oddusudan and Padavi Sripura have a low population and mainly based on agriculture, and their votes are not considered as highly significant within the districts (5.3.9.3).

The only road that is carpeted in Padavi Sripura was described as single lane road and not constructed according to the general standards compared to other areas in Sri Lanka (4.5.3.2). The reasons for this is not clear. Although the road could have been widened by accumulating the land and the cost of widening will not differ significantly from that of the current road. The only possible explanation is the corruption of politicians and contractors which is a predominant issue in Sri Lanka (2.4.3). The politicians are rent-seeking and they give the road-building contracts to their henchmen based on the amount of

commission they receive from the construction. If the cost allocated for a particular road is low, and also if the rents of the politicians and other middlemen are high, the contractors will have to opt for a low-cost construction to maximise their profits. This issue is further discussed under 5.3.9.4. Lack of rural road connectivity is a common issue in Sri Lanka irrespective of the conflict situation (Kumarage, 2003).

5.3.2.4. Officers' vs community perception

Another issue highlighted throughout the data is the difference between the government officers (both national and local) and the community respondents. It was mentioned that although the construction of main roads and inner roads were handled under different ministries, the funders give priority to all the types of roads (main and provincial) (4.6.2.1,4.6.2.3,4.6.2.9). However, it was not the actual case as it was clear from the responses of local community members that main roads were given more priority and the inner roads' construction progress was very slow (4.3.3.1 and 4.3.4.1). On the other hand, as mentioned in section 5.3.9.2, the different areas were given different allocations for road reconstruction based on political influence. However, according to the officers who were based in Colombo, all areas were given funding for road reconstruction solely based on the destruction caused by the war (4.6.2.7). In a system where the salaries of the officers as well as the debts of reconstruction are paid by the taxes of the public, the officers not representing the public view is a questionable situation.

5.3.3. Incomplete/ lack of reconstruction

5.3.3.1. Wrong technology and poor condition

According to the views of the experts interviewed at the national level, some of the roads were built using the wrong technology and was not suitable for the country (4.6.2.8). It was also revealed reconstruction was done using minimum cost material for profit maximising purposes (4.6.2.2 and section 5.3.4.), as well as due to the corruption (4.6.2.10). As a result, the roads are unsustainable, prone to disasters and do not have any actual value in the long term. This also a result of rent-seeking behaviour as highlighted in 5.3.9.4 and 5.4.4.5. Although the roads were almost complete in Kalmunai, some roads were poorly constructed resulting in flooding (4.4.4.2). This could also be a result of the wrong technology, poor planning and cost minimising by the constructors. (Kelegama, 2014b) confirms that Chinese lenders not only gave quick and unconditional loans but also exported technical assistance for infrastructure projects. The construction projects in some of the conflict-affected areas were completely taken over by Chinese

companies, and the labour, technology and resources that were used were also imported (Wheeler, 2012).

5.3.3.2. Lack of reconstruction

The incompleteness of inner roads is a major issue discussed by respondents in both Oddusudan and Padavi Sripura, as well as by experts at the national level. This is also in line with some of the previous research (Thalpawila, 2016). The roads that are not complete as well as those not adequately maintained cause a number of negative impacts on economic activities, education, health and environment (further discussed in section 5.4). The incompleteness of roads also prompts people to question the genuineness of the government and the real motives behind reconstruction. It was also mentioned in the case of these two areas, that there is no political willingness and political leadership to bring about road development projects into the areas (4.3.3.2, 4.3.4.4 and 4.5.3.7). On the other hand, it was the political connection of Muslim politicians to the government in power that enabled the Kalmunai area to secure funding for road development projects. At the same time, lack of funds for the local authorities was also mentioned as a reason for not building the inner roads (4.3.3.1 and 4.3.4.4). The funds allocated through the ministry of provincial council to the province are divided within the area not only for road projects but for all the needs within the province. Due to the scarcity of funds and a large number of needs to be met within the allocation, the roads cannot be given priority in the area. This raises the question of what priority roads have or should be given within the area, especially in Oddusudan where people are still recovering from the destruction and trauma caused by war. Do they have other needs such as livelihood support, education and health? Some of these areas are suffering from a lack of drinking water and severe poverty. Should the government funding be allocated for solving those basic issues rather than building roads? (Further discussed in 5.5.1).

All three DS divisions discussed in the study face natural disasters, particularly flooding, and the problem was accelerated due to the lack of reconstruction of inner roads. In the case of Oddusudan, the main road is elevated and built, causing floods to the inner roads which are still in gravel (4.3.4.2). It was evident that the mere completion of the main roads was not helping to ease the lives of people, as there is a large number of incomplete elements such as bridges, culverts, drainage and canals. On the other hand, the roads built with gravel also have to be maintained by the local governments and there is an allocation every year for gravel road maintenance (4.3.4.1). Each year the gravel roads are destroyed by natural hazards, and the allocation is used to resurface the gravel road resulting in an unsustainable pattern of maintenance. This can almost be considered as a

vicious circle caused by lack of funds at the local government level to complete the roads either using tarmac or concrete. On the other hand, since there is no much reconstruction done in Padavi Sripura, there is no effort to maintain even the gravel roads by the authorities. The negligence of the government was criticised by the community members, and this has prompted them to think the Sinhalese people are discriminated within the province (section 5.4.3.4). A similar view of discrimination was displayed by Tamil respondents when they compared the construction of roads in Oddusudan to that of other Tamil areas like Jaffna (4.3.4.1 and 4.3.4.3). However, in this case, the discrimination, as viewed by the community members, is not based on ethnicity, as the majority of people living in Jaffna are also Tamil. They just believe that the different areas and communities are treated differently, and the consequences of such discrimination are further discussed in section 5.4.3.4.

It was revealed through some of the interviews that reconstruction was halted with the change of government in 2015 (4.4.4.4). The change of government has redirected the funding allocated for roads for other purposes. This is clear evidence of the nature of physical infrastructure-oriented development undertaken by the Rajapakshe regime, and how it has changed drastically with his defeat in 2015 (5.4.4.2). Reuters reported that the next president Maithripala Sirisena stopped a number of Chinese projects initiated by his predecessor (Aneez, 2016).

5.3.4. Material resources

Obtaining the material resources used for reconstruction was a major challenge for officers and constructors who worked in post-conflict areas (4.6.2.2). The lack of natural resources and unavailability of resources is a challenge faced during reconstruction interventions in war-affected North Sri Lanka (de Silva, 2010). It was revealed that the shortages of water, electricity and raw material were difficult to obtain within the area (4.6.2.2), and was difficult to transport the material due to lack of road facilities (5.2.1). The officials from RDA and aid agency also revealed that it was difficult to encourage the consultants and the workers to go into the war-affected areas due to lack of resources. According to one of the respondents, the international lender split the total grant into small amounts to attract local consultants and contractors (4.6.2.8). This can be considered as a progressive and adaptive move by the lenders, as it allowed the income to be gained by Sri Lankan people. This is specifically done by international multilateral funding organisations who follow strict regulations to allow using local resources, and from the explanation from the expert in 4.6.2.8 of results chapter, it is clear that bilateral lenders do not use local resources. The difference between the funding mechanisms of multilateral and bilateral

lenders is further discussed in section 5.3.12. The international funders also said that a high cost was allocated for construction due to the difficulties of acquiring the resources needed for construction. This, however, tallies with the idea of the expert that cost for northern terrain is higher than other parts of the country and similar to difficult construction terrains of upcountry (4.6.2.2 and 4.6.2.7). Although the experts have attributed the high cost to the corruption and rent-seeking behaviour of politicians and contractors, the lack of material is outlined as the reason for high allocation by the lenders. These conflicting views are questionable. It is also quite possible that the reasoning for high cost can differ based on the area of reconstruction, and a subject that can be further studied in future research.

However, as highlighted in sections 5.2.7, Oddusudan which comes under Mullaitivu district is rich with resources, and during the period of reconstruction, the contractors have acquired gravel from the local area without any permission or supervision. At the same time, the gravel quarries were left without rehabilitation, leaving the external cost of construction to local communities and wild animals. It was also revealed the construction cost was low due to obtaining gravel from the local area and at not paying for them (4.4.3.34.3.3.5). This situation questions the justification of allowing the high cost for material, particularly for the case of Oddusudan where the construction activities have caused large scale damage to the environment.

5.3.5. Land acquisition and community corporation

5.3.5.1. Process of land acquisition

The issue of land acquisition was also discussed only in Oddusudan since the roads were widened and already in gravel condition in Kalmunai. In Padavi Sripura, no land acquisition has taken place due to the lack of reconstruction activities. However, the respondents described that if the government is widening the roads, the residents of Padavi Sripura are willing to give their lands for the road construction (4.5.3.2 and 4.5.3.3). This shows the willingness of people to cooperate and how essential the roads are for their lives. A similar willingness was displayed by the Tamil communities in the north, when they cooperated with the officers for road reconstruction. 'Welcoming of road development', 'easy to cooperate', 'understanding the value of the roads' are some of the terms used by officials to describe their behaviour. However, at the initial stage, the construction as carried out before the resettlement of people and land acquisition process was not difficult (4.6.2.3). On the other hand, some of the owners of the lands never returned after the conflict as they no longer lived in the country. The question of 'what comes first, reconstruction or resettlement' (1.3.1.) recurs in this context, as the road reconstruction

has to continue irrespective of people being resettled. The local respondents also agreed that they didn't face many issues during the process of land acquisition. The problems were solved locally and managed with the corporation of officers (4.6.2.3). Irrespective of the negative associations such as no local capacity building (5.4.1.4), no local employment provision (5.3.7), destruction of environment (5.3.8) and lack of ownership (5.4.3.6), the extent of support and corporation displayed by the local communities in the war-affected areas is highly commendable. There was no hostility against the consultants, contractors and workers who were mainly Sinhalese and from other areas of the country. This could be a sign of trust and reconciliation. However, this trust-building is counteracted by the centrality of the reconstruction process as discussed under 5.3.10.

5.3.5.2. Grievance redress mechanism

The establishment of a grievance redress mechanism (4.6.2.5), is a point highlighted by the officials from Colombo as a measure to address the issues faced by people during the construction. The issues that occurred were solved locally and there were no major conflicts between the community and the constructors. RDA has published information pertaining to NRCP grievance redress mechanism which clearly specifies the guidelines that should be followed to solve problems at the local level (RDA, unknown). However, an opposite view was expressed in this regard by the national level experts, who claimed that officers working in Colombo do not know the real situation in the field of construction (4.6.2.5). The lack of community participation and not addressing their needs before the construction are reasons for this critique. On the other hand, the construction process is completely outsourced to the contractor and the workers (4.6.2.7 and 4.6.2.9), and all the employment and consultancy comes from outside areas. From the data, it is further clarified that community participation and involvement was minimal, and almost non-existent (section 5.3.6 and 5.3.7). This makes the outsiders question whether the people were able to express their genuine grievances freely to the officials during the process.

On the other hand, the grievance redress mechanism is focused only on the aspects related to physical reconstruction. The use of the word 'grievance' to refer to day-to-day issues of physical blocks is itself questionable, as in the wider ethnopolitical context in Sri Lanka, grievances are the problems of discrimination and marginalisation faced by Tamil communities. The reconstruction process arguably excluded the local communities (5.3.6) and isolated them politically (5.4.4.1 and 5.4.4.4), and also used as a tool to operate control and central authority and ignore their history. The role played by the aforementioned grievance redress mechanism in solving the problems of people and bridging the trust towards government is almost negligible. On the other hand, the

construction of roads is an imposed condition of the people in war-affected areas as their opinion and participation was not considered (4.6.2.5 and 4.3.3.3). Therefore, the communities had to cooperate only to an extent where they try to obtain the best outcome from the conditions presented to them. This is a business-like negotiation, and it can be argued that there is no mechanism of building trust or addressing real grievances of the communities. A number of researchers argue that the governments since the end of war failed to address the grievances of Tamil communities, which is lingering as a threat to a future conflict (Herath, 2018; Jayasuriya & Weerakoon, 2019; Lindberg & Herath, 2014).

5.3.5.3. Language barrier

In addition to losing the employment opportunities (5.4.1.3), the people faced difficulties of expressing their concerns to the workers and officers as most of them were not able to speak in the local language, which is Tamil. Although this issue was mentioned only by one officer (4.6.2.4) and was never mentioned by local community members, it justifies the issues such as lack of community participation, lack of problems to be addressed as grievances and lack of trust. The inability of the central government authorities (such as RDA) to consider the need to communicate in local language further clarifies the lack of understanding of the government authorities and individuals in powerful positions towards the local context. Communities face a number of difficulties in a large number of different situations due to language barrier between officials and the Tamil speaking public up to this day (Chandrakala, 2019; LBO, 2018; Wuthmann, 2017).

5.3.6. Community participation

The significance of community participation in PCR activities is highlighted in section (2.3.5) of the literature review. As discussed in several sections in this chapter, the community participation in construction activities was at a minimal level in all three DS divisions discussed in the study (4.6.2.5 and 4.3.3.3). In Oddusudan, people didn't get the opportunity to engage as the construction activities were started before resettlement (5.2.5.1). On the other hand, planning and implementation of construction projects in Sri Lanka take place using a top to bottom approach. The allocation of funds and prioritising projects are done within the government based on political influence (4.6.2.10, 4.6.2.7, 4.4.4.4 and 4.4.3.2). As a result, the projects are imposed on people by politicians and not based on local priority or need. The feasibility is undertaken after deciding the project, the area and the allocation, and it is not based on the local adaptability. This brings us back to the question whether road reconstruction is an actual priority of the areas affected by conflict, as the people did not ask for it and the projects were imposed on them from the government. The failure to recruit local people to work in road construction project

further deprived the communities of their participation and income generation (5.3.7). On the other hand, the contractors, consultants and employees from the other parts of the country and even from other countries came and settled among the local communities without prior informing and without permission (4.6.2.8 and 4.6.2.5). This worsens the vulnerability and insecurity of the communities affected by conflict and acts as a further block to building trust.

5.3.7. Local employment

The issue of employment provision was discussed as a major problem by the people in Oddusudan, as they were in dire need of income and livelihood support by the time they were resettled in the DS divisions (4.3.3.4). Although there are relative poverty and unemployment in the other two areas, there was mention of needing the employment provided by the government. However, the people in Oddusudan were not able to benefit from the construction work as the people were already employed and brought in from other areas and other countries by the time of resettlement. The local community members as well as the experts, criticised this move by the government as it was a missed opportunity to provide financial stability for local families. It would also have provided some training for the community members who were deprived of such opportunity for the whole period of war, and through that training, they would have benefitted even after the construction. However, some government officers claimed that local people were not willing to be employed in the construction sector as they were engaged in agricultural activities (4.6.3.1). The main livelihood activity of people is agriculture and they need to prioritise the agricultural activities over construction work, which is often temporary manual labour. However, ADB reports that IDPs were employed in the construction sector within the development programmes as soon as they were resettled (Tilakaratne & Siriwardena, 2013). It can be argued that Oddusudan situation might have been different from other places where more employment opportunities were provided.

5.3.8. Deforestation/ gravel extraction

As mentioned in section 5.2.7, in Oddusudan, which was under LTTE control for the most of conflict duration, the environment was protected from large scale human and industrial activities. Reconstruction of roads was the first intervention that took place in the area after the war (4.6.2.1). On the other hand, there were no other government organisations or environmental authorities operating in the area when the road constructors started their work (4.6.2.1 and 4.3.3.5). Therefore, the constructors had the freedom to exploit the natural resources in the area without any barrier, and the gravel needed for road reconstruction was extracted from wherever they had access to it (4.3.3.5). The quarries

made from gravel extraction have resulted in a number of negative environmental impacts as discussed in sections 5.4.2.1 and 5.4.2.3. It was a noteworthy observation that all the complaints regarding gravel extraction came from those outside the road construction authorities, and the officials in Colombo didn't seem to have any knowledge about it. The profit maximising behaviour of the contractors, not covering the externalities of environmental damage, and their negligence of natural environment is somewhat anticipated as they are in the private sector and generally interested in public welfare. Causing environmental damage was also highlighted in the literature as a feature of post-conflict reconstruction (2.5.2). However, the government's inability to monitor and control the environmental damage, and to impose charges on the damages they have caused is problematic. This is further leading to show the lack of political will of the government to preserve the environment and to intervene in securing the wellbeing of communities. However, the gravel extraction from local areas and resulting environmental damage is not mentioned by the respondents from the other two areas. This is clear evidence of the unique abundance of natural resources in Oddusudan. Also, the contractors were able to do these illegally in the absence of people, and it would have been difficult if the people were already living in the area. (UN-REDD, 2015) reports that resettlement and infrastructure development after the conflict has contributed to deforestation in Northern Sri Lanka. It is worth examining whether the negligence of environment and exploitation of natural resources is a common issue that occurs during reconstruction activities in other parts of Sri Lanka.

In addition to gravel extraction, the trees were also cut down to make way for new and widened roads (4.3.3.5). According to Camisani (2018) extraction of materials such as sand, gravel and stone was a common practice related to the post-conflict reconstruction sector. The government officers insisted that the constructors were advised to plant three trees for every single tree that has been cut during the process (4.6.2.9), as per the requirement of the financial lenders. However, this is contradicting the claims by the local respondents in Oddusudan who said that a large number of trees were cut down from the beginning of reconstruction period and there was no appropriate replacement mechanism (4.3.3.5). This further supports the idea that private contractors are mostly concerned about maximising their own profits rather than the wellbeing of the community. On the other hand, it further the lack of knowledge of the government officials who are based in Colombo about the actual situation occurring in the field.

5.3.9. Political influence (national and community level)

5.3.9.1. Lack of political leadership and willingness

The lack of political willingness and leadership is a common theme discussed by respondents in Padavi Sripura and Oddusudan. In Oddusudan, the national representation of people is at a minimal level, and the local elections to elect municipal council members were not conducted by the time of data collection (4.3.3.2). The communities expressed their dissatisfaction of the inaction of politicians to hasten the reconstruction process and mistrust towards their political promises. It should be noted, the politicians representing the area of Oddusudan are also Tamil in terms of ethnic origin and the disappointment of people were expressed towards the local politicians irrespective of their ethnic background. The lack of accountability of Tamil politicians towards their communities is an issue rarely discussed in the press or by the international community. It is problematic that the actual grievances of the communities are not reaching outside the village level. On the other hand, the lack of political representation at the local level is also believed to be a reason for the incompleteness of inner rural roads in the area (4.3.4.1). They also compare the development of Jaffna to that of Oddusudan, and that Tamil people in Jaffna are better off than themselves. One respondent went so far as to question why they are treated differently from other Tamil people. To the people in rural North, development in Jaffna is far better than their own (Preventionweb, 2010). On the contrary, in Padavi Sripura the lack of political leadership is attributed to ethnic isolation and marginalisation by the respondents (4.5.3.7), as the majority of the people and the politicians in the district are of Muslim background and Sinhalese politicians are not elected from the Padavi Sripura division.

5.3.9.2. Influence of politicians to secure funds for reconstruction

Another theme that has continuously emerged is the ability of the politicians to secure funds for reconstruction activities in the local area. This was explicitly discussed by the respondents from Kalmunai, who said that the Muslim political representatives were able to maintain a close link with the government both during and after the war, irrespective of which political party is in power (4.4.3.2). It was through these linkages Kalmunai DS division was able to secure funds for the road reconstruction activities, and the financial restrictions were not mentioned as an issue by the respondents in the Kalmunai DS division. Kumarage (2003) confirms that the road construction projects are selected based on political decisions rather than a project appraisal method. On the contrary, the inadequacy of funding was mentioned as a barrier for road reconstruction for both Oddusudan and Padavi Sripura. The funds given for the provincial councils have to be allocated among several different needs, making the road reconstruction less of a priority (4.3.4.4). On the other hand, as the Tamil politicians representing Oddusudan do not collaborate with the national government and always maintain their principle identity

sperate from the government (4.6.3.3 and 4.6.4.1). Therefore, people think that the politicians' involvement in pushing the government to allocate funds is not adequate. The respondents also expressed their concerns that funds allocated for development are misused by politicians and that often the local MPs decide the area of development (4.4.3.2, 4.4.4.4 and 4.6.2.10), again implying the ability of the politicians to interfere in allocation of public funds.

5.3.9.3. Impact of the voting base on political involvement

An interesting observation made during the data analysis is the relationship between the voting base and the political involvement in reconstruction. Some community members believe that the extent of involvement in reconstruction depends on how much votes the politicians are receiving from that area (4.3.4.4 and 4.5.3.7). Oddusudan is a less populated area, and the politicians are not heavily relying on the number of votes from the area to win the election. However, a respondent from Oddusudan also revealed that the politicians are often giving fake promises before elections, but never develop the roads or bring about any other development activities (4.3.4.4). On the other hand, the votes of Tamil people are not based on the reconstruction activities as the ethnic basis is always used by the local politicians to attract votes (4.4.4.4). Irrespective of the infrastructure development, Tamil community in Northern Sri Lanka has refused the Rajapakse rule during elections (Ranasinghe, 2019; Wickramasinghe, 2014). However, in Padavi Sripura, people believe that the Sinhalese areas are not developed as all the elected MPs from the district are Muslim, and take the road construction to their own areas (4.5.3.7 and 4.5.4.3). On the contrary, the Muslim politicians were able to bring about the funding for construction to the communities who voted for them (4.4.4.4 and 4.4.3.2). The Muslim politicians have a history of forming alliances with the ruling party in order to bring benefits to their home towns (Yusoff, Sarjoon, Hussin, & Ahmad, 2017). Ali (2014) argues that the relations between the majority Sinhalese and Muslims could have resulted in negative economic outcomes for communities. However, during this research conflicting arguments were presented in terms of voting base and the impact on road reconstruction.

5.3.9.4. Rent-seeking and corruption

The issues of corruption and rent-seeking behaviour were discussed at both local and national levels. The road construction is implemented in such a way from top to bottom that, many people within the process are getting personal benefits. The road projects are decided on the first place not prioritised according to local needs, but rather on the political motivations of the central government and the ministers (4.6.2.9). The bids for construction are also selected with the intervention of the politicians, which allows them

to select contractors of their choice. As revealed by several respondents, the ministers give the contracts for their close acquaintances or 'henchmen', and in return, the politicians get a certain percentage of the grant into their own pockets (4.4.4.4). Not only the ministers but several political and administrative figures in the middle of the transaction are also receiving lump sums of money from the contractors. This could be a reason why the contractors are not following the social and environmental regulations as they are minimising their costs. At the same time, the government officials who are supposed to be monitoring them are also engaged in rent-seeking. According to Rajasingham (2010), some of the national and local politicians display rent-seeking behaviours which are counterproductive to the development agenda of the government. Therefore, the government officers are not able to carry out their regular duties of the maintaining regulations, monitoring the standards and supervising the activities of constructors. Not only the politicians and public sector employees, but powerful military actors are also involved in rent-seeking in PCR context in Sri Lanka (Goodhand, Rampton, Venugopal, & de Mel, 2011). As a result, some roads were claimed to be not up to the standards and in poor condition (4.5.3.2 and 5.3.3.1), used wrong technology (5.3.3.15.3.9.4) and the material cost for construction was high (5.3.4).

5.3.10. Central government's PCR strategy

The nature in which the road construction intervention has taken place reveals the government's take on PCR strategy. As defined in the literature review, the PCR strategy is the holistic approach taken by the government to reconstruct the conflict-affected area by integrating different interventions and policies (2.3.2). According to several respondents, lack of national plan and strategy for reconstruction as a whole is a barrier for implementing the projects. Some roads were included in mega development projects, and some are mainly politically motivated (4.5.3.5, 4.5.3.7, 4.4.3.2 and 4.6.2.10), and carried out under the guidance of different ministries, politicians and several governmental organisations, as well as NGOs. There were also claims of not having coordination among these different actors and that construction was done according to individual plans and timings (also discussed in 5.3.11). The lack of coordination among the different actors, lack of community participation (5.3.6) rushed nature of the main road construction (4.3.4.1) are also signs of not having a central PCR strategy targeted towards long-term development (5.5.1.4). the planning and budgeting of the road infrastructure are not connected to each other in all institutions, including those at the national and ministerial levels (Kumarage, 2003).

The road reconstruction activities were also criticised due to lack of reach to the rural areas and last-mile connection to the houses. As mentioned in section 5.3.3.2, people are not able to benefit from main roads due to lack of access to them through the inner rural roads, which are still not complete in both Oddusudan and Padavi Sripura. This could also be a result of the lack of a national PCR strategy and a dedicated timeline for reconstruction. On the other hand, the main cities that were connected through the main roads were able to recover faster than the rural areas where no reconstruction activity took place until the main roads were completed. As a result, it took a long time for the resources and other facilities to reach the rural areas, and communities in some most areas are still living without those resources due to unavailability of roads.

