



Economic and Social Council

Distr.: General
5 August 2022

Original: English

Economic Commission for Europe

Committee on Forests and the Forest Industry

Eightieth session

Geneva, 2-4 November 2022

Item 6 (d) of the provisional agenda:

Report on and implementation of the 2022-2025 Integrated

Programme of Work and related decisions

Report on forest landscape restoration in the region

National Policy Guiding Principles for Forest Landscape Restoration

Note by the Secretariat

Summary

This document was prepared under the project “Strengthening policy framework on forest landscape restoration in selected UNECE countries to achieve SDG 15” (Germany, ECE-E372). It is a tool for national forest authorities engaged in forest landscape restoration (FLR) to support them in identifying and adapting their national FLR-related policies, strategies and laws according to available best practice and evidence.

Delegations are invited to take note and request its dissemination.



I. Background

1. Despite many tools and trainings on forest landscape restoration (FLR), there is a lack of guidance on favourable enabling policy environments for successful, sustainable FLR interventions. The National Policy Guiding Principles (NPGP) are a tool for national forest authorities to support such policy development.
2. They are composed of thematic and cross-cutting principles, a rationale, a set of proposed criteria, and expected benefits.

II. Guiding Principles

A. Address the root causes of degradation (principle 1)

Rationale

3. Planting trees is a relatively simple operation thanks to the vast know-how available. However, keeping planted seedlings alive can be very challenging. Failures of restoration attempts are multi-faceted, but generally reflect the insufficient understanding of root causes of forest landscape degradation. For any FLR activity to be successful and sustainable, it is of utmost importance that the root causes of degradation are identified and addressed.
4. Only by understanding and removing the underlying socioeconomic, political and institutional causes that drive forest and land degradation can restoration efforts be successful, sustainable, and scalable. It is expected that a better understanding of the situation on the ground will guide the responsible forest administration to design appropriate restoration measures and propose adequate strategies to prevent degradation.
5. Problems of forest landscape degradation are, in most cases, well known and documented. They include the loss of forest areas, the decline of tree/woody vegetation density and variety, industrial pollution, increased erosion, and fire occurrence, etc. Although climate change can exacerbate these processes of degradation, the origins are clearly of anthropogenic nature and the result of unsustainable practices. While the identification of the root cause of a problem might seem to be straightforward, it is - in most cases - far more complex and with wide-ranging implications.
6. Too often there is confusion between the outcome of the root cause and the root cause itself. For instance, overharvesting of wood products is frequently pointed as one of the root causes of degradation. However, in reality, it might be the lack of incentives to manage sustainably the resources, because of unclear or conflictual rights or benefits' sharing, which lead to illegal, destructive practices and overharvesting.
7. The identification of the root cause of forest landscape degradation can also be greatly facilitated by reviewing lessons learned of past and ongoing FLR initiatives (see Annex 2). In particular, the evaluation of partly failed or failed initiatives could point to root causes that were not foreseen at the planning stage but became apparent during implementation. This necessitates, however, that the assessment of these initiatives not only focus on the short-term establishment of tree and/or vegetation cover but also on the longer-term tree growth, environmental and socioeconomic outcomes.
8. Understanding the root cause of a problem requires the participation of all relevant stakeholders, including, in particular, those who are practicing unsustainable use of resources. It also involves recognizing the gender dimension of differential access to and use of forest resources. For this reason, great care should be taken in identifying all stakeholders. They can be primary, secondary, or key stakeholders with high or low importance and influence in the context of future FLR activities.
9. With an appropriate methodology, including all important stakeholders, root causes can generally be accurately identified by building a "problem tree" or a graphical representation of an existing problem, its causes and effects. The problem tree should provide a clear and shared understanding of the issues. Consequently, once the root causes are well

identified, appropriate and effective measures can be formulated by building a “solution tree”. These corrective measures can be of legal and/or technical nature and will have the potential to considerably enhance the success rate of FLR activities.

