

Guidelines for building forest landscapes resilient to global changes in drylands

Report of the Second International Workshop
Hotel King Fahd, Dakar, Senegal, 25-28 February 2013



Guidelines for Building Forest Landscapes Resilient to Global Changes in Drylands

Workshop Report

1. Background

In order to meet a specific recommendation of its members, FAO engaged in a comprehensive analysis, evaluation and documentation of forestation and restoration programmes and projects in drylands, in collaboration with its member countries, local partner organizations and international institutions and organizations.

The ultimate aim of this process is the compilation and evaluation of the lessons learnt, and the development of guidelines for the restoration of degraded drylands, for the benefits of the local population. The initiative focuses on Mediterranean type ecosystems (Mediterranean basin, South Africa, SW Australia, Chile and NW America), the Sahel and other dryland countries in Sub-Saharan Africa, West and Central Asia – including Northern China - and Latin America.

This initiative contributes to the implementation of the 10-year strategy (2008-2018) of the United Nations Convention to Combat desertification (UNCCD); the United Nations Convention on Biodiversity (UNCBD) Strategic plan for biodiversity 2011-2020 as well as to the adaptation and mitigation efforts under the United Nations Framework Convention on Climate Change (UNFCCC). In particular it contributes to achieve the Bonn challenge targets related to the restoration of 150 million hectares of degraded lands and ongoing initiatives supported by FAO and partners.

The process to produce the guidelines on restoration of degraded lands in drylands was launched in May 2012 in Konya, Turkey, at an international workshop convened by the Turkish Ministry of Forestry and Water Affairs, FAO, Turkish Cooperation and Coordination Agency (TIKA) and the German Agency for International Cooperation. The final output of the event was the formulation of a draft version of the guidelines.

The second international workshop in Dakar, which is the focus of this report, was aimed to deliver the following, tangible outputs:

- A set of recommendations for the finalization of “Guidelines for building resilient forest landscapes in drylands”;
- Joint actions defined to address the gaps and challenges for building resilient forest landscapes in Great Green Wall countries.

2. The Workshop

The international experts’ consultation workshop in Dakar represented the second step in the process of formulating the guidelines. It took place in Dakar on 25-28 February 2013 and was organized by FAO with the financial support of the Turkish Ministry of Forestry and Water Affairs, the Turkish International Cooperation Agency (TIKA), and in collaboration with the African Union Commission and the Ministry of Environment and Sustainable Development of

Senegal and its technical Institutions (Directorate of Forests, Water, Hunting and of Soil Conservation of Senegal and the National Agency of the Great Green Wall of Senegal). This event was a follow-up to the recommendations and actions identified during the first international workshop, organized in Konya, Turkey, on 28-31 May 2012.

The workshop had the following objectives:

- Contribute to the formulation of the “Guidelines for building resilient forest landscapes in drylands” based on the expertise and experience of participating experts;
- Identify gaps and challenges that need to be addressed and appropriate actions for building resilient forest landscapes in Great Green Wall countries.

Participants included over 80 international experts on drylands restoration from forestry departments, research institutions, the private sector, NGOs and international development agencies, representing 13 countries, mainly from Africa (the Great Green Wall countries) and Europe. See list of participants in annex.

The workshop involved 2 full days on the field. Participants had the opportunity to review and test the application of the drafted guidelines on the GGWSSI Senegal case and provided their inputs and contributed with recommendations for their finalization. They have also learned from the past and ongoing forest restoration efforts in Senegal and Turkey as well as from the experience of Burkina Faso in the provision of high quality seeds for building resilient forest landscapes in drylands.

3. The Agenda

The workshop agenda was organized as follows:

- 1) Introduction of workshop objectives, structure and expected outputs and status of the Drylands Restoration Initiative “Guidelines for building resilient forest landscapes in drylands”.
- 2) Presentation of Turkey, Senegal and Burkina Faso experiences with lessons learned on key drylands restoration issues.
- 3) Organisation of three working groups (WG) to review the summarized version of the drafted guidelines and to visit and assess the following sites and initiatives during the two days of field visits, according to the drafted guidelines:
 - WG 1: Restored site and local community tree nursery in Widou Thiengoly and the National programme of forest seeds (PRONASEF);
 - WG 2: Farmer orchard (jardins polyvalents) managed by a local organization of 240 women in Widou and the soil and conservation operations in the watershed basin of Thiès;
 - WG 3: A site plantation and the assisted natural regeneration initiative promoted in Koyli/Alpha by the local communities of Mboula as well the regional tree Nursery of Dakar.
- 4) Plenary session to report on the results from the working groups and get comments.
- 5) Round table of countries’ representatives to report on key issues and challenges they face in their countries for building resilient forest landscapes.
- 6) Plenary session to identify joint actions for addressing the issues and challenges and define a road map for the finalization of the guidelines and actions implementation.