It is not clear whether the roads were the main priority of the local communities affected by war. However, since they faced a number of difficulties due to lack of road facilities, roads were one of the essentials for communities. Yet, allocating all funds to physical construction activities alone can be a problematic approach. Some international actors criticised the government's continued obsession with infrastructure reconstruction (BBC, 2014). Prasanna-Perera (2014) argues that spending large amounts of money only on roads is a deviation from the Northern and Eastern grand development plans introduced by the government. However, the Rajapakshe government was keen on road reconstruction after the conflict (4.6.4.3), and this was viewed in a different light by different ethnic groups. While the Muslim respondents viewed it as a positive development (4.4.4.4), some Tamil respondents displayed their suspicion that it is done to cover up the war damage as fast as possible (4.3.4.4). However, since the change of the government in 2015 the road construction activities have also stopped, showing that the present regime's strategy is different from that of the previous.

5.3.11. Horizontal and vertical coordination

As discussed in section 5.3.10, unavailability of a national PCR strategy has led to a lack of coordination among the different actors involved in the reconstruction process. The road construction is handled by 3 different ministries at different levels, namely ministry of highways, ministry of provincial councils and local authorities, and ministry of irrigation. For the main roads constructed under the Ministry of Highway, the RDA is involved in physical construction activities. In addition, the presidential authorities and rural development ministry are also involved in different kinds of road projects. The financial lenders are involved in terms of monitoring the construction process and ensuring the conditions of borrowing are followed during the implementation. At the same time, several other NGOs, local-level authorities and community organisations are also engaged in the

process. These different actors are supervised and given orders by different lines of ministries and under different motivations, and lack of coordination among the actors involved in construction is observed through the data. This lack of coordination can be seen between the different national-level organisations, as well as to national to local level institutions. On the other hand, several other infrastructure interventions take place at the same time as road construction such as water, electricity and telecommunication. As the different projects are happening under different authorities, implementation of one project can affect the completed interventions, resulting in additional costs for both projects (4.6.2.6). However, it was revealed different projects were synergised to achieve the best outcome when funded by the same financial lender (4.6.2.8). It will be useful to have a mechanism to synergise the infrastructure interventions of different ministries and authorities to focus on a particular geographical area, through an effective cooperating mechanism. It should be noted that these conflicts also arise due to the absence of a national PCR strategy which aims for long term development of the area through strategically positioning the different infrastructure interventions.

5.3.12. Financing the construction

As mentioned in 5.2.9, the government enjoyed marginal fiscal ease after the conflict period due to cessation of military expenditure and went on a spree of borrowing loans for physical construction. According to the experts, this was a misjudgement of the country's own capacity to borrow, as most of the loans were long-term conditional ones with high interest rates (4.6.2.7). On the other hand, the borrowing has taken place without setting a master plan for reconstruction or a PCR strategy for the country (5.3.10), which has led to spending the borrowings in an unproductive and uncoordinated manner.

The post-conflict road projects were mainly funded by the loans from multilateral and bilateral lending partners (4.6.2.7 and 4.6.2.8), except for very few which were either community built (sourced from interviews) or funded by NGOs (4.4.3.1). From the respondents' views, it was clear that multilateral lenders are firmer in regulations than bilateral lenders, in terms of calling for bids, employment, social and environmental safeguard, and material standards. An expert at the national level claimed that it is safer to opt for multilateral loans than for bilateral loans, as the latter not only trap the country in high debt but also take the income generated from the construction to their own countries (4.6.2.8 and 4.6.3.1). For bilateral loans, there was no competitive bidding at the national level and the contractors were already selected by the lenders, which affects the economy in the long term. In addition to the high debt burden, the public is also faced with the disadvantage of not receiving the multiplier effect of construction expenditure.

This also results in applying the wrong technology for the roads resulting in the high cost of material and poorly constructed roads (5.3.12 and 5.3.3.1). The government's interest in easy and cheap funding sources led to a number of issues that put the country in a debt trap and failed to provide any long-term returns (Weerakoon & Jayasuriya, 2019).

However, the multilateral loan projects were far more centrally planned by the lenders and were managed according to their own guiding principles. As discussed in results (4.6.3.1), although the multilateral lenders do not have the intention of developing the country in the long-term, they insist on competitive bidding to attract local contractors, on employing local people and compulsory employment of women and follow the social and environmental safeguards (4.6.2.9). However, when it comes to actual practise these standards were not implemented by the contractors due to lack of monitoring from the side of the government. On the other hand, with multilateral lenders, it is difficult to misuse the funding and get involved in corruption due to strict monitoring by the lenders. The respondent from the funding organisation also stated that the funds had to be prioritised according to a weighted average method (4.6.2.9), and this could minimise the involvement of politicians in making decisions.

As discussed in section 5.3.4, the funders allocated a high material cost due to the scarcity of materials in the conflict-affected areas. This was also confirmed by the experts, although the reason for the high cost was attributed to rent-seeking and corruption that took place during the construction process (4.6.2.10). Although a direct relationship cannot be drawn between the high cost and corruption, the rent-seeking behaviour of the politicians was discussed by several respondents at different instances, and it was linked to the incomplete or poor condition of the roads. The lack of transparency in the process of financing reconstruction, including the feasibility reporting and calling for bids, raises additional concerns about the potential misusing of funds.

The incompleteness of rural road construction was attributed to the inability of local authorities to prioritise the roads among other needs (4.3.3.1 and 4.6.2.7). Although this view was expressed by an expert, it cannot be concluded as an instance of mismanagement or incompetence, as government officers from the local areas expressed concerns about lack of funding for all development activities at the rural level (4.3.3.1). Several other issues affect the local communities such as poverty, lack of education, health and water resources, that local authorities have to manage the given amount of funds to resolve all the problems. Yet, due to the lack of resources and newly set up local government system, the conflict-affected areas may face issues around governance and financial management. According to Silva (2016), only a very small allocation is made

from national and decentralised budgets to rural transport infrastructure development, which causes the lack of road facilities in rural areas. On the other hand, some local politicians also influence local financial decisions to prioritise certain projects over others based on their personal benefits (4.3.3.2). The personal agendas of the politicians and their influence on public decisions may further disadvantage the communities who have already suffered due to conflict and related issues.

5.3.13. Soft and hard elements of reconstruction

As discussed in the literature (2.3.7 and 2.4.3), the focus on physical reconstruction is evident in the case of Sri Lanka through the massive effort and priority the roads are given within the PCR strategy. However, different physical and soft infrastructure had to be meaningfully linked in order to provide the road infrastructure. On the other hand, failure to link certain soft elements with physical road construction has caused issues during the PCR process. The infrastructure such as water and electricity were necessary to build roads, and the lack of those facilities acted as a barrier and a challenge to continue the construction process (section 5.3.4). On the other hand, soft elements of government fiscal policy and PCR strategy were highly significant in deciding the amount and quality of physical road construction. As depicted in section 5.3.12, government's inability to manage the public funds effectively question the operation of fiscal policy of the government. The absence of an overarching PCR strategy has made it difficult to coordinate different road projects for a large number of actors and to allow community participation towards peacebuilding (section 5.3.6). The roles and responsibilities of all the key actors mentioned in section 5.3.1 can be also classified as soft elements that occur within the construction process. Their actions are key in deciding the successful implementation of road projects and failure to integrate the roles of actors into the PCR process, such as encouraging community participation, can act as a barrier to successful interventions. The institutional infrastructure, which consists of central and local government authorities, NGOs and international organisations, is essential for the whole process of road infrastructure intervention. Finally, the political and cultural elements such as politicians' influence (5.3.9.2), corruption and rent-seeking behaviour (5.3.9.4), language barriers (5.3.5.3), building trust and addressing grievances (5.3.5.2) should also be considered in the context of PCR as these can affect the long-term political stability, peace and reconciliation.

5.3.14. Sub-framework for nature of road infrastructure reconstruction intervention

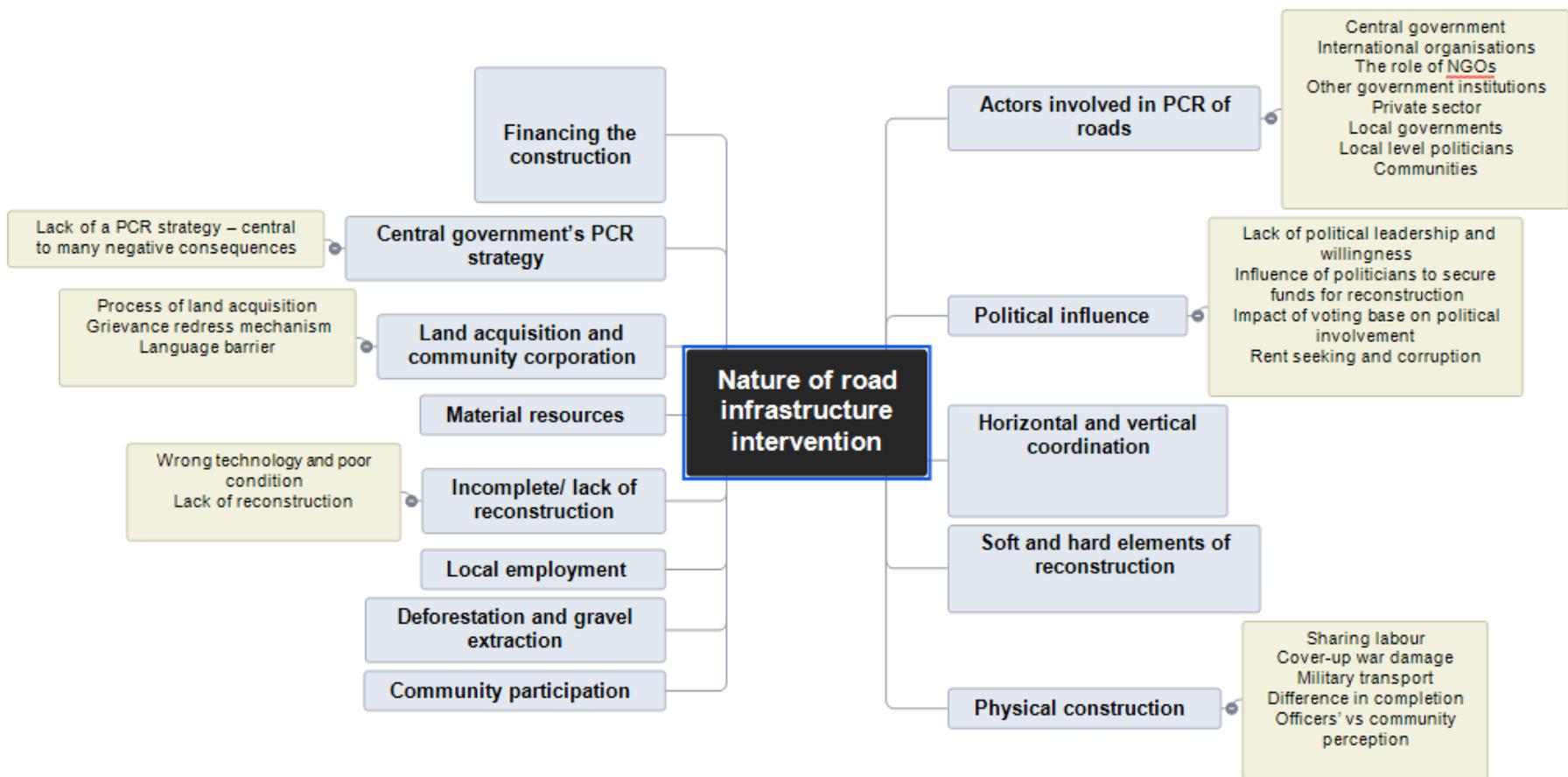


Figure 5.2. The nature of road reconstruction intervention

5.4. Consequences of road infrastructure intervention

5.4.1. Economic

Based on the qualitative data gathered during the study, the extent to which the economy has improved in the case study areas cannot be estimated. Therefore, the perceived analysis presented below is based on the views and observations of the respondents. Many local respondents have discussed the convenience of travelling, and the reduced travel time and cost as immediate benefits of reconstruction and availability of new roads. The other economic benefits are resulting from this ease of transport. On the other hand, people revealed the economic difficulties they face due to lack of inner roads and difficulty in connecting to the main roads. As the road infrastructure intervention is discussed as a whole and the convenience of travelling is a result of connectivity, the non-construction of roads is important as much as the construction of roads. Therefore, the consequences of both construction and non-construction are discussed in the proceeding sections.

5.4.1.1. Access to goods, services and markets

Access to goods and services, the raw material and the markets for production is a consequence of the availability of roads and convenience of travelling (4.3.4.1, 4.4.4.1, 4.5.4.1 and 4.6.3.1). People also engage in more agriculture and other forms of production activities such as fishing and handloom weaving due to availability and access to new markets, raw material and machinery. The prices of the goods and services have also reduced than before the end of the conflict, due to less cost of transport, competition and availability of goods and services (4.6.3.1). After the road construction, other forms of services such as public transport, banking and telecommunication reached the severely war-affected areas for the first time in about 30 years (4.3.4.1 and 4.6.3.1). All these can be considered as positive developments that occurred as a result of road construction. As discussed in the literature, access to resources through infrastructure can improve links between different markets and economies, that ultimately contribute to improving the living conditions of people. However, the incomplete construction of inner roads may hinder the access to resources and markets, resulting in some areas to be economically deprived than others. Although the main roads are constructed, the lack of inner roads in some areas does not bring in the economic benefits of the construction to the people. Due to lack of access, people face difficulties in obtaining goods, services and selling their products in outside markets. This also can result in economic inequality, both locally and nationally. People invariably compare their economic situation to that of other communities within the province and the country (4.3.4.3 and 4.5.4.3).

Although access is primarily a positive economic consequence, the sudden and unprecedented access to goods, services and markets can have negative impacts both economically and socially. The availability of demerit goods (unhealthy, degrading or socially undesirable goods) such as cigarettes, alcohol and drugs were readily available in large quantities (4.3.4.3, 4.4.4.3 and 4.6.3.2). To some areas affected by conflict, these goods were being supplied only after reconstruction and never before, and not on large scale. The markets and the consumers are completely new to them, and there is no mechanism to regulate the supply as the markets become open and the goods are supplied in the same rate as other areas of the country. People also do not have the capacity to self-regulate the consumption, resulting in social, cultural and health problems in the society. The same applies to the use of technology and communication facilities. People did not have access to mobile phones, internet and satellite television before, and the sudden supply of these facilities is overwhelming. People did not have an opportunity to gradually absorb the changes, and thus the issues have occurred among younger generation regarding the uncontrolled use of technology. At the same time, illegal goods such as drugs, pornography and illegal alcohol, have also reached the areas in excessive amounts (4.3.4.3, 4.4.4.3 and 4.6.3.2). This has also resulted in creating illegal markets for such goods within the area, making the communities vulnerable to additional social and cultural complications.

5.4.1.2. Economic development

01. Livelihoods and development

A number of respondents have discussed the boom of industries and services such as construction, handloom, telecommunication and information technology, that resulted from the reconstruction of roads (4.4.4.1 and 4.6.3.1). Improvement in agriculture and fishing activities were also mentioned as an impact of increased access to markets, raw material and capital equipment (4.3.4.1, 4.4.4.1, 4.5.4.1 and 4.6.3.1). People also started engaging in more than one livelihood activities to gain the benefits of reconstruction. Infrastructure can affect economic development through the improvement of productive base and trade (2.4.1). Accordingly, it can be implicitly concluded that the increase in economic activities have contributed to economic development in the respective areas, and ultimately to the country's economic expansion. The increase in trade activities particularly in Kalmunai is a noticeable development and have brought in economic gains for local people (4.4.4.1). Elimination of the middle man and the direct links between the producers and the traders in other areas have decreased the costs and increased the profits for producers. On the other hand, trade relations have also improved the links with

ethnic communities from different parts of the country, which contribute to build trust and bridge further healthy relationships. The prices of lands near the roads have also increased after road construction according to the respondents from Padavi Sripura (4.5.4.1), and this can have a positive impact on the real estate in the area. However, the lack of construction of inner roads can draw the people away from the rural roads and force them to settle near the main roads, which can have an adverse impact on the development of the rural areas. This issue is also discussed in the literature as 'industrial relocation', as shifting of development activities due to the concentration of infrastructure to urban areas (2.4.1). This can also result in a decrease of population in rural areas and forcing the vulnerable communities to further poverty conditions. The Diplomat reports that more than after ten years since the end of the war, the Northern province is lagging behind the rest of the country in terms of development and livelihood creation (Moramudali, 2019).

02. Poverty and vulnerability

The increased production and trade activities, as well as the increased opportunities for livelihood creation, may have contributed to reducing poverty in the areas under consideration. The population growth and increase in urban activities in Kalmunai are evidence of improved living conditions of people (4.4.4.1). Nevertheless, respondents have complained about lack of new investments, absence of new employment opportunities (4.5.4.1) and unavailability of incentives for large scale businesses (4.4.4.1). according to previous research, infrastructure construction can be used to reduce poverty through improving the climate for new investments (2.4.1). On the contrary, the road reconstruction was not paired effectively with effective investment incentives and economic recovery in the cases discussed in the study. The road infrastructure should be placed within the long-term vision of recovery within the PCR strategy, in order to gain the maximum economic gains. (Bowden & Binns, 2016) claim that industrial and other forms of livelihood opportunities are lacking for the youth in Northern province Sri Lanka. The physical reconstruction alone cannot reduce the poverty level or improve investments without the additional support of economic and financial infrastructure.

On the other hand, the lack of inner roads forces people to stay in poverty conditions due to being deprived of the economic benefits the rest of the population receive after the conflict. Several respondents from Oddusudan and Padavi Sripura have stated that living conditions have not improved much due to inner roads not being constructed, highlighting the poor condition of agriculture, trade, education and health services (4.5.4.1). Some claimed that situation has even got worse since the end of the conflict, as people were

resettled in different lands affected by flooding (4.3.4.1) and at the same time, roads used for military purposes were stopped being maintained (4.5.3.2). In these cases, the poverty and economic vulnerability of people have worsened than it was during the war situation. At the same time due to the exploitation of natural resources through gravel extraction and deforestation (4.3.3.5), people missed an opportunity to earn income through local resources. They are also exposed to hazards caused by the externalities created by environmental degradation, which can further contribute to increased vulnerability and poverty conditions. Due to poverty and low income, people also engage in illegal activities such as logging or selling illegal alcohol varieties. It was also revealed that people buy timber at a lower price from illegal loggers at a low cost due to low income and inadequacy of state housing grant (4.3.4.1 and section 5.4.2.2). Thus, the poverty conditions create a vicious cycle of illegal activities, related social and cultural issues, and poor living conditions which ultimately result in further vulnerability.

03. War economies

As discussed in sections 5.2.6.2 and 5.2.6.3 of this chapter, reliance on aid and shifting from war economies were prominent features of the pre-intervention context. According to some respondents, the aid dependency of some people has not changed, as road reconstruction has failed to improve the economic conditions of some families. This reiterates the significance of linking the road infrastructure intervention to the overall PCR strategies, especially focusing on the empowerment of vulnerable communities. This also poses the question whether people have shifted from war-related economic activities to new forms of illegal activities such as illegal logging, as they are not provided with alternative means of livelihoods and employment opportunities (4.3.4.2, 5.3.7 and 5.4.1.3). According to the Asia Foundation, illegal logging and deforestation have increased in Sri Lanka since the end of the conflict (Rebert, 2016). The community, which has not taken part in the mainstream economy for nearly 30 years, can be much susceptible to illegal activities. Therefore, the economic assistance with a long-term vision for development is needed to bring the communities to par with the rest of the country.

5.4.1.3. Employment

The lack of employment opportunities in the road construction sector was an evident issue that was also discussed in section 2.6 and 2.7 of this chapter. It was believed to be a missed opportunity for local people to improve the post-conflict economic conditions (4.3.4.1). It was also revealed that the permanent positions in road infrastructure construction were given based on political influence (4.4.4.1). As discussed in the literature, this is an example where the economic benefits of construction can be

undermined due to corruption and political influence (2.4.4). However, contrary to the view of community representatives, several government officers claimed that people were not willing to work in the road construction sector, although they were offered the opportunity. They also highlighted the government's efforts to abide by the lenders' requirements of local and women participation in construction. Among these contradictory views, the locals' view is in par with the statements from the experts who emphasised the inability of the reconstruction to employ local human resources and improve local capacities (4.6.3.1). It was also mentioned that the construction process was highly capital intensive and centrally controlled (4.6.2.7, 4.6.2.10 and 4.6.3.1), allowing almost no room for local participation and employment provision. Thus, it can be concluded that local employment creation through road construction was at a minimal level. Bowden and Binns (2016) suggest that the unwillingness of the government to employ northern Tamil youth in reconstruction is further evidence of its refusal to reconciliation with the Tamil community.

Drawing from the discussion on economic development (section 5.4.1.2), it would be fair to assume that employment opportunities were provided due to increase in trade and agriculture activities. However, within the three DS division discussed under the study, very little evidence is provided on the creation of employment opportunities. On the contrary, people are still suffering from unemployment and poverty, especially in the severely affected Oddusudan DS division. There is evidence of continued youth unemployment in North of Sri Lanka throughout the period after conflict (Bowden & Binns, 2016). Some people are relying on aids and assistance from NGOs, and some others are engaged in illegal activities for income generation (4.3.4.1). This raises the question of whether the construction of roads and the economic system that followed were able to provide enough opportunities to people who were shifting from war economies (1.4.3). On the other hand, there are claims of people moving to other areas looking for employment opportunities, especially in Oddusudan and Padavi Sripura (4.3.4.1 and 4.5.4.1). This can also result in a continuous outflow of skilled labour, and a vicious cycle of unemployment within these DS divisions. However, the employment opportunities were created in the handloom industry in Kalmunai, and few indirect jobs were available in the tourism sector. The development of the handloom industry is due to road reconstruction and coupled with the skilled labour and resources the people were able to make the best outcome of the trade opportunities presented to them. In Padavi Sripura, the employment creation was not linked to road construction as most locals are working in the military service or in the government sector on a permanent basis. On the other hand, not many roads were built in Padavi Sripura after the conflict, and thereby no new investments have taken place to create any employment opportunities.

5.4.1.4. Capacity building

As mentioned in the literature (2.3.5), the community empowerment and capacity building are key components within the process of post-conflict recovery. The community participation was minimal and not sufficient during the road reconstruction intervention with regard to the cases discussed in the study (section 5.3.6), and thereby the reconstruction process was not sufficiently used as an opportunity to empower the communities. As discussed by the experts in (4.6.2.7), due to the nature in which the loans were obtained for PCR, the people were not given the opportunity to build internal capacities through improving engineering know-how, entrepreneurship, and receive the multiplier effects of reconstruction expenditure. In terms of bilateral lenders, it is even worse as the lender country is the only supplier and there is no competitive bidding, creating a situation similar to an oligopolistic or monopolistic market. As a result, local suppliers also lost the opportunity to generate income. Due to the lack of local employment creation (5.3.7), people not only lost the ownership of infrastructure (5.4.3.6) but also the opportunity to earn income through employment and selling local resources. As explained by the experts in results (4.6.3.1), the natural capacity building that normally occurs during a project implementation did not take place in the case of post-conflict road reconstruction in Sri Lanka. The lack of a long-term recovery plan and an overall PCR strategy have also contributed to the low capacity building through the road infrastructure intervention. Ideally, the people should be integrated into the reconstruction process through training and community consultation, so that they will be empowered through the process of reconstruction and the infrastructure provision also can be altered according to public needs.

5.4.1.5. Tourism

The tourist industry is not a major income-generating activity in any of the DS divisions discussed in the study. However, the local tourists have come to Oddusudan soon after the war and at the beginning of the reconstruction period to visit the war wreckage in the areas previously controlled by the LTTE. This did not generate any income to local people, but rather may have created further grievances to victims of violence in the affected areas. In Kalmunai, local tourists come to the beaches and again do not provide any economic gains to the area. On the contrary, negative social and environmental problems were created as discussed in later sections (sections 5.4.3.3 and 5.4.2.4). Although these areas may not have the capacity to generate tourist income, measures should be taken to reduce the adverse impacts of local tourism through monitoring and regulations. Groundviews claim that the increased attention to increasing tourism in Sri Lanka after conflict deviated

the government and communities from livelihood recovery of war-affected people (Gurung, 2017)

5.4.1.6. Accidents

The rapid increase in the number of accidents was discussed as a major result of newly built roads in the cases of Oddusudan and Kalmunai. The smooth and undisturbed nature of roads and the local people not being used to such roads were given as reasons for accidents (4.3.4.1 and 4.4.4.1). However, this again proves the need to gradually introduce the changes to the conflict-affected communities with a long-term vision for recovery. A large number of heavy vehicle use was also mentioned as a reason for accidents during the period of reconstruction (4.4.4.1). The overwhelming and uncoordinated nature of the reconstruction process act as barriers to carrying out the daily lives of local people. Thus, the reconstruction activities should be thoroughly planned and well-coordinated among different actors to get the best possible outcome for the communities. The economic growth in Jaffna after conflict could also be linked to a large number of vehicles passing through the roads and causing accidents (Renuraj, Varathan, & Satkunanathan, 2015).