Criteria

- (a) Primary, secondary, key stakeholders identified and ranked according to their importance and influence (stakeholder matrix);
- (b) Stakeholder participation strategy developed;
- (c) Past and ongoing FLR projects objectively assessed (longer-term sustainability of tree/vegetation cover, environmental and socioeconomic impacts), lessons from experience identified;
- (d) Climate change impact on restoring forest landscape taken into account (suitability of tree and shrubs species);
- (e) Forest landscape degradation problem tree constructed;
- (f) Barriers and root causes of forest landscape degradation identified;
- (g) Solution tree constructed;
- (h) Requirements for successful FLR identified.

Expected benefits

- (a) Sustainable FLR measures (root causes of degradation have been removed);
- (b) High level of understanding and visibility of FLR initiatives;
- (c) Important stakeholders are supporting and contributing to FLR initiatives;
- (d) United Nations Decade principles 2, 3, 4 and 5 met.

B. Provide supportive governance (principle 2)

Rationale

10. Forests and trees play essential roles in many landscapes, in particular dryland landscapes. Their health and capacity to provide goods and environmental benefits are influenced by many external factors. Therefore, an enabling policy and legal/regulatory environment is essential for the success and sustainability of FLR activities. FLR initiatives have, by definition, long-term implications. Trees and woody vegetation take many years to be firmly established, and soil restoration is a slow process. While in the initial years of an FLR activity the technical, human and financial requirements are high, long-term sustainability of these operations mostly depends on a supportive and enabling policy and legal environment. In some cases, policies, laws, and institutions need to be adapted to FLR requirements. Monitoring and evaluation during the analysis of the root causes of forest landscape degradation and/or during implementation of FLR will facilitate identification of those needs.

11. Further, trees, forests and forestry activities are often dealt with in relative isolation from other landscape components or development sectors that contribute to forest landscape degradation such as agriculture, energy, urban development, mining, or infrastructure. A landscape approach to management that integrates trees and forest management with other land uses is more likely to produce sustainable outcomes. Working at the landscape level implies the involvement of different sectors. An enabling governance system is key to well-functioning cross-sectoral coordination, regional collaboration and maintaining adequate funding.

Criteria

- (a) A national FLR strategy is endorsed by the government;

- (b) Policy, legal and institutional barriers identified in the problem tree construction are adequately addressed and removed;
- (c) All non-forestry sectors that contribute to or are impacted by FLR are identified;
- (d) Intersectoral communication, coordination and collaboration established;
- (e) Sectors that contribute to forest landscape degradation such as agriculture, mining, infrastructures, urbanization, etc., have adopted preventive and/or mitigation measures;
- (f) An enabling environment for sustainable FLR funding and investment, from government, the private sector, international organizations, and other sources, is established;
- (g) Income generation mechanisms resulting from FLR are enabled;
- (h) Policy, legal and institutional frameworks for the continuous monitoring of FLR implementation are ensured.

Expected benefits

- (a) Successful and sustainable FLR;
- (b) High level of participation across relevant sectors;
- (c) Efficient FLR measures through coordinated efforts;
- (d) Updated, modernized governance system benefits beyond FLR;
- (e) United Nations Decade principles 1, 5 and 10 met.

C. Develop a national forest landscape restoration strategy (principle 3)

Rationale

12. Once the root causes and the drivers of degradation are well defined and understood, a national FLR strategy should be formulated to guide government and other main stakeholders' actions to prevent further degradation and ultimately ensure the sustainability of FLR activities.

13. Developing strategies is part of a comprehensive planning process. Strategic planning¹ may be defined as a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and why it does it. Strategic planning must address four fundamental questions:

- (a) What are the objectives?
- (b) How can the objective be met? (strategies)
- (c) What is the blueprint for action? (activities, budget)
- (d) How to ensure that implementation is on track? (monitoring & evaluation)

14. The first part of the strategic planning process is embedded in principle 1 which provides information about location, extent, suitability, and desirability of areas for restoration (see principle 6 for prioritization of areas). It further identifies the issues to be addressed with consideration of not only biodiversity questions (e.g., connectivity and fragmentation) but also economic and social concerns (e.g., other land uses, land ownership, income generation, energy needs).

