XIV WORLD FORESTRY CONGRESS, Durban, South Africa, 7-11 September 2015

Conservation logic in the forests of south-west Ethiopia: Linking honey producers to markets and the implications for sustainable forest management

Janet Lowore[1] and Adrian Wood[2]

1. Bees *for* Development janetlowore@beesfordevelopment.org 1 Agincourt Street, Monmouth, NP25 3DZ, UK
2. The Business School, University of Huddersfield, Queensgate, Huddersfield, HD1 3DH, UK

Abstract

Sustainable trade in non-wood forest products (NWFPs) has been much tested as a strategy for leading to the dual objectives of forest conservation and poverty reduction. Whilst this approach has met with concerns about elite capture, poverty traps and unsustainable harvesting, the literature on NWFP commercialisation identifies key factors essential for NWFP enterprises to work well. One of these factors concerns the relationship between those who manage the forest, and those who derive income from the forest. This paper discusses NWFP development and marketing in the biodiverse forests of south-west Ethiopia, and describes the institutions in place to manage forests under participatory forest management (PFM) and the different forms of trade for NWFPs, principally honey. Forest use decisions were in the past partly governed by family claims to bee trees and so-called 'honey forests', which indicate that the link between conservation and trade is not new. The context is research and development work undertaken by the University of Huddersfield and Ethio-Wetlands and Natural Resources Association, 2003 to date. Participatory forest management associations (FMAs) have responsibility for demarcated forest areas. NWFP marketing is carried out by different forms of co-operatives, some with structural links to the FMAs and others with none. Honey trade is also carried out by farmer-owned trading companies and individual traders. This paper explores how project work linking producers to markets has been obliged to pay close attention to the connection between the way trade happens and the way forest management happens i.e. the conservation logic. There is some evidence that the increasing honey price is revitalising traditional claims to bee trees, and co-operatives linked to FMAs understand the rationale for giving a percentage of their profits to the FMA. The paper discusses the link between sustainable forest management and honey income.

Keywords: Honey trade, beeswax trade, institutions, beekeeping, beekeepers, conservation logic

Introduction, scope and main objectives

Community members will conserve and protect forest resources if they receive the economic benefits from sustainable forest use, (Lecup and Nicholson 2000).

If greater value can be derived from [other] sustainable forms of forest utilization and production, the threat of deforestation … will be reduced…, (SNV 2008).

The strong link between forests and traditional beekeeping creates opportunities for promoting beekeeping as an incentive for sustainable forest management [in Zambia], (CIFOR 2008).

These statements refer to the compelling concept that non-timber forest products (NTFPs) can save tropical forests from degradation and deforestation. This idea emerged in the 1980s with Peters *et al's* (1989) notable contribution on the valuation of an Amazonian rainforest and gave rise to many development projects aiming to commercialise NTFPs. Enthusiasm for this 'silver bullet' solution waned in the 1990s with concerns about elite capture, poverty traps, unsustainable harvesting, NTFPs being inferior goods and the failure of poor communities to meet market demand for volume and quality (Sills *et al* 2011 in Shackleton *et al* 2011). Nevertheless, the strength of the idea remained sufficiently robust to persist, and has since become subject to a significant body of research documenting case studies and analysing what works, when, and what can go wrong and why (Marshall *et al* 2006, Ruiz-Pérez *et al* 2004, Shackleton *et al* 2011).

This paper concerns the work of two development projects in south-west Ethiopia, NTFP-PFM Phase II[1] and WCC[2], both having the goal of securing forest conservation through participatory forest management and enhancing forest livelihoods. The projects have invested in strengthening NTFP trade, principally coffee, honey and spices. In this paper we discuss the conservation logic between an increasingly buoyant honey industry and community incentives to manage the forests from which the honey is harvested. The term conservation logic is used to convey the idea that under certain circumstances i.e. when forests yield benefit, it is logical to conserve them. The related term 'line of sight' is also used. By this we mean a clear connection between one change (e.g. rising honey prices) and another change (e.g. actions taken to manage honey forests).