5.4.1.7. Education

Education sector benefitted significantly from road reconstruction, especially in the severely war-affected area of Oddusudan where some of the education facilities newly setup and others were dramatically improved after the conflict (4.3.4.1). The ease of transport from other areas has enabled the inflow of human resources needed for improving education. For example, the teachers were able to and were willing to travel from other areas to schools in Oddusudan due to access to convenient transport facilities. Students also travel to other areas for education owing to the improved transport facilities (4.3.4.1). However, most teachers and other education sector professionals travel to Oddusudan from outside, as DS division itself remain short of human capital (4.3.4.3). People believe that the economic benefits of education will evolve over time to benefit the local communities in the long-term. Nevertheless, it is important to expand the opportunities within the area and continue support to enhance local resources. If neglected the area is in the danger of being continuous lack of human capital. Those students who achieve higher levels of education do not stay in the DS division due to lack of career opportunities (4.3.4.3). This problem also discussed under brain-drain in section 5.4.3.1. People are also permanently moving out of the areas for better employment opportunities and lack of other facilities both Oddusudan and Padavi Sripura (4.3.4.1 and 4.5.4.1). at the same time, due to the incomplete nature of inner rural roads and the issue of flooding

in some of the gravel roads, students are facing difficulties in accessing education facilities (4.3.4.1). World Bank reports that while there is an improvement in school enrolment and results in Northern province education sector, there are large gaps in terms of the number of qualified teachers and per-student spending compared to other areas of Sri Lanka (Dundar et al., 2017). The construction of main roads alone cannot improve the education sector, but rather overall supply of all infrastructure facilities together with other incentives and opportunities are needed for its steady development.

5.4.1.8. Health

The health sector has improved in the areas discussed under the study particularly due to increased access to resources (4.3.4.1 and 4.4.4.1). The health sector professions were able to travel from other areas due to convenience and availability of transport facilities, and the other resources such as medicines and technical facilities were also more readily available than before. However, the health services are still limited to relatively urban areas and advanced surgical facilities are available only in bigger cities such as Aunradhapura and Trincomalee. The services within small towns were claimed to be inadequate by the respondents (4.5.4.1 and 4.5.4.3). On the other hand, people who live in inner villages still face difficulties in accessing hospitals as they have to pass through the incomplete gravel roads in order to reach the main road (4.3.4.1 and 4.5.3.3). According to Thalpwila (2016), although basic health services are made available at divisional hospitals in war-affected areas, the equipment may not be modern and serious conditions could not be treated. The lack of health services can lead to further vulnerability in the communities, and the unequal access to the services may also create problems.

5.4.1.9. National debts

As discussed in section 5.3.12, the road construction in the post-conflict period was funded by the loans given by multilateral and bilateral lenders, and the debt burden is an unavoidable economic circumstance. As explained by the experts, the high-interest loans have to be repaid by the country, yet there was no advantage to the country in terms of capacity building, employment creation and increased economic expenditure because the technology, the know-how and the supplies were all taken from outside the country (4.6.2.7 and 4.6.3.1). The manner in which the loans were taken and the way they were used were highly problematic, as there proves to be no other long-term economic benefit than the physical availability of the road. Several researchers agree that Sri Lanka has been moving into a national debt trap through its highly capital-intensive development programme (Athukorala, 2014; Rajasingham-Senanayake, 2005; Var & Po, 2017; Weerakoon, 2017).

5.4.2. Environmental

As discussed in the literature, the environmental consequences of PCR are often underestimated in post-conflict agenda due to emphasis on post-conflict-related issues (2.4.2). Although environmental impacts are widely discussed in non-conflict contexts, the post-conflict literature often fails to look at environmental issues within the big picture of recovery and reconciliation. Although the consequences identified during the study are not specific to the PCR context, the absence of supervision and governance structures affect the inability to control or regulate the environmental destruction. Thus, a main finding of the study is the powerful link between the environmental destruction and the weaknesses or failed state conditions that can be typically seen in the post-conflict contexts. In the cases where environmental consequences are overlooked, it was revealed that the environmental agencies were established quite recently and the councils do not have a proper environmental policy (4.3.4.2 and 4.4.4.2). On the other hand, the national monitoring agencies and the responsible stakeholders display a lack of awareness about the environmental destruction taking place in the field (4.6.2.9). Although there are established monitoring actors at the national level, they do not seem to effectively operate at the local level. This may be because these agencies are based in Colombo, and their links to local-level actors and the operation in rural areas could be less effective. However, the overall operation of environmental agencies in Sri Lanka and their influence on controlling the infrastructure construction activities in any area of the country is not considered in this study. It will be worth examining whether these environmental issues occur due to construction activities in other parts of the countries irrespective of the post-conflict context.

5.4.2.1. Gravel extraction and deforestation

As discussed in 5.3.8, both gravel extraction and deforestation took place during the construction period, resulting in the exploitation of resources and degradation of the environment. This problem was prominent in Oddusudan than in the other two, and this was also attributed to the absence of community settlements during the time of reconstruction. The community representatives claimed that environmental destruction was legal. This is due to being done by the contractors hired by the government, and no action is taken afterwards to compensate or to fine the responsible contractors (4.3.4.2). This is another sign of lack of governance and monitoring capacity, and the inability to implement the regulations. Such weaknesses can lead to loss of public trust towards the government, who is otherwise should be viewed as the law implementing authority and

protecting the wellbeing of people. However, the government officers mainly based in Colombo did not acknowledge the environmental destruction taking place at the local level. They specifically mentioned about the lender's mandatory requirement to plant ten trees for one tree that was being cut during the reconstruction process (4.6.2.9). The contradicting explanations of the local community representatives and the government officers further highlight the gap in communication and understanding between the two groups and the lack of understanding of the officers about the local conditions.

In normal circumstances, the contractors would have to pay for the material used for road construction. But due to the absence of people and the forest land being technically owned by the government, the gravel was a free resource for them (4.3.4.2). Consequently, the people in the area did not benefit from the gravel extraction, as they gained no income from the local resources (also discussed in 5.4.1.2) and thus left with the negative consequences of environmental destruction. The absence of communities in the war-affected areas made it easier for the contractors to exploit or destroy the local resources, as the reconstruction started before the resettlements. This brings the question of what should occur first; reconstruction or resettlement; as discussed in 5.2.5.1. If the people were already resettled, would they have a say in the manner of reconstruction and stop the exploitation of resources? However, it is not clear how much influence the public can have in intervening in the construction activities in Sri Lanka. To this end, the environmental destruction of construction in conflict-affected, uninhabited areas could be compared to that of the unaffected areas in other parts of the country. Although there is no clear documentary evidence regarding gravel extraction by construction companies, there are reports of people in North-East complaining about the environmental exploitation and resource extraction by parties allied to the government (Human Rights Watch, 2018).

5.4.2.2. Illegal logging, sand mining and metal quarry

After the construction of roads, the illegal logging has become a prominent issue, especially in the Oddusudan areas as discussed by the respondents (4.3.4.2). The availability of roads is facilitating the logging industry due to access to markets for timber outside the area. The traders and the loggers were also able to access the local forests due to roads, and the new and convenient roads with almost traffic provide an easy escape to the illegal loggers before they can be captured by the authorities (4.3.4.2). The lack of government regulations and ineffective operation of monitoring agencies in the area could add to the continued environmental exploitation in the post-construction period. Some community members revealed their suspicion that the illegal loggers may have the support of the police (4.3.4.2). This is due to the inability of the police to control the illegal logging,

and it further decreases the trust of the communities towards the government and law enforcing institutions. Not only illegal logging, sand and metal mining (4.3.4.2 and 4.4.4.2) also takes place in some of the war-affected areas after road reconstruction. Illegal sand mining has become a major industry in these areas since the end of the conflict, partly resulting from the growing need for sand in the construction sector (Pereira & Ratnayake, 2013). Unlike before the construction, these are taking place at a large and industrial-scale after construction, both due to availability of facilities and access to outside markets. The community representatives expressed their concern that the environment keeps deteriorating due to large scale exploitation, and there is no mechanism to conserve the local resources. The sand mining that takes place in Kalmunai area is happening without proper supervision, and the traders are extracting sand even from the preserved areas (4.4.4.2).

The lack of employment opportunities may also be linked to engaging in illegal logging, and sand and metal mining, as people choose it as an alternative to war economies. As discussed in section 5.2.6.3, when people are shifting from war economies, there is a tendency to engage in illegal activities due to lack of the opportunities offered to them within the new socio-economic context. At the same time, it was pointed out that some local people buy timber from loggers or engage in illegal logging to build their own houses, as the allocation given for housing is not adequate to acquire all the material they needed. In this light, illegal logging is an alternative mean of supplying their material rather than gaining income. It was revealed that buying timber from illegal loggers was cheaper compared to general market prices (4.3.4.2). (Lindström, 2011) presents a link between deforestation and farming activities of the locals, as they do not have adequate land for cultivation or other means of meeting their livelihood needs. The continued deforestation is thus connected to poverty and lack of livelihood support provided to resettled communities. This highlights the need to provide economic support and create income opportunities for people within a post-conflict community, together with infrastructure development.

5.4.2.3. Wildlife and biodiversity

As discussed in the results (4.3.4.2), biodiversity and wildlife were affected dramatically in the Oddusudan DS division due to the large-scale environmental destruction, including deforestation, gravel extraction, mining and high-speed vehicles. The lack of efforts by the government organisations to rehabilitate the areas destroyed by such activities or to adopt protection mechanisms to continued destruction, further increases the risk to the biodiversity. Wild elephants were specifically mentioned as being affected, but being a

resource-rich area there bound to be lots of other animals and plants who are affected by exploitation (4.3.4.2). The impact of deforestation on wildlife is already becoming an urgent issue in Sri Lanka (Rebert, 2016). Neither the officials and nor the community representatives mentioned any details of research undertaken within the area in order to understand the issues around biodiversity and conservation.

5.4.2.4. Other environmental issues

Among the other issues related to the environment, flooding caused by gravel roads as well as completed roads can be considered as significant (4.3.4.2 and 4.4.4.2). It can cause serious environmental and health impacts such as erosion, infertile soil and spread of diseases. The flooding of the concrete roads in Kalmunai DS division (4.4.4.2), also reveals the inadequate planning and the use of poor technology in road construction activities, and that local weather and geographical conditions are not adequately considered during the planning as well as implantation process. This is further highlighted by the issue of heat caused by the concrete roads in Kalmunai, where the increased heat on the concrete surfaces disturbs the daily activities of the communities. Among the other issues, were the increased level of pollution in land, air and water due to the increased economic activities and a large number of vehicles. The pollution in the beaches by local tourists was specially mentioned in Kalmunai DS Division 4.4.4.1(4.4.4.2), as the communities are only left with such negative consequences but no economic benefits from the tourism sector (4.4.4.1).

5.4.3. Social

5.4.3.1. Brain-drain in education

Although the local education facilities have improved increased to a certain extent, it is difficult to retain the human resources within the villages due to lack of opportunities. This was particularly discussed with regard to Oddusudan DS division, and that students do not stay within the area after reaching a certain level of education (4.3.4.3). the lack of career opportunities and higher education facilities force them to move to bigger cities, and they often do not come back to their home towns but rather settle in places where they are employed. Due to the continued unavailability of educated people within the area, the younger generation continues to move out in search of opportunities. This has become a vicious cycle of brain-drain, where the unavailability of the educated community within the area tend to force the next generations to move to other areas in a continuous sequence. There is little documentary evidence on brain drain within the country from North to West.

However, Bowden and Binns (2016) claim that young people move away from hometown in Jaffna seeking better employment opportunities. On the other hand, there is no effort or policy from the government to retain the educated human resources within the DS division and to be used for development activities. This is deemed as complete mismanagement of human resources as those who are employed in the government sector were not appointed to the local offices, but rather forced to work in other areas (4.3.4.3). This shows that although the roads are constructed and infrastructure is provided for the communities, it is not linked with a long-term vision for development and post-conflict recovery. This is also related to the lack of PCR strategy discussed in section 5.3.10, where the infrastructure interventions are undertaken in isolation without connecting it to central planning. The lenders have identified the problem of brain-drain in rural areas and highlighted the need to develop rural roads (4.6.3.2). It is evident that to develop the war-affected rural areas, the local resources should be retained within and used as a motivation for their own benefit. However, from the data collected, there was no evidence of any effort by the government to control the brain-drain.

5.4.3.2. Illegal activities

In the literature review, it was pointed out that reconstruction of infrastructure can facilitate the exploitation that already exists in the post-conflict societies and result in increased violence (2.4.4). As discussed in several sections, illegal logging (5.4.2.2), illegal drugs and alcohol use by underage boys (5.4.3.3) are some of the illegal activities that resulted from the reconstruction of roads, although not necessarily related to the post-conflict context. In a normal post-conflict setting, the illegal activities will be continued by the ex-carders of the terrorist groups or those who were benefitting from war economies (2.2.3). With regard to the cases discussed in the study, although some of the illegal activities such as logging maybe a result of shifting from war economies, the others such as drug and alcohol use are not necessarily so, because those who engage in trading these items were not identified as local people. The community representatives from both Oddusudan and Kalmunai insisted that the drug and alcohol have become an issue with the increased influence from the outside areas and the inflow of resources (4.3.4.3 and 4.4.4.3). Providing evidence of crimes in post-conflict Sri Lanka, Jinadasa (2015) reveals that military personals were involved in illegal activities in Northern province after the war. There are further reports on illegal activities in Eastern province such as drug trafficking, cow smuggling, liquor dealing, gem mining and logging that have drastically and negatively affected the lives of communities (Venugopal, 2015). On the other hand, the lack of capacity of the police and other law enforcing institutions to control the illegal

activities have raised suspicions among the community members as to whether the lawbreakers have the support of the police and the politicians (4.3.4.3).

5.4.3.3. Cultural issues

01. Technology, drugs and alcohol

The increased access to technology and communication facilities was also discussed as having a serious social impact in terms of changing the behaviour of the younger generation (4.3.4.3 and 4.4.4.3). Although phones and internet use cannot be categorised as illegal, the community representatives have complained of unacceptable behaviour of young generation due to harmful usage of them and the difficulty of controlling the access. It should be noted that although the technology is not viewed as a negative commodity, their sudden influx through the unregulated markets has likely created negative cultural consequences. Some of the areas affected by conflict didn't have access to such facilities for nearly 30 years, and when the facilities were suddenly available the transformation comes as a shock to the community as a whole. On the other hand, there is no monitoring and regulation mechanism, or the psychological support needed to adjust for the transformation. The same situation was observed with the use of alcohol and drugs (4.3.4.3, 4.4.4.3 and 4.6.3.2), that were easily supplied to these areas after reconstruction of roads, by both legal and illegal means (also discussed in section 5.4.3.2). Although drugs and alcohol use an issue that is common in all parts of Sri Lanka, these areas were not severely affected by them due to restricted access and violent conditions. However, their sudden supply in large quantities is new to the communities, whereas in other areas they were always available and is not a novel experience to the communities. Tamil Guardian reports that there is an unprecedented increase in drug and alcohol consumption among Northern Tamil communities since the end of the war and the arrival of military forces (Tamil Guardian, 2015). The increased alcohol use has resulted in incidences of domestic violence in some parts of Eastern Sri Lanka (Sørensen et al., 2019). The addictions faced especially by young men and the inability of the parents to control their behaviour, highlight the need to introduce the changes slowly to the post-conflict communities and to maintain a social and psychological support system.

02. The behaviour of the young generation

The reckless and aggressive behaviour of the younger generation is also linked to road reconstruction as they can go away from their families and engage in unacceptable and dangerous activities. Riding motorbikes without a license (4.4.4.3), going on trips with

friends to use alcohol (4.6.3.2), and engage in dangerous activities like swimming and diving (4.6.3.2) are some such examples mentioned by the respondents. Although people suffered due to lack of access before construction of the roads, the families were closely knit together and parents were able to watch the whereabouts of their children, which in the eyes of community members was considered as a safe environment (4.6.3.2). Yet, with the availability of the roads, parents are not able to control the activities of the children, leaving them exposed to the negative influences from the outside world. The communities affected by war face a lack of management capacity and the resilience to sudden changes, which makes such exposure have negative consequences including family issues and problems of sexual abuse (4.6.3.2). Bowden and Binns (2016) suggest that increased drug and alcohol use among youth is also resulting from the restlessness caused by unemployment, lack of purpose and marginalisation.

03. Tourism

As discussed in section 5.4.1.5, none of the areas considered for the study are famous tourist attractions and thereby do not create any tourist income. However, due to the actions of the local visitors in Kalmunai area, the cultural problems were created among the community. The community members believe that tourists are one of the reasons for drug and alcohol use among the young men, firstly because it is not allowed under to the Muslim religion and secondly because they didn't have such issues before the outsiders started travelling to the area (4.4.4.3). The dissatisfaction among the community members regarding the behaviour of the tourists is evident and hints at a cultural conflict between the Muslim community and the tourists who are from Sinhalese or Tamil background. The respondents also discussed incidents of child abuse due to the activities of tourists visiting the beaches (4.4.4.3). Although this issue is mentioned only once and only with regard to Kalmunai DS division, it is a serious problem that needs consideration and regulation. According to Ratnayake and Hapugoda (2017), the post-war tourism in Sri Lanka was commercially driven and neglected the traumas and grievances faced by communities for over twenty five years of war. The infrastructure provision without adequate support and monitoring mechanisms tend to create additional cultural issues for post-conflict communities who are already vulnerable due to prolonged violence. It is the responsibility of the government and international community to introduce protection together with the infrastructure facilities, in order to deal with the cultural shocks and exposure faced by the communities.

5.4.3.4. Discrimination and inequality

As discussed in the literature, the unequal infrastructure provision and resource distribution among post-conflict communities can lead to widening the socio-economic gaps, and such inequalities can fuel new conflicts among those communities (2.4.3). Community representatives from both Oddusudan and Padavi Sripura expressed concerns about the unequal availability of roads, as they inevitably compare the construction in the local areas to that of others. This is also discussed under the nature of infrastructure intervention (sections 5.3.3.2 and 5.3.9.2), where the incomplete or lack of reconstruction lead to community believe that they are being discriminated among others in the country. The feelings of inequality expressed by respondents in Padavi Sripura were based on ethnicity as they felt discriminated as a minority within the eastern province where the majority of people are of Muslim background. The reasons were both lack of road construction as well as the poor standards of the completed roads (4.5.4.3). The respondents also expressed concerns that the government has favoured other ethnic groups over Sinhalese community, with the intention of showing the international community that minority groups are treated well. Although Sinhalese community is less affected by the conflict compared to others in North and Eastern provinces, the less attention to reconstructing Sinhalese areas has caused more psychological damage and division among communities. Further evidence of uneven resource distribution and unequal economic development after war calls for a stronger and long-term PCR strategy that is sensitive to post-conflict environment (Đevoić, 2013; Höglund & Orjuela, 2011; Moramudali, 2019).

As discussed in results (4.3.4.3 and 4.3.4.4), the respondents from Oddusudan view the lack of political will as connected to inequality and question why the roads in other areas are more developed than their own. However, unlike in Padavi Sripura, the inequality was not connected to ethnicity because the areas they made comparisons to such as Jaffna are also mainly occupied by Tamil people. Although the respondents did not necessarily point out at other communities in the country, they expressed their concern and grief over being treated to different to other areas if the country. For a community that suffered during the protracted period of conflict, faced displacement and loss, and are recovering from trauma, the continuity of grievance and feelings of discrimination are clearly adding to their negative experiences. It is the responsibility of the government, local leaders and the international community to avoid the operation of mechanisms that add to the discrimination felt among different ethnic groups affected by the conflict.

5.4.3.5. Inter-ethnic relationships

The road construction has contributed to improve the ethnic interactions among different communities in the cases discussed in the study, especially through improved trade and communication and by reducing the isolation that post conflict areas faced before construction. The ability of road infrastructure to improve community relations through simple daily interactions is also highlighted by the previous researchers (2.4.3). Improved inter-ethnic relationships were emphasised as positive and advantageous by the respondents in Kalmunai, where the main reason for this improvement was given as the trade activities (4.4.4.3). While the general trade activities have improved for Muslim people in Tamil areas, major reason for trusting the Tamil community was also pointed out as the absence of violence rather than road construction. However, with the Sinhalese people the trade relations have improved due to the handloom industry. The Sinhalese traders from around the country started visiting Kalmunai to purchase hand-loom products from the weavers, and this has led to a series of friendly and trustworthy relationships. Such positive relationships that benefit both ethnic communities can contribute to build trust and thereby to help achieve long term reconciliation.

However, the interethnic relationships were not viewed as a major consequence in other two areas discussed in the study, and it was also pointed out that there was no need to have close relationships (4.5.4.3). In Oddusudan, the relationships are mostly limited to official purposes, and thus not adequate to form trustworthy relationships. On the contrary, the impression left by local tourists to the area have increased the ethnic gaps and mistrust, due to locals being objectified as war victims or war exhibits (4.6.3.2 and 4.6.4.3). Through a respondent in Padavi Sripura, it was revealed that Tamil people are not allowed to purchase land within the DS division (4.5.4.3), although not adequate information is given on how this is maintained surpassing the normal regulations of the country. This is clear evidence of a cartel that the Sinhalese land owners have formed in order to keep out the other ethnic groups from acquiring any land within the DS division. On the other hand, a Sinhalese respondent also acknowledged to feeling safe due to absence of close relationships with other ethnic groups (4.5.4.3). As an isolated Sinhalese area where all the surrounding areas are occupied by Tamil or Muslim community, the people in Padavi Sripura experienced prolonged periods of violence from LTTE, which has led them to mistrust the Tamil community. Irrespective of the absence of violence, people still carry the feelings of mistrust and fear that has been planted during the conflict. Therefore, the recovery and reconciliation cannot be based on reconstruction of physical infrastructure alone. In fact, there is a danger of infrastructure to contribute to quite the contrary, by increasing the mistrust and relationship gaps between the ethnic groups. For an example, the Sinhalese people felt ignored and discriminated within the eastern province as the roads within Padavi Sripura are not constructed as much as those

in other parts of the province (also discussed in 3.3.4). At the same time, the Kalmunai residents feel culturally affected due to the actions of the local tourists in the area, who were mainly Sinhalese people (also discussed in 5.4.3.4). In both these instances, the negative attitudes towards the other ethnic groups were created due to the nature of road construction and the resulting consequences. Such attitudes may worsen the existing mistrust among the communities and create new forms of conflicts.

5.4.3.6. Ownership of physical infrastructure

The centralised approach adopted by the Sri Lankan government for the reconstruction of roads is emphasised by the previous research as highlighted in the literature (**Error! Reference source not found.**). This was evident throughout the data, due to the nature in which the reconstruction is centrally planned and implemented without community consultation, and they are politically motivated rather than based on the community needs (also discussed in 5.3.6 and 5.5.6). The centralised approach to infrastructure provision can lead to alienation of the local community from the reconstruction process. Minimised community participation (5.3.6), lack of local employment provision (5.3.7), and absence of capacity building (5.4.1.4), further contribute to creating issues of ownership of physical infrastructure for the local community. The failure of the government to give the ownership of the roads to the local community was viewed as a missed opportunity by the experts (4.6.3.2 and 4.6.4.3). When it comes to roads constructed using bilateral loans, ownership is absent both at the local and national level, and the project resources did not come from within the community. The failure to create multiplier effects of expenditure through leaking the investment into the national or local economy also resulted in lack of ownership, because the investments were not able to create economic gain to the community. At the same time, the Tamil communities viewed the infrastructure as externally imposed and also a return due to the government for the damage they have caused during the construction (4.6.4.3). With such mentality in the background, the inaction of the government to address the community grievances (5.3.5.2) and the perceived cover-up of the war damage (5.4.4.3) increase the lack of ownership felt by the community. These feelings can be further aggravated by the environmental exploitation that took place during the construction period and the resulting damage inflicted upon the community (5.3.8) because if the local community were given an opportunity to contribute and to participate in the construction process such damage could also be minimised.