15. Once the objectives are set, a national FLR strategy should be developed which clearly outlines how barriers will be overcome. This includes defining the most realistic proposals to overcome these barriers, the major actions needed and the next steps to implement these

¹ J. M. Bryson, *Strategic Planning for Public and Nonprofit Organizations. A guide to Strengthening and Sustaining Organizational Achievement.* The Jossey-Bass Management Series, 1988.

actions. A national FLR plan will include a set of strategies that can be clustered in two categories, implementation strategies and functional strategies.

(a) Implementation strategies:

(i) Implementation strategies are about technical pathways for successful FLR. A national FLR strategy will provide clarity on specific areas suitable for FLR and assigns priority based on feasibility, stakeholder engagement, availability of resources, complementarity, effectiveness, and sustainability;

(ii) Not all areas are suitable for FLR. Specifically, at the early stage, it is recommended that areas with best expected outcomes should be selected for a positive FLR dynamic. It is also important to set realistic and measurable goals.

(b) Functional strategies:

(i) Functional strategies are dealing with the required “software” to support FLR, such as governance, financing, staffing, capacity development, facilities and procurement strategies;

(ii) A national FLR strategy should be developed taking into consideration cross-sectoral cooperation, a landscape approach (identified in principle 2) and resource and capacity gaps (identified in principle 1);

(iii) Due to the cross-sectoral nature of FLR, strategies should also be integrated with other national priorities and processes (such as national development strategies, poverty-reduction strategies, land-use plans, infrastructure development and subsidy schemes);

(iv) A national FLR strategy, once endorsed by the government, will require the development of action plans to carry out FLR activities.

Criteria

(a) Areas that are deforested, degraded or are prone to degradation and deforestation are identified;

(b) Areas with highest potential for successful FLR are prioritized;

(c) An assessment of human and financial capacities available for FLR is completed, highlighting strengths, weaknesses, opportunities, and threats (SWOT);

(d) Based on the problem tree and on the FLR related assessment, a national FLR strategy is developed for ensuring effective and sustainable FLR measures;

(e) Developed FLR strategy is embedded in national strategies and is clearly formalized in the national legal and administrative system.

Expected benefits

(a) Successful and sustainable FLR;

(b) Optimal and efficient allocation of human and financial resources for FLR;

(c) Effective and transparent framework for FLR;

(d) Clear framework to assess progress;

(e) Clear roles and responsibilities of stakeholders encouraging their support and contribution;

(f) United Nations Decade principles 1 to 10 met.

D. Encourage capacity development for forest landscape restoration (principle 4)

Rationale

16. Existing and often outdated approaches and technical knowledge might prevent successful FLR measures. In light of past experiences, today's FLR requires a range of improved/new capacities to ensure better results. Two types of capacities can be identified: technical and functional capacities.

17. Technical capacities are required in all the broad areas of restoration, from soil-erosion control measures, water provision, nature-based restoration, tree nurseries, plantations, tree-seed centres, and assessment of restoration needs to the enabling of national, subnational, and local actors in carrying out the restoration of degraded lands.

18. Functional capacities are required to enable national, subnational, and local institutions to plan, lead, manage, monitor, evaluate and sustain improvements in restoration initiatives and degradation prevention strategies. The goal is to ensure that technical know-how is embodied in local systems and processes in a sustainable way.

Criteria related to technical capacities

- (a) Technical requirements for planned FLR identified;
- (b) Review and assessment of existing technical capacities at national, subnational, and local levels;
- (c) Knowledge gaps, if any, identified;
- (d) Capacity development, where needed, provided according to best practices.