In cases where NTFPs are harvested from common property forests - as in this case - questions about conservation logic come face to face with questions about the logic of collection action.

Approach

This paper is a review and analysis of the work done by the two projects and draws also on non-project research work. In undertaking the analysis the question is being asked, "how does a strong honey trade impact on forest management?", or more elaborately, "how does a strong honey trade impact on the organisation of resource users to govern their common property forests?"

To examine the conservation logic we need to consider whose decisions or actions are impinging on how the forest is managed, and who is benefitting from selling honey.

Material for the analysis comes from a project progress, impact and evaluation reports. The literature review was augmented by field interviews undertaken during a two week field visit in February 2014 by the main author. Interviews were held with over 60 honey traders, forest management associations, project staff, honey producers and NTFP marketing co-operative members. The contributing author has been Project Manager for the projects and has intimate knowledge of both since the inception of the first phase in 2003, with considerable time spent in the field.

A review of associated literature about honey forests in south-west Ethiopia was also undertaken.

Background to the project area

The local population comprises indigenous ethnic groups and several immigrant communities. Forest beekeeping has been long practised by some of the indigenous peoples. Honey selling is the major source of income for some (van Beijnen *et al* 2004). Beekeepers place locally-made bee hives in trees throughout the forest area, exhibiting preference for intact forests with many large nectar-producing trees.

Prior to the projects all forest was owned by government, and subject to use constraints, principally timber harvesting and land clearance, whilst beekeeping was permitted. The government enforced these rules with limited success, there being no forest guards. Some customary tenure arrangements persisted, notably the *kobo* system which appears to be intricately linked to the practice of forest beekeeping. Local people are much concerned about the opening of large private agro-industrial estates (e.g. for tea and coffee) which inevitably leads to the loss of forest and forest benefits, and importantly, local people also see these new estates as taking their land.

Honey is traded by individual businessmen based in the towns. They buy direct from beekeepers and from honey collectors, the latter being intermediary village-based traders who buy from beekeepers and sell to traders. The town-based traders sell honey into a range of markets including to visitors, urban consumers, long distance traders who export to the middle east, to *tej* (honey wine) brewers and, more recently, to Addis Ababa-based honey companies exporting to Europe and USA.

---

[1] Non-Timber Forest Product and Participatory Forest Management Project Phase II, managed by the University of Huddersfield and Ethio-Wetlands Natural Resources Management Association (EWNRA) 2007 to 2013, preceded by Phase I which started in 2003.

[2] Wild Coffee Conservation through Participatory Forest Management Project, managed by the University of Huddersfield and EWNRA, 2012 to present.

Results

In this section we draw attention, to those project activities associated with forest management and honey trade. Then we report on a separate research study into the relationship between beekeepers and forests in the same area.

Forest Management Associations (FMAs)

The Participatory Forest Management (PFM) arrangements involve working up from a small local unit – the *gott* – and demarcating forests falling under their jurisdiction. PFM plans are developed and formally agreed through a signed document with government for each *gott* forest. At the district level all of the *gotts* with PFM forest form a Forest Management Association (FMA) which provides a higher level of local monitoring and supervision. By 2014 there were over 120 signed, and over 40 nearly-signed PFM agreements covering an area approaching 200,000 hectares of forest.

Increasing income from honey

Work was done to introduce so-called 'improved' beekeeping methods at farm level, also known as backyard beekeeping. This was in contrast to the prevailing forest beekeeping system using simple, local style hives placed in trees in the forest - sometimes very far into the forest. The intention was to increase quality, quantity and accessibility - in the latter case making honey production accessible to women.

Strengthening trade through forming institutions and building links

To increase the returns from honey selling the NTFP-PFM project set up 7 Honey Trading PLCs (companies owned by farmers through shareholdings), supported government established cooperatives and, later on, established new-format forest enterprise cooperatives (properly and hereafter known as Forest Products Marketing Co-operatives (FPMCs). The FPMCs differed from the PLCs in that their membership was drawn from FMAs, and in their constitution they agreed to give 10% of their profits to the FMAs to cover their running costs.

