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From liability to asset

Interest in forest landscape restoration (FLR) has grown enormously in recent years, partly because it is an inclusive approach with widespread benefits and partly because of the vast area of degraded land in need of urgent restoration. An estimated 930 million hectares of forest lands in the tropics is degraded. Although this is alarming, it also represents an opportunity to “build back better”, make progress towards Sustainable Development Goal 15 (life on land) and facilitate the implementation of the United Nations Decade on Ecosystem Restoration, which starts next year. This edition of the TFU presents new ITTO guidelines to assist in implementing FLR and illustrates how it can be applied.

FLR can transform livelihoods and the environment at the local and landscape scales. If implemented broadly enough, it will also generate

global benefits in terms of biodiversity conservation, climate-change mitigation, water quality and other vital ecosystem services. Crucially, local people must be involved because they are the ones who will benefit directly and who must drive the process.

FLR is a complex and fast-developing science and practice, and easy-to-use guides are needed to assist decision-makers and practitioners in putting it into practice. Recognizing this, ITTO—in collaboration with the Collaborative Partnership on Forests, the Asian Forest Cooperation Organization and many other partners working in tropical forests—has now published *Guidelines for Forest Landscape Restoration in the Tropics*. ITTO Executive Director Gerhard Dieterle sets the scene in his article on page 3, and an article by Jürgen Blaser and Cesar Sabogal (page 4) describes the guidelines in detail.

Inside: guidelines on FLR • restoration in PNG and Peru • Thailand's new C&I

Fellowship report

An ITTO Fellowship in the Brazilian Amazon has helped a doctoral researcher organize a community exchange among users of six sustainable-use forests and promote social learning on community-based forest management

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View swap: Participants listen attentively during a community exchange held in the Verde para Sempre Extractive Reserve in September 2019. Photo: A. Espada

The Amazonian context

As the world watches to see if the sustainable-use paradigm can attend to both biodiversity conservation and human wellbeing, the literature on joint government–local-community co-management has matured. Key decision-making challenges include how to prioritize and assimilate a diversity of knowledge systems (e.g. local, technical and scientific), interests (e.g. socioeconomic and environmental) and needs (e.g. for income and infrastructure). There is, however, limited empirical information on the integration of knowledge systems, community empowerment and women's strategic role in sustainable timber management, as well as few practical examples of how to go about doing it.

Forest-based communities play an important role in both tropical timber supply and forest conservation. In Latin America, communities legally manage 216 million hectares of forest (one-third of the region's forested area) (RRI 2015). In 2010, the countries with the largest areas of publicly owned forest under community management were Brazil and Colombia, with 152 million and 30 million hectares, respectively (Gilmour 2016). Within multiple-use forest management, logging on community land is an important component of forest production, local economies and conservation agendas.

In Brazil, the government strategy of public forest concessions has the potential to supply tropical timber for regional and international markets, but it has been deployed minimally to date and is not achieving its objective. Of the 5.3 million hectares available for timber production in publicly owned forests (including sustainable-use protected areas), only 1 million hectares was under effective logging in 2019 (SFB 2019); it took more than ten years after approval of the Public Forest Management Law (Federal Law 11.284 /2006) to attain this coverage.

A recent study shows that the “effectiveness index” score of forest concessions is very low (Castanheira 2018). To develop this index, the Brazil Forest Service first applies a rigorous, transparent process of excluding ecologically and socially sensitive areas from logging consideration. It reviews this assessment on an annual basis and announces those logging concessions that are open for bidding (*plano anual de outorga florestal*) by cooperatives, private timber companies and others. To date, contracts have been implemented in very few designated areas, however, producing an index score of less than 20. Ideally, all public forested lands available as concessions would be under effective contracts (equating to an effectiveness index score of 100).

New focus on community forestry

The timber industry, therefore, has identified community areas as potential suppliers—with good reason. Fairly recently, communities have been granted more management rights to participate in formal timber markets (logging is legally permitted). Indeed, a novel regulatory standard, the Chico Mendes Institute of Biodiversity Conservation (ICMbio) Normative Instruction No. 16/2011, has enabled forest residents in extractive reserves (IUCN protected area category VI—Dudley 2008) to manage timber for commercial purposes.