5.4.3.7. Social capital and community capacity building

Use of community participation is discussed as an important aspect of PCR throughout the literature review, as it contributes to promote social capital and distribute peace dividends (2.3.5). Yet, throughout the results of this study, it was evident that community participation was at a minimal level or almost non-existent in terms of road reconstruction (4.3.3.3, 4.6.2.5 and 4.6.3.1). Due to its inability to engage the local communities and allow community participation, PCR of infrastructure was no different from any other technical intervention (Prasanna-Perera, 2014). As discussed in section 5.3.1.1, a centralised approach was used in decision making and implementation of road projects, and thus the projects are not based on the community need or the local adaptability (4.6.2.10 and 4.6.4.2). Such an approach may lead to projects being irrelevant and create negative impacts, as pointed out in the literature review (2.4.3). The inability of the infrastructure projects to build community capacities (5.4.1.4) and provide employment (5.3.7) further highlights the lack of community participation. The evidence of political involvement (5.3.9) in the infrastructure interventions and the gaps in addressing grievances (5.3.5.2) also verify the above claim. As highlighted in the literature, the infrastructure development should be people-centred rather than project centred in order to achieve recovery and sustainable development (2.3.2 and 2.4.1). Failure to incorporate community participation in PCR of road infrastructure can slow the process of recovery and contribute to further instability.

5.4.4. Political

As discussed in section 5.3.9, political involvement is a prominent feature that was observed during the PCR of roads in the areas considered for the study. As claimed in previous research, the politics that evolve in the country during and after the conflict can affect the goals of the reconstruction intervention, and therefore it is important to consider political dynamics of the country during the PCR process (2.4.4).

5.4.4.1. Lack of political participation and political isolation

As stated in section 5.3.9.1, the local political representatives often do not have the willingness of the authority to influence the local infrastructure decisions. This can also result in centrally planned infrastructure interventions that do not meet the community needs and do not allow community participation. The nature in which the reconstruction was undertaken was criticised by previous researchers as it resulted in increased marginalisation and mistrust towards the government (**Error! Reference source not found.**). While there is no adequate opportunity for local politicians to get involved in the

PCR decision making, the community members also criticised the inaction of local politicians to secure the funds to for road infrastructure provision, especially in Oddusudan DS division (4.3.4.4). On the other hand, it was revealed that the national level MPs representing the area are more interested in fuelling the ethnic divisions and not cooperating with the central government. The Guardian argues that the growth of hate and xenophobia among Tamil politicians can disadvantage all communities fighting for justice (Jeganathan, 2009). The community members believe that rural roads can be speedily constructed if the politicians intervened (4.3.4.4). The situation in Oddusudan can be juxtaposed with the road construction in Kalmunai, where the intervention of politicians and the close relationships of local MPs with the central government were given as main reasons for completion of road infrastructure (5.3.9.2). The political isolation of the Tamil community and their respective MPs was also pointed out as an issue by the experts interviewed at the national level (4.6.2.10). Rather than cooperating with the central government, they tend to maintain ethnic separation. Nevertheless, it can be argued that many Tamil political parties have always maintained such seclusion before, during and after the conflict, due to the same reasons that prompted the beginning of the conflict itself (**Error! Reference source not found.**). No action was specifically taken during the recovery period or within the PCR process to address the root causes that caused such separation or to deliberately engage the Tamil community in the process. Therefore, the continued political isolation during and after the infrastructure interventions do not come as a surprise.

5.4.4.2. Impact on national government/ wider politics

It was explained in section 5.3.9.3, how the voting base has an impact on the political decision making on reconstruction. Reciprocally, the amount and the quality of reconstruction can affect the public's trust towards the politicians and their voting decisions. According to expert opinion, one of the main reason for the defeat of the Rajapakshe government in 2015 elections was its inability to deliver infrastructure projects successfully (4.6.3.3). Absence of capacity building (5.4.1.4), high debt burden (5.4.1.9), poor national planning and lack of PCR strategy (5.3.10), corruption and favouritism (5.3.9.4) were all indirect consequences of road infrastructure intervention, and they also led the government to its defeat. At the same time, the central government missed the opportunity to use the road reconstruction as a tool to bridge the gap between the communities and to gain the trust of war-affected people through promoting social capital and community participation (3.3.7). However, some respondents claimed that the Muslim and Tamil people in North and East vote the political parties that ethnically represent them irrespective of the actions of the government (4.4.4.4). Although Rajapakshe government

focused on building physical infrastructure, the people voted the ethnic party resulting in defeat. A reason could be the nationalistic focus of the previous government and that even after six years of conflict, sensitive issues related to ethnic discrimination and nationalism were left untouched by the government. However, a different light was shed on the impact on voting by the respondents in Padavi Sripura, who claimed that due to low population and being a minority in the eastern province, the people within the DS division have no power to reject the politicians who do not intervene in providing road infrastructure to the community (4.5.4.4). This has disadvantaged the small rural communities who are hardly represented by any politician at the national or local level.

5.4.4.3. Political motives/ cover-up war damage

During the literature review of the study, the imposing of political notions and ideologies by external parties was identified as one of the political consequences (2.4.4). The results were not sufficient to show the influence of foreign actors on imposing such notions in the cases discussed. However, as explained in section 5.3.2.1, there is a possibility that reconstruction was used as a tool to cover up war damage by the ruling government. This concern was expressed by the respondents in the Oddusudan DS division, where the roads were completely destroyed during the conflict, and by the end of the conflict, there was a large amount of work left to be completed in terms of clearing the debris and paving the roads. Yet, the government took quick actions to clear the war wreckage and construct roads, leaving little or no evidence of the years of violence (4.3.4.4). The local community representatives made remarks that the roads were constructed with the political motive of showing the international actors that the government is looking after the Tamil people who are severely affected by the conflict. These suspicions were reassured by the lack of political will to construct the rural roads and develop the facilities in the innermost villages, where the condition of rural roads is hidden from the outside world.

5.4.4.4. The politicisation of public affairs

In section 5.3.9.2, it was described, the nature in which the politicians influence the infrastructure decisions and securing finances to favour the infrastructure provision in their own areas. Because of this political influence, there is a tendency for the politicisation of public affairs at all the levels of administration and implementation of the road construction projects, both at the national and local level. The development plans are approved and implemented based on personal political influence rather than on national PCR strategy or legislation of the country (4.4.4.4). If a powerful politician is behind the project, then there is a high chance of the project being implemented and if not, even if there is a dire need for the project, the construction will not go ahead. The projects and funds are allocated to

a certain area based on the political representatives' links to the government or the friendliness with the relevant ministry (4.4.4.4). Local-level public affairs are disturbed by personal agendas of the influential politicians. Regulations are ignored when it comes to politically motivated projects but strictly followed when opposite politicians are involved. For example, the rule of the coastal buffer zone is applied in general, but when construction is backed by a government-affiliated politician the rule is operational (4.4.4.4). At the same time, the politicians favouring their own areas is another example of the politicisation of public affairs. The funds are easily allocated, and development projects are implanted in the areas where the politicians or their relatives are based, and thus the political will to improve roads depends merely on personal connections (4.3.4.4). As in the case of some countries pointed out in the literature, the policies introduced to prevent horizontal inequality were not effective due to political influence and elite interference (2.4.4). The political representatives are supposed to be serving the community as a whole and work on public wellbeing, irrespective of the voting base and personal connections. The continued political influence on reconstruction activities affect the PCR strategy and recovery process, and thereby force the country to remain a failed state (also discussed in 5.5.4.2 and 5.5.6).

5.4.4.5. Corruption/rent-seeking

The corruption that prevails in the post-conflict societies spreads to the PCR process, and lack of transparency within the PCR process in Sri Lanka was an issue highlighted in the literature review (2.4.4). As discussed in section 5.3.4, the high cost for material for road infrastructure in post-conflict areas was pointed out as a result of rent-seeking and corruptive behaviour of the interveners (4.6.2.2 and 4.6.2.7). As discussed in section 5.3.9.4, the road contracts are given to the supporters of politicians and those politicians get a commission in return from the contractors. All the individuals involved in the funding approval process receive commissions from the contractors (4.4.4.4). Thus, the actual cost gone into construction is much less than the allocation, due to being commissioned throughout the process. Goodhand et al. (2011) state that the culture of corruption exists from national to local levels in Sri Lanka and the large scale investment projects provide opportunities for that culture to continue. Road projects are given to contractors not based on their performance, but on the percentage of commissions, the politicians receive from the transaction (4.4.4.4). The corruption proportionately increases with opportunities to undertake infrastructure projects and the size of the funding, resulting in more corruption respective to the increasing number of road infrastructure activities. While infrastructure provision may lead to concentration of power and elite control through corruption and rent-seeking activities, others in the society may feel disempowered and even angered by

the extent of power enjoyed by the political elite. As discussed in the literature (2.5), such disempowerment may lead the communities to seek alternative means of power through violence that can result in renewed armed conflict.

5.4.5. Sub-framework on consequences of PCR of road infrastructure

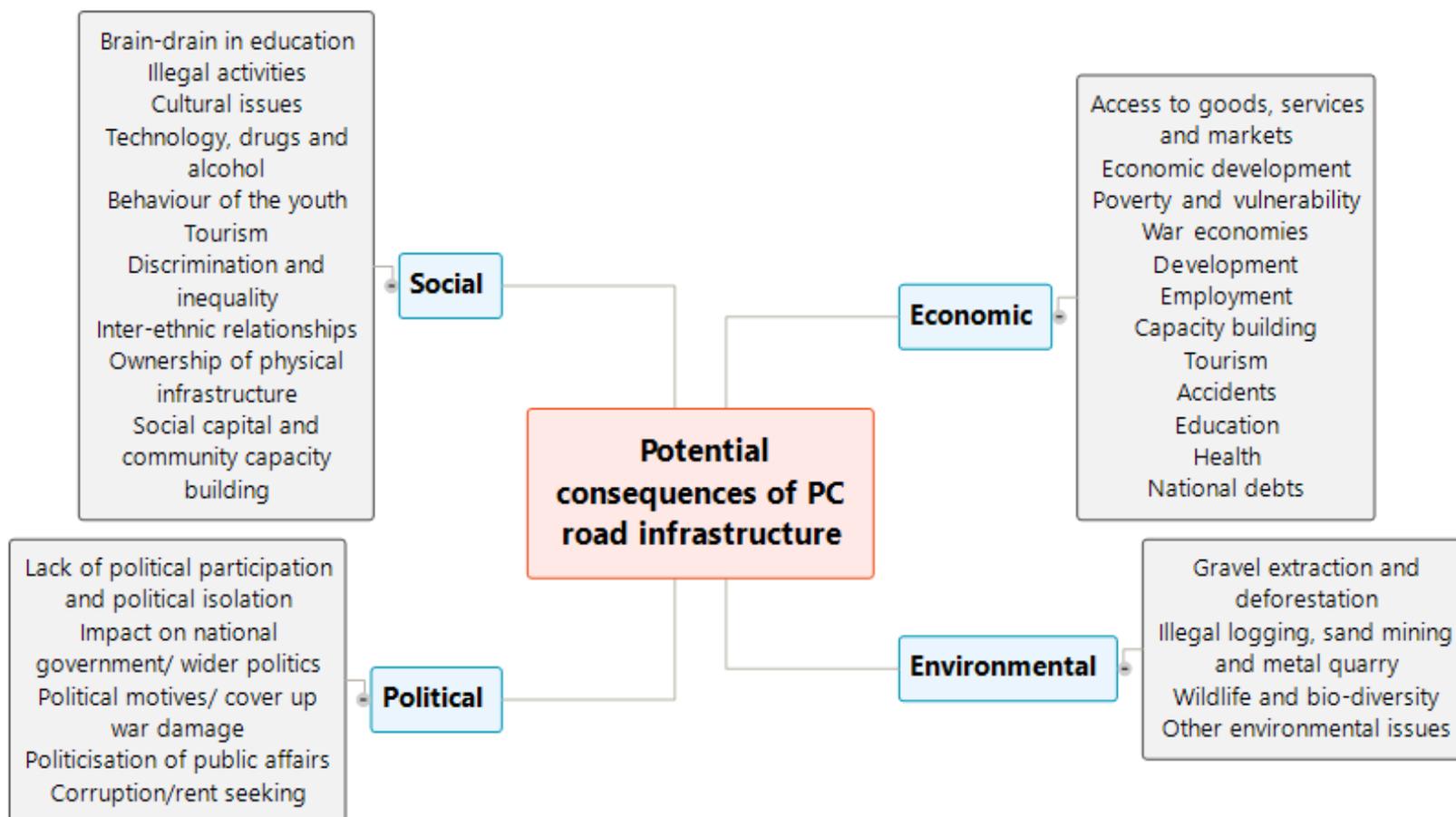


Figure 5.3. Potential consequences of post conflict road infrastructure intervention

5.5. Long-term impact on the post-conflict context

5.5.1. Sustainable development

5.5.1.1. Economic growth

In Kalmunai, the economic activities improved considerably after the construction of the roads, especially in terms of handloom trade (4.4.4.1). Kalmunai city has also urbanised rapidly, allowing other businesses to grow and contribute to the regional economy. Among the three cases studied for this research, Kalmunai is more urbanised and economically active than the other two. The increased trade activities also encourage the local producers to engage in production, and due to well-connected roads producers can sell the products at a fair price without the involvement of a middle person. These improvements can benefit the regional economy in the long run, and at the same time contribute to enhance ethnic interactions as discussed in section 5.5.4 below.

5.5.1.2. Lack of economic development

As discussed in the literature, the absence of violence is a precondition to achieve economic development, and on the other hand, sustainable development can be used as a tool to acquire long term stability and peace (2.5). Although urbanisation and improved trade activities were visible in Kalmunai (4.4.4.1), there were very little signs of economic development in Oddusudan and Padavi Sripura (4.3.4.1 and 4.5.4.1). Some people believe that development will unfold over the years and the benefits of reconstruction will start to spread to the community in the post-conflict areas (4.3.4.1). Low population and agricultural livelihoods of people in Oddusudan are the main barriers for development in Oddusudan, and it was revealed that more government intervention is needed to promote investments and to provide incentives to local producers. On the other hand, the lack of inner roads and the halting of road projects since the defeat of Rajapakshe government in 2015 are also observed to be obstacles to achieve any further economic improvements (4.3.4.1). The community in Oddusudan suffered continuously during the conflict period and have lost everything in the last stages of the conflict. upon return to their homes, they had to start all the economic, social and cultural activities from the beginning. The mere provision of main roads will not rebuild the local economy unless it is supported by strong incentives for investments with a vision for long term sustainable development. The respondents from Padavi Sripura believed that the government paid more attention to road construction and maintenance during the war than after the war, due to roads being used for military operations (4.5.3.2). As a result, the people were better off during the war than after, and there was no significant economic improvement since the road

reconstruction. On the other hand, there were more employment opportunities in the armed forces, whereas after the war there is excess labour in the military sector that is used in other non-military activities. These are the evidence of ineffective use of resources and thus, people not obtaining the expected economic benefits of the post-conflict period. The comparisons between and after conflict situation have made people prefer the conflict period, which poses a serious threat to existing nonviolent conditions. Such thoughts and preference towards violence may force communities to revert to conflict. On the other hand, the extremist groups wanting to go back to the conflict may profit from such thoughts by forcing their ideologies on common people. It was also discussed by previous researchers that if the PCR projects do not deliver specified economic objectives, communities suffering from poverty and underdevelopment may be drawn back to conflict (2.5).

5.5.1.3. Incomplete and unsustainable construction

At the same time, it was revealed through the results that the roads were built as isolated projects by a number of different actors and that most of the inner roads are still not constructed (4.3.3.1 and section 5.3.3). On the other hand, the construction was halted since the defeat of the Rajapakshe government, and the present government do not seem to restart the construction activities (4.3.3.1 and 4.4.3.3). The inability to deliver the outcomes of road construction itself affects the authenticity of the government. Being one of the very first initiatives of the war-torn areas, one would have expected the road projects to be completed before any other development activity. The failure to complete the road construction may, therefore, would affect negatively on the other projects aimed towards economic improvement. Furthermore, issues around lack of capacity building (5.4.1.4), community participation (5.3.6) and local employment provision (5.4.1.3) also affect the long-term economic development. Due to the poor-quality performance and use of wrong technology (4.6.4.2 and 5.3.3.1), the roads themselves tend to be unsustainable, requiring a high maintenance cost or rebuilding again within a short period. While the cost of initial reconstruction is also born by the taxpayers through repaying the loans, the cost of maintaining or rebuilding also has to be acquired through such means, forcing the country to be trapped in a continues expenditure cycle with no actual economic gain.

5.5.1.4. Absence of a PCR strategy and long-term national debt

As discussed in section 5.3.10, absence of a PCR strategy aiming for the development of all sectors is also affecting the sustainable growth and long-term recovery process. road reconstruction projects are not linked to a PCR strategy and implemented based on political interest rather than towards achieving economic objectives. It was discussed in the

literature review that if infrastructure reconstruction should be supported by a clear vision for recovery and development (2.3.1). Not linking the road construction to a master plan of economic development will fail to bring about economic benefits both at the local and national level. On the other hand, the road construction projects were financed by long term loans from bilateral and multilateral lenders (section 5.3.12 and 4.6.4.2). Due to the lack of capacity building and the absence of a multiplier effect of expenditure, the expenditure failed to draw sufficient economic benefits. Yet, the people are left with a long-term debt burden, the effects of which also spreads to the whole country.

5.5.2. Environment

The environmental consequences of the reconstruction activities and the road facilitates were discussed in section 5.4.2. Most of these environmental consequences are long-lasting and can pose a serious threat to the natural balance of the environment. For example, the quarries made by gravel extraction were not rehabilitated, leaving the wild animals exposed to the dangers and allowing no forest growth in the area. Deforestation and metal and sand mining also affect the biodiversity in the long-term, and swift action is needed to stop such exploitation of natural resources (4.3.4.2). The increased level of industrial activities after the reconstruction of roads not only cause environmental damage but also re-establish the mistrust towards the government and other ethnic groups. The environment was safe and protected when there was no outside intervention, and forest resources were protected by LTTE than the government workers who destroyed forests for material (4.3.4.2 and 4.3.5.2). Ultimately, people end up preferring isolation and not wanting the government to initiate further development activities. The outside people and the central government are involved in environmental destruction, and local people do not have any authority over the management of natural resources. This can also lead to people preferring independence from the government and re-emergence of violence. The respondents are suspicions that the illegal environmental damage is happening with the support of police (4.3.4.2 and 4.3.5.2). This can lead to further mistrust towards the government and the law enforcing institutions, seeking people to find their own means of justice.

Environmental consequences can also have a long-lasting impact on the social and economic conditions of the society. Chan, Ruwanpura, and Brown (2019) suggest that neglecting the environment during infrastructure intervention can not only have an impact on the natural world but also could block opportunities for peace and reconciliation. Flooding is already disrupting the education and health needs of people, affecting the wellbeing of the people and thereby the productive capacity (A – 5.3). It can increase the

vulnerability of people through continued displacement and by forcing communities to be trapped in poverty.

5.5.3. Cultural impacts and influence on the young generation

In the results chapter, the increased use of drugs, alcohol and access to inappropriate content from internet were also mentioned as the issues that can cause long-term impacts (4.3.5.4). Even though violence was prevailing under LTTE, negative effects on culture through drugs and alcohol were minimum during the conflict. The influence of outsiders is blamed for the cultural impacts, resulting in people preferring seclusion and isolation to protect the community, particularly to safeguard the young generation. The inappropriate use of technology is also causing new problems to be emerged among the young people both in Kalmunai and Oddusudan, especially among school students, affecting their mental and physical health, education and causing problems in social lives (4.3.5.4 and 4.4.4.3). The communities that were already vulnerable due to being affected by violent conflict, are further exposed to cultural and social issues by the invasion of drugs, alcohol and technology. Unfortunately, supporting networks or monitoring mechanisms are not available to educate the communities about the dangers of drugs and inappropriate technology use. The social systems are not adequately developed to balance out the negative impacts of their use. Given the impact that the exposure to these negative goods has on young people, there is less hope for the future to be better off than present. On the other hand, in the absence of support networks, these communities can become stable income-generating markets, for illegal traders who profit on their vulnerability and addiction.

The cultural issues were caused by the local tourists who not only bring drugs and alcohol but also create social problems in terms of sexual and child abuse (section 5.4.3.3). While causing new cultural problems to arise, such actions can also damage the ethnic harmony between communities (further discussed in section 5.5.4.3).

5.5.4. Ethnic harmony

5.5.4.1. Inter-ethnic trade relations

One of the positive consequences of the road network is the impact it had on improving the trade activities in Kalmunai area (also discussed in 5.4.3.5). The resulting trade relations, especially with Sinhalese people, have contributed to building trust between the two ethnic groups (4.4.5.1). It was also revealed that Muslim traders from Kalmunai felt safe to have official relationships with Tamil people, not just because of road connections,

but more so due to the absence of violence (4.4.5.1). The government and NGO officials were also able to bring education and awareness programs promoting peace, due to the road facilities (4.4.5.1). Some respondents from Oddusudan also gave evidence of non-confrontational relationships with other ethnic groups, especially with those who came to work in the road reconstruction projects (4.3.5.5). These positive outcomes that occurred due to road reconstruction can contribute to strengthening the trust between different ethnic groups in the long-run.

5.5.4.2. Political and ethnic exclusion

However, according to previous researchers, if PCR interventions worsen the existing political exclusion and used as a tool of exercising power, it can lead to increase the ethnic divisions in the post-conflict societies (2.5). The road reconstruction was centrally planned and externally implemented in the severely war-affected areas, with no prior community consultation and allowing no room for community participation. In addition, the contractors and the employers who worked in road construction were also from Sinhalese areas, taking away the opportunities of income for local people (4.3.5.5). These interventions were done by the central government, which could be viewed as politically representing the majority of citizens, who are Sinhalese by ethnicity. This can lead to minority groups feeling politically excluded and ethnically discriminated, which can lead to repeat history through renewed ethnic tensions.

5.5.4.3. Cultural issues leading to ethnic mistrust

The cultural and social problems formed due to the doings of tourists from other areas have also caused people to prefer isolation and reduce ethnic interactions. As discussed in sections 5.4.3.2 and 5.4.3.3, the illegal and culturally inappropriate behaviours of tourists have started to spread in the areas only after reconstruction of roads, and some respondents are convinced that they occur due to visitors from other ethnic communities. For an instance, the respondents in Kalmunai firmly stated that the issues brought in by the tourists never existed before the road construction and before the local tourists started visiting the beaches in the area which is predominantly Muslim (4.4.4.3). In such cases, ethnic harmony among the communities are negatively affected and can lead to long-term mistrust and ethnic isolation. Another negative impact that tourism had on ethnic harmony is the use of war damage to impose the nationalistic agenda. At the initial stages of reconstruction and soon after the war, local tourists, mainly Sinhalese people, who came to visit the war-torn areas (4.6.4.3) left a negative impression on local people, due to being treated as war exhibits. This may have also contributed to widen the ethnic gaps and to increase the mistrust towards Sinhalese people.

5.5.4.4. Lack of trust and feelings of discrimination

According to the respondents of Padavi Sripura, ethnic relationships have not significantly improved since the roads were constructed (4.5.5 and 4.5.4.3). It was also revealed that people prefer isolation and separation from other ethnic groups due to concerns of safety. The people in Padavi Sripura suffered due to the activities of LTTE during the conflict and treat the whole Tamil community in a suspicious manner, which is similar to the mainstream Sinhalese attitude towards the Tamil community in the country. From some respondents, there is an acknowledgement of the sufferings of the Tamil community and sympathy towards the issues of poverty they face. Yet, they are not ready to trust the Tamil people who were under LTTE power for a long period and suspect that they are harmful to the Sinhalese community. It was also revealed that Tamil people are not allowed to purchase the land within the Padavi Sripura DS division (4.5.4.3), providing further evidence of mistrust. Although roads are constructed physically connecting the villages, no effort is taken by the government, international organisations or local community to improve social connections and build trust among communities. To this end, the road connectivity is so far not used as a tool to create ethnic harmony among Tamil and Sinhalese communities.

While the existing gap between Tamil and Sinhalese people is maintained, a new form of tension is created among the Sinhalese towards the Muslim community. People felt that they are being discriminated and mistreated by the government, due to having less road development compared to other areas in the province (4.4.5.2). In Eastern province, the Muslims form the majority of the population, and the politicians elected in the province are also mostly from the Muslim community. The road construction and resulting economic growth in the Muslim majority areas have created jealousy and anger among Sinhalese people, towards the Muslim community and their respective politicians (further discussed in section 5.5.5 below). Since the jealousy is based on ethnic grounds, it can have a long-lasting influence on harmony among the two communities and may create new forms of conflicts.