Project outcomes

The Final Report of the Forest Enterprise Work showed that the project had linked honey producer groups with buyers, with a recorded achievement of an annual export of 250 tonnes of honey from the project area. The report concluded that there had been a "*big leap in supply of honey by producer groups and traders from the area to national and international markets through project facilitated market linkages*", and the market price for honey rose from 5 to 50 ETB per kilo, an increase well exceeding the rate of inflation (Abebe 2013). The End of Project Evaluation recorded, "*The project has had a positive impact on the local honey trade. This NTFP trade is now well established and likelihood of long term benefits are high*", (NTFP-PFM 2013:35). The Project Impact Assessment indicated that, with the exception of firewood, honey is the highest earning NTFP (Bekele and Tesfaye 2013). On forest conservation achievements the same study also reported that community members reported a notable fall in forest encroachment and illegal harvesting and a notable increase in forest regeneration and the health of young seedlings.

Individual honey producers

Germane to the question about conservation logic is the relationship between individual honey producers and the forest. Work done by Endalamaw in 2005 in the same location as the projects - but independent of them - is useful.

Beekeepers interviewed by Endalamaw maintained that honey production is heavily forest dependent and they were quick to mention the best species for bee forage and, "*... they say that trees are the source of forage, they provide nesting places, raw materials for hive production, trees and shrubs also serve for smoking and fumigation of hives",* (Endalamaw 2005)

On conservation actions he reports that 97% of beekeepers were involved in at least one form of forest enhancement activity ranging from protecting and preserving big trees, tending and protection of younger trees and tree planting. 34% of the respondents reported that they work for the conservation of the forest by lobby, local discussion and in some cases by reporting free riders to officials. In one location beekeepers entered into a local agreement to reduce causes of bushfires.

A number of customary tenure systems were reported, notably the *kobo* system. In land-based *kobo* families have claimed rights to hang hives in delineated forest patches, to the exclusion of others. In tree-based *kobo* a beekeeper places a bee hive in a tree and claims ownership. Ownership passes from father to son.

"*In kobo … it is mentioned that trees are properly managed and promising trees that could be a good nest tree will be tended and protected from damage. Beekeepers remove less vigorous trees to avoid competition on potential hive hanging trees. Maximum protection is made to avoid damage to standing trees while felling trees for hive making or other purposes*", (Endalamaw 2005:51).

A similar finding is reported by Hartmann, "*Manjo and Shekacho have separate areas where they hang up their hives. Each beekeeper has individual use rights to the forest trees used for beekeeping, which are inherited from father to son, or from husband to his widow*", (Hartmann 2004:6).

Endalamaw writes that disputes between beekeepers and other forest users are handled locally. The most damaging conflict is that between honey producers and tea and coffee entrepreneurs. These conflicts are beyond local capacity to resolve and "*still remain in deadlock*" (Endalamaw 2005:52).

Although this section is entitled *Individual honey producers,* the actions and behaviours they exhibit are more akin to 'organised co-appropriators' "*tied together in a lattice of interdependence so long as they continue to share a single common property resource*", (Ostrom 1990: 38).

Discussion

The goal of the WCC and NTFP-PFM projects is sustainable forest management, and all honey trade development work is designed to underpin this goal. The question is - does it?

Improved backyard beekeeping

Work to establish profitable backyard apiaries met with some success, yet this approach was abandoned. The main reason for this change was recognition of the lack of conservation logic.

"*It …was found to provide not enough incentives that will compensate communities to keep on conserving their forests through their eyes. On contrary, working on moving out the production and business of NTFPs from the forest to farmland is seen as something that gradually deteriorates the connection and coexistence of people and forests by turning forests in to less competitive land uses as compared to agriculture*", (Abebe 2013:5).

In fact whilst this statement correctly talks of 'deteriorating the connection', it fails to mention explicitly that the forest provides the richest source of bee forage. Taking the bees out of the forest means potential honey yields, at distant locations within the forest, are forgone.

