

## Implementing the Forest Landscape Restoration approach: analysis and outlook

BY

- Bernard Mallet (CIRAD Emeritus)

WITH CONTRIBUTIONS FROM

- Christophe Besacier (FAO)
- Christian Castellonet (CST-F/GRET Secretariat)
- Marion Daugeard (CST-F/GRET Secretariat)
- Marie-Ange Kalenga (former Fern)
- Régis Peltier (CIRAD)
- Nicolas Picard (GIP-Ecofor)
- Plinio Sist (CIRAD)
- Daniel Vallauri (WWF)

Following a thematic day held by the Forest Scientific and Technical Committee (Comité scientifique et technique Forêt; CST-F) and discussions by a working group on Forest Landscape Restoration (FLR), this paper has been drafted to expand on the many existing works on the subject, in particular by highlighting the critical points in implementing the approach.

### THE ADDED VALUE OF FOREST LANDSCAPE RESTORATION (FLR)

An analysis of the evolution of the world's forests shows a continued loss of tropical forest cover and a general deterioration in forest ecosystems, regardless of the differences between continents and regions. The causes of deforestation and the degradation of forest ecosystems are well known (demographics, agricultural activities, infrastructure, over-exploitation of resources, etc.). The combination of these two trends, while not new, is all the more concerning given the major role played by forests in combating climate change, conserving biodiversity and preserving global water resources, as confirmed by the sixth report of the Intergovernmental Panel on Climate Change (IPCC) and the most recent Conferences of the Parties (COP) of the three Rio Conventions on Climate Change, Biodiversity and Desertification. While there is still an inevitable need to fight against the various drivers of these trends, for several decades now the international community has expressed a growing interest in forest restoration.

Initiatives to restore degraded forests and unproductive deforested land have been launched, but they have had mixed success and highlight the urgent need to take into account external factors when tackling conservation and restoration issues. This has given rise to sectoral approaches to forest restoration covering a wide range of actions with various components (forest management, natural or assisted regeneration, silvicultural interventions, forest or agroforestry plantations, etc.), which have progressively evolved from a forest plot/stand level to a territory level, and more recently a landscape level, integrating agricultural or non-forest areas in a more systemic concept of Forest Landscape Restoration (FLR) since the 2000s.

Various definitions of FLR coexist. The World Wide Fund for Nature (WWF) and the International Union for Conservation of Nature (IUCN) define FLR as "a planned process that aims to regain ecological integrity and enhance human well-being in deforested or degraded landscapes".

However, FLR is not so much a list of solutions or best practices (there are many publications on the subject) as it is a global approach to action.

FLR must contribute both to:

- the social and economic development of communities at a local level (e.g., by creating value in the agricultural and forestry sectors, generating jobs and promoting dialogue and inclusion); and
- the objectives of the major international conventions at global and national levels (e.g., by combatting climate change, maintaining and restoring biodiversity and fighting desertification), as well as achieving the 2030 Agenda for the Sustainable Development Goals (SDGs).

FLR actions also aim to restore a number of environmental and biophysical functions of landscapes and their components, with respect to soils, plant formations (both forest and non-forest), biodiversity and water regimes.

The breadth of social, economic, environmental and forestry objectives undoubtedly explains the appeal of FLR to a very diverse range of stakeholders who have moved beyond the world of conservation towards the world of development, including agriculture and forestry. It is clear, however, that despite good intentions, there is still a great deal of uncertainty about the trade-offs that will have to be made between these often-contradictory objectives (at least in the short term), the actual beneficiaries of the actions and the way in which these choices will be made.



A number of major initiatives have been launched over the past 20 years to implement FLR strategies – some of them involving commitments from the donors and the countries concerned – and set targets for 2030 in thousands or even millions of hectares and billions of trees.

These international and regional initiatives, rolled out at a national level, are interconnected and sometimes have common stakeholders (donors, implementing agencies and non-governmental organisations [NGOs]). The figure below briefly summarises these initiatives and highlights the key policy steps in putting restoration on the agenda.