5.5.5. Inequality

The unequal nature of road reconstruction and the resulting economic inequality is an issue discussed by respondents from all three DS divisions used for the study (also discussed in section 5.4.3.4). Due to being more developed than other war-affected areas, the Muslim community in Kalmunai believe that they are subject to jealousy of other ethnic groups. As a result, false rumours were being spread about the Muslim community, affect

the ethnic harmony among communities (4.4.5.2). as it was clearly mentioned in several sections of this chapter, Sinhalese people in Padavi Sripura feel discriminated within the eastern province. They also believe that Tamil and Muslim areas affected by conflict received more development than Sinhalese areas (4.5.5). The feelings of discrimination can have long term impacts by creating jealousy and negative attitudes towards other ethnic groups.

The respondents from Oddusudan also felt discriminated because other Tamil areas, especially cities, affected by conflict are better reconstrued (4.3.4.3). The inner roads which provide access to most rural and underdeveloped areas are the ones that are least constructed and slow in construction progress (4.3.4.1). Although the jealousy is not directed at other ethnic groups (5.4.3.4), they may conclude that inequality is based on class and privilege, since the economically better off people also enjoy more construction facilities (such as Jaffna). As a result, vulnerable communities may start feeling further disempowered and mistreated by the government. As discussed in the literature, such feelings can be used by illegal combatants to question the government authority and justify the violence, encouraging people to seek alternative means of power (2.4.3)

5.5.6. Political isolation and mistrust towards the government

Several issues discussed in this section, such as lack of economic development, absence of clear PCR strategy, environmental impacts, inequality and problems of ethnic harmony, are all contributing to developing a public mistrust towards central government. It is also connected to numerous negative consequences presented in section three, including lack of capacity building (5.4.1.4), incomplete construction (5.3.3), political exclusion (5.3.9.1) and corruption (5.3.9.4). As a result of the government's inability to implement effective PCR solutions and protect the vulnerable communities affected by war, the people may lose trust in government. Consequently, they may seek alternative means of satisfying their needs and mobilise around political or ethnic leaders that they perceive to be capable of meeting their demands. As pointed out in the literature review, political exclusion, that was evident in the PCR process, can lead to promoting ethnic division and escalation of violence (2.4.4).

In the case of Oddusudan, the mistrust is directed not only at the central government but also towards MPs elected from the area and local government level political representatives. Some respondent claimed that local politicians are not active in securing funds for local reconstruction, and not capable of influencing the government (4.3.4.4). However, politicians and their interests are divided based on ethnicity, and people from

North and East, tend to vote the ethnically-based political part irrespective of the actions of the national government (4.4.4.4). On the other hand, the central government is viewed by them as nationalistic and not representing the interests of minority ethnic groups, resulting in continuous disagreements between the ethnically-based political parties and the government. A continued cycle of mistrust is carried on between the nationalistic government and the ethnically based parties, which ultimately affects the completion of infrastructure. On the other hand, the government failed to use the opportunity presented by road construction to bring together different ethnic groups, and to build trust towards the government (4.6.4.1). The way the reconstruction has taken place encouraged and justified the ethnic division and political isolation. The lack of local employment provision and capacity building worsened this situation, creating more mistrust towards government who they think has favoured the Sinhalese community.

5.5.7. Peace and Reconciliation

It was claimed in the literature review that both aspects of peacebuilding and reconstruction are equally essential for long term stability of a post-conflict state (2.5). Through the results, it was established that Physical construction alone is not adequate to achieve peace. Reconstruction cannot heal the wounds of people and some respondents firmly believed that it has no connection to reconciliation (4.3.5.6). It could be just one step towards reconciliation and maybe indirectly related, but not sufficient to achieve an end solution (4.6.4.3). People who suffered immensely for a long period due to the prevalence of violence were generally grateful about the end of the armed conflict (4.3.5.6). Yet, no further steps were taken by the national government, to divide the peace dividends to the community (4.6.4.3). Reconstruction projects should be parts of a major strategy that work towards recovery, sustainable development and reconciliation, and isolated road-building do not serve this purpose.

As discussed in the literature, PCR could have been used as an opportunity to build trust and bridge the gap between the war-affected communities (2.3.1). Yet, the government failed to profit from that opportunity but merely used it to cover up the war damage through quick construction, which ultimately led to escalating the existing mistrust among communities and towards the government. At the same time, local governments were not given the opportunity, independence or the empowerment to act towards their own development, since everything is centrally implemented. The local people also lost their power over local resources and given no responsibility to contribute to local development (4.6.4.3). These aspects can lead to an escalation of unrest among people and stand as barriers to reconciliation.

On the other hand, there are growing issues of inequality and injustice (5.5.5 and 5.5.6), which contributes to the unrest of people. The ownership of the road infrastructure is not given to local people, as they externally planned and implemented (4.6.4.2). Consultants, contractors and employers were from other areas, and sometimes from other countries. There was no significant effort for community participation and capacity building, and the community was not consulted before the project implantation, especially in North where the road construction started before resettlement. When centrally controlled and the concern for social and psychological needs is absent, people mistrust and object to infrastructure interventions (4.6.4.2 and 4.6.4.3). Adding to this, there is evidence of the politicisation of public affairs and corruptive and rent-seeking behaviour of the politicians (5.4.4.4 and 5.4.4.5). These factors contribute to the continuation of failed state criteria, minimising the state's capacity to engage in building peace. On the other hand, the grievances of the Tamil community are not addressed after the conflict but rather aggravated through the road infrastructure interventions (5.3.5.2). Using road reconstruction as a tool to cover up war damage is also a barrier for reconciliation and in establishing peace (5.3.2.1). The war damage was not only the evidence left from the violent conflict but also signifies the community's suffering, their history and the lifelong grievances. By forceful removing of their historical memories, the government and the rest of the community are ignoring their grievance. It is important to understand and acknowledge the grievances, in order to heal their sufferings. In the absence of such acknowledgement, hopes for peace are rather farfetched.

5.5.8. Sub-framework for long-term impact on post conflict context

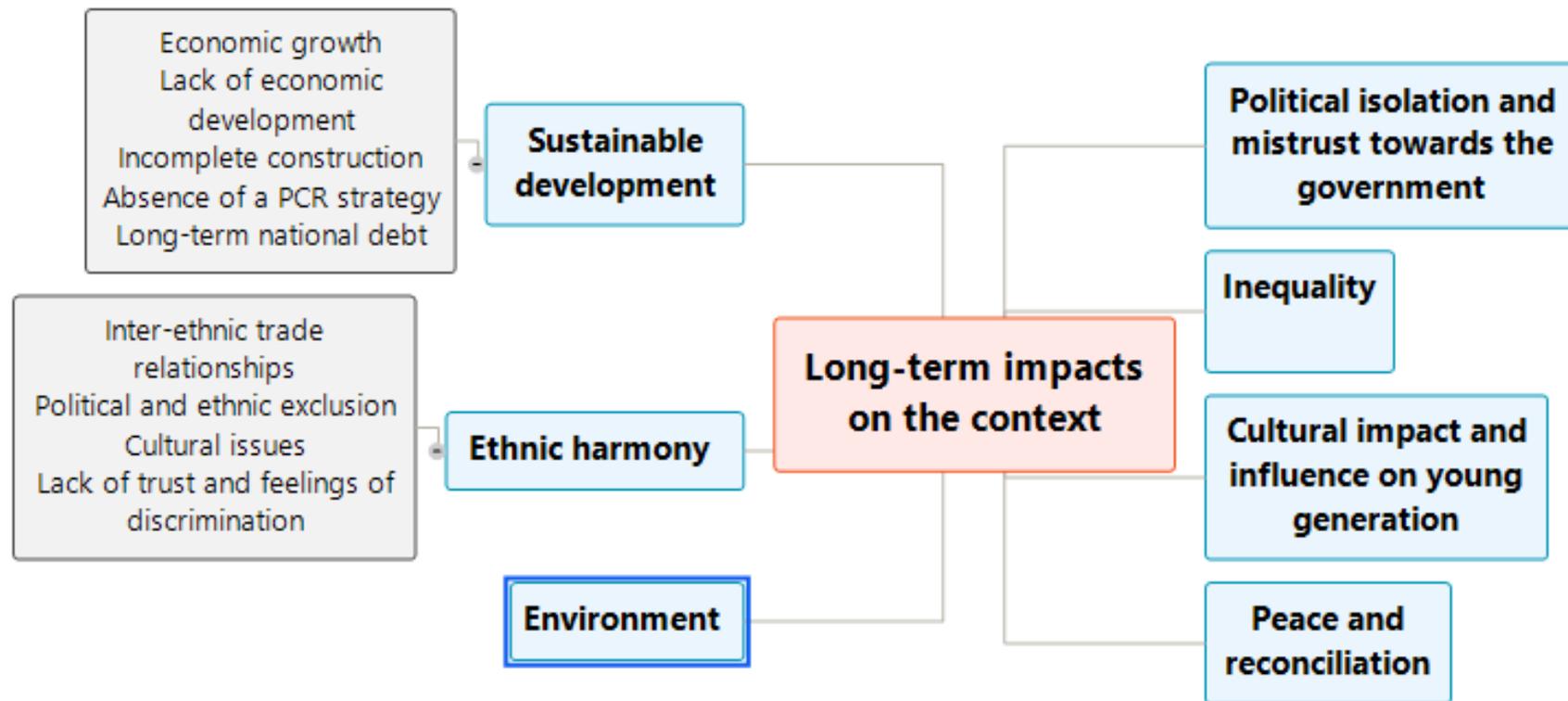


Figure 5.4. The long-term impact of the consequences on the post-conflict context

5.6. Final analytical framework

The final analytical framework depicted in figure 5.5 below, is the visual presentation of the whole of the discussion presented in this chapter. The basis for developing the analytical framework is the conceptual framework formed using the literature review 2.7.3. The conceptual framework was also used to guide the data collection and coding purposes, and therefore it provides the basis for the main skeleton and the structure used in the novel framework introduced below. While the conceptual framework is based on concepts revealed by analysing literature related all forms of PCR intervention, the analytical framework below is solely based on the findings of this study and this based on road infrastructure intervention. The structure is filled with the issues, concepts and themes identified through the data analysis. Some of the themes that emerge in the analytical framework were also found in previous research, this was validated through the data from the case study analysis. Yet, their relationships to the context and the other issues within the framework are discussed from a different perspective. At the same time, a number of new concepts and issues were introduced in the framework, some specifically significant to Sri Lanka, such as the political influence and consequences, cultural consequences and national fiscal environment. The relationships among these concepts discovered through the study are also novel and provide a dynamic view of the PCR context and its aftermath. Since the framework structure is based on the conceptual analysis, it has a strong theoretical foundation. The issues and relationships are derived from the primary data collection and analysis, and thereby have a high theoretical contribution and practical implications. It can also be adapted to other forms of infrastructure or interventions, and the components within the framework can be improved to from individual models regarding specific fragments of the PCR process.

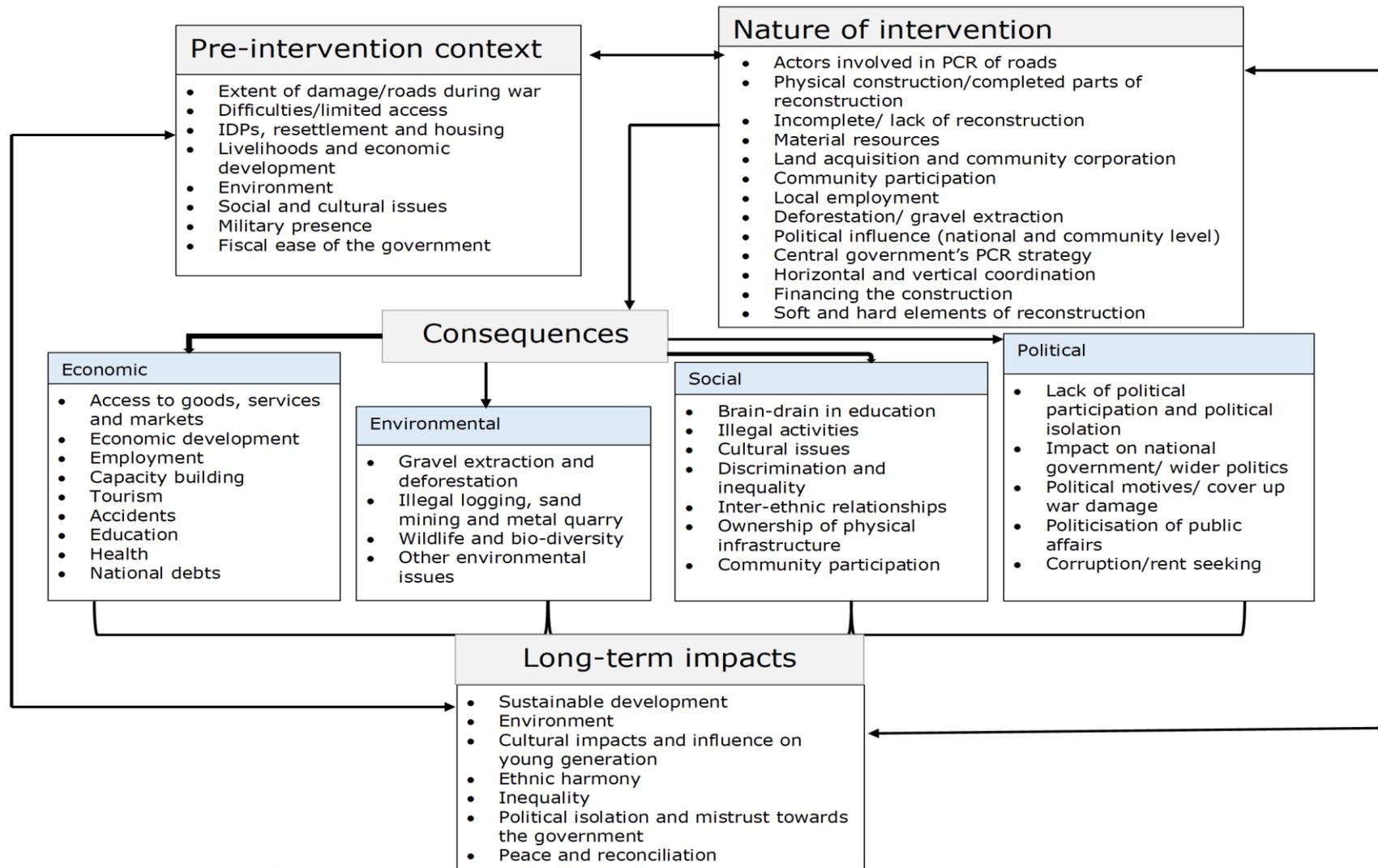


Figure 5.5 – Analytical framework for analysing the consequences of PCR intervention of road infrastructure

5.7. Summary

The issues identified during the reporting of results were analysed in this chapter connecting them to the previous research identified through the literature review. The issues are also discussed within the big picture of the post-conflict context, and also in relation to each other. The evidence from results from all cases was drawn together to highlight the patterns, connections and new findings emerging through the study. The findings are confirmed by bringing in documentary evidence from a variety of sources. This chapter also presents the analytical framework introduced throughout the study. Four sub-frameworks were given at the end of each section highlighting the main findings pertaining to those particular sections. The final analytical framework is a summary of all the sub-frameworks and the visual presentation of the findings unveiled through the study.

6. Conclusion

6.1. Introduction

This is the concluding chapter of the study. Immediately following this introduction, section 2 describes how each of the study aims and objectives was achieved. This is followed by two sections where the theoretical and practical contributions of the study are outlined. The strengths and limitations of the analytical framework introduced through the study are discussed in section five, followed by a review on the generalisability of the same framework. The novelty of the research study is explained in section seven. The final two sections bring attention to the challenges and limitations encountered during the research, and to outline future research potential created through the study. At the end of the chapter, the researcher provides a personal reflection on her PhD journey as a final note to the thesis.

6.2. Aim and objectives

As highlighted in the introduction and the methodology chapters, this study aimed at the analytical framework to represent the potential consequences of PCR interventions and their linkages, focusing on road infrastructure reconstruction. The analytical framework developed through the study can be used either as a whole or as separate sections to understand not only the consequences but also how different issues within the intervention affect the PCR process and its outcome. The four main components of the framework can be used to evaluate different stages within the PCR process. For example, the pre-intervention context (chapter 5 – figure 5.1) is useful for policymakers and planners of infrastructure to better understand the issues and complexities of the context that they are going to get involved during the intervention. Such understanding may allow them to be sensitive to those dynamics when planning the intervention. Similarly, the highlighted potential long-term impacts on the context (chapter 5 -figure 5.4) are linking the pre-intervention to the consequences and useful during and after the infrastructure provision. The awareness of the negative impacts can guide the project implementers to adopt good practices in intervention and minimise negative consequences.

Three objectives were identified to fulfil the aim. The way they were achieved during the study is described below.

6.2.1. Objective 1

The first objective was to understand the potential consequences of a PCR intervention. This was achieved mainly through the literature review (chapter 2), and through the data collection and analysis process of the research (chapter 4 and 5). The different types of consequences that already exist in the PCR literature (2.4), as well as literature related to transport infrastructure (2.7), were explored and organised during the literature review. The consequences particularly relevant to road infrastructure reconstruction are found through the primary data analysis and presented in chapter 5 (section 5.4). The consequences were presented under the four main themes of economic, environmental, social and political, for the convenience of analysis. However, these consequences are interconnected to each other and cannot be isolated from the context. The significance of these consequences was identified within the post-conflict context and their relationship to the intervention itself. It should be noted that the consequences revealed through primary data analysis are particularly relevant to road reconstruction in post-conflict Sri Lanka. The relationships between road infrastructure intervention and the consequences were built based on the perceived linkages revealed through the qualitative study. The researcher acknowledges the presence of a large variety of other factors that could result in the occurrence of the aforementioned consequences.

6.2.2. Objective 2

The second objective is to understand the methods, models and frameworks that are used and can be used to analyse the consequences of a PCR intervention involving physical infrastructure. This was mainly achieved through the literature review and the conceptual framework (chapter 2), exploring the different methods used to understand and evaluate the consequences both within the post-conflict context and in the provision of transport infrastructure. It was revealed that there are very few frameworks that focus on the consequences of infrastructure construction, and most of them do not fall within the post-conflict category. On the other hand, the research that dealt with post-conflict issues do not necessarily look at the potential range of consequences, but rather on isolated issues prominent within the post-conflict context. As a result, the vital consequences that may affect conflict-affected communities in the long-term are ignored in the PCR interventions. Achieving the second objective through the literature review, clarified the gap necessary to carry out the study and to define the questions to be addressed during the rest of the study.

6.2.3. Objective 3

The third objective was to provide a guideline for PCR project implementers to analyse the potential consequences of a PCR intervention involving road infrastructure. This was achieved through the data analysis and building of the analytical framework (chapter 5). The framework

was built focusing on the road infrastructure reconstruction in post-conflict Sri Lanka, looking at both pre and post-intervention contexts and the nature of the intervention itself. Thus, the consequences are analysed in relation to a number of socio, economic, environmental and political issues that exist in the war-affected areas, and the national political context. These issues had an important impact in shaping the nature of a road reconstruction intervention. On the other hand, some of the planning and implementing decisions taken during the intervention were not sensitive to the post-conflict dynamics of the society, resulting in several negative consequences. The framework also includes four sub frameworks, which present in detail the issues within different components and their linkages to other components. Four frameworks were brought together to form the main framework giving a macro perspective of the linkages between the main components of context, intervention and potential consequences (figure 5.5).

6.3. Theoretical contributions

6.3.1. Conceptual framework

The conceptual framework developed through the literature review outlines the nature of PCR interventions, their potential consequences and the long-term impacts within the post-conflict context. The initial framework, which provided the basis for the current research, can also be used in future for a detailed exploration of the PCR interventions and their consequences. The framework can be expanded based on other areas of research, because the ones related to PCR and transport infrastructure are considered in the literature review, and there is potential to expand the concepts based on other social, political and economic situations and different types of interventions, including soft infrastructure. The conceptual framework is one of the very few to bring together the different theories, frameworks and models discussed in literature providing an overall understanding of the nature of PCR interventions and their consequences.

6.3.2. The analytical framework

The final analytical framework introduced through the research can be considered as an extension of the conceptual framework, and yet it is introducing a number of concepts, issues and themes that were not discovered in the literature review. On the other hand, while the conceptual framework is based on different types of PCR and other forms of interventions, the final analytical framework is based especially on PCR of road infrastructure. The concepts are presented in detail, with their linkages to several other concepts in the framework and in relation to their significance within the overall context. The framework is practically significant due to improving and re-establishing using the primary data rather than relying on the

previous research findings. Yet, it also has a strong theoretical foundation due to being based on the initial conceptual framework, which was also used to develop the data collection tools and organise the data analysis. Triangulation and validation of the framework through documentary evidence and expert consultation further strengthens its theoretical value.

6.4. Practical contributions of the analytical framework

As mentioned in section 6.2, the third objective of the study is to provide a guideline on PCR of road infrastructure, so that they can analyse the potential consequences prior to the intervention. As highlighted in chapter 2, the current practice lacks a guideline that particularly focuses on physical infrastructure reconstruction. The guidelines currently used in transport infrastructure provision at large do not account for conflict sensitivity. The construction of roads after conflict involves being sensitive to the needs of affected communities while achieving the recovery and development goals. The framework presented in this study highlights the nexus between these nexuses between conflict aspects, recovery and economic development. The qualitative approach adopted in developing the framework was particularly useful in bringing together different socio, economic and political relations between intervention, consequences and context. The framework can be used as a tool at the top-level policymakers and project planners to understand the complex environment surrounding a single intervention and allow for positive outcomes. It can also help them plan the interventions to minimise the negative consequences or to take counter measurements to expected negative consequences. The project managers, politicians, government officials, NGOs and other stakeholders engaged in reconstruction below the planning level can use the framework as a guidance mechanism throughout the implementation. Based on the potential outcomes linked to practices of infrastructure interventions, they can respond accordingly to address the resulting problems at the practical level rather than waiting for long-term impacts to develop. At the same time, policymakers can focus on isolated interconnections between interventions and certain types of consequences, and address to avoid the negatives within their capacity. However, the understanding of the bigger picture presented through the framework is helpful for taking decisions at the micro-level for any actor dealing with intervention. At the same time, micro tools can be developed based on the framework to be used in different departments and at different levels related to the road infrastructure intervention and used as good practices at department or regional level.

6.5. Strengths and limitations of the analytical framework

The main strengths of the framework presented in this thesis, are its novelty, theoretical justification and practical contribution. The framework is novel due to the employment of qualitative case study analysis for its development and was based on primary data related to

road infrastructure reconstruction in Sri Lanka. It also presents a big picture analysis of the PCR of roads in Sri Lanka, and provide linkages between intervention, consequences and post-conflict context. Due to this feature, there is potential for a large amount of future research and areas of exploration that can be generated through the framework. The constructive approach used to develop the framework strengthens its theoretical base. The conceptual framework by which the data collection and analysis was guided helped to establish the theoretical justification. The ability of using or developing tools to be used in practical situations can also be considered as a positive attribute of the framework. As discussed in section 6.4 above, the framework can be used by different stakeholders in road reconstruction sector as a guidance tool to plan their projects and actions.

One of the main limitations of the framework is that it is not possible for it to be tested within a single study as a method of validation. The framework assumes complex and perceived relationships between context, infrastructure intervention and consequences based on the qualitative data, and by combining the data through thematic analysis. The establishment of these relationships within the framework does not guarantee pure causal relationships in the actual world. There promises to be a large number of other variables that affect the factors described in the framework, and the researcher makes an effort to isolate certain relationships useful for the analysis. Use of only three case studies to derive these relationships could also be considered as a limitation, although it was unavoidable due to time and cost limitations. Different relationships may occur or the established relationships may prove to be wrong if more cases were used for the analysis, allowing for comparisons based on more factors in addition to ethnic identity.

6.6. Generalisability of the analytical framework

The justification used for generalising the study findings were discussed in chapter three earlier (section 3.7.5). While the framework is highly related to the post-conflict road reconstruction, there is a potential for it to be developed or adjusted to other types of physical infrastructure, especially those related to providing critical services (such as water and health). There is reasonable applicability of the framework to other types of infrastructure interventions within Sri Lanka. Except for some of the concepts within the intervention and consequences components of the framework, the rest is based on the information that is relevant across several infrastructure sectors in Sri Lanka. Furthermore, the framework can also be adjusted or tested to be applied in transport infrastructure interventions in other countries that have gone through similar post-conflict experiences. The qualitative case study approach used in this study improved the generalisability of the framework. The in-detail and in-depth engagement with the data and making a large number of linkages helped strengthen

the analysis. The presentation of a single intervention of road infrastructure using a macro-level analysis, drawing long-term and short-term causal relationships, and providing the bigger picture within which the intervention and consequences take place, have also contributed to the generalisability of the framework.

