

Building Forest Landscapes Resilient to Global Changes in Drylands Workshop Report¹

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 operational guidelines for the restoration of degraded drylands, for the benefits of the local population. The initiative will focus 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.

The initiative will deliver the following, tangible outputs:

- A field-tested and reconciled forest restoration monitoring tool for analysing, evaluating and tracking the performance and impacts of forestation and restoration initiatives;
- A set of recommendations and contributions of experts, gathered through several consultation and knowledge sharing workshops in dryland regions;
- A comprehensive expert report compiling the lessons learnt from success and failure and presenting the way forward for forestation and restoration in drylands in the form of operational guidelines;
- A partnership platform for knowledge sharing on best practices in forestation and forest restoration projects and case studies. The platform will promote networking between ongoing projects led by FAO and partner organizations and will facilitate exchange on innovative solutions to common problems;
- A roadmap for further steps, including the possibility of extending the project portfolio on forestation and forest restoration of degraded lands in drylands.

2. The Workshop

The international experts' consultation and knowledge sharing workshop in Konya was the first step in the process to achieve the goal of the drylands restoration initiative in a participatory manner, based on lessons learned from past and ongoing forest restoration efforts in the represented countries. It took place in Konya on 28-31 May 2012, and was co-organized by the Turkish Ministry of Forestry and Water Affairs, the Turkish International Cooperation Agency (TIKA), the Food and Agriculture Organization of the UN (FAO), and the German Agency for International Cooperation (GIZ).

¹ Report prepared by Pedro Regato, FAO Consultant (27 June 2012)

The initiative was also supported by international and inter-governmental organizations such as the African Union Commission, the United Nations Convention to Combat Desertification (UNCCD) Secretariat, the Global Mechanism of the UNCCD (the “Global Mechanism”), the Global Environment Facility (GEF) Secretariat, the Permanent Interstate Committee for drought control in the Sahel (CILSS), the African Forest Forum (AFF), the Millennium Development Goals Centre for West and Central Africa, the International Union for Conservation of Nature, the Walloon Region of Belgium, the World Agroforestry Center (ICRAF), the World Wide Fund for Nature, the United Nations Development Programme (UNDP) and Silva Mediterranea, a technical statutory body of FAO.

The workshop had the following objectives:

- Share know-how from different countries/regions on forest restoration in drylands;
- Identify key elements of success and failure to improve effectiveness in forest restoration of drylands;
- Contribute to the development of a comprehensive monitoring tool to guide implementers in the planning and implementation of field projects/programmes, assess success and facilitate the sharing of knowhow;
- Contribute to the development of operational guidelines;
- Agree on recommendations for the next steps/process for the formulation of project ideas within the framework of existing cooperation initiatives.

Participants included over 90 international experts on drylands restoration from forestry departments, research institutions, the private sector, NGOs and international development agencies, representing twenty-four countries in Africa, Central Asia, the Near East and the Mediterranean region.

3. The Agenda

The workshop agenda was organized as follows:

- 1) Introduction of workshop objectives and presentation of the preliminary results from the testing of the drylands restoration monitoring tool in 22 cases in Africa, the Mediterranean Region, West Asia, Northern China, and Latin-America.
- 2) Presentation of case studies with lessons learned on key drylands restoration issues.
- 3) Organisation of four thematic working groups to debate and agree on recommendations regarding the following issues:
 - WG 1: Planning of forest restoration projects, stakeholder participation and contribution to rural development;
 - WG 2: Policy, governance and regulatory frameworks in support of drylands restoration;
 - WG 3: Production of seeds and seedlings, nursery management, economic and ecological considerations for species selection;
 - WG4: Field techniques, soil preparation, water and soil management, planning operations, natural regeneration, maintenance and protection of plantings.
- 4) Organisation of regional working groups to collect the input of the participants from the different regions about the draft drylands restoration monitoring tool.
- 5) Plenary sessions to report the results from the working groups, get comments and incorporate the input from the rest of participants.

- 6) Panel discussions about funding opportunities for drylands restoration, interacting donor agencies and the workshop participants from the different regions.