Criteria related to functional capacities

- (a) Review and assessment of functional capacities at national, subnational, and local levels carried out;
- (b) Functional issues limiting FLR activities, if any, identified;
- (c) Institutional changes or reforms conducted wherever needed.

Expected benefits

- (a) Successful and sustainable FLR;
- (b) National technical and functional capacities up to date;
- (c) Recognized FLR expertise at national, regional, and global levels;
- (d) United Nations Decade principle 6 met.

E. Raise awareness, educate and share knowledge (principle 5)

Rationale

19. Awareness raising, education and knowledge management are key to get informed support from main stakeholders but also from the general public for and beyond FLR activities.

20. Awareness raising about FLR, and cross-cutting issues (such as environmental services, climate, soil, water, energy; biodiversity, community, food and forest products, local economy, job creation, poverty alleviation, culture) is mostly to inform direct stakeholders and the general public, and influence their attitudes, behaviours, and beliefs. Increased awareness of FLR initiatives and implementation will contribute to a better understanding of the need for FLR, the conditions required for its success and the expected environmental and socioeconomic benefits.

21. FLR education and knowledge management consists of creating, sharing, using and managing knowledge and information resources. In particular, knowledge management aims towards developing relevant training programmes and facilities, and disseminating good practices and lessons learned from FLR activities (see Annex 2). This information can be shared with a wide audience, such as policymakers, practitioners, and stakeholders (including communities, landowners), with a view to improve FLR implementation, support and upscaling.

Criteria

- (a) The national FLR strategy is widely shared among stakeholders;
- (b) Benefits expected from FLR defined (environmental services, climate, soil, water, energy, biodiversity, community, food and product, local economy, job creation, poverty alleviation, culture);
- (c) Incentives for stakeholders identified;
- (d) Awareness campaigns for the general public designed and suitable media identified;
- (e) National, subnational, and local awareness campaigns conducted prior, during and after FLR activities;
- (f) Piloting FLR implementation approaches/methodologies (knowledge creation);
- (g) Knowledge sharing platforms (subnational, national, regional) identified or established;
- (h) FLR-related training programmes and facilities are developed;
- (i) Relevant education institutions are involved in knowledge sharing and management.

Expected benefits

- (a) Successful and sustainable FLR;
- (b) Broad support for FLR from all stakeholders and the general public;
- (c) Transparent FLR processes motivate upscaling;
- (d) Cutting-edge knowledge and skills on FLR available and disseminated;
- (e) United Nations Decade principles 2 and 6 met.

F. Implement strategies for effective forest landscape restoration (principle 6)

Rationale

22. Working at landscape level is a complex endeavour which needs to take into account many factors such as targeted areas for FLR, stakeholders' involvement, capacities, cross-sectoral coordination, funding, sustainability, climate, etc. Therefore, decisions to conduct FLR must be strategic and prioritized to be successful (see principle 3).

23. Successful FLR implementation will be the most visible outcome of a FLR initiative, e.g., the amount of forest areas restored, and therefore, deserves a specific principle to guide initial decision making.

24. Based on a national FLR strategy, three main strategies for FLR implementation can be distinguished:

- (a) Protect and restore what exists;
- (b) Restore forest landscape through planting, nature-based regeneration and other technical measures;

- (c) Greening non-forest sectors in support of FLR.

G. Protect and restore what exists (sub-principle 6a):

Rationale

25. Stopping ongoing degradation and protecting what exist should be the first action. It is also the most cost-effective measure. Often, for various reasons and because it is expected to be the most visible way to combat landscape degradation, FLR projects prioritize reforestation of bare forest land and even, sometimes, afforestation of desert lands at very high costs but resulting in mixed to poor results. Considerable resources are invested in these approaches with the risk of depriving the management of existing forest areas from these most needed resources with the consequence that these forest areas are left to continue degrading. Therefore, as a priority, human and financial capacities, should first be directed towards protecting and restoring existing forest areas.