4. Workshop Outcomes

The workshop was instrumental in setting the ground for a network, where professionals with different skills and expertise (field and policy level, research, private sector, NGO, development partners) and from different countries can keep sharing experience, knowledge and contacts for future collaboration.

During the workshop, participants appreciated the opportunity to establish and extend their professional networks through this event and to visit and analyze restoration activities implemented on the ground by the Great Green National Agency and the Directorate of Water, Forests, Hunting, and Soil conservation.

A bilateral collaboration agreement was signed between Senegal and Turkey in support to forest restoration and combating desertification.

4.1 Working groups

The working groups reported on successful actions recorded during their field visits and recommended actions for improving certain aspects. The main outcomes and findings of the working groups are presented below:

The Restored site and local community tree nursery in Widou Thiengoly and the National programme of forest seeds (PRONASEF)

During the visit of the Restored site of Widou Thiengoly, participants identified a number of areas of strength such as the technical success, the financial support of the State, the awareness of the population and the coordination with the research sector. On the other hand, the working group identified the following challenges that might hinder the sustainability of the restoration action:

- Lack of silvicultural management of the restored area;
- Lack of further financial support to sustain such action due to the high costs entailed;
- Risk of unsustainability because the approach was exclusively defensive (use of fences, guards) and not based on the ownership of local communities.

The group also visited the tree nursery in Widou (not active currently as it is not yet the seedlings production period) and has highlighted both the importance of the site for ensuring plant production and the need to further enhance the capability in terms of equipment and human resources.

At the visit of the office of the National programme for forest seeds (PRONASEF), the participants and programme staff praised the experience and the team motivation. They also discussed the following issues:

- The lack of human and financial resources that are putting at risk the operational sustainability of the structure (lack of research support programme, obsolete equipment);
- The need of capacity building at national level on seeds conservation for sustainable provision of high quality seeds to meet the national needs including the Great Green Wall needs;

- The need for a regional platform that would support the exchange of expertise and equipment.

Farmer garden (jardins polyvalents) managed by a local organization of 240 women in Widou and the soil and conservation operations in the watershed basin of Thiès

During the visit of the jardins polyvalents, participants identified a set of recommendations to develop capacity of women groups and project partners on the rational use of soil and water resources and on agriculture production at different implementation stages of the garden, in particular:

- On integrated pest management to avoid the use of chemical pesticides;
- On the use of effective biological fertilizers including anaerobic compost, organic matter and animal manure to improve soil fertility and water infiltration properties and, therefore, agriculture production;
- On crop rotation, diversification and staggering;
- On water harvesting and appropriate irrigation techniques. For instance, in sandy soils the use of chemical fertilizers directly in irrigation water should be avoided and lower irrigation rate should be applied than the real infiltration capacity of the soil in order to limit leaching of nutrients;
- On conservation, transformation and marketing of agriculture and horticulture products and milk (more than 50% of milk produced during the rainy season normally perishes);
- On the use of agroforestry and of multipurpose living fences for use, also to strengthen the link with livestock, which could be better integrated (e.g. fodder production, use of manure, etc.);
- On alternative energy generation;
- On the installation of wind breaks;
- On fish ponds and small-scale aquaculture.

The group also assessed the soil and water conservation measures in the Plateau of Thies, identifying the following recommendations:

- Ensure the sustainability of the implemented approach;
- Pilot test Payment for Ecosystem Services schemes to compensate upstream populations;
- Valorization of non-wood forest products and access to relevant benefits for the local population;
- Application of the forest legislation and release of land concession contracts to allow local people benefit from the forest resources they take care of;
- Adoption of integrated watershed management approaches to address upstream/downstream linkages and prevent conflicts over the access to natural resources;
- Leave highly desertification prone areas under integral protection regime excluding human activities.

A site plantation and the assisted natural regeneration initiative promoted in Koyli/ Alpha by the local communities of Mboula as well the regional tree Nursery of Dakar

During the visit of the site plantation in Koyli/Alpha, the group highlighted the good natural regeneration and the use of the fences and of the Vallerani System for the water catchments. On

the other hand, the working group identified the following challenges that might prevent the sustainability of the action:

- Insufficient involvement of the community in the planning;
- Weak integration of the agricultural component to actually have an agrosilvopastoral plantation;
- Lack of diversification of species;
- Lack of data on the situation of reference (baseline data) and therefore lack of a monitoring and evaluation system;
- Lack of fire breaks;
- Low growth of the *Acacia senegal* as the variety used is not appropriate to the rainfall of the place;
- Lack of management plan that could lead to a problem of sustainability.