6.7. Novelty

A new area of research within the post-conflict literature was explored during the study. Although there have been many studies assessing the impact of internal conflict or civil war, less focus is paid to the consequences of PCR, particularly in the case of physical infrastructure reconstruction. Among the studies that examine the impacts of PCR, the focus is on conceptually analysing the implications on war and peace, and other conflict specific aspects. The PCR literature lacks an analysis of potential consequences within a single study. On the other hand, the previous studies transport infrastructure tended to focus on economic, environmental and social consequences separately but does not necessarily integrate the different consequences. Therefore, it is difficult to apply the frameworks used in transport literature in a post-conflict context. The existing frameworks in PCR are mostly conceptual and have limitations for application at a practical level. On the other hand, the applied frameworks currently used by decision-makers do not have a strong theoretical basis.

This study aimed to bring together the potential consequences of PCR intervention and their analysis into a single framework, which effectively embodies the linkages among the different consequences and their connections to the larger post-conflict context. The framework that includes a range of potential consequences is itself a unique approach to looking at the consequences of PCR intervention. The framework was primarily based on literature and case studies from road infrastructure in Sri Lanka. Therefore, it was mainly focused on an analysis of the consequences of physical infrastructure reconstruction, looking specifically at road infrastructure reconstruction. Typically, road infrastructure interventions are analysed through the narrow lenses of economic, social and environmental impacts. The study brings in a new perspective to the analysis of road infrastructure reconstruction by integrating different potential consequences and connecting them to the post-conflict context. Although the framework is developed based on road infrastructure reconstruction, there is a potential to widen its use to other forms of physical infrastructure, especially in the post-conflict setting. The effort to bring together the post-conflict analysis and road infrastructure analysis into a single framework is also a new contribution to knowledge. The current theory and practice of PCR application lack the analysis of conflict-related issues in infrastructure reconstruction. The framework being developed through this study attempts to fill this knowledge gap by

integrating the potential consequences of PCR intervention and highlighting their complex relationships to the post-conflict context.

6.8. Challenges and limitations

Due to the limited period of study, the analysis had to be constrained for road infrastructure intervention in Sri Lanka, and thus the framework is based on the Sri Lankan experience. A study carried out using a cross country analysis might reveal other issues that haven't been addressed in this framework due to inevitable differences in socio-cultural and economic contexts.

During the data analysis, comparisons were made among DS divisions based on the ethnic difference. It was not possible to expand the number of cases to represent at least two Ds divisions to represent each ethnic group, which would have allowed a more detailed inter-case analysis and compare the consequences based on factors such as geographical location, proximity to urban areas, the size of the population and nature of local livelihoods.

A major challenge faced during the data collection was the identification of individuals for interviews. Although the respondents at a national level were identified based on their contribution and expertise on road construction, the DS level participants were selected based on personal contacts, and getting through to other contacts of the known people. This also reduced the number of participants, as only the community representatives were chosen due to the sensitivity of the research topic. This is also a reason for the different number of respondents within each DS division, which could be treated as an imbalance. However, the lesser number of Sinhalese participants from Padavi Sripura was at least partially compensated for by the majority of national-level respondents being of Sinhalese background. While the analytical framework was built using a constructive approach, which has a strong theoretical foundation due to being based on the previous research, it was not further validated due to limited availability of time for the completion of PhD thesis. A validation process using focus group discussions or further set of expert interviews would further strengthen the theoretical justification behind the analytical framework.

6.9. Future research

The analytical framework can be tested and expanded using other types of physical infrastructure in different countries affected by conflict. It could also be tested using a cross country analysis. The framework can be used as a background tool for a macro-level analysis combining the different types of infrastructure, and to compare and contrast their consequences and long-term impacts. The analysis can be expanded to consider geographical

location, international political influence, natural environmental aspects, and other population dynamics. There is also potential to alter the framework to assess the soft infrastructure interventions by introducing and integrating different methods used to analyse their effectiveness. Furthermore, the sub-components within the analytical framework can be expanded to develop models or frameworks useful for micro-level analysis.

6.10. Reflection

The four-year journey towards the completion of the PhD thesis has been a challenging, sometimes tiring, but always a rewarding and learning experience. Mistakes were made from the beginning till the end of this journey. Passing through each of them I grew stronger and wiser. Looking back, I do not regret any mistake or a wrong step I have taken, and I would not have it in any other way. The first year was literature, second and third year dealing with data, and last year writing, I achieved, triumphed, enjoyed, laughed, but also agitated, panicked, cried, and at times got mentally broken. I had moments of interest, curiosity, adventure, exploration and discovery, as much as those of dullness, boredom, sickness, and almost giving up. I went through days and nights without sleep and days and nights of not getting out of the room. But still, I would not have it any other way. This journey made me realise my full potential and discover new talents and skills that were hiding deep within me. It also helped me understand my insecurities and weaknesses, and develop tools and strategies to cope with those insecurities. I made friends for life and learnt lessons that could not be learnt otherwise. It is not an exaggeration to say that this journey has transformed me as a person, and opened pathways to new prospects. I am forever thankful for this journey and to all those who held my hand and showed me the way. I am excited about the life waiting ahead of me and ready to walk towards that life as the new person I am of today.

7. Appendices

7.1. Appendix 1 – Guideline for semi structured interviews

1. Information about the respondent
 - 1.1. Age
 - 1.2. Gender
 - 1.3. Ethnicity
 - 1.4. Position
 - 1.5. Department
 - 1.6. Relationship to the road reconstruction process?
2. Context
 - 2.1. How was the context like before the intervention?
 - 2.2. What specific post war dynamics were visible in the context?
 - 2.3. Are you aware of any evaluations undertaken before the construction?
 - 2.4. Was the **post conflict context** of the particular area analysed before construction – during the evaluation?
 - 2.5. Was the **context dynamics** taken into consideration during the different stages of construction? Any specific post war dynamics?
 - 2.6. If yes, at which stage?
 - 2.7. What were the (observed or evaluated) **context specific constraints** faced during reconstruction?
3. Intervention
 - 3.1. Are you aware of any feasibility studies undertaken? What were their outcomes?
 - 3.2. Was the opinion of the public taken into consideration?
 - 3.3. Were any research and development activities carried out with the third-party consultations?
 - 3.4. What was your role with related to any of the road projects?
 - 3.5. Who were the other stake holders (as per your knowledge)?
 - 3.6. How would you describe each of their roles in the project?
4. Consequences
 - 4.1. Were consequences (both positive and negative) considered during different stages of construction?
 - 4.2. If so, what consequences and at which stage? [0-7 of RIBA]
 - 4.2.1. Economic
 - 4.2.2. Environmental
 - 4.2.3. Social
 - 4.2.4. Political
 - 4.3. What were the actual consequences that occurred during and after the construction?

4.3.1. Economic (Each of these questions will be expanded based on the number of consequences suggested by the respondent. The consequences included in conceptual framework will be used as a guideline to crosscheck. However, it is expected that respondent will come up with more suggestions than in the framework. Since the response should not be constrained by the consequences suggested through conceptual framework, the researcher will not suggest them at the beginning)

4.3.1.1. At which stage

4.3.1.2. At which level (national, regional, communal, individual)

4.3.1.3. How would you compare the situation before and after the intervention in terms of these consequences?

4.3.2. Environmental

4.3.2.1. At which stage

4.3.2.2. At which level (national, regional, communal, individual)

4.3.2.3. How would you compare the situation before and after the intervention in terms of these consequences?

4.3.3. Social

4.3.3.1. At which stage

4.3.3.2. At which level (national, regional, communal, individual)

4.3.3.3. How would you compare the situation before and after the intervention in terms of these consequences?

4.3.4. Political

4.3.4.1. At which stage

4.3.4.2. At which level (national, regional, communal, individual)

4.3.4.3. How would you compare the situation before and after the intervention in terms of these consequences?

4.3.5. Other

4.3.5.1. At which stage

4.3.5.2. At which level (national, regional, communal, individual)

4.3.5.3. How would you compare the situation before and after the intervention in terms of these consequences?

4.4. Whether the above consequences were positive or negative/direct or indirect?

4.5. Was it measured? How big was the impact?

5. Long term outcomes

5.1. Did the road reconstruction have a long-term impact on the context/area?

5.2. What would be the long-term impacts of above-mentioned consequences?

5.3. Can those be seen now or will they occur later?

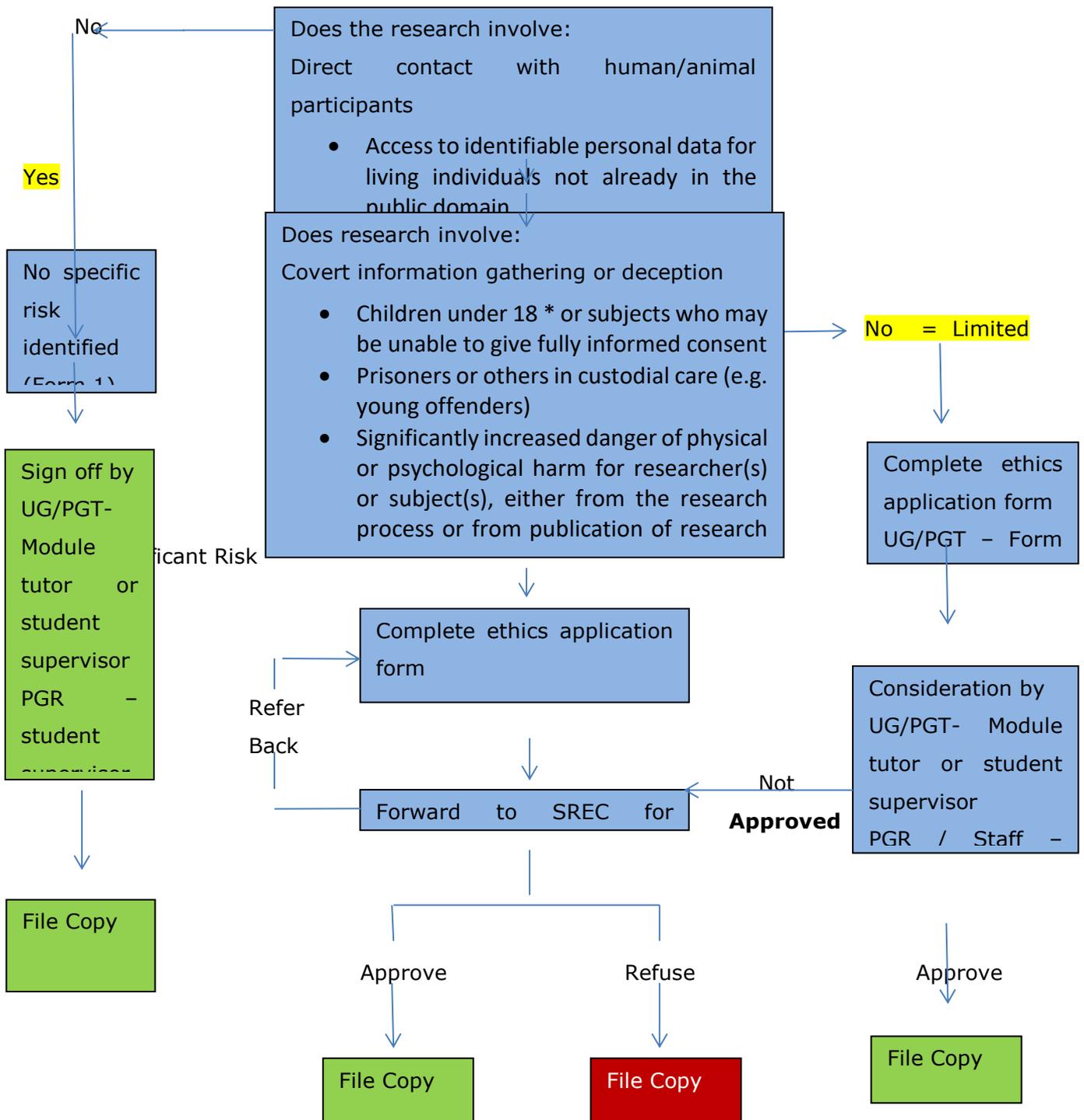
5.4. When will the results of these impacts be visible?

7.2. Appendix 2 – Ethics form used in the study

School of Art, Design and Architecture

Project Proposal

Consideration for research ethics approval requirements



THE UNIVERSITY OF HUDDERSFIELD
School of Art, Design and Architecture

POSTGRADATE STUDENT / STAFF RESEARCH ETHICAL REVIEW

(Limited or Significant Risk)

Please complete and return via email to school research administrator (S.E.Baines@hud.ac.uk) along with the required documents (shown below).

SECTION A: TO BE COMPLETED BY THE APPLICANT

Before completing this section please refer to the School Research Ethics web pages which can be found at [this link](#). Applicants should consult the appropriate ethical guidelines.

Please ensure that the statements in Section C are completed by the applicant (and supervisor for PGR students) prior to submission.

Project Title	A framework to analyse consequences of Post Conflict Reconstruction Intervention: The case of road infrastructure in Sri Lanka
Applicant	Maheshika M. Sakalasuriya
Supervisor (where applicable)	Richard P. Haigh
Award (where applicable)	PhD
Project start date	22 April 2015

SECTION B: PROJECT OUTLINE (TO BE COMPLETED IN FULL BY THE APPLICANT)

Issue	Please provide sufficient detail to allow appropriate consideration of any ethical issues. Forms with insufficient detail will need to be resubmitted.
<p>Aims and objectives of the study. Please state the aims and objectives of the study.</p>	<p>The aim of this research is to build a framework to analyse the potential consequences of a PCR intervention.</p> <p>In order to fulfil the above aim, there are four objectives.</p> <ol style="list-style-type: none"> 4. To understand the potential consequences of a PCR intervention 5. To understand the methods that are used and can be used in analysing the consequences of PCR in existing literature, theory and practice 6. To develop the analytical framework of potential consequences incorporating and synthesizing the methods and consequences

	7. To validate the framework using data from post conflict road infrastructure in Sri Lanka
Brief overview of research methodology The methodology only needs to be explained in sufficient detail to show the approach used (e.g. survey) and explain the research methods to be used during the study.	This study uses case study method, and uses two road reconstruction projects as cases. The data collection methods are interviews and documentary analysis.
Does your study require any permissions for study? If so, please give details	No
Participants Please outline who will participate in your research. Might any of the participants be considered 'vulnerable' (e.g. children)	Interviews will be conducted with community representatives, representatives from local government, officers from road development authority (RDA) and representatives from funding organizations (ADB and JICA).
Access to participants Please give details about how participants will be identified and contacted.	Participants will be identified through consulting with the RDA officers who were involved in the projects. They will initially be contacted through email, and then by telephone conversations. The interviews will be conducted meeting personally with the participants. <p>Purposive sampling will be used (Miles & Huberman, 1984), with participants selected based on the project and on the potential contributions of participants. It will be important to ensure a diversity of people from within the institutions; from those "on the ground" doing this day to day, to others with a more strategic responsibility.</p> <p>Some considerations for inclusivity include:</p> <ul style="list-style-type: none"> • Cultural and linguistic diversity • People with disabilities • Seniors • Gender • Interest groups
How will your data be recorded and stored?	Data will be recorded and stored in audio devices and computers. <p>A data management plan will be developed. This will include:</p> <ul style="list-style-type: none"> • Description of the data to be collected / created • Standards / methodologies for data collection and management • Ethics and intellectual property considerations • Plans for data sharing and access • Strategy for long-term preservation <p>The storage of data will comply with existing National and/or International Data Protection Laws and codes.</p>
Informed consent. Please outline how you will obtain informed consent.	8. Participation will be based on willing and informed consent. In practice this means that those taking part should have a clear understanding of why information is being gathered from them and what it will be used for.

	<p>Those taking part will be aware of who is undertaking the engagement work and who it is being undertaken for, including contact details of these organisations.</p> <p>Taking part is entirely voluntary. Those taking part can refuse to answer any questions or withdraw at any point, without having to explain why.</p> <p>Engagement will not be unduly intrusive or harm the participant in any way.</p> <p>An information sheet and informed consent form will be issued to all participants. As a minimum this will:</p> <p>Say who we are; where we are from; and what we are doing.</p> <p>Tell the person how/why they were selected to be invited to take part.</p> <p>Inform them that, even if they agree to take part, they can change their mind at any time, without giving an explanation.</p> <p>Tell them what they would be asked to do if they agreed to take part.</p> <p>Tell them the level of anonymity and confidentiality we can guarantee.</p> <p>Say what the information will be used for, how it will be stored, and how long it will be kept.</p> <p>The storage of data will comply with existing National and/or International Data Protection Laws and codes.</p> <p>A participant will be asked to sign a Consent Form to record informed agreement to take part. The example provided by the University will be used as a basis for this.</p> <p>The interviewee will be explained about the objectives of the research and what is expected of the interviewee. The informed consent letter will be provided in a language convenient for the interviewee.</p>
<p>Confidentiality Please outline the level of confidentiality you will offer respondents and how this will be respected. You should also outline about who will have access to the</p>	<p>Participants will be assured of confidentiality, meaning that we will not identify or link a response with a particular participant. To achieve this, information will be stored securely and no unauthorized access to the information</p>

<p>data and how it will be stored. (This information should be included on Information your information sheet.)</p>	<p>allowed. Information from an identified individual can only be identified if that individual has given their consent for this. Any personal information held will be removed as soon as it is no longer needed.</p>
<p>Anonymity If you offer your participants anonymity, please indicate how this will be achieved.</p>	<p>The data will be reported without revealing the identity of the participant. The contributor's name will be removed, unless they wish to be named. However, we may need to take more than this basic step to protect a participant's identity. Other information can help to identify people, for example: job title, age, gender, length of service, and strongly expressed opinions.</p>
<p>Harm Please outline your assessment of the extent to which your research might induce psychological stress, anxiety, cause harm or negative consequences for the participants (beyond the risks encountered in normal life). If more than minimal risk, you should outline what support there will be for participants. If you believe that that there is minimal likely harm, please articulate why you believe this to be so.</p>	<p>The topic under investigation is not likely to cause stress, anxiety or harm. Those directly affected by a conflict will not be targeted to avoid stirring painful memories.</p>
<p>Does the project include any security sensitive information? Please explain how processing of all security sensitive information will be in full compliance with the "Oversight of security - sensitive research material in UK universities: guidance (October 2012)" (Universities UK, recommended by the Association of Chief Police Officers)</p>	<p>No</p>

Retrospective applications. If your application for Ethics approval is retrospective, please explain why this has arisen.

SECTION C – SUMMARY OF ETHICAL ISSUES (TO BE COMPLETED BY THE APPLICANT)

Please give a summary of the ethical issues and any action that will be taken to address the issue(s).

Informed consent will be obtained from all participants. Vulnerable groups will not be directly targeted. Instead, community representatives will be invited to participate.

SECTION D – ADDITIONAL DOCUMENTS CHECKLIST (TO BE COMPLETED BY THE APPLICANT)

Please supply copies of all relevant supporting documentation electronically. If this is not available electronically, please provide explanation and supply hard copy.

I have included the following documents

Information sheet	Yes <input checked="" type="checkbox"/>	Not applicable <input type="checkbox"/>
Consent form	Yes <input checked="" type="checkbox"/>	Not applicable <input type="checkbox"/>
Letters	Yes <input type="checkbox"/>	Not applicable <input checked="" type="checkbox"/>
Questionnaire	Yes <input type="checkbox"/>	Not applicable <input checked="" type="checkbox"/>
Interview schedule	Yes <input checked="" type="checkbox"/>	Not applicable <input type="checkbox"/>

SECTION E – STATEMENT BY APPLICANT

I confirm that the information I have given in this form on ethical issues is correct. (Electronic confirmation is sufficient).

Applicant name/signature: Maheshika M. Sakalasuriya

Date: 10.05.2016

Affirmation by Supervisor (where applicable)

I can confirm that, to the best of my understanding, the information presented by the applicant is correct and appropriate to allow an informed judgement on whether further ethical approval is required

Supervisor name/signature: Prof. Richard Haigh

Date: 10.05.2016

All documentation must be submitted electronically to school research administrator (S.E.Baines@hud.ac.uk).

If you have any queries relating to the completion or consideration of this form, please do not hesitate to contact school research administrator (S.E.Baines@hud.ac.uk).

7.3. Appendix 3 - Participation Information sheet used in the study

University of Huddersfield
School of Art, Design and Architecture

Participant Information Sheet

Research Project Title: A framework to analyse consequences of post conflict reconstruction
Intervention: The case of road infrastructure in Sri Lanka

You are being invited to take part in a research project. Before you decide, it is important for you to understand why this research is being done and what it will involve. Please take time to read the following information and discuss it with others if you wish. Ask if there is anything that is not clear or if you would like more information. May I take this opportunity to thank you for taking time to read this.

What is the purpose of the project?

The research project is intended to provide the research focus for a module which forms part of my degree. It will attempt to build a framework to analyse consequences of post conflict reconstruction drawing from the road infrastructure provision in Sri Lanka

Why have I been chosen?

Because you are a stake holder of the reconstruction projects

Do I have to take part?

Participation on this study is entirely voluntary, so please do not feel obliged to take part. Refusal will involve no penalty whatsoever and you may withdraw from the study at any stage without giving an explanation to the researcher.

What do I have to do?

You will be invited to take part in an **interview**. The interview will seek information about the road reconstruction project (Northern connectivity project/Pro-poor Eastern infrastructure development project), and the role played by you and your institution during different stages of project. It will also involve some questions related to post construction period of the project, particularly regarding the different consequences of the project. This should take no more than **2 hours** of your time.

Are there any disadvantages to taking part?

There should be no foreseeable disadvantages to your participation. If you are unhappy or have further questions at any stage in the process, please address your concerns initially to the researcher if this is appropriate. Alternatively, please contact Prof. Richard Haigh at the School of Art, Design and Architecture, University of Huddersfield.

Will all my details be kept confidential?

All information which is collected will be strictly confidential and anonymised before the data is presented in any work, in compliance with the Data Protection Act and ethical research guidelines and principles.

What will happen to the results of the research study?

The results of this research will be written up in final thesis and relevant publications. If you would like a copy please contact the researcher.

What happens to the data collected?

Data will be first anonymised, and then analysed using different data analysis methods before being presented as results in the final thesis

Will I be paid for participating in the research?

No

Where will the research be conducted?

Sri Lanka

Criminal Records check (if applicable)

Not applicable

Who has reviewed and approved the study, and who can be contacted for further information?

Prof. Richard Haigh

School of Art Design and Architecture

University of Huddersfield

Name & Contact Details of Researcher: XXX

Maheshika M. Sakalasuriya

PhD student | Teaching Assistant

School of Art, Design and Architecture

University of Huddersfield

Queensgate

Huddersfield

Maheshika.Sakalasuriya@hud.ac.uk | 447778338734

7.4. Appendix 4 - Participant Consent Form used in the study

University of Huddersfield
School of Art, Design and Architecture

Participant Consent Form

Title of Research Study: A framework to analyse consequences of post conflict reconstruction Intervention: The case of road infrastructure in Sri Lanka

Name of Researcher: Maheshika M. Sakalasuriya

Participant Identifier Number:

I confirm that I have read and understood the participant Information sheet related to this research, and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

I understand that all my responses will be anonymised.

I give permission for members of the research team to have access to my anonymised responses.

I agree to take part in the above study

Name of Participant:

Signature of Participant:

Date:

Name of Researcher:

Signature of Researcher:

Date:

7.5. Appendix 5 – Ethics approval from university

THE UNIVERSITY OF HUDDERSFIELD

ADA

Reviewer Proforma.

Project Title:	A framework to analyse consequences of Post Conflict Reconstruction Intervention: The case of road infrastructure in Sri Lanka
Name of researcher (s):	Maheshika Sakalasuriya
Supervisor (where appropriate):	Richard Haigh
Reviewer names	Song Wu, Rowan Bailey, Lucy Montague and Craig Richardson

Issue	Advice / Comments to applicant
Aim / objectives of the study	
Research methodology	
Permissions for study?	
Participants	
Access to participants	
How will your data be recorded and stored?	
Confidentiality	
Anonymity	
Could the research induce psychological stress or anxiety, cause harm or negative consequences for the participants (beyond the risks encountered in normal life).	
Retrospective applications.	