Establishing PLCs and honey market linking activities

Much evidence points to enhanced honey trade in the project areas. Some of the PLCs worked well, but not all. Despite some failures the overall impact of the support and the market-linking interventions was a considerable boost to honey trade as a whole. New buyers traded with the PLCs but also made separate deals with other traders. Prices went up, new market channels were created, demand went up, other private sector agents and traders benefitted. The project recognises that the intention was not to design a 'perfect' market institution and stake PFM success on its performance. What is required is buoyant trade, competition and emerging 'good practice' whatever form that might take. When commenting on the market landscape Dena Freeman points out that "*it will change anyway*" (Freeman 2012: 11). The NTFP-PFM End of Project Report also recognises the relevance of a "*hands off approach*" and "*letting the market do the rest*", (NTFP-PFM 2013:19).

However, this success needs examining from the point of view of conservation logic. The direct link between the growth of the PLCs and other traders, and forest conservation is weak at an institutional level. These players do not directly have an influence on the way PFM forests are managed. The 'line of sight' between increased honey trade and forest conservation is not direct. It relies on intermediary players of which there are two (a) FMAs and (b) forest beekeepers.

FPMCs

The FPMCs were designed deliberately to forge a stronger 'line of sight' between the benefits of honey trade (as one forest product) and forest conservation. This is to be achieved through a commitment by the FPMCs to give 10% of their profits to the FMAs to help cover their costs. This commitment is well articulated by FPMC leaders in interviews in 2014, "*The role of our Co-op is to protect the forest, utilise the products and sell the products*" and "*Our Co-op is part and parcel of the FMA and we handle utilisation and marketing*" (Lowore 2014). At the time of the interviews these co-ops had not yet started paying out the 10% profit. When / if this does happen this represents a clear 'line of sight' between honey trade and forest management, via the FMAs.

The main problem is that not all honey is traded through the FPMCs. The PLCs, old-format cooperatives and individual honey traders are all participating in and benefitting from an increasingly buoyant honey trade - and possibly all benefitting from the work of the FMA to sustainably manage the forest from which the honey originates. This raises issues:

1. The FPMCs are actually put at a disadvantage. They are trading on the same playing field as all the other types of traders and yet they have to pay for forest management whilst other traders do not. One could argue that all forms of honey trade should contribute (be taxed?) to support the costs of forest conservation.

2. It brings back into question the other intermediary group which forge a direct 'line of sight' connection between honey trade and forest conservation - the beekeepers themselves.

Forest beekeepers

There are a number of ways forest beekeepers can make a direct impact on forest conservation. Where it so happens that FMA committee members are also beekeepers this creates a strong direct motivation for effort. It is also worth discussing the relationship between the FMA and the beekeepers as a whole.

The FMAs are what Ostrom calls enforcers of local rules and they have to bear a range of enforcement and transaction costs (Ostrom 1990). Any factors which bring down these costs have the potential to contribute to the long-term persistence of these institutions. As honey prices rise, individual resource users benefit more and this may make them more inclined to co-operate with forest management rules. Endalamaw's work shows that prior to project interventions a range of unwritten norms - concerning tree management and dispute resolution - were in existence, strongly suggesting that such an outcome might be likely.

The *kobo* system was a form of privatisation which had emerged as a local solution to harvesting from a common-property resource and project staff have noted that families are re-asserting their claims over their customary *kobos* and excluding users who cut trees (Abebe pers. comm. 2014).

Conclusions

Commercialisation of NTFPs may increase incomes but will not lead to forest management outcomes unless there is clear 'line of sight' between the change in trade and the resource management institution and its effective action to maintain the forest.

In this review of work in Ethiopia we learned that by side-lining forest beekeeping in favour of promoting backyard beekeeping this 'line of sight' was broken - and the approach was halted. We also learned that the project succeeded to build new farmer-owned honey trading PLCs and facilitated the entry of new buyers to the project location. The outcome was a boost in scale of trade and in honey prices. The 'line of sight' between stronger trade and forest conservation was, however, weak - as the PLCs and traders had no direct engagement with forest management decisions. In an attempt to strengthen this 'line of sight' the project changed approach by investing in trading structures with an overt link to forest management, through a transfer of 10% of trade profits to the FMAs .

