

## Landscapes for public goods: multi-functional mosaics are fairer by far

### Policy pointers

- **Approaches to ensuring** forest public goods must secure social foundations for the poorest (food security, energy access, income, and etc.) within planetary boundaries (climate change, biodiversity conservation, nitrogen cycles etc.).
- **Large-scale corporate** approaches that provide public services based on the scale efficiencies of 'monotypic masses' face severe social and environmental challenges.
- **An alternative locally** controlled 'multi-functional mosaic' approach is economically credible, fairer and more sustainable: but needs enabling donor investment on a scale not yet seen.
- **Initiatives such as FLEGT** and REDD+ should be judged by how well they support four 'pillars' that will enable locally controlled multi-functional mosaics: tenure, business support, extension services and the freedom to associate.

How do we get the most public goods from forest landscapes when various publics in varying places make conflicting claims? One approach, caricatured as 'monotypic masses', says big 'single use' corporate blocks are best. But that brings ecological and social challenges (especially displacement) that may eventually undermine economic viability. A better approach is 'multi-functional mosaics' of smallholder forest-farm enterprises that offer both local and distant public goods. These can help ensure all publics receive a share of all public goods. The international Forest Connect alliance has shown that smallholders themselves generally favour multi-functional mosaics because these balance long and short term risks and returns. But making such mosaics viable at scale is an economic challenge that requires unprecedented 'enabling' investment.

Forest landscapes underpin social foundations for the poor<sup>1</sup> — providing options for income generation, food security, energy access and so on. They also help slow humanity's overshoot across environmental planetary boundaries<sup>2</sup>: mitigating climate change, conserving biodiversity and fertilising soils without need for chemical nitrogen inputs. In other words they can help keep life in balance — providing a stream of benefit to the poor and a mop to the excess of the rich. So why do forest landscapes too often fail to provide all these goods to the publics that need them?

### Public goods, but for which public and where?

The problem is that 'publics' in various places prioritise and lay claim to various 'goods' that may be local or may be generated elsewhere. These claims often conflict, potentially displacing each other. For example, in the Kathmandu valley, investors trying to assure income generation as a public good for both local and international tourism companies lay claim to forest and agriculture land.<sup>3</sup> This displaces equivalent goods, such as income generation or food security, for a poor domestic public. It might also displace non-equivalent

goods, such as climate change mitigation and biodiversity conservation, for the public at large. And this displacement happens both ways between different 'publics' and different 'goods'.

Crucially, different publics wield different clout in laying claim to public goods. The result is inequity in how public goods are apportioned. For example, investors acting on behalf of a rich tourism industry served by the market economy might have more influence over forest land allocation than either the poor domestic public or the forest conservation lobby, both of whom they compete with. So how best to govern competing claims and provide an optimal mix of public goods?

### Two approaches to providing public goods

At the Rio+20 summit, how to provide public goods was centre stage — particularly in discussions about the need for a new green economy. Two broad schools of thought on public goods are caricatured (as 'straw men') below:

**1. Monotypic masses are the way to go.** Displacement is unavoidable. In delivering public goods, the key considerations are technological and scale efficiencies.

# A blend of different enterprise options is both necessary and desirable

Unleash the power of capital by allowing it to acquire large, scale-efficient, monotypic sites, best suited to producing the good in question. Profitability requires free market allocation of crops, be they for food, fuel and fibre or carbon, in large agricultural blocks where they grow

best. Similarly, biodiversity must be conserved in large rainforest blocks where it is richest.

This economic logic appeals to international publics served by, and shareholders in, the market economy; and particularly to those living in urban environments who are entirely market dependant. Many source all they need from that market and are mobile enough to avoid less pleasant production sites or to visit pristine conservation sites as they wish. But the approach suffers from rather serious ecological and social challenges that may one day undermine the economics. Ecologically, large-scale monocultures are vulnerable to soil degradation, flood or drought events as climates become more erratic, and to related pest and disease outbreaks — a recipe for economic volatility. There are also some obvious conflicts when different public goods are best produced from the same ecological area — or when particularly special elements of biodiversity do not fall within conservation hotspots.

Socially, this approach brings displacement for local people and livelihoods. That is unjust, even if people have the wherewithal to buy alternatives for the public goods they lose (for example bought food to replace food grown or gathered). Where people do not have those resources, displacement can be tantamount to genocide. The forced displacement that comes with large-scale land acquisitions usually results in social conflict — a further recipe for economic volatility. Of course, there are economic profits to be made from volatility — but it is questionable how well public goods will be served by ‘monotypic masses’ unless such ecological and social issues are addressed.

**2. Multi-functional mosaics are the way to go.** The primacy of local rights means that displacement should be avoided. When delivering public goods, justice requires ensuring local rights holders can meet their own needs before considering the needs of distant publics. Local rights holders extend to future generations who don’t have representatives to argue their case, but for whom sustainability is clearly essential. Justice and sustainability require careful multi-functional land use planning in which an integrated supply of food, fuel and fibre maintain social and ecological integrity. Only then will local public goods be assured and, alongside them, those of distant publics — as less tangible goods like climate change biodiversity conservation become integral to the production system.