To overcome this set of challenges, participants recommended the following measures:

- Use the existing manure on the ground to increase soil fertility and involve the population for safe recovery of soil;
- Establish a system of monitoring and evaluation;
- Develop support research;
- Use a wide range of species (woody and herbaceous) according to the site conditions and taking inspiration from nature to enhance resilience and address socio-economic needs;
- Take into account the *Balanites* in planting activities;
- Develop the management system, in particular:
 - Involve herders in the planning and management of forests and restored areas, for example through licensing of pasture (not to require fences);
 - Develop a plantation management plan and local charters of agrosilvopastoral management with and for people.

The group also visited the assisted natural regeneration initiative, praising both this community-based driven action and the presence of community rules to not cut down trees and protect forests. Among the problems, it has been highlighted the lack of management plan, the objectives not well defined, the undeveloped water potential of the site and the lack of enrichment plantation which would have increased the biodiversity of the site. The group recommended the following measures to strengthen the potential of the initiative:

- Initiate exchange of visits for the benefit of other communities;
- Develop a management plan for the area considering enrichment planting;
- Undertake silvicultural techniques (as part of the management plan operations) to assist nature;
- Provide secure source of seeds to create a village tree nursery.

In the end the participants and the staff members visited the Regional tree Nursery of Dakar, where they noticed the lack of credible sources of seeds, the lack of maintenance, management and equipment for the proper functioning of the nursery and the production of only 10% of local species. They identified the following recommendations to overcome the weaknesses:

- Commercialize part of the production for the maintenance of the nursery;
- Capacity building (including training) for seed collection techniques, equipment, computerized management of the nursery, exchange visits with other countries;
- Plan the production of more local species to ensure resilience.

4.2 Recommendations for the finalization of the guidelines

The workshop participants gave valuable feedback on the structure and content of the guidelines for building resilient forest landscapes in drylands. More in particular they gave the following useful set of recommendations:

- Appreciating that these guidelines are global, participants recommended to develop, as a second step, after the finalization of these global guidelines, operational guidelines/specifications that could respond to specific needs at local regional / local levels; ;
- An agreement upon the definition of resilience should be provided and widely communicated to better reflect global changes, increase resilience and reduce the risks;
- Highlight the importance of local population, in particular:
 - Clarify that local populations should be prominent in landscape restoration activities, not just as beneficiaries but as central actors and potential users of the guidelines;
 - Add elements of effective integration of people and of their autonomy after the project;
- Better organize and structure the guidelines, in particular:
 - Harmonize the language and clarify the used technical terminology;
 - Once ready a simplified version of the guidelines should be prepared, translated and made available to local people with the support of NGOs, particularly for the dissemination and the transcription of recommendations in local language;
- Make these guidelines more operational in the local context, in particular:
 - Provide indications on how to identify relevant actors in intended activities and define their level of involvement and responsibility. In these sense it could be useful to promote the use of coordinating committees to overcome sectoral boundaries;
 - Develop data sheets and fact sheets on best practices and sustainable land management according to the ecosystem for each country;
 - Technical examples of the appropriate technical procedures should be provided and carefully adapted to local conditions;
- The guidelines should consider the land and resource issue more carefully, in particular:
 - Nutrition, agroforestry, horticulture, livestock rearing and other land uses should be integrated in landscape restoration approaches, but still keeping a focus on natural resources management, especially forests. It will be useful also to integrate recommendations on seed storage, treatment and germination tests;
 - Within the landscape restoration initiatives, it is necessary to consider the land issue through planning activities to avoid conflicts and providing management solutions for possible competition for land use over the access to natural resources, in particular water. Furthermore the overall issue of how to make available water resources for restoration purposes should be clarified;
 - Provide provisions for alternative energy sources to wood and charcoal and for the development of non-wood forest products and their commercialization.

4.3 Joint actions

During the workshop, participants identified gaps and common challenges impeding the success of restoration initiatives that need to be addressed to build resilience of forest landscapes:

- Technical challenges: availability and quality of seeds; need for a better connection between research and development; lack of capacity, at different levels, of sustainable natural resource management; technical problems in relation to water harvesting and management, soil conservation/use of treated waste water for restoration;
- Biophysical bindings: availability and management of water resources; water and wind erosion; drought; climate change;
- Institutional level/Governance: limited regime of ownership/access to resources by the community; inadequate funding at different levels; lack of policies related to the problems of drylands.