Time is yet to tell concerning the success of this new model. One major concern is that this trading structure alone, amongst all others, is being placed at a financial disadvantage - in effect being obliged to pay a tax on honey trade. In a competitive field this could prove challenging.

The one unifying link between all honey trade and forest conservation is the beekeeper himself (rarely herself). Given the evidence of beekeepers' attitudes towards their honey forests we suggest it likely they

will be willing to play a positive role in supporting the work of the new Forest Management Associations and must do so to help maintain the forests.

Acknowledgements

I would like to acknowledge and thank the support of the University of Huddersfield Wild Coffee and Conservation Project, UK and Ethiopia, Ethio-wetlands Natural Resources Association and CB Dennis Trust, UK

References

Abebe, B. 2013. Forest-based enterprise development work, Final Report. NTFP-PFM Research and Development Project. *University of Huddersfield project report*.

Bekele, M. and Tesfaye, Y. 2013. NTFP-PFM South-West Ethiopia, Forested landscapes and livelihood project. Project Impact Assessment, Final Report. Submitted to SLA and its partners by Conscientia training, consultancy and research PLC.

CIFOR. 2008. Beekeeping in Zambia. *Forest Livelihood Brief no.7.*

Endalamaw, T.B. 2005. Dynamics in the management of honey production in the forest environment in South West Ethiopia. MSc Thesis. Wageningen University.

Freeman, D. 2012. Enterprise Development Report 1. Wild Coffee Conservation by Participatory Forest Management Project. *University of Huddersfield project report.*

Hartmann, I., 2004. "No Tree, No Bee – No Honey, No Money": *The Management of Resources and Marginalization in Beekeeping Societies of South West Ethiopia*. Paper submitted to the Conference: Bridging Scales and Epistemologies, Alexandria, March 17 – 20, 2004.

Lowore, J. 2014. Report on honey value chain development. Wild Coffee Conservation by Participatory Forest Management Project. *University of Huddersfield project report.*

Marshall, E., Schreckenberg, K. and Newton, A.C. (eds) 2006. Commercialisation of non-timber forest products: Factor influencing success. Lessons learned from Mexico and Bolivia and policy implication for decision makers. *UNEP-WCMC Biodiversity Series no. 32*.

NTFP-PFM South-West Ethiopia, Forested landscapes and livelihood project. 2013. End of Project Evaluation Report. ENV 2006 114-229. Submitted to SLA and its partners by LTS International Ltd. 5th October 2013

Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press, 280 pp.

Peters, C.M, Gentry A, Mendelsohn R. 1989. Valuation of a tropical forest in Peruvian Amazonia. *Nature* 339:655–657

Ruiz Peres, M., B. Belcher, R. Achdiawan, M. Alexiades, C. Aubertin, J. Caballero, B. Campbell, C. Clement, T. Cunningham, A. Fantini, H. de Foresta, C. García Fernández, K. H. Gautam, P. Hersch Martínez, W. de Jong, K. Kusters, M. G. Kutty, C. López, M. Fu, M. A. Martínez Alfaro, T. R. Nair, O. Ndoye, R. Ocampo, N. Rai, M. Ricker, K. Schreckenberg, S. Shackleton, P. Shanley, T. Sunderland, and Y. Youn. 2004. Markets drive the specialization strategies of forest peoples. *Ecology and Society* 9(2):4. [online] URL: http://www.ecologyandsociety.org/vol9/iss2/art4/ [accessed 02 02 14]

Shackleton, S., Shackleton, C., and Shanley, P. (eds). 2011. *Non-Timber Forest Products in the Global Context.* Springer 286 pp.

Sills, E., Shanley, P., Paumgarten, F., de Beer, J. and Pierce, A. 2011. Evolving Perspectives on Non-timber Forest Products. Chapter 2 in *Non-Timber Forest Products in the Global Context* by Shackleton, S., Shackleton, C., and Shanley, P. (eds). Springer, pp 23-51.

van Beijnen, J., Mostertman, I., Renkema, G. and van Fliet, J. 2004. Baseline description of project area. NTFP-PFM Research and Development Project. *University of Huddersfield project report.*