**FIGURE 1. KEY POLICY STEPS AND REGIONAL INITIATIVES TO IMPLEMENT FOREST LANDSCAPE RESTORATION STRATEGIES**

**Political steps**



**Regional initiatives**



Source: Daniel Vallauri, 2022



Farmers watering a forest nursery in Tillabéri, Niger (Forest and Landscape Restoration Mechanism [FLRM], Food and Agriculture Organization of the United Nations [FAO], 2021)

## DECIPHERING THE DIFFICULTIES OF IMPLEMENTATION: FROM A THEMATIC DAY TO A POLICY BRIEF

Despite the potential of FLR and the resources deployed, beyond these many initiatives there is still limited data available on the ground regarding the actions actually carried out and their global, local, environmental, social and economic impacts. It would be necessary to analyse these various initiatives, the resources actually allocated and planned, and the state of play in terms of achievements on the ground. It is also necessary to examine and promote consistency and complementarity between strategies to combat deforestation (including deforestation “imported” into Europe) and FLR initiatives.

Various retrospective studies, carried out by the WWF among others, highlight a lack of perspective on a number of past actions – whether considered successes or failures – as is the case in particular for various national and local forest plantation programmes. On the whole, the medium and long-term sustainability of the actions carried out – beyond the project implementation phase – and their contribution to the

countries and their populations could be discussed and analysed in detail.

The speakers at the Forest Committee’s “Forest Landscape Restoration” meeting, held on 19 October 2022, highlighted the challenges involved in implementing FLR as well as several areas of debate and controversy, which this note aims to address.

## THE CENTRAL INVOLVEMENT OF LOCAL POPULATIONS NEEDS TO BE STRENGTHENED IN PRACTICE

Improving the living conditions of local populations is a key principle in defining FLR projects. The place allocated to local people – as stakeholders, decision-makers and beneficiaries, as well as those who are potentially disadvantaged, excluded or marginalized – is a major issue and a factor in the long-term sustainability of these actions. However, traditional knowledge and practices and the expectations, priorities and needs of local people in terms of socioeconomic development are not always fully taken into account.

There is a certain vagueness in the terms used to describe the role of local people in FLR programmes and

projects (involvement, participation, inclusion, co-construction, co-decision-making and consultation), hence the extent to which their contributions to decisions, actions and the funding of actions can vary. Behind these terms, relatively top-down processes sometimes arise with unbalanced governance, somewhat limited and unsustainable social and economic impacts and even risks of negative effects (e.g., on land issues and access to natural resources). Some FLR projects simply take into account the gains resulting from new actions (e.g., enhanced biodiversity, forest plantations), without measuring the losses resulting from other actions (e.g., fencing off of traditionally exploited areas and restrictions on slash-and-burn clearing). However, it is unlikely that a community will support an FLR programme over the long term if it results in a net economic loss for said community.

Decisions on landscape restoration and other forest conservation and management policies have major implications for all traditional forest-dependent peoples and communities, both indigenous and non indigenous. Particular attention must be paid to these populations to ensure that their rights and interests are properly taken into account and that they do not risk being marginalized, including within discussion and negotiation forums. Several agreements are in place to protect these rights, such as the International Labour Organization's Convention 169 on Indigenous and Tribal Peoples (1989), the Convention on Biological Diversity (1992) and the United Nations Declaration on the Rights of Indigenous Peoples (2007). The principle of respecting the "free, prior and informed consent of the populations concerned" should therefore be guaranteed in all FLR programmes.



Clove tree-based agroforestry systems in Fénérive, Madagascar (Eric Penot, French Agricultural Research Centre for International Development [CIRAD], 2014)

As is often the case with local development projects, we need to take a closer look at ways of encouraging more bottom-up processes and strengthening the role of the populations concerned and their representatives in initiating and implementing projects. It is important to ensure that FLR projects are "win-win" in economic terms for the populations concerned in terms of the direct gains linked to FLR, taking into account their losses and identifying and negotiating sustainable compensation.

Guaranteeing the inclusion of local populations, ensuring that they are actual decision-makers (or co decision-makers) and prioritising collective action in FLR strategies are essential requirements and suggest a major paradigm shift.

## RESTORING THE PRODUCTIVE FUNCTIONS OF LANDSCAPES

While FLR aims to restore the environmental functions of landscapes (soils, biodiversity, water regimes, climatic impacts, etc.), the restoration of "natural" ecosystems may in itself be an objective within certain landscapes and in certain contexts. The fact remains that the various components of forest landscapes often have major functions in production (e.g., in supplying timber, non-timber forest products, food and cash crops, fodder and livestock), which support local people and economic sectors by providing food, employment and resources, thus contributing to local and national development.

Deforestation linked to agricultural land clearance is often less a choice and more a necessity resulting from constraints suffered by small farmers (soil impoverishment, weed cover, etc.). Therefore agricultural intensification, particularly in the form of agroecological intensification, can also contribute significantly to FLR objectives and benefit farmers working in these landscapes.