Criteria

- (a) Forest governance and management arrangements are implemented to halt deforestation, degradation and sustain restoration (supportive legal framework, involvement of stakeholders, mobilization of additional resources, etc.);
- (b) Forest restoration measures conducted (controlled and sustainable use of forest products, promotion of natural regeneration, enrichment planting, etc.);
- (c) Preventive measures against degradation designed and implemented (legal and/technical, e.g., erosion control, fire prevention, pest and disease control, sustainable agriculture, rangeland management, alternative energy).

Expected benefits

- (a) Successful and sustainable FLR;
- (b) Healthy forest landscape stabilized;
- (c) Efficient use of available resources and capacities;
- (d) United Nations Decade principles 1 to 5 met.

H. Restore forest landscape through planting, nature-based regeneration and other technical measures (sub-principle 6 b)

Rationale

26. Once existing forest landscapes are sustainably managed and “secured” and/or if the required capacities are available, heavily degraded forest landscape can be restored through assisted natural regeneration or the plantation of trees, shrubs, and other vegetation together with erosion control, fire prevention, pest and disease control measures wherever appropriate. Restoring such landscape can be very challenging and require substantial resources. Great care should be taken in ensuring that these restoration measures are in line with the national strategy, as a national strategy should provide a framework to ensure sustainability from an economic, social, and environmental point of view. For sites where previous experience was not satisfactory or no previous experience is available, it is highly recommended to pilot restoration before scaling-up.

Criteria

- (a) Effectiveness of planned afforestation from the landscape perspective is analysed and relevant priorities are set;
- (b) Restoration is planned with a long-term perspective, in particular in areas with harsh conditions and natural succession patterns;
- (c) Plantations and assisted natural regeneration carried out;

- (d) Erosion control, fire prevention, pest and disease control measures taken;
- (e) An enabling environment to sustain restoration efforts (supportive legal framework, involvement of stakeholders, mobilization of additional resources, etc.) is in place.

Expected benefits

- (a) Successful and sustainable FLR;
- (b) High success rate in FLR on severely degraded lands;
- (c) Increased and sustainable forest landscape;
- (d) United Nations Decade principles 1 to 5 and 7 met.

I. Greening non-forest sectors in support of forest landscape restoration (sub-principle 6 c)

Rationale

27. Beyond the forest sector, other sectors such as agriculture, energy, urban development, mining, or infrastructure can play a significant role in contributing to FLR by alleviating or mitigating the negative impact they have on the landscape in general. Although these sectors do not necessarily contribute directly to FLR, they do involve land use. They can play a very important role in landscape restoration, either through their practices or by not affecting forest lands, which can, in turn, support and complement FLR efforts. It is therefore important to involve these sectors and get their support for the implementation of a national FLR strategy or a wider, overall national landscape restoration strategy. To that end, a tailored awareness-raising campaign (see principle 5) targeting these sectors is likely to facilitate and encourage their full participation.

Criteria

- (a) Active participation of relevant groups in intersectoral communication and collaboration established;
- (b) Possible contributions of relevant sectors to FLR identified and coordinated;
- (c) Commitments of relevant sectors in contributing to FLR established.

Greening agriculture by alleviating drivers of forest landscape degradation resulting from agricultural practices

Rationale

28. Globally, agriculture continues to be the main driver of deforestation and forest degradation and the associated loss of forest biodiversity.

Criteria

- (a) Landscape restoration measures on agricultural lands are implemented (improved irrigation, agro-forestry, wind breaks/ shelterbelts, rangelands management, etc.);
- (b) Connectivity/complementarity of wooded areas in the agriculture lands with other elements of landscape, in particular forested areas, is ensured;
- (c) Intensification of agriculture with nature-based practices.