Under this rubric, government, local communities, timber companies and non-governmental organizations are adopting governance strategies (e.g. participatory decision-making and community–company partnerships) to promote sustainable forest management (SFM) in Brazilian Amazon extractive reserves, national forests and sustainable development reserves. This approach also raises challenges in decision-making processes, however, such as the integration of local knowledge with technical and scientific expertise

and the prioritization of local needs (infrastructure and income) in conservation initiatives. Local knowledge is the cumulative body of knowledge and associated beliefs that people in a given community have transmitted and developed—and continue to develop—over time (Mulder & Coppillo 2005). It complements scientific knowledge and, when considered by co-managers, can result in much improved, bottom-up decisions promoting long-term partnerships, mutual cooperation and collective action to conserve standing forests through SFM. It can also contribute substantially to both local livelihoods and regional economies.

Overview of the research

The complexity and novelty of community timber management systems in the Amazon and the Global South more generally led to the following key research question: What variations in community timber management schemes have emerged, and why? Guided by this, one of the authors, Ana Luiza Violato Espada, a doctoral researcher at the University of Florida, organized a community exchange among users of six Brazilian Amazon extractive reserves (Figure 1). This exchange emphasized collective inquiry, experimentation grounded in experience, and the wealth of social learning related to community timber management.

The community exchange was part of Ana’s 15 months of fieldwork (May 2018 to September 2019) for her thesis, which consisted of extensive data collection using diverse and complementary methods, including archival research, semi-structured individual interviews, group interviews

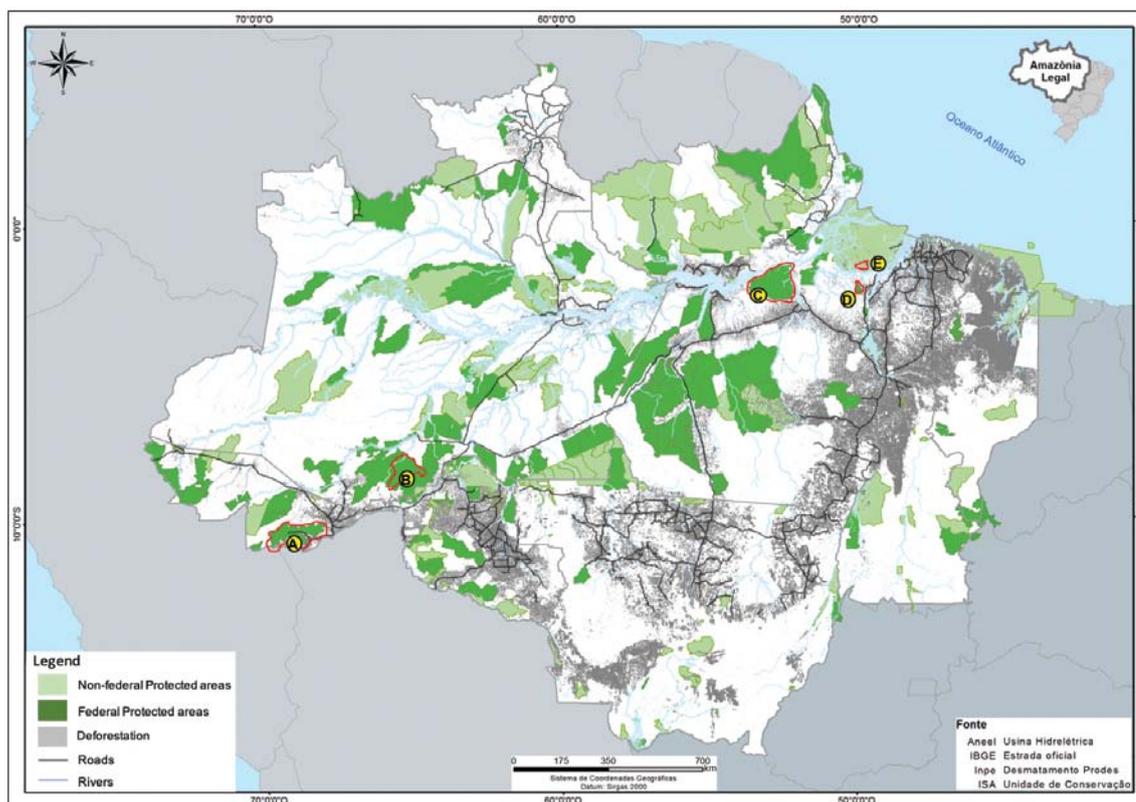
(six community meetings with, in total, 167 participants), participant observation, and focus groups (a three-day community exchange). Drawing on a decade of experience working in community-based forest management in the Amazon, Ana applied a participatory action research approach, using multiple participatory tools to engage people and emphasizing participation and action towards SFM. This constituted an innovative methodological approach to participatory action research that is replicable in natural resource co-management contexts elsewhere.