Forestry and agroforestry plantations can therefore play an important role in FLR programmes by complementing "natural" forest formations. The diversity of forest species that can be used in plantations and the products and services they provide can significantly benefit local populations and the industries concerned. Strengthening productive functions as a part of FLR also helps reduce pressure on "natural" formations and support strategies to combat deforestation. It is therefore important to integrate the restoration of productive functions into FLR strategies so that they meet the expectations of local stakeholders and contribute to development initiatives. Restoring "productive" ecosystems and agroecosystems makes FLR initiatives acceptable, or even attractive, to local stakeholders and ensures the initiatives are more sustainable and focused on production by small farmers or villages rather than within industrial agroforestry complexes.



Terraced agroforestry landscape in Rulindo, Rwanda (Mutesi Teopista, FAO, 2017)

## SCALING UP FOR GREATER IMPACT: PITFALLS TO AVOID

For many organisations, the urgent need to roll out FLR programmes and initiatives, particularly in tropical regions, requires a real change of scale in terms of the areas to be restored and the populations concerned. Such scaling up involves the spatial dimension (greater surface area), the temporal dimension (long term actions) and the “transferability” of actions in space and time (greater ownership). However, contradictions or discrepancies may arise (depending on the human, financial, institutional and interactional resources deployed) between :

- wanting and needing to scale up projects in terms of surface areas, regions and ecosystems (see the targets set in hundreds of millions of hectares for the major initiatives already mentioned), with the risk of using standardised interventions; and
- guaranteeing quality and real added value (social, environmental and economic) in the long term from these interventions, by truly adapting to different contexts and ensuring buy-in by local populations and stakeholders (through “tailor-made” and negotiated projects).

With scaling up, it is therefore necessary to both replicate and expand on actions carried out at a local level,

combining “doing things quickly” and “doing things well”, and even sometimes, “doing less” but “doing things better”. This also raises the question of how to ensure that FLR intervention strategies are consistent between different levels in countries and between territorial planning, land use planning and land management, and how public and private stakeholders can work together to achieve this consistency. Finally, scaling up requires FLR initiatives to work upstream on sustainable production strategies for agriculture and livestock as well as on the flow of people coming to clear the forests in order to support them in their life projects, while promoting the general development of national economies.

The timing of actions and the time required to carry them out are of paramount importance. The environmental, social and economic processes and transformations associated with FLR require far longer timeframes than traditional projects and funding. This is typical for many development projects, but here the combination of long-term environmental, social and economic issues and the risk of sharp and rapid backtracking results in greater constraints. As a result, it is important to carry out in-depth discussions with donors, funders and national and local decision-makers and ensure consistency between the various international levels (initiatives, programmes, projects and actions) and national levels (national policies and local actions), combining long-term programming (10 to 15 years) and short-term actions (3 to 5 years) through a learning process based on successive phases.

## THE NEED TO TAILOR THE EVALUATION APPROACH TO THE CONTEXT

Due to the complex nature of the approach on which it is based and its multidimensional structure relating to the broad range of SDGs, FLR covers a wide variety of topics, resulting in diverse socioeconomic and environmental indicators, which can sometimes be difficult to evaluate. This has led to a proliferation of evaluation guides (covering a variety of indicators and standards), numerous metrics and differing donor guidelines. Nevertheless, the literature review shows that fewer socioeconomic indicators are taken into account than biophysical and environmental indicators, even though socioeconomic issues appear to be critical in implementing FLR and they should be taken into account without fail. In any case, the question remains as to whether this proliferation of standards is likely to facilitate evaluation.