Supporting documents (e.g. questionnaire, interview schedule, letters etc)	
Other comments	

OVERALL RESPONSE

APPROVE	
APPROVE SUBJECT TO RECOMMENDATIONS [please specify]	It would be useful to include more information in the "What do I have to do?" section of the consent form.
APPROVE SUBJECT TO CONDITIONS [please specify]	
FURTHER INFORMATION REQUIRED [please specify]	
REJECT [please specify reasons]	

Date 17.05.16

Where the project is deemed to potentially represent a significant risk it should be forwarded to SREIC for consideration

References

- Abeyratne, S. (2004). Economic roots of political conflict: The case of Sri Lanka. *World Economy*, 27(8), 1295-1314.
- ADB. (2019). Sri Lanka: Northern Road Connectivity Project. Retrieved from <https://www.adb.org/projects/42254-013/main#project-documents>
- Alam, J. B., Wadud, Z., & Polak, J. W. (2013). Energy demand and economic consequences of transport policy. *International Journal of Environmental Science and Technology*, 10(5), 1075-1082. doi:10.1007/s13762-013-0240-1
- Ali, A. (2014). Political Buddhism, Islamic orthodoxy and open economy: the toxic triad in Sinhalese-Muslim relations in Sri Lanka. *Journal of Asian and African Studies*, 49(3), 298-314.
- Amarasinghe, D., & Rebert, J. (2013). Dynamics and trends of foreign aid in Sri Lanka: Exploring space for context-sensitive aid delivery. *Research Summary*, Available: http://www.international-alert.org/sites/default/files/SriLanka_AidEffectiveness_EN_2013_0.pdf.
- Anand, P. (2005). *Getting infrastructure priorities right in post-conflict reconstruction*: Research Paper, UNU-WIDER, United Nations University (UNU).
- Anderson, M. B. (1999). Do no harm. *How aid can support peace or war*. London.
- Aneez, S. (2016). *Sri Lanka's influential ex-leader opposes land for Chinese investment*. Retrieved from reuters.com: <https://www.reuters.com/article/sri-lanka-china-rajapaksa/sri-lankas-influential-ex-leader-opposes-land-for-chinese-investment-idUSL4N1EO2SC>
- Angstrom, J. (2001). Towards a Typology of Internal Armed Conflict. *Civil Wars*, 4(3), 93. doi:10.1080/13698240108402480
- Arambewela, N., & Arambewela, R. (2010). Post-war opportunities for peace in Sri Lanka: an ongoing challenge? *Global change, peace & security*, 22(3), 365-375.
- Arasaratnam, S., & Peiris, G. H. (2019). Sri Lanka. Retrieved 27.12.2019, from Encyclopaedia Britannica <https://www.britannica.com/place/Sri-Lanka>

Arrous, M. B., & Feldman, R. (2014). Understanding contemporary conflicts in Africa: a state of affairs and current knowledge. *Defense & Security Analysis*, 30(1), 55-66. doi:10.1080/14751798.2013.864865

Arunatilake, N., Jayasuriya, S., & Kelegama, S. (2001). The Economic Cost of the War in Sri Lanka. *World Development*, 29(9), 1483-1500. doi:10.1016/S0305-750X(01)00056-0

Association of Social Anthropologists of the UK and the Commonwealth. (2011). Ethical Guidelines for good research practice. ASA.

Athukorala, P.-c. (2014). *Sri Lanka's Post-conflict Development Challenge: Learning from the Past*. Retrieved from

Athukorala, P.-C., & Jayasuriya, S. (2013). Economic Policy Shifts in Sri Lanka: The Post-Conflict Development Challenge. *Asian Economic Papers*, 12(2), 1-28. doi:10.1162/ASEP_a_00203

Auerswald, D. P., & Saideman, S. M. (2014). *NATO in Afghanistan: Fighting together, fighting alone*: Princeton University Press.

Azmi, F., Brun, C., & Lund, R. (2013). Young people's everyday politics in post-conflict Sri Lanka. *Space and Polity*, 17(1), 106-122.

Bajoria, J. (2009). The Sri Lankan Conflict. *Council on Foreign Relations*, 18.

BBC. (2014). Sri Lanka's recovery: Are new roads the way forward? Retrieved from <https://www.bbc.co.uk/news/world-asia-29628189>

Beardsley, K., & McQuinn, B. (2009). Rebel groups as predatory organizations: The political effects of the 2004 tsunami in Indonesia and Sri Lanka. *Journal of Conflict Resolution*, 53(4), 624-645.

Bender, G. (2011). Post Conflict Reconstruction in Africa: Lessons from Sierra Leone. *Insight on Africa*, 3(1), 71-90.

Bohle, H. G., & Fünfgeld, H. (2007). The political ecology of violence in eastern Sri Lanka. *Development and change*, 38(4), 665-687.

Bopage, L. (2017). Sri Lanka: Good Governance And Corruption.

Bowden, G., & Binns, T. (2016). Youth employment and post-war development in Jaffna, northern Sri Lanka. *Conflict, Security & Development*, 16(3), 197-218.

Brattberg, E. (2012). Revisiting UN Peacekeeping in Rwanda and Sierra Leone. *Peace Review*, 24(2), 156-162.

Braun, V., & Clarke, V. J. Q. r. i. p. (2006). Using thematic analysis in psychology. 3(2), 77-101.

Breiner, P. (2004). 'Unnatural Selection': Max Weber's Concept of Auslese and His Criticism of the Reduction of Political Conflict to Economics. *International Relations*, 18(3), 289-307. doi:10.1177/0047117804045194

Brown, R. H. (2005). Reconstruction of Infrastructure in Iraq: end to a means or means to an end? *Third World Quarterly*, 26(4), 759-775. doi:10.1080/01436590500128006

Brun, C., & Lund, R. (2008). Making a home during crisis: Post-tsunami recovery in a context of war, Sri Lanka. *Singapore Journal of Tropical Geography*, 29(3), 274-287. doi:10.1111/j.1467-9493.2008.00334.x

Brush, S. B. (1983). Traditional agricultural strategies in the hill lands of tropical America. *Culture and Agriculture (EUA)(no. 18) p. 9-16.*

Camisani, P. B. (2018). Sri Lanka: a political ecology of socio-environmental conflicts and development projects. *Sustainability Science*, 13(3), 693-707. doi:10.1007/s11625-018-0544-7

Canning, D., & Pedroni, P. (1999). Infrastructure and long run economic growth. *Center for Analytical Economics working paper*, 99(09).

Cantarelli, C. C., Molin, E. J., van Wee, B., & Flyvbjerg, B. (2012). Characteristics of cost overruns for Dutch transport infrastructure projects and the importance of the decision to build and project phases. *Transport Policy*, 22, 49-56.

Casey, S. (2005). *Establishing standards for social infrastructure*: UQ Boilerhouse, Community Engagement Centre Ipswich, Australia.

Caspersz, P. The plantation people of Sri Lanka. Towards a study of colonialism and other social variables affecting their status and role. *Groniek*(92).

Chan, L., Ruwanpura, K. N., & Brown, B. D. (2019). Environmental neglect: Other casualties of post-war infrastructure development. *Geoforum*, *105*, 63-66.

Chandra, A., & Thompson, E. (2000). Does public infrastructure affect economic activity? Evidence from the rural interstate highway system. *Regional Science and Urban Economics*, *30*(4), 457-490. doi:10.1016/S0166-0462(00)00040-5

Chandrakala, V. (2019). In Sri Lanka, Returned Refugees Can't Find Employment, Blame Bureaucracy, Language Barriers.

CIA. (2019). The World Factbook, South Asia: Sri Lanka. *The World Factbook*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/ce.html>

Cole, J. (2014). Conflict, Post-Conflict and Failed States: Challenges to Healthcare. *The RUSI Journal*, *159*(5), 14-18. doi:10.1080/03071847.2014.969934

Collier, P. (2000). Economic causes of civil conflict and their implications for policy.

Collier, P., & Hoeffler, A. (2004). Greed and Grievance in Civil War. *Oxford Economic Papers*, *56*(4), 563-595. doi:10.1093/oep/gpf064

Collier, P., Hoeffler, A., & Söderbom, M. (2008). Post-Conflict Risks. *Journal of Peace Research*, *45*(4), 461-478. doi:10.1177/0022343308091356

Collinson, S. (2003). *Power, livelihoods and conflict: case studies in political economy analysis for humanitarian action*: Humanitarian Policy Group, Overseas Development Institute.

Combs, D. L., Quenemoen, L. E., Parrish, R. G., & Davis, J. H. (1999). Assessing disaster-attributed mortality: Development and application of a definition and classification matrix. *International Journal of Epidemiology*, *28*(6), 1124-1129. doi:10.1093/ije/28.6.1124

Corbin, J., & Hold, N. L. (2005). Grounded Theory. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences*. Thousand Oaks, Calif;London;: SAGE Publications.

Cramer, C., & Goodhand, J. (2002). Try Again, Fail Again, Fail Better? War, the State, and the 'Post-Conflict' Challenge in Afghanistan. *Development and Change*, *33*(5), 885-909. doi:10.1111/1467-7660.t01-1-00253

Dafikpaku, E., Eng, M., & Mcmi, M. (2011). *The strategic implications of enterprise risk management: a framework*. Paper presented at the ERM Symposium.

Dale, R. (2015). Divided we Stand: Cities, Social Unity and Post-War Reconstruction in Soviet Russia, 1945-1953. *Contemporary European History*, 24(4), 493-516. doi:10.1017/S0960777315000302

Dasgupta, M. (2015). Exploring the Relevance of Case Study Research. *Vision: The Journal of Business Perspective*, 19(2), 147-160. doi:10.1177/0972262915575661

Davidson, H. (2014). Sri Lankan security forces destroyed evidence of war crimes, report claims. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2014/feb/05/sri-lankan-forces-committed-flagrant-and-reckless-violations-of-human-rights-report-claims>

Dayton, B. W., & Kriesberg, L. (2009). *Conflict transformation and peacebuilding: moving from violence to sustainable peace*: Routledge.

de Silva, K. M. (2010). Post-LTTE Sri Lanka: The Challenge of Reconstruction and Reconciliation. *India Quarterly*, 66(3), 237-250. doi:10.1177/097492841006600301

Defreese, M. (2009). Kosovo: Cultural heritage in conflict. *Journal of Conflict Archaeology*, 5(1), 257-269. doi:10.1163/157407709X12634580640614

Deng, T. (2013). Impacts of transport infrastructure on productivity and economic growth: recent advances and research challenges. *Transport Reviews*, 33(6), 686-699. doi:10.1080/01441647.2013.851745

Department of Census and Statistics. (2007). *Basic Population information on Ampara District - 2007*. Colombo, Sri Lanka Retrieved from www.statistics.gov.lk > PopHouSat.

Department of Census and Statistics. (2012). *Sri Lanka Census of Population and Housing*. Colombo, Sri Lanka Retrieved from <http://www.statistics.gov.lk/PopHouSat/CPH2011/index.php?fileName=Activities/TentativelistofPublications>.

Department of Irrigation. (2020). About the Department of Irrigation, Sri Lanka. Retrieved from <http://irrigationmin.gov.lk/irrigation-department/index.html>

Department of Treasury. (2018). *Budget Estimates 2018*. treasury.gov.lk Retrieved from http://www.treasury.gov.lk/documents/10181/490927/V_01_Approved_E.pdf/378d791a-3c68-48d8-8648-7cde311d3b99.

Devarajan, S., & Mottaghi, L. (2016). *MENA Quarterly Economic Brief January 2016: The Economic Effects of War and Peace*: The World Bank.

Đevoić, B. (2013). Sri Lanka: Physical Reconstruction and Economic Development as Conflict Prevention Factors. *Croatian International Relations Review*, 19(69), 55-76.

DeVotta, N. (2009). The liberation tigers of Tamil Eelam and the lost quest for separatism in Sri Lanka. *Asian Survey*, 49(6), 1021-1051.

Donais, T. (2009). Empowerment or Imposition? Dilemmas of Local Ownership in Post-Conflict Peacebuilding Processes. *Peace & Change*, 34(1), 3-26.

Donaldson, D. (2010). *Railroads of the Raj: Estimating the impact of transportation infrastructure*. Retrieved from

Dundar, H., Millot, B., Riboud, M., Shojo, M., Aturupane, H., Goyal, S., & Raju, D. (2017). *Sri Lanka Education Sector Assessment: Achievements, Challenges, and Policy Options*: The World Bank.

Eames, A. (2013). Poverty and a lack of democratic rights. *The Telegraph*. Retrieved from <https://www.telegraph.co.uk/travel/destinations/asia/sri-lanka/articles/Inside-Sri-Lankas-former-war-zones/>

Earnest, J. (2015). Post-conflict reconstruction - a case study in Kosovo: The complexity of planning and implementing infrastructure projects. *International Journal of Emergency Services*, 4(1), 103.

EBRD. (2017). *Resettlement Guidance and Good Practice*. Retrieved from ebrd.com: <https://www.ebrd.com/documents/environment/pdf-resettlement-guidance-and-good-practice.pdf>

Eck, K. (2009). From Armed Conflict to War: Ethnic Mobilization and Conflict Intensification. *International Studies Quarterly*, 53(2), 369-388. doi:10.1111/j.1468-2478.2009.00538.x

Economic and Social Research Council. (2015). ESRC framework for research ethics *Assessing Risk*.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory Building from Cases: Opportunities and Challenges. *The Academy of Management Journal*, 50(1), 25-32.

Enia, J. S. (2008). Peace in its wake? The 2004 tsunami and internal conflict in Indonesia and Sri Lanka. *Journal of Public and International Affairs*, 19(1), 7-27.

ESCAP, U. (2006). What is Good Governance? United Nations Economic and Social Commissions for Asia and the Pacific.

Farhadi, M. (2015). Transport infrastructure and long-run economic growth in OECD countries. *Transportation Research Part A: Policy and Practice*, 74, 73-90.

Fray. (2018). What is analytical framework? Retrieved from <https://deephelptest.zendesk.com/hc/en-us/articles/360006969651-What-is-an-Analytical-Framework-Gemeente>

Gaillard, J.-C., Clavé, E., & Kelman, I. (2008). Wave of peace? Tsunami disaster diplomacy in Aceh, Indonesia. *Geoforum*, 39(1), 511-526.

Ganegodage, K. R., & Rambaldi, A. N. (2014). Economic consequences of war: Evidence from Sri Lanka. *Journal of Asian Economics*, 30, 42-53. doi:10.1016/j.asieco.2013.12.001

Gellman, M. (2010). World views in peace building: a post-conflict reconstruction challenge in Cambodia. *Development in Practice*, 20(1), 85-98. doi:10.1080/09614520903436984

Gillen, D. (2000). Public capital, productivity, and the linkages to the economy: Transportation infrastructure. *POLICY STUDY-CD HOWE INSTITUTE*, 36-72.

Gleditsch, N. P. (2015). Armed conflict and the environment *Nils Petter Gleditsch: Pioneer in the Analysis of War and Peace* (pp. 81-103): Springer.

Gobat, J., & Kostial, M. K. (2016). *Syria's conflict economy*: International Monetary Fund.

Goldbart, J., & Huster, D. (2005). Ethnography. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences*. Thousand Oaks, Calif;London;: SAGE Publications.

Goodhand, J. (2012). Sri Lanka in 2011. *Asian Survey*, 52(1), 130. doi:10.1525/as.2012.52.1.130

Goodhand, J., Hulme, D., & Lewer, N. (2000). Social capital and the political economy of violence: a case study of Sri Lanka. *Disasters*, 24(4), 390-406.

Goodhand, J., Rampton, D., Venugopal, R., & de Mel, N. (2011). Sri Lanka: strategic policy assessment. *Unpublished Report, February*. Available at: <http://personal.lse.ac.uk/venugopr/Sri%20Lanka%20Strategic%20Policy%20Assessment,202011>.

Gurung, P. (2017). Tourism Overlooks Livelihood Recovery in Post-War Sri Lanka. Retrieved from <https://groundviews.org/2017/06/17/tourism-overlooks-livelihood-recovery-in-post-war-sri-lanka/>

Hamieh, C. S., & Mac Ginty, R. (2010). A very political reconstruction: Governance and reconstruction in Lebanon after the 2006 war. *Disasters*, 34(1), S103-S123. doi:10.1111/j.1467-7717.2009.01101.x

Hamre, J. J., & Sullivan, G. R. (2002). Toward postconflict reconstruction. *Washington Quarterly*, 25(4), 83-96.

Hamutuk, L. (2014). *CIVIL SOCIETY COMMENTS ON INFRASTRUCTURE STRATEGIC SECTOR*. Retrieved from <https://www.laohamutuk.org/https://www.laohamutuk.org/econ/14TLDPM/InfraCSOen.pdf>

Handrahan, L. (2004). Conflict, Gender, Ethnicity and Post-Conflict Reconstruction. *Security Dialogue*, 35(4), 429-445. doi:10.1177/0967010604049521

Harbom, L., & Wallensteen, P. (2010). Armed Conflicts, 1946-2009. *Journal of Peace Research*, 47(4), 501-509. doi:10.1177/0022343310376887

Hart, J. (2002). Children and armed conflict in Sri Lanka. *Report for UNICEF-ROSA, Kathmandu (2002a)'Children's' clubs: new ways of working with conflict displaced children in Sri Lanka', Forced Migration Review(16)*.

Heale, R., & Forbes, D. (2013). Understanding triangulation in research. *Evidence-Based Nursing*, 16(4), 98-98.

Herath, D. (2018). Post-conflict reconstruction and reconciliation in Rwanda and Sri Lanka. *conflict trends*, 2018(1), 35-41.

Höglund, K., & Orjuela, C. (2011). Winning the peace: conflict prevention after a victor's peace in Sri Lanka. *Contemporary Social Science*, 6(1), 19-37. doi:10.1080/17450144.2010.534491

Hourani, N. B. (2015a). People or Profit? Two Post-Conflict Reconstructions in Beirut. *Human Organization*, 74(2), 174.

Hourani, N. B. (2015b). Post-conflict reconstruction and citizenship agendas: lessons from Beirut. *Citizenship Studies*, 19(2), 184-199. doi:10.1080/13621025.2015.1005949

Howorth, J. (2013). Humanitarian intervention and post-conflict reconstruction in the post-Cold War era: A provisional balance-sheet. *Cambridge Review of International Affairs*, 26(2), 288-309. doi:10.1080/09557571.2013.790584

Human Rights Watch. (2018). *Why cant we go home? Military occupation of land in Sri Lanka*

Hyndman, J. (2003). Aid, conflict and migration: the Canada-Sri Lanka connection. *Canadian Geographer/Le Géographe canadien*, 47(3), 251-268.

Hyndman, J. (2008). Feminism, conflict and disasters in post-tsunami Sri Lanka. *Gender, Technology and Development*, 12(1), 101-121.

Hyndman, J., & Amarasingam, A. (2014). Touring "Terrorism": Landscapes of Memory in Post-War Sri Lanka. *Geography Compass*, 8(8), 560-575.

IISS. (2015). Armed conflict database. Retrieved 01.10.2015 <https://acd.iiss.org/en/conflicts/sri-lanka--lte---archived-2011-d92b>

ILO. (2015). *Formulation of the National Human Resources and Employment Policy (NHREP) for Sri Lanka: A country case study* Retrieved from ilo.org: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_405765.pdf

Immigration and Refugee Board of Canada. (2006). Sri Lanka: Security measures in place to control the movement of Tamils between northern and southern regions of the country

(August 2005 - September 2006). Retrieved from <https://www.refworld.org/docid/45f1476d34.html>

Imtiyaz, A. R. M., & Hoole, S. (2011). Some critical notes on the non-Tamil identity of the Muslims of Sri Lanka, and on Tamil-Muslim relations. *South Asia: Journal of South Asian Studies*, 34(2), 208-231.

International Crisis Group. (2007). Sri Lanka's Muslims Caught in the Crossfire. *Crisis Group Asia Report 134*.

Islam, A. (2014). Laws of war and environment. *Environmental Policy and Law*, 44(4), 364-368.

Jabareen, Y. (2009). Building a conceptual framework: philosophy, definitions, and procedure. *International journal of qualitative methods*, 8(4), 49-62.

Jabareen, Y. (2013). Conceptualizing "Post-Conflict Reconstruction" and "Ongoing Conflict Reconstruction" of Failed States. *International Journal of Politics, Culture, and Society*, 26(2), 107-125. doi:10.1007/s10767-012-9118-3

Jacoby, H. G. (2000). Access to Markets and the Benefits of Rural Roads. *The Economic Journal*, 110(465), 713-737. doi:10.1111/1468-0297.00562

Jamil, H., Nassar-McMillan, S., Lambert, R., Wang, Y., Ager, J., & Arnetz, B. (2010). Pre-and post-displacement stressors and time of migration as related to self-rated health among Iraqi immigrants and refugees in Southeast Michigan. *Medicine, Conflict and Survival*, 26(3), 207-222.

Jayasundara-Smiths, S. (2018). Lost in transition: linking war, war economy and post-war crime in Sri Lanka. *Third World Thematics: A TWQ Journal*, 3(1), 63-79.

Jayasuriya, S., & Weerakoon, D. (2019). Introduction: Challenges and Opportunities of Sri Lanka's Post-conflict Economic Development Overview *Managing Domestic and International Challenges and Opportunities in Post-conflict Development* (pp. 1-12): Springer.

Jeganathan, P. (2009). The unacceptable face of Tamil nationalism. *The Guardian, UK*. Retrieved from <https://www.theguardian.com/commentisfree/2009/sep/01/tamils-sri-lanka>

Jiang, W., He, G., Long, T., & Liu, H. (2017). Ongoing conflict makes Yemen dark: From the perspective of nighttime light. *Remote Sensing*, 9(8), 798.

Jinadasa, M. (2015). Rate of crime and the involvement of army soldiers in Post Conflict society in Sri Lanka: Gender representation in crime and lack of the psycho-social awareness in the army profession. *Review of Journalism and Mass Communication*, 3(2), 41-57.

Jones, B. (2014). Ensuring a political space for conflict by applying Chantal Mouffe to post-war reconstruction and development. *Progress in Development Studies*, 14(3), 249-259. doi:10.1177/1464993414521331

Jones, S., & Howarth, S. (2012). Supporting infrastructure development in fragile and conflict-affected states: learning from experience. *Oxford Policy Management*, Matt MacDonald, available <http://www.opml.co.uk/sites/opml/files>, accessed, 3(6), 13.

Keethaponcalan, S. (2001). Social cubism: A comprehensive look at the causes of conflict in Sri Lanka. *ILSA J. Int'l & Comp. L.*, 8, 921.

Kelegama, S. (2014a). *Challenges remain for China-Sri Lanka FTA*. Paper presented at the East Asia Forum.

Kelegama, S. (2014b). China–Sri Lanka Economic Relations: An Overview. *China Report*, 50(2), 131-149.

Kengni, B. (2013). War and Environment: The Environmental Effects of the Civil War in Somalia. *Environmental Quality Management*, 23(1), 43-54. doi:10.1002/tqem.21351

Khan, H. A., & Weiss, J. (2006). *Infrastructure for regional Co-operation*. Paper presented at the joint workshop of ADBI and IDB in Seoul, Nov.

Khemani, S. (2010). Political economy of infrastructure spending in India. *World Bank Policy Research Working Paper Series*, Vol.

Kivunja, C. (2018). Distinguishing between Theory, Theoretical Framework, and Conceptual Framework: A Systematic Review of Lessons from the Field. *International Journal of Higher Education*, 7(6), 44-53.

Korf, B. (2004). War, livelihoods and vulnerability in Sri Lanka. *Development and Change*, 35(2), 275-295.

Korf, B. (2006). Who is the rogue? Discourse, power and spatial politics in post-war Sri Lanka. *Political Geography*, 25(3), 279-297.

Korf, B., Habullah, S., Hollenbach, P., & Klem, B. (2010). The gift of disaster: the commodification of good intentions in post-tsunami Sri Lanka. *Disasters*, 34, S60-S77.

Korf, B., & Silva, K. T. (2003). Poverty, ethnicity and conflict in Sri Lanka. Retrieved November, 6, 2014.

Kumar, K. (1989). *Conducting key informant interviews in developing countries*: Agency for International Development Washington DC.

Kumarage, A. (2003). *Rural roads and community access in Sri Lanka: an overview*. Retrieved from Colombo, Sri Lanka <https://kumarage.files.wordpress.com/2015/03/2003-r-01-ti-kumarage-a-s-rural-roads-and-community-access-in-sri-lanka-sida-39pp.pdf>

Kyamusugulwa, P. M., & Hilhorst, D. (2015). Power Holders and Social Dynamics of Participatory Development and Reconstruction: Cases from the Democratic Republic of Congo. *World Development*, 70, 249-259. doi:<http://dx.doi.org/10.1016/j.worlddev.2015.02.002>

Labuschagne, A. (2003). Qualitative research-airy fairy or fundamental? *The qualitative report*, 8(1), 100-103.

Lakshmanan, T. R. (2011). The broader economic consequences of transport infrastructure investments. *Journal of Transport Geography*, 19(1), 1-12. doi:10.1016/j.jtrangeo.2010.01.001

Lappin, R. (2010). The Unique Challenges of Post-Conflict Democracy Assistance. *Peace Review*, 22(2), 178-183. doi:10.1080/10402651003751479

LBO. (2018). Sri Lanka's private insurance providers exploit language barrier: Research. *Lanka Business online*.