Greening infrastructures investments

Rationale

29. Rapid development of infrastructures in many parts of the world can lead to further forest and other landscapes degradation. If not adequately addressed, they could undermine

other FLR efforts. To prevent such negative impacts, rigorous environmental impact assessments (EIA) and mitigation measures need to be in place for all infrastructure to meet agreed standards for GHG emissions, adaptation to climate change, biodiversity conservation, pollution abatement, resource management and integrated land use.

Criteria

- (a) EIA carried out for any medium- to large scale infrastructure project;
- (b) Systematic inclusion of mitigation (restoration and greening) measures in any medium- to large scale infrastructure project;
- (c) Environmental sustainability standards developed for infrastructures;
- (d) Creation of sustainable green spaces promoted in areas occupied by infrastructure (e.g., for industry and transport) and their vicinity;
- (e) Connectivity/complementarity of wooded areas in urban and peri-urban lands with other types of landscapes, in particular forested areas, is ensured.

Greening urban and peri-urban centres

Rationale

30. With the rapid development and expansion of urban and peri-urban centres, trees and forests are becoming increasingly vital components of healthy, liveable, and sustainable communities. Functioning urban ecosystems help clean our air and water and to cool urban heat islands. They also support our well-being by shielding us from floods and landslides and providing opportunities for recreation. In addition, urban and peri-urban forestry helps the urban population connect (or reconnect) with nature and with tree and forest ecosystems and, by doing so, contributes to maintaining the connection between urban and rural areas.

Criteria

- (a) Promotion and creation of sustainable green spaces in urban and peri-urban areas;
- (b) Enabling urban planning and governance frameworks to foster the establishment of green spaces.

Overall expected benefits from principle 6

- (a) FLR success enhanced by the restoration and greening of other landscapes;
- (b) Comprehensive and coordinated efforts towards countrywide landscape restoration;
- (c) National commitments set out in the NDC are met;
- (d) Significant increase of environmental benefits from FLR;
- (e) United Nations Decade principles 1 to 10 met.

J. Monitor and evaluate (principle 7)

Rationale

31. Poor monitoring prevents accountability and the possibility to learn from past experience, thus undermining the ability to understand the change processes and improve future FLR activities. It is therefore critical to put in place a multi-stakeholder, gender sensitive (see cross-cutting principle 3) monitoring and evaluation system (M&E) right from the start. A multi-stakeholder approach will ensure a comprehensive and objective monitoring of FLR activities while simultaneously providing opportunities for shared M&E capacities with other national commitments such as NDC, biodiversity and SDG reporting.

An efficient M&E will ensure transparency and provide evidence of progress, achievements and impact of FLR. It will enable updates and help develop the national FLR strategy. It

32. will also encourage positive momentum, inspire replication, and transfer relevant knowledge through the communication of positive results and outcomes and corrective actions taken in response to possible negative results. M&E enable investors to see progress towards their investment goals and open possible additional funding opportunities.

Criteria

- (a) Realistic, simple, and feasible, multi-stakeholder monitoring framework including biophysical, social, economic and governance measures established;
- (b) Gender-sensitive indicators, and data-collection methodology disaggregated by gender developed;
- (c) Baseline for monitoring FLR achievements established, and, wherever possible, linked and integrated (compatible) with existing forest-monitoring systems;
- (d) Indicators, metrics, and indicator framework defined;
- (e) National FLR strategy implementation is continuously monitored and feedback provided to policymakers and stakeholders in order to see progress and address issues of concern;
- (f) Regular M&E carried out and shared with all stakeholders.

Expected benefits

- (a) Successful and sustainable FLR;
- (b) Evidence of FLR impact provided, including on who benefitted, and on progress towards achieving national, regional, and international commitments;
- (c) Enhanced trust in FLR and foster additional investments for scaling up;
- (d) Important contribution to national commitments regarding NDC, biodiversity, SDG reporting;
- (e) United Nations Decade principles 8 and 9 met.