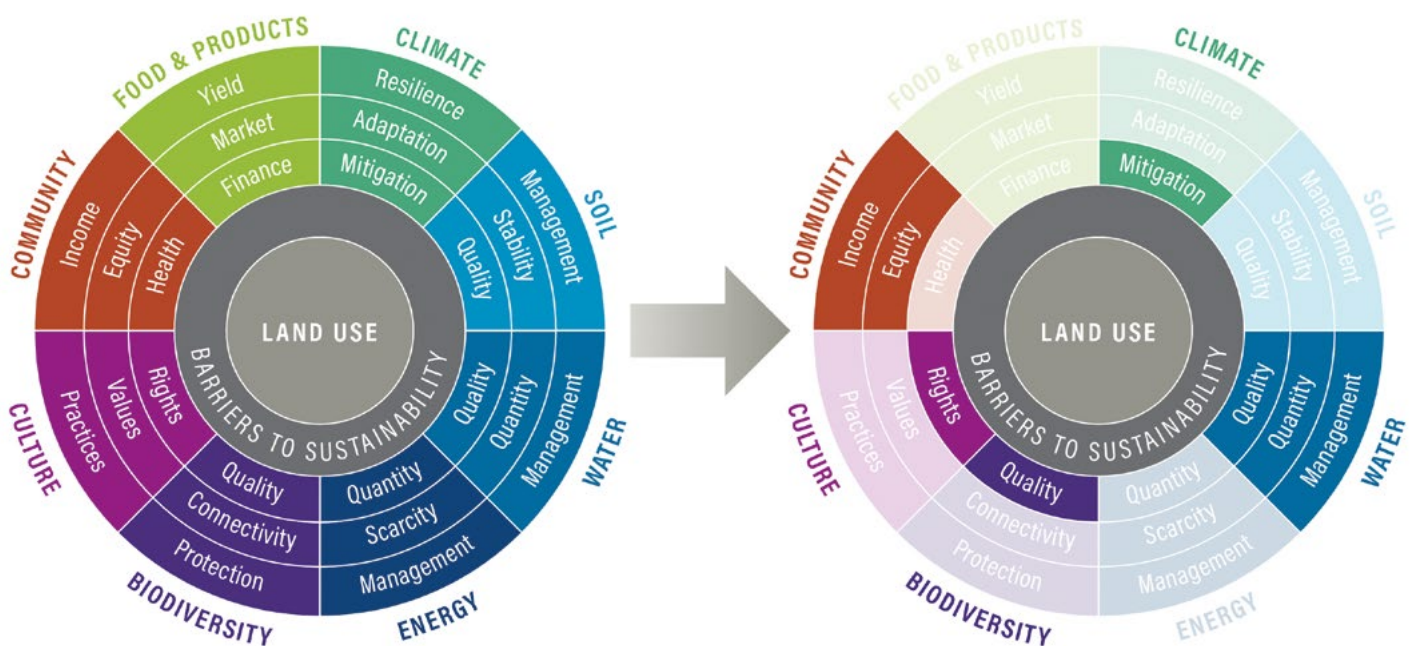
The high degree of complexity involved in evaluating FLR raises the issue of the associated costs that need to be factored into the initiatives. However, setting higher

requirements runs the risk of sidelining teams and profiles from the evaluation process that do not have the skills required to tackle such complexity. The growing importance of carbon issues in forests and agricultural environments and the possibility of generating “carbon credits” or “biodiversity credits” within the scope of FLR actions could require specific evaluation procedures – regarding not only the environment, but also the way in which the benefits derived from such credits are distributed.

Consideration could be given to internalising (rather than outsourcing) the evaluation process, so that it forms part of the FLR construction process (adaptive evaluations that can be adjusted as the action progresses). This could be done through a collective and participatory process, involving all stakeholders (starting with the main issues rather than multiple indicators in order to maintain a certain independence between stakeholders and evaluators) and continuing well beyond the end of the projects.

Finally, long term viability must be analysed by taking into account changes in land allocation within landscapes and the consequences of such changes in space and time.

FIGURE 2. RESTORATION MONITORING WHEEL



Source: Buckingham et al. 2020. “The road to restoration: A guide to identifying priorities and indicators for monitoring Forest and Landscape Restoration.” FAO, WRI.



Villagers planting trees as part of a restoration project in Tillabéri, Niger (FLRM, FAO, 2021)

## FINANCING FLR IN LINE WITH NEEDS AND URGENCY

The needs on the ground and ambitions expressed at international and national levels raise the question of increasing and securing funding. The very diverse nature, sources and methods of funding can make it difficult to put FLR projects together.

This also raises questions about the origin of funding and the expectations of donors in relation to the nature and objectives of the projects. It is necessary to ensure public development and environmental donors, NGOs and foundations, and international and local companies complement each other in an orderly way to make the most of this funding and target it as effectively as possible without forgetting local people's in-kind contributions and working time. Coordination (and at the very least the sharing of information) between FLR donors in the same country is also important to ensure consistency and optimise the use of funding and resources (including human resources) allocated to these projects. Lastly, FLR initiatives need to be embedded in the long term (as mentioned above), with the risk of "funding dependency".