The social and ecological logic of this approach appeals to local and international publics who are isolated from or distrust international markets — particularly in rural environments where rights to land and resources are keenly felt. But it has serious economic challenges. Remote local peoples often have insecure commercial rights and limited business capacity to supply multiple public goods in ways that are both efficient and sustainable. The transaction costs, tailored enabling investments and time required to improve rights and capacity at scale are daunting. In many cases it would require a complete overhaul of public education and social infrastructure — for which there is no available finance. Although justice and sustainability are laudable reasons for pursuing multi-functional mosaics, the economic costs and delays associated with producing public goods in this way may simply render them illusory unless a better investment framework can be found.

So both approaches have their advocates, detractors, strengths and weaknesses. Recent paradigm shifts in development and environment arenas have erred towards the free market approach. Many agencies now focus on minimising the social and environmental harm from investments of the ‘monotypic masses’ type (toughening up procurement laws, pushing certification systems, conducting independent monitoring, setting up industry roundtables, exploring outsourcing and so on<sup>4</sup>). Resources to overcome the economic challenges associated with the ‘multi-functional mosaic’ approach are scarce.

## Picking the right investment approach

Public goods are certainly evident in the tapestry of green Nepalese hills that provided a backdrop for the third international meeting of the Forest Connect alliance (12–15 February 2013).<sup>5</sup> At its gathering, this ad hoc alliance of 1,000+ supporters of small forest enterprises from 94 countries set eight country teams a challenge.<sup>6</sup> Given the scarcity of financial resources and the many public goods demanded from forest landscapes, what particular types of forest enterprise would they support in order to get the best supply of public goods — both local and international? For example, which solutions might best: generate and distribute income fairly (including a gender balance), secure food, enhance energy, be climate-smart, be biodiverse and be nitrogen efficient. The remit was kept broad, with no inbuilt assumptions against large monocultures. Teams were asked to explore not only natural or planted forest enterprises but also on-farm enterprises where trees either indirectly enhance or directly produce food, energy or environmental services (including carbon, biodiversity, water or tourism).

What was striking was that in the eight papers presented from Brazil, Burkina Faso, Cambodia, Democratic Republic of Congo (DRC), Mexico, Nepal, Tanzania and Vietnam each country team rejected a single sub-sectorial (monotypic) priority. In other words, even the most profitable, socially and ecologically sustainable smallholder production system was unable, as a ‘monotypic mass’, to deliver all the desired public goods for local populations, let alone for both local and distant populations. Instead, progress against multiple social and environmental criteria required support for a portfolio or blend of different sub-sectorial enterprises — that is an approach based on ‘multi-functional mosaics’.

In each country context it was possible to identify a multi-functional mosaic blend of forest and farm enterprise that might do the job, ensuring local sustainability in a system that also included international public goods like climate regulation and biodiversity conservation. For example, the Brazil team prioritised support to timber production derived from both natural forest and agroforestry together with domesticating non-timber forest products (NTFPs) in forest and farm settlements. The Burkina Faso team prioritised tree-crop food enterprises and agroforestry fertiliser trees that support agricultural yields, with secondary woodlot energy and NTFP enterprises. The DRC team prioritised almost everything: timber, wood energy, cash crops and NTFPs; but in this case all requiring significant governance interventions towards formal and sustainable supply. The Mexican team prioritised tree-based cash crops, such as coffee and honey, with timber and fuelwood from managed natural forest areas. The Nepal team prioritised ecosystem-based farming with bio-briquette charcoal production. The Tanzania team prioritised woodlots for timber and fuelwood, plus briquetted farm waste, with fertiliser trees and indigenous fruit trees development. The Vietnam team prioritised tree-based cash crops, for example rubber, coffee and pepper, with community plantation wood and NTFPs. The Cambodia team opted for blended NTFP options (and did not assess other options).

The main conclusion was that, given the need to supply both local and distant public goods at the same time, a blend of different enterprise options across the landscape is both necessary and desirable. Mixing short-term high-return cash crops and longer-term lower-return socially or environmentally oriented production systems is the preferred option across many different countries (see Box 1). Such multi-functional mosaics suit local people’s cash flow as well as their broader environmental and social needs. And a diverse portfolio suits farmers’ cautious attitude to risk, which climate change reinforces. But how can the economic challenges of the multi-functional mosaic model be overcome?

## Box 1. Multi-functional forest farm mosaics in Nepal

Nepal’s Dolakha region demonstrates how communities are starting to develop multi-functional mosaics of forest and farm enterprises. Community groups that were primarily agricultural have gained valuable experience in producing wintergreen oil from certain forest species. They have gone on to use the thinnings and waste material from planted pine trees to manufacture charcoal briquettes for the Kathmandu market, through a wholly owned retailing business. And community forest user groups near Dolakha that started with certified timber production now also sell handmade FSC-certified paper through a wholly owned processing and marketing firm in Kathmandu. Several among the latter groups are also piloting potential REDD+ payment options.