III. Cross-cutting principles²

33. While developing national FLR strategies with the help of the above-mentioned policy-guiding principles, some cross-cutting principles need to be reflected in these strategies to improve restoration outcomes and to maximize net gain for FLR and human health and well-being. Although not an exhaustive list, eight cross-cutting principles are briefly described hereunder:

- (a) Build on existing commitments and partnerships;
- (b) Ensure a participatory approach;
- (c) Mainstream gender;
- (d) Address needs of people with disabilities;
- (e) Alleviate poverty;
- (f) Adapt to climate change;
- (g) Protect biodiversity;

² The cross-cutting principles presented here are largely taken from the cross-cutting principles identified in the “Draft Strategy for landscape restoration and greening the infrastructure of the Caucasus and Central Asia” presented at the seventy-eighth session of the Committee on Forests and the Forest Industry, Geneva, 4-6 November 2020. Note by the Secretariat: ECE/TIM/2020/3.

- (h) Take a regional approach.

A. Build on existing commitments and partnerships

34. In the last 10 years, an increased number of FLR related initiatives around the world are gaining pace as a nature-based solution to address the challenges of climate change. These experiences offer a great opportunity to identify best practices that can be applied to new FLR activities. At the same time, duplication and competition with existing processes and partnerships should be avoided. New FLR measures should seek alignment and coordination of forest landscape restoration work in the region by engaging relevant stakeholders and organizations in their implementation.

B. Ensure a participatory approach

35. A participatory approach is essential for the success of FLR. It will ensure that all stakeholders contribute to the development of a national FLR strategy and its implementation. Stakeholders' participation will ensure that their propositions and concerns are taken into account. Through this approach, stakeholders will develop a sense of "ownership" of FLR initiatives, which will result in their strong support. This will contribute to long-lasting, sustainable, inclusive progress in FLR in the subregion. It should be noted, however, that the requirements for a truly participatory approach are often underestimated. A participatory approach that fully engages stakeholders requires capacities to develop a well-planned and rigorous methodology as well as allocate adequate resources to identify and engage stakeholders and create conditions for their just and long-term engagement.

C. Mainstream gender

36. FLR activities should provide equal opportunities for women and men. They both play a crucial role in ecosystem conservation and restoration. Given the lack of women's participation at all levels of governance, from FLR policymaking to implementation, their full inclusion needs to be stressed and encouraged. This is important for responding to the immediate needs of the rural population as well as for ensuring equitable access to resources and benefit sharing. Based on the "Gender-responsive restoration guidelines", published by IUCN3, there are several gender-responsive actions that can be undertaken in the subregion: "(a) conducting a gender analysis to provide insights into gender roles; (b) involving women in "greening" decision making; (c) improving women's rights to land and natural resources; (d) creating partnerships and alliances with regional and national restoration networks; (e) developing gender-sensitive indicators and collecting data disaggregated by gender; (f) developing gender-responsive policies on land and forest management at the subnational and national levels; (g) exchanging knowledge on key gender issues, strategies and outcomes between countries in the region. Gender gaps and biases should be identified, whenever they exist, and addressed".

D. Address needs of people with disabilities

37. Wherever relevant, FLR work that aims to improve citizens' access to green areas for recreation and eco-tourism should consider, and if required, address the needs of people with disabilities. Such measures include the involvement of relevant stakeholders, representing people with disabilities, in the planning phase, improved communications and training, and implementation, where relevant.

³ IUCN 2017, Gender-responsive restoration guidelines. Available at: <https://portals.iucn.org/library/node/46693>.

E. Alleviate poverty

38. The rural poor in many countries are highly dependent on forests and are the most affected by forest landscape degradation. So far, they only benefit marginally from forest markets and forest conservation efforts. Yet, forest landscape restoration will not be achieved in the long run without the support and involvement of local communities.

39. The rural poor are highly dependent on forests and are the most affected by forest landscape degradation. So far, they only benefit marginally from forest markets and forest conservation efforts. Yet, forest landscape restoration will not be achieved in the long run without the support and involvement of local communities.