The purposes and methods of public and private funding (international, national and local) need to be optimised, with the idea that this funding should target investments (both institutional and on the ground). In addition, mechanisms should be put in place within the collective action to ensure the sustainability of the restored landscapes, thereby reinjecting part of the economic benefits into the control and management of the landscapes.

It would be beneficial for public authorities to take on the subject of FLR and define an overall framework for implementing initiatives. In this way, public funding could help ensure that all stakeholders are genuinely taken into account, arbitrate between potentially contradictory objectives and support governments in implementing an institutional framework and regulations for FLR projects. Private funding could be concentrated more specifically on "on-the-ground" investments in conjunction with monitoring to avoid a potential focus on "environmental" results at the expense of social issues and the rights and interests of local populations.

Private funding sources could be classified to distinguish between companies linked to the agricultural and forestry sectors of the landscapes concerned and those that aim to offset their environmental impacts or those of their customers (including via carbon or biodiversity credits, for which special attention is needed). For each of these companies, it would be necessary to highlight the risks of greenwashing and business as usual under the guise of FLR.

## SUMMARY AND RECOMMENDATIONS

There is now an international consensus on the value of the FLR concept, with major programmes and numerous initiatives being implemented at national and local levels. However, there is a lack of perspective on the results and impacts of these programmes. Questions

remain on the medium and long term sustainability of the actions carried out beyond the project implementation phase and their contribution to countries and their populations. The positioning of FLR strategies and initiatives in relation to public policy frameworks also needs to be better examined, particularly for the countries concerned by them.

FLR aims to reconcile the response to major environmental challenges and socioeconomic development issues in given territories with the populations concerned. Good intentions notwithstanding, there is still a great deal of uncertainty as to how consensus is to be reached, how to resolve these often conflicting objectives (at least in the short term) and how these choices are to be made.

Although a key principle of FLR is to allow the populations concerned to participate in decision-making and the socioeconomic benefits, many projects appear to be fundamentally top-down, which compromises their sustainability.

→ *The recommendations for future projects and programmes are more specifically to:*

- ensure that FLR projects are economically “win-win” for the populations concerned, by taking into account their losses and identifying and negotiating any sustainable compensation;
- ensure that local populations are actual decision-makers (or co-decision-makers) in the choice of FLR strategies, suggesting a major paradigm shift, and that respect for the free, prior and informed consent of the populations concerned is guaranteed in FLR programmes; and
- integrate into FLR strategies and initiatives the functions of producing goods (timber, forest and agricultural products) and services (soil, water, carbon, climate, etc.) for the benefit of the populations and sectors concerned, with the aim of ensuring sustainable FLR actions that contribute to local development.

It is essential that FLR projects negotiated locally are adapted to the context of each landscape, which means initiatives should be gradual and tailor-made, starting on a small scale, gradually expanding and continuing in the long term. Each project must therefore be the result of consensus between stakeholders, collective action and trade-offs between different FLR objectives.

Contradictions or discrepancies may arise between:

- wanting and needing to change scale and timeframes to increase the number of projects in terms of surface areas, regions and ecosystems, which can go hand in hand with standardized interventions; and
- guaranteeing quality and real added value (social, environmental and economic) in the long term from these interventions, implying the use of “tailor-made” and negotiated projects.

→ *The various stakeholders involved will therefore need to give careful thought to ensuring consistency between the international levels (initiatives, programmes, projects and actions) and national levels (national policies and local actions), combining long-term programming (10 to 15 years) and short-term actions (3 to 5 years) in a learning process based on successive phases*

To monitor and evaluate FLR projects, it is important to take into account their diversity and the multiplicity of their objectives.

→ *Consideration could therefore be given to internalising the monitoring and evaluation processes so that they form part of the FLR construction process (i.e., adaptive evaluations that can be adjusted as the action progresses). This could be done through a collective and participatory process, involving all stakeholders (starting with the main issues rather than multiple indicators in order to maintain a certain independence between stakeholders and evaluators) and continuing well beyond the end of the projects.*

Finally, it is important to properly coordinate the different sources of funding for FLR:

→ *Public funding should help ensure that all stakeholders are genuinely taken into account in order to arbitrate between potentially contradictory objectives, support governments in implementing an appropriate institutional framework and contribute to the regulation of FLR projects.*

→ *Depending on its nature and objectives, private funding could focus on “environmental” components and/or “production” components within the framework of regulatory mechanisms, in particular to avoid focusing FLR actions on environmental results at the expense of local development and the rights of local populations. ●*