Lewis, D. (2007). Sri Lanka's Muslims: Caught in the Crossfire.

Lindberg, J., & Herath, D. (2014). Land and grievances in post-conflict Sri Lanka: exploring the role of corruption complaints. *Third World Quarterly*, 35(5), 888-904.

Lindström, S. (2011). Tropical deforestation in Sri Lanka. *Sri Lanka: University of Gothenburg*.

Lukka, K. (2003). The constructive research approach. *Case study research in logistics. Publications of the Turku School of Economics and Business Administration, Series B, 1*(2003), 83-101.

Mahaweli Authority of Sri Lanka. (retrieved 2019). About Mahaweli Authority. Retrieved from <http://mahaweli.gov.lk/en/about.html>

Mallett, R., & Pain, A. (2017). Markets, conflict and recovery: Findings from the secure livelihoods research consortium. *London: Secure Livelihoods Research Consortium.*

Mampilly, Z. C. (2012). *Rebel rulers: Insurgent governance and civilian life during war*: Cornell University Press.

Manor, J., & Segal, G. (1985). Causes of Conflict: Sri Lanka and Indian Ocean Strategy. *Asian Survey, 25*(12), 1165-1185.

Merrouche, O. (2011). The Long Term Educational Cost of War: Evidence from Landmine Contamination in Cambodia. *The Journal of Development Studies, 47*(3), 399-416. doi:10.1080/00220388.2010.485633

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: an expanded sourcebook* (Vol. 2nd). Thousand Oaks, Calif;London;: Sage.

Ministry of Higher Education and Highways. (2016). Ministry of Higher Education and Highways, Sri Lanka. Retrieved from <http://www.mohsl.gov.lk/web/>

Ministry of Home Affairs. (2020a). District Secretariat - Trincomalee Retrieved from <http://www.trincomalee.dist.gov.lk/index.php/en/administrative-structure/divisions.html>

Ministry of Home Affairs. (2020b). Divisional Secretariat - Kalmuna (Muslim). Retrieved from <http://www.kalmunai.ds.gov.lk/index.php/en/about-us/overview.html>

Ministry of Home Affairs. (2020c). Divisional Secretariat - Oddusudan. Retrieved from <http://www.oddusuddan.ds.gov.lk/index.php/en/news-n-events/54-news.html>

Ministry of Home Affairs. (2020d). Divisional Secretariat - Padavi Sripura Retrieved from <http://padavisripura.ds.gov.lk/index.php/en/statistical-information.html>

Ministry of Information and Communication Technology. (2020). Ministry of Information and Communication Technology, Sri Lanka. Retrieved from <http://www.mdiit.gov.lk/index.php/en/>

Ministry of Local Government and Provincial Councils Sri Lanka. (2016). Ministry of Local Government and Provincial Councils Sri Lanka. Retrieved from <http://www.lgpc.gov.lk/eng/>

Ministry of National Policies and Economic Affairs. (2009). *Mega projects over Rs,. 3 billion - Foreign funded projects - Behind Schedule - As at Second Quarter 2009*. Colombo, Sri Lanka Retrieved from http://www.pmm.gov.lk/resources/2009_Mega_Projects_2nd.pdf.

Ministry of Power and Energy. (2020). Ministry of Power and Energy, Sri Lanka. Retrieved from <http://powermin.gov.lk/english/>

Ministry of Provincial Councils and Local Government. (2020). Ministry of Provincial Councils and Local Government, Finance division Retrieved from http://www.lgpc.gov.lk/web/index.php?option=com_content&view=article&id=66&Itemid=185&lang=en

Ministry of Public Administration & Home Affairs. (2011). District and Divisional Secretariats Portal. Retrieved from <http://www.ds.gov.lk/>

Moramudali, U. (2019). Sri Lanka's Uneven Reconstruction. Retrieved from <https://thediplomat.com/2019/11/sri-lankas-uneven-reconstruction/>

Mothé, G. A., Sthel, M. S., Castro, M. P. P. d., Toledo, R., Stumbo, A., Gomes, M., . . . Vargas, H. (2014). Air Pollution in the Brazilian Road Transport and Its Environmental and Social Consequences. *Journal of Environmental Protection*, 5(15), 1466-1476. doi:10.4236/jep.2014.515139

Muijs, D. (2004). Validity, reliability and generalisability. *Doing quantitative research in education with SPSS*, 64-84.

Mundial, B. (2005). Toward a Conflict-Sensitive Poverty Reduction Strategy: Lessons from a Retrospective Analysis: Report.

Naranpanawa, A., Bandara, J. S., & Selvanathan, S. (2011). Trade and poverty nexus: A case study of Sri Lanka. *Journal of Policy Modeling*, 33(2), 328-346.

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-based nursing*, 18(2), 34-35.

O'Driscoll, D. (2018). Good Practice in Post-Conflict Reconstruction.

O'Leary, J. T. (1976). Land use redefinition and the rural community: Disruption of community leisure space. *Journal of Leisure Research*, 8(4), 263-274.

Oberst, R. C. (1992). A war without winners in Sri Lanka. *Current History*, 91(563), 128.

Oji, R. O., Eme, O. I., & Nwoba, H. A. (2015). HUMAN COST OF COMMUNAL CONFLICTS IN NIGERIA: A CASE OF EZILLO AND EZZA-EZILLO CONFLICTS OF EBONYI STATE, (2008-2010). *Arabian Journal of Business and Management Review (Oman Chapter)* U6, 4(6), 1.

Okyere, F. O., & Abdallah, M. (2011). The NATO Intervention in Libya: Implications for the Protection of Civilians and the AU's Pan Africanist Agenda.

Omer, M., Mostashari, A., & Lindemann, U. (2014). Resilience analysis of soft infrastructure systems. *Procedia Computer Science*, 28, 873-882.

Ong, T. (2014). Sri Lankan forces may have destroyed evidence of mass killings-new report. Retrieved from <https://www.reuters.com/article/us-srilanka-war-report/sri-lankan-forces-may-have-destroyed-evidence-of-mass-killings-new-report-idUSBREA1506620140206>

Orjuela, C. (2010). Understanding power and change in the context of armed conflict and post-war reconstruction. *Power and politics*, 9.

Orjuela, C., & Höglund, K. (2011). Winning the peace: conflict prevention after a victor's peace in Sri Lanka. *Contemporary Social Science*, 6(1), 19-37. doi:10.1080/17450144.2010.534491

Pacheco-Vega, R. (2018). Writing theoretical frameworks, analytical frameworks and conceptual frameworks. Retrieved from <http://www.raulpacheco.org/2018/09/writing-theoretical-frameworks-analytical-frameworks-and-conceptual-frameworks/>

Paris, R. (2004). *At war's end: building peace after civil conflict*: Cambridge University Press.

Peebles, P. (1990). Colonization and ethnic conflict in the dry zone of Sri Lanka. *The Journal of Asian Studies*, 49(01), 30-55.

Pereira, K., & Ratnayake, R. (2013). *Curbing Illegal Sand Mining in Sri Lanka*. Retrieved from http://waterintegritynetwork.net/wp-content/uploads/2015/04/Case_SriLanka_SandMining_EN_2013.pdf

Perera, S. (2001). The Root Causes of the Ethnic Conflict in Sri Lanka. *World Bank Background Paper*.

Pfaffenberger, B. (1990). The political construction of defensive nationalism: the 1968 temple-entry crisis in northern Sri Lanka. *The Journal of Asian Studies*, 49(1), 78-96.

Pinstrup-Andersen, P., & Shimokawa, S. (2008). Do poverty and poor health and nutrition increase the risk of armed conflict onset? *Food Policy*, 33(6), 513-520.

Pinto, A. J., & Zeitz, H. J. (1997). Concept mapping: a strategy for promoting meaningful learning in medical education. *Medical Teacher*, 19(2), 114-121.

Prasanna-Perera, P.-P. W. L. (2014). The Political Economy of Postwar Economic Development in Sri Lanka. *International Journal of Business and Social Research*, 4(12), 43-62.

Preventionweb. (2010). *Implementation of the National Physical Planning Policy and Plan Sri Lanka 2010-2030*. Retrieved from https://www.preventionweb.net/files/15417_nppp20102030proposals.pdf

Price, N. (2010). Integrating 'Return' with 'Recovery': Utilising the Return Process in the Transition to Positive Peace: A Case Study of Sri Lanka. *The Round Table*, 99(410), 529-545. doi:10.1080/00358533.2010.509948

Rajasingham-Senanayake, D. (2004). Between reality and representation: Women's agency in war and post-conflict Sri Lanka. *Cultural Dynamics*, 16(2-3), 141-168.

Rajasingham-Senanayake, D. (2005). Sri Lanka and the violence of reconstruction. *Development*, 48(3), 111-120. doi:10.1057/palgrave.development.1100171

Rajasingham-Senanayake, D. (2009). Transnational peace building and conflict: lessons from Aceh, Indonesia, and Sri Lanka. *Sojourn: Journal of Social Issues in Southeast Asia*, 24(2), 211-235.

Rajasingham-Senanayake, D. (2011). Is Post-War Sri Lanka Following the 'Military Business Model'? *Economic and Political Weekly*, 27-30.

Rajasingham, D. (2010). One Year After Terrorism: Sri Lanka Needs to Demilitarise Reconstruction and Development for Sustainable Peace. *Strategic Analysis*, 34(5), 690-696.

Ranasinghe, P. (2019). Implications of the populist frenzy of the Presidential Election. *Ground Views*.

Ratnayake, I., & Hapugoda, M. (2017). Land and tourism in post-war Sri Lanka: A critique on the political negligence in tourism *Balancing Development and Sustainability in Tourism Destinations* (pp. 221-231): Springer.

RDA. (2020a). About RDA. Retrieved from <http://www.rda.gov.lk/source/about.htm>

RDA. (2020b). List of Contracts Warded - iRoad project. *iRoad - II*. Retrieved from http://www.iroad.rda.gov.lk/iroad_ii/list-of-contracts.php

RDA. (unknown). *ADB Funded Northern Road Connectivity Project -Additional Financing (NRCP - AF) -GRIEVANCE REDRESS MECHANISM (GRM)*. Colombo, Sri Lanka Retrieved from <http://www.rda.gov.lk/supported/noticeboard/publications/nrcp/grm/GRM%20-English.pdf>.

Rebert, J. (2016). Deforestation Now Urgent Concern in Post-War Sri Lanka. Retrieved from <https://asiafoundation.org/2016/03/16/deforestation-now-urgent-concern-in-post-war-sri-lanka/>

Reliefweb. (2005). Sri Lanka: Road network assessment of the tsunami struck areas (East, North and South). *REPORT from UN Joint Logistics Centre*. Retrieved from <https://reliefweb.int/report/sri-lanka/sri-lanka-road-network-assessment-tsunami-struck-areas-east-north-and-south>

Renuraj, S., Varathan, N., & Satkunanathan, N. (2015). Factors influencing traffic accidents in Jaffna. *Sri Lankan Journal of Applied Statistics*, 16(2).

Richmond, O. P. (2012). Justice and Post-conflict Violence. *International Peacekeeping*, 19(5), 655-659. doi:10.1080/13533312.2012.722014

Road Development Authority. (2016). Road Development Authority, Sri Lanka. Retrieved from <http://www.rda.gov.lk/source/about.htm>

Road Development Authority, S. L. Northern Road Connectivity Project. Retrieved from <http://www.rda.gov.lk/supported/nrcp/nrcp.htm>

Robinson, W. C. (2003). *Risks and rights: The causes, consequences, and challenges of development-induced displacement*: Brookings Institution Washington, DC.

Room, S. B. (2017). Pre Construction Information.

Ruwanpura, K. N., & Humphries, J. (2004). Mundane heroines: Conflict, ethnicity, gender, and female headship in eastern Sri Lanka. *Feminist Economics*, 10(2), 173-205.

Safayeni, F., Derbentseva, N., & Cañas, A. J. (2005). A theoretical note on concepts and the need for cyclic concept maps. *Journal of research in science teaching*, 42(7), 741-766.

Sakalasuriya, M. M., Haigh, R. P., & Amaratunga, D. (2018). A Conceptual framework to analyse consequences of post conflict reconstruction interventions. *Procedia engineering*, 212, 894-901.

Saul, M. (2012). The search for an international legal concept of democracy : lessons from the post-conflict reconstruction of Sierra Leone. *Melbourne Journal of International Law*, 13(1), 540-568.

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students* (Vol. 6th;6.;). GB: Pearson Education.

Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (Vol. Seventh). Harlow: Pearson Education.

Schwartz, J., & Halkyard, P. (2006). Post-conflict infrastructure: Trends in aid and investment flows.

Seoighe, R. (2019). Sri Lanka ten years after the war: the Tamil struggle for justice continues. *The concersation*

Silva, R. d. (Producer). (2016). Community involvement in rural access infrastructure construction and maintenance - Experiences from the region. *International Forum for Rural Transport and Development (IFRTD)*. Retrieved from https://www.unescap.org/sites/default/files/5-e.IFRTD_.pdf

Singer, M. R. (1992). Sri Lanka's Tamil-Sinhalese Ethnic Conflict: Alternative Solutions. *Asian Survey*, 32(8), 712-722.

Siriwardhana, C., & Wickramage, K. (2014). Conflict, forced displacement and health in Sri Lanka: a review of the research landscape. *Conflict and health*, 8(1), 22.

Slater, R. (1997). Approaches to strengthening local government: lessons from Sri Lanka. *Public Administration and Development: The International Journal of Management Research and Practice*, 17(2), 251-265.

Slone, M., & Mann, S. (2016). Effects of war, terrorism and armed conflict on young children: a systematic review. *Child Psychiatry & Human Development*, 47(6), 950-965.

Smith, A. C., Houser, D., Leeson, P. T., & Ostad, R. (2014). The costs of conflict. *Journal of Economic Behavior and Organization*, 97, 61-71. doi:10.1016/j.jebo.2013.10.005

Snodgrass, D. (1999). The economic development of Sri Lanka: A tale of missed opportunities in Rotberg, RI (ed) *Creating Peace in Sri Lanka. Civil War and Reconciliation*: Brookings Institution Press, Washington, DC.

Snowden, A., & Martin, C. R. (2011). Concurrent analysis: towards generalisable qualitative research. *Journal of clinical Nursing*, 20(19-20), 2868-2877.

Somasundaram, D., & Sivayokan, S. (2013). Rebuilding community resilience in a post-war context: developing insight and recommendations-a qualitative study in Northern Sri Lanka. *International journal of mental health systems*, 7(1), 3.

Somasundaram, D., Thivakaran, T., & Bhugra, D. (2008). Possession states in northern Sri Lanka. *Psychopathology*, 41(4), 245-253.

Sørensen, J. B., Konradsen, F., Agampodi, T., Sørensen, B. R., Pearson, M., Siribaddana, S., & Rheinländer, T. (2019). A qualitative exploration of rural and semi-urban Sri Lankan men's alcohol consumption. *Global Public Health*, 1-13.

Spencer, J. (2002). *Sri Lanka: History and the roots of conflict*: Routledge.

Sri Lanka Army. (Unknown year-a). Army Actively Supports Development Projects. Retrieved from <http://www.army.lk/news/army-actively-supports-development-projects>

Sri Lanka Army. (unknown year-b). Army Nears Completion of Somawathiya-Seruwila Road Project. Retrieved from <https://www.army.lk/news/army-nears-completion-somawathiya-seruwila-road-project>

Stark, S., & Torrance, H. (2005). Case Study. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences*. Thousand Oaks, Calif;London;: SAGE Publications.

Stewart, F. (2005). Policies towards Horizontal Inequalities in Post-Conflict Reconstruction.

Stewart, F. (2008). *Horizontal inequalities and conflict: understanding group violence in multiethnic societies*. Basingstoke: Palgrave Macmillan.

Strogen, B., & Horvath, A. (2012). Greenhouse gas emissions from the construction, manufacturing, operation, and maintenance of US distribution infrastructure for petroleum and biofuels. *Journal of Infrastructure Systems*, 19(4), 371-383.

Stukalo, N., & Simakhova, A. (2018). Social and economic effects of the war conflict in Ukraine for Europe. *Geopolitics under Globalization*, 2(1), 11-18.

Tamil Guardian. (2015). Five-fold increase in consumption of alcohol in North-East Sri Lanka. *Tamil Guardian*.

Tennøy, A., Øksenholt, K. V., & Aarhaug, J. (2014). Transport Effects and Environmental Consequences of Central Workplace Location. *Transportation Research Procedia*, 4, 14-24. doi:10.1016/j.trpro.2014.11.002

Thalpawila, O. N. (2016). Post-War Reconstruction in Sri Lanka: Reconstruction and Development of the Socio-Economic Sectors. *International Journal of Liberal Arts and Social Science*, 4(5), 43-56.

The United Nations International Strategy for Disaster Reduction. (2009). *UNISDR Terminology on Disaster Risk Reduction* Geneva, Switzerland: United Nations.

Theron, S. (2011). Post-Conflict Reconstruction: The Case of Ethnicity in Burundi. *Insight on Africa*, 3(2), 143-158.

Tilakaratne, K. M., & Siriwardena, W. A. (2013). Former Foes Restore War-torn Sri Lankan Infrastructure and Livelihood Together.

Toh, K., & Kasturi, P. (2012). Foreign aid in post-conflict countries: The case of South Sudan. *Journal of Third World Studies*, 29(2), 201-220.

Tran, C. (2015). Six years after the end of Sri Lanka's civil war, Tamils in Jaffna still struggling to rebuild their lives. *ABC News*. Retrieved from <https://www.abc.net.au/news/2015-10-10/sri-lankan-tamils-struggling-to-rebuild-in-post-war-jaffna/6843180>

Tzifakis, N. (2013). Post-Conflict Economic Reconstruction. *Encyclopedia Princetoniensis. The Princeton Encyclopedia of Self-Determination*. Recuperado de <https://pesd.princeton.edu>.

UCPD. (2015). UCPD Conflict Encyclopedia. Retrieved 02.10.2015, from Uppsala University Department of Peace and Conflict Research www.ucdp.uu.se/database

Ugalde, A., Selva-Sutter, E., Castillo, C., Paz, C., & Cañas, S. (2000). Conflict And Health: The Health Costs Of War: Can They Be Measured? Lessons From El Salvador. *BMJ: British Medical Journal*, 321(7254), 169-172. doi:10.1136/bmj.321.7254.169

Ugwu, O., & Haupt, T. (2007). Key performance indicators and assessment methods for infrastructure sustainability—a South African construction industry perspective. *Building and Environment*, 42(2), 665-680.

UN-REDD. (2015). Drivers of Deforestation and Forest Degradation in Sri Lanka: Assessment of Key Policies and Measures.

United Nations. (2004). *Democratic Socialist Republic of Sri Lanka: Public Administration - Country Profile*. Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan023242.pdf>

University of Huddersfield. (2011). University of Huddersfield, Art, Design and Architecture , Research Ethics Review for Research and Teaching and Learning *University Ethical Guidelines for Good Practice in Teaching & Research*: School of Art, Design and Architecture, University of Huddersfield.

Unknown. (2002). A first-hand report of life in LTTE-held areas of Sri Lanka. *Poverty and a lack of democratic rights*. Retrieved from <https://www.wsws.org/en/articles/2002/06/sri-j26.html>

Unruh, J., & Shalaby, M. (2012). A volatile interaction between peacebuilding priorities: road infrastructure (re)construction and land rights in Afghanistan. *Progress in Development Studies*, 12(1), 47-61. doi:10.1177/146499341101200103

- Uyangoda, J. (2010). Sri Lanka in 2009: From Civil War to Political Uncertainties. *Asian Survey*, 50(1), 104-111. doi:10.1525/as.2010.50.1.104
- Vanhanen, T. (2012). Ethnic conflict and violence in heterogeneous societies. *Journal of Social, Political, and Economic Studies*, 37(1), 38-66.
- Var, V., & Po, S. (2017). *Cambodia, Sri Lanka and the China debt trap*. Paper presented at the East Asia Forum.
- Venugopal, R. (2015). Demonic violence and moral panic in postwar Sri Lanka: Explaining the Grease Devil crisis. *The Journal of Asian Studies*, 74(3), 615-637.
- Verbrugge, B. (2016). Best Practice, Model, Framework, Method, Guidance, Standard: Towards a Consistent Use of Terminology–Revised: Van Haren Publishing. Disponible en internet: <https://www.vanharen.net> ...
- Vervisch, T., Titeca, K., Vlassenroot, K., & Braeckman, J. (2013). Social Capital and Post-Conflict Reconstruction in Burundi: The Limits of Community-based Reconstruction. *Development and Change*, 44(1), 147-174. doi:10.1111/dech.12008
- Waters, J. (2015). Snowball sampling: a cautionary tale involving a study of older drug users. *International Journal of Social Research Methodology*, 18(4), 367-380.
- Weerakoon, D. (2017). Sri Lanka's debt troubles in the new development finance landscape. *Third World Thematics: A TWQ Journal*, 2(6), 744-761.
- Weerakoon, D., & Jayasuriya, S. (2019). Debt Financing for Development: The Sri Lankan Experience *Managing Domestic and International Challenges and Opportunities in Post-conflict Development* (pp. 95-112): Springer.
- Weinthal, E., Troell, J., & Nakayama, M. (2011). Water and post-conflict peacebuilding: introduction. *Water International*, 36(2), 143-153. doi:10.1080/02508060.2011.561772
- Weisbrod, G. (2008). Models to predict the economic development impact of transportation projects: historical experience and new applications. *The Annals of Regional Science*, 42(3), 519-543. doi:10.1007/s00168-007-0184-9

Weisbrod, G., & Simmonds, D. (2011). *Defining economic impact and benefit metrics from multiple perspectives: lessons to be learned from both sides of the Atlantic*. Paper presented at the Proceedings of the 2011 European Transport Conference.

Wheeler, T. (2012). *China and Conflict-affected States: Between Principle and Pragmatism*. Sri Lanka. London: Saferworld.

Wickramasinghe, N. (2014). Sri Lanka in 2013: Post-war oppressive stability. *Asian Survey*, 54(1), 199-205.

Wijerathna, D., Bandara, J. S., & Karunagoda, K. (2013). How useful is a regional SAM in evaluating regional projects in Sri Lanka?: An illustration for post-war regional development policy analysis. *Australasian Journal of Regional Studies*, 19(2), 239-273.

Wimmer, A., Cederman, L.-E., & Min, B. (2009). Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set. *American Sociological Review*, 74(2), 316-337. doi:10.1177/000312240907400208

Wolff, K. E. (1993). A first course in formal concept analysis. *SoftStat*, 93, 429-438.

Wuthmann, W. (2017). Language equality : A road to reconciliation. *Daily News*. Retrieved from <http://www.dailynews.lk/2017/08/07/features/124319/language-equality-road-reconciliation>

Xinhua. (2018). Sri Lanka ranked No 1 travel destination in 2019 by Lonely Planet. *China Daily*. Retrieved from <https://www.chinadaily.com.cn/a/201810/24/WS5bcfdd1ba310eff3032843d0.html>

Yin, R. K. (2003). *Case study research: design and methods* (Vol. 5). Thousand Oaks, Calif;London;: Sage Publications.

Yin, R. K. (2014). *Case study research: design and methods* (Vol. 5th). Los Angeles, California: SAGE.

Yusoff, M., Sarjoon, A., Hussin, N., & Ahmad, A. (2017). Analyzing the Contributions of the Sri Lanka Muslim Congress and Its Founder-Leader to Muslim Politics and Community in Sri Lanka. *Social Sciences*, 6(4), 120.

Zabyelina, Y. G. (2013). Buying peace in Chechnya: Challenges of post-conflict reconstruction in the public sector. *Journal of Peacebuilding and Development*, 8(3), 37-49. doi:10.1080/15423166.2013.860343

Zhu, X. o. (2015). Demystifying the role of Chinese commercial actors in shaping China's foreign assistance: the case of post-war Sri Lanka. *Stability: International Journal of Security and Development*, 4(1).

Zilberfarb, B.-Z. (2018). The short-and long-term effects of the Six Day War on the Israeli economy. *Israel Affairs*, 24(5), 785-798.

Zou, W., Zhang, F., Zhuang, Z., & Song, H. (2008). Transport Infrastructure, Growth, and Poverty Alleviation: Empirical Analysis of China. *Annals of Economics & Finance*, 9(2).

Zuberogoitia, I., Del Real, J., Torres, J. J., Rodríguez, L., Alonso, M., & Zabala, J. (2014). Ungulate vehicle collisions in a peri-urban environment: consequences of transportation infrastructures planned assuming the absence of ungulates.