40. FLR represents a significant opportunity to contribute to poverty alleviation by enhancing the livelihoods of some of the countries' poorest people. This can be achieved not only by restoring forest landscapes, but also through community-based solutions that allow the rural poor to take advantage of one of their most important natural assets. FLR has the potential to open up new opportunities for community-based forest management, agroforestry, forest enterprises, enhancement of wood and non-wood products, and eco-tourism. FLR can further promote the establishment of forest resources on small-scale local producers own farmland, thus generating market opportunities.

41. To demonstrate the potential of FLR measures contributing to poverty alleviation, a social cost-benefit analysis, considering the full spectrum of costs and benefits of FLR, including social and environmental effects, should be integrated as part of FLR knowledge management (see principle 5).

F. Adapt to climate change

42. An ultimate and long-term goal of FLR across the globe is to mitigate and adapt to climate change, thereby restoring ecological functions across degraded landscapes. FLR is seen as a necessity to attain this goal, but its beneficial impact will only be measurable in the long-term future due to the relatively slow growth rate of forest vegetation, and to the gradual response of the climate system.

43. Therefore, FLR measures need to anticipate climate change effects on the growth and survival of trees and shrubs. Consequently, FLR practitioners need to adapt their restoration activities to these changing climatic conditions. In the short term, adaptation measures can increase the resilience of existing forest cover through silvicultural treatments, for example to reduce evaporation or competition, or through establishing infrastructures to improve water harvest, decrease soil erosion, etc. In order to address longer-term adaptation and more severe effects of climate change, species that are resilient to climate change will need to be selected. The International Union of Forest Research Organizations has called this approach "transformational adaptation"⁴, and defines it as "measures to proactively respond to or anticipate climate change, that are larger in scale or more intense than incremental or anticipatory adaptation measures, or that are novel either to a region or by their nature. Transformational adaptation measures include managing novel ecosystems or creating them using assisted migration of species".

44. Climate change adaptation and transformational adaptation should be considered at all stages of FLR, from strategy formulation to implementation.

G. Protect biodiversity

45. Globally, forests are home to most of the Earth's terrestrial biodiversity and are therefore an important source of biodiversity. Well designed and successful FLR has the potential to arrest and reverse species extinction in various ways. Most countries in the world are Parties to the Convention on Biological Diversity (CBD). For that reason, the Aichi

⁴ IUFRO, Forest Landscape Restoration as a Strategy for Mitigating and Adapting to Climate Change, Project Flyer. Available at: https://www.iufro.org/download/file/18473/1304/flr-project-flyer_pdf/.

Biodiversity Targets, especially target 15 (dealing with ecosystem restoration), are of high importance. Due to the high value and uniqueness of biodiversity in the subregion, this dimension of sustainability should receive special consideration in FLR activities. Further, biodiversity conservation should be strongly promoted through FLR related awareness-raising campaigns.

H. Take a regional approach

46. Although much of the action will take place at the local or landscape level, coordination with a regional approach to FLR is necessary, with full respect of national and local approaches to natural resources management, because ambitious, large-scale, and well-designed landscape restoration activities would have positive consequences also for neighbouring countries. In addition, some of the largest infrastructure projects aim at improving connectivity, are strongly international in nature, and are likely to affect the watersheds and ecosystems beyond national boundaries. The drying of the Aral Sea is an excellent example of a major environmental challenge which has subregional causes, and thus needs regional solutions based on a transboundary river basin approach, encompassing not only the two countries bordering the Aral Sea, but also those located upstream.

Annex

Theory of change behind the National Policy Guiding Principles

The following visualization tool provides an overview of the theory of change behind the principles presented in the previous chapters. It is in easily accessible format and summarizes all guiding principles and cross-cutting principles, their relationship and role in contributing to successful FLR outcomes.