The community exchange aimed to:

- share and reflect on community logging experiences in sustainable-use protected areas (Figure 2);
- discuss decision-making processes and socio-productive arrangements for community timber management;
- create spaces for dialogue and action that could result in individual and collective empowerment processes;
- create spaces for strategic actions that could strengthen local governance and tropical timber production; and
- apply participatory methodologies so they can be documented and adapted to other scientific research contexts.

For the first time, extractive-reserve communities who are logging their forests had the opportunity to share experiences, technologies and lessons learned. Participants were encouraged to examine the concept of “empowerment” and to think through their own journeys and those of their

Figure 1: Extractive reserves represented in the community exchange



Note: A = Chico Mendes (Acre); B = Ituxi (Amazonas); C = Verde para Sempre (Pará); D = Terra Grande-Pracuúba (Pará); E = Mapuá and Arióca-Pruaná (Marajó Archipelago Environmental Protection Area, Pará). Map adapted from Araújo et al. (2016).

Figure 2: Community-exchange logo



Note: The logo suggests how community timber management evolved in Brazilian Amazon extractive reserves. The story begins in the state of Acre (left icon with people), where the first timber project was approved under Normative Instruction No. 16/2011 in the Chico Mendes Extractive Reserve. In 2014, Ituxi became the next extractive reserve to approve its timber management project (middle icon with trees). Finally, the Verde para Sempre Extractive Reserve (right icon with timber) approved five projects in 2015. The icons going from left to right also suggest connections (dashed line) between the three extractive reserves, highlighting the meaningful dialogue and knowledge exchange enabled by the ITTO Fellowship and resulting in sustainable timber management.

communities. Understanding outcomes and how and why variations in timber management have emerged in these sustainable-use protected areas is crucial for informing the growing number of such initiatives where local communities are central to their implementation, monitoring and success.

Ana received financial and in-kind support for this community exchange from diverse partners, especially the ITTO Fellowship and a non-profit organization, the Tropical Forest Institute (IFT) (through the Amazon Fund).

Community-exchange activities

The community exchange took place in the Verde para Sempre Extractive Reserve over three days (18–20 September 2019). It included 32 participants, of whom 27 were community members and five were from IFT (one environmental journalist, two forestry technicians and two newly graduated female foresters); the five IFT participants helped execute the logistics of the community exchange. Among the community members, ten were women working in timber co-management projects in their communities.

Day 1 of the community exchange consisted of a visit to a logging area to observe activities and discuss differences in logging operations between the extractive reserves. Day 2 involved storytelling about logging schemes, community engagement, participation in logging operations, and reflections on community empowerment. The narratives and ensuing conversations addressed local rules and benefit-sharing arrangements; the identification of social organizations emerging from the logging schemes; targets regarding forest management (timber tree species); and community aspirations towards local livelihoods (e.g. investment in education, health and food security). Day 3 consisted of a debate on health and safety in logging operations; low-cost technologies for transporting timber; and the engagement of women and youth in decision-making processes and timber management. The entire community exchange was documented through notes, photos and videos.

Outcomes achieved

The community exchange enabled discussions and reflections on sustainable tropical timber production on Amazonian communal lands under the auspices of scientific research. This innovative participatory research method brought together community members from six protected areas for



Links in the chain: Participants use a technique for information exchange and learning during the community exchange held in the Verde para Sempre Extractive Reserve in September 2019. Photo: A. Espada



Knowledge exchange: Participants in a focus group swap stories during the community exchange held in the Verde para Sempre Extractive Reserve in September 2019. *Photo: A. Espada*

the first time. The methods supported social learning by sharing and reflecting on community logging experiences. The community exchange also created spaces for dialogue among community members and forestry extensionists that ultimately could lead to individual and collective empowerment processes and strategic actions to strengthen local governance and timber production in the tropics.

Some of the learnings from the exchange are described below.