After a fully participated discussion in order to address the above challenges, participants identified appropriate actions for building resilient forest landscapes in Great Green Wall countries:

- FAO to support the mobilization of the Green Climate Fund to boost restoration in the countries of the GGWSSI;
- Develop common action among the consultation frameworks to promote exchanges of experiences between countries;
- Develop cross-border strategies for the conservation of common species and the conservation and management of protected areas;
- Strengthening of capacity, for example through joint training on technical aspects;
- Support Restoration development programs (based on the sustainable use and marketing of non-wood forest products);
- Establish a platform to facilitate access/financial resource mobilization;
- Use of mechanized technologies (Vallerani System);
- Continue advocacy for dryland forests at the international level and stress the important role of the NGOs especially in the Sahel region to mobilize local financing;
- Integrate contributions of national budgets within financing strategies;
- Take advantage of existing opportunities for capacity building;
- Reaffirm the role of research on plantation/ forest restoration management, planning and impact assessment (monitoring and evaluation);
- Demonstrate and make visible the contribution of the GGWSSI in achieving the objective of the Bonn Challenge (Global Partnership on Forest and Landscape Restoration GP-FLR: restoration of 150 million hectares of lost forests and degraded lands by 2020).

5. Next Steps

Participants have defined follow-up actions and a road map for the finalization of the guidelines and their effective implementation in Great Green Wall countries. A steering committee was set up to follow-up the implementation of the recommendations and identified actions. The committee is chaired by Senegal and co-chaired by Burkina Faso and involve one representative per country, a representative of FAO and a representative of TIKA.

The draft version of the guidelines will be revised taking into consideration the recommendations and inputs from Dakar workshop participants. The revised version should be circulated to participants for final comments by July 2013. It was also highlighted the need of developing resilience assessment tools/indicators.

The summary guidelines and outcomes of the two workshops (Konya and Dakar) will be presented in April 2013 during the side event in Istanbul, organized by Turkey in collaboration with Senegal and FAO, at the Occasion of the 10th session of the United Nations Forest Forum (UNFF).

FAO will finalize the development of the capacity development strategy and action plan in support to the Great Green Wall, in collaboration with the Walloon Region of Belgium/Association pour la Promotion de l'Education et de la Formation à l'Etranger (APEFE) and the MDG Center for West and Central Africa, taking into consideration restoration capacity development needs and priorities identified during this workshop for the effective implementation of the guidelines on the ground, by July 2013.

The ultimate output of this phase of the process will be the presentation of the final full document of the guidelines in September 2013, at the occasion of the 11th Session of the UNCCD Conference of Parties, to be held in Namibia.

As regards the development of a seeds value chain for building resilient forest landscapes in drylands, the National Forest Seed Center of Burkina Faso (CNSF) and the Tree Seed Center of the Kenya Forestry Research Institute (KEFRI) were identified as leaders that could provide technical support on development of the seeds' value chains respectively in GGW countries of West Africa and of East Africa.

For the case of West Africa, based on a side meeting led by the national forest seed center of Burkina Faso (CNSF) and involving participants (GGW focal points and Tree seed centers focal points from Burkina Faso, Mali, Mauritania, Niger; Nigeria and Senegal), it was decided that a Capacity development programme to support seed centers in West Africa should include:

- The setting up of a regional forest seed bank (for short and long-term) for the conservation of seeds in case of disasters; (ii) the setting up of a regional seeds laboratory;
- In-situ and ex-situ conservation. Partners of this capacity development programme will involve FAO, CILSS, CDAO, UEMOA, WBI, Royal Botanic Gardens of Kew, JICA, OSS, CEN-SAD, TIKA and Bioversity international. To develop such a programme, with support of FAO, the countries will undertake the following immediate actions: (i) a detailed assessment of the current status of seeds centers; (ii) organization of a regional meeting

to compile the results of the needs' assessment and define the capacity development programme objectives and actions;

For the case of East Africa, FAO will follow-up discussions with KEFRI to define next steps for the development of a support programme to the seeds value chain for Eastern Africa (including Sudan, Ethiopia);

In North Africa, FAO will work in collaboration with Morocco, Algeria and other North African Countries to develop a programme of support for the development of a seeds value chain in North Africa. Finally, participants agreed to keep up the excellent networking through regular communications among the group of participants and contributors to the guidelines.

For more information on the Dakar workshop and the Drylands Restoration Initiative:
www.fao.org/forestry/aridzone/restoration