## Making ‘public good delivery’ viable from multi-functional mosaics

Forest Connect members have participated in 11 dialogues on ‘Investing in Locally Controlled Forestry’ (ILCF), held between investors and local forest and farm rights holders. The dialogues have looked specifically at how to make a multi-functional mosaic of small forest and farm enterprises economically viable. At the Nepal Forest Connect meeting, Peter DeMarsh, of the International Family Forestry Alliance, summed this combined knowledge succinctly — noting that local forest farmers will deliver forest-related public goods if they can answer yes to each of the following questions:

- If I plant tree x (for food, fuel, fibre, conservation etc.) will I have the right to sell it? (The tenure question.)
- If I plant tree x (for food, fuel, fibre, conservation etc.) will I be able to sell it at a fair price? (The business support question.)
- If I plant tree x (for food, fuel, fibre, conservation etc.) will I be able to get the management and technical support to protect it from pest and diseases and package it for the market? (The technical extension question.)
- If I plant tree x (for food, fuel, fibre, conservation etc.) will I be able to associate with others to make sure I can carry on answering yes to the previous three questions? (The freedom of association/organisation question.)

There is much practical work that donors might support to make this happen, often now referred to as ‘enabling investment’ as it falls outside the remit of — but is a necessary precondition to leverage — more conventional ‘asset investment’. Reflecting the questions above, this financial enabling investment must: (i) secure commercial land and resource tenure for local people; (ii) strengthen their business capacity;

## Box 2. How Forest Connect intends to pursue public goods

At the end of Forest Connect's third international meeting (February 2013), participants considered how an alliance such as Forest Connect might best serve public goods. Four key ingredients were selected as the core for future work:

- Developing strong in-country platforms to support diverse locally controlled forest and farm businesses.
- Research, capture and share from this work successful 'business models' for locally controlled forest and on-farm tree enterprises that emerge.
- Based on those business models, develop training materials in small forest enterprise support for facilitators and extension workers.
- Maintain regional and international learning and networking events and exchanges.

Anyone wishing to support or join that agenda should please contact the author.

(iii) revitalise necessary technical extension services; and (iv) catalyse enterprise-oriented association and ultimately political federation.

In the forest sector, efforts to support legality assurances for timber, for example through the Forest Law Enforcement, Governance and Trade (FLEGT) initiative, should be assessed on how they contribute to these four ILCF 'pillars'. Similarly, efforts linked to reducing emissions from deforestation and forest degradation (REDD+) should be assessed against their capacity to channel climate finance towards these four areas.

For example, how do the latest FLEGT/REDD+ strategies secure commercial land and forest rights for local people? How do they set out to build the capacity of sustainable local forest and farm enterprises in multi-functional mosaics? How do they equip those enterprises with agronomic and technical knowledge? How do they foster associations that can give scale efficiencies and smallholder representation to further improve the national enabling environment?

If initiatives can give good answers to these questions, they are likely to be on the right track. If they are not able to answer adequately, it is likely that they are fostering 'monotypic masses' that probably won't provide an optimal mix of forest goods serving both local and international publics. This matters because at present humanity is crashing through planetary barriers while still failing to meet the needs of many of the world's poorest people.

The Rio+20 summit ramped up the rhetoric, but it did little to specify any economic architecture that might bring about a 'green economy'. In forests, a local smallholder 'multi-functional mosaic' approach to delivering public goods might be fairer by far — but its significant economic challenges will require concerted enabling investment.

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## Notes

- <sup>1</sup> Rowarth, K. 2012. *A safe and just space for humanity*. Oxfam, discussion papers. Oxfam, Oxford, UK.
- <sup>2</sup> Rockström, J. *et al.* 2009. Planetary boundaries: exploring the safe operating space for humanity. *Ecology and Society* 14(2) 32. [www.ecologyandsociety.org/vol14/iss2/art32/](http://www.ecologyandsociety.org/vol14/iss2/art32/)
- <sup>3</sup> Ravanera, R.R., Gorra, V. 2011. *Commercial pressures on land in Asia: an overview*. International Land Coalition, Rome, Italy.
- <sup>4</sup> Walker, N. *et al.* 2013. *Demand-side interventions to reduce deforestation and forest degradation*. IIED, London, UK.
- <sup>5</sup> Forest Connect is a network linking supporters of small forest enterprises who aim to reduce poverty and protect forests by better connecting to each other, to markets, services providers and to decision makers. <http://forestconnect.ning.com>
- <sup>6</sup> Macqueen, D. 2013. *Going with the grain: supporting small farm-forest enterprise to achieve a green economy based on integrated, intensified, climate smart land use*. Forest Connect II. IIED, London, UK.