Community-based timber management schemes vary among the extractive reserves, although all cases have similarities: for example, they are under the same Brazilian Federal Normative Instruction No. 16/2011; all the schemes are based in the same category of sustainable-use protected area (i.e. extractive reserves); in all cases, community members work with more than two economically viable forest resources; and, in all cases, communities had support at some point from government and non-governmental organizations to establish timber management in their reserves. On the other hand, historical land-use processes and local political and economic pressures have differed among the reserves, with significant influences on decision-making about timber management in terms of production arrangements and community-level participation. The way in which each community is involved in decision-making processes continues to influence the three dimensions (i.e. social, economic and environmental) of conservation efforts, community development and timber management outcomes.

In extractive reserves in which community members have had high levels of involvement in decisions on how to manage forest resources for local benefit, we observed that:

- there is more local commitment to long-term forest use, which can promote forest conservation;
- awareness is higher on how to distribute timber sales revenues to benefit people other than logging workers; and
- more community members participate in operational logging activities and forest management, which provides more autonomy and capacity to make decisions on community forests.

Ultimately, the participation of community members in all stages of the decision-making process (before, during and after logging activities) promoted a process of community empowerment.

Capacity building via participatory research engaged Brazilian students, newly graduated female forest engineers and forest residents (including young people and women), generating reflection, improving social learning, and providing elements for individual and collective empowerment. Ana trained the female forest engineers using participatory methods derived from a literature review, previous non-governmental experience in Brazil (from 2009 to 2016), and University of Florida classes focused on communication skills. The application of participatory methods in community meetings provided local people with opportunities to reflect on and discuss forest use, social benefits and conservation.

For many years, tropical timber management has been seen as a masculine activity among both timber producers and forestry professionals. This is changing, however, as local communities and their partners strive to encourage the involvement and participation of women in decision-making to improve timber value chains and better reflect family and community interests.

Participation in timber management should have at least three dimensions:

- 1) access to information and preparatory processes for decision-making on an equal footing;
- 2) the right to be heard at meetings and in key decision-making moments; and
- 3) a willingness among other participants to listen, discuss and deliberate on alternatives proposed by women.

The functions performed by women directly reflect on the quality and delivery of timber to industry. Women are becoming involved in all stages of timber management, from administration to forest inventories to the processing of timber products. But there is a need to do more. It is evident that women play an important role in timber management, but men are still the principal protagonists.

Forest-based communities play important roles in protecting and sustaining forests around the world. This is particularly true in remote protected areas, where governments are struggling to protect forests against land grabbing and deforestation for agribusiness. Decision-making processes that involve and engage local people are crucial for creating commitment towards forest conservation. Sustainable timber management is indeed a strategy for both using and conserving forest resources—but not in all circumstances nor in all forests. Forest-based communities have the right and knowledge to decide what to use and how to manage their forests. Outside partners can support their decisions but not decide for them—because undermining the empowerment of local people will jeopardize their strong, generational forest conservation commitment.

During the exchange, community members drew a matrix to compare logging schemes among the extractive reserves.

Outreach and future activities

The community exchange was featured in local and regional Brazilian news.¹ In October 2019, Ana presented preliminary results from the community exchange at the world congress of the International Union of Forest Research Organizations, which took place in Curitiba, Brazil. The dissertation findings, including data on the community exchange, will be disseminated in various ways, including papers in international scientific journals, articles in Brazilian media outlets, academic presentations such as scientific conferences, and field-based presentations with multistakeholder groups.

We are planning a two-day multistakeholder seminar with the participation of community members and governmental and non-governmental organizations that have supported logging projects at the research sites. Day 1 of the seminar will focus on sharing results, key implications for forest conservation and livelihood improvements, public policies, and the potential contributions of the research to natural resource co-management practice. Day 2 will consist of participatory methods—such as working groups with guiding questions—to gather information and perceptions about research results from these audiences, bringing their opinions and data into the collective space for debate.

Finally, we plan to document the multiple participatory tools used in the community exchange in a technical document to disseminate among practitioners and scientific researchers who seek methods for generating knowledge among local stakeholders and researchers (Duchelle et al. 2009) in tropical forest management and conservation.

Acknowledgements

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¹ See, for example, www.ift.org.br; www.revistarural.com.br; and <https://observatoriomf.org.br/observatorio/intercambio-promove-troca-de-experiencias-em-manejo-madeireiro-comunitario>