The workshop included a field day to visit forestation and forest restoration experiences in the Konya basin, led by the Konya Regional Forestry Directorate with the involvement of research institutions and NGOs. The field trip included the Olcay tree nursery run by the Forestry Directorate, and the following initiatives: (i) Forestation to protect a degraded watershed including the Altınapa dam; (ii) Afforestation the Konya plain implemented by the Konya Sugar Company; (iii) The Karapınar Wind Erosion Control Project with large scale dune fixation.

4. Outcomes from the Working Groups

During the workshop, participants shared experiences, identified key elements of success and failure in forest restoration projects and discussed the comprehensive forest Restoration Monitoring Tool, newly developed by FAO, to guide planning, implementation and evaluation of field projects and programmes.

Experts from international development partners and networks (the FAO Subregional Office for Central Asia, GEF, the Global Mechanism, Silva Mediterranea and UNDP) presented funding opportunities and ongoing collaborative programmes to support national and regional efforts in dryland restoration. Among such programmes, the following deserve being highlighted: the African Union's Great Green Wall for the Sahara and the Sahel initiative, which involves 13 countries around the Sahara and benefits from the funding support of the European Union; the Global Mechanism and FAO; the GEF/World Bank programme support to the Great Green Wall for the Sahara and the Sahel initiative, covering 12 countries; the Collaborative Partnership on Mediterranean Forests and the Committee on Mediterranean Forestry Questions – Silva Mediterranea, involving 15 partners including GIZ, the French Fund for the Global Environment and the French Development Agency; and the FAO–Turkey Forestry Programme in Central Asia and neighbouring countries, which counts on the support of the Turkish Government.

The main outcomes and findings of the working group are presented below:

WG 1 - Restoration planning, stakeholders' participation and contribution to rural development

- 1) Planning challenges: predominance of top-down approaches; lack of full understanding of the ecosystems functioning and baseline situations; inadequate problem analysis with little understanding of the root-causes of degradation/vegetation loss; difficult prioritization of restoration interventions within large-scale programmes (i.e. watershed level); inadequate site-based planning, site selection, data availability (i.e. meteorological), needs assessment, costing and monitoring; most projects have short-term commitments; too much focus on exotic species and inappropriate genetic material). The WG recommends the following measures to overcome this set of challenges:
 - Restoration planning should be done at the landscape level and in the long-term, with a multi-sectoral and regional approach. Both ecological and administrative boundaries should be considered.
 - Balance top-down and bottom-up planning approaches.

- Establish multidisciplinary teams for restoration planning, implementation and effective monitoring and evaluation.
 - Planning should be done in the long-term and it should identify sustainability measures for post-project/programme completion;
 - Establish adequate long-term mechanisms to secure enough funds for landscape restoration actions at the national and/or international levels (i.e. carbon credits for well-measured carbon sequestration in drylands).
- 2) Stakeholders' participation challenges: top-down approaches with lack/inadequate stakeholders' consultation, participation, coordination, and harmonization; inadequate capacity at all levels; low consideration of indigenous technical knowledge/culture. The WG recommends the following measures to overcome this set of challenges:
- Involve all concerned stakeholders (public administration, NGOs, academic/scientific institutions, extension agents, land users/managers, private sector) in restoration planning, implementation and monitoring.
 - Develop good governance frameworks and mechanisms adopting a multilayer and multi-pillar approach, to secure inclusive and democratic community participation with a gender focus.
 - Support and strengthen leadership at local level (i.e. local project champions).
 - Promote synergies and complementarities among local, provincial, national, regional and global institutions.
 - Promote knowledge management, information dissemination and technology transfer.
- 3) Rural development challenges: inadequate mainstreaming of restoration into development priorities at local, national and international level; lack of clarity on benefit sharing and land tenure issues. The WG recommends the following measures to overcome this set of challenges:
- Create/improve land tenure and land use right policies.
 - Develop long-term ecological goals/outputs and short-term socio-economic goals/outputs focusing on equitable and tangible benefits for local communities in restoration interventions.

WG 2 - Policy, governance and regulatory frameworks

- 1) Recommendations to overcome weaknesses in the legal framework (clear land tenure rights and conflict resolution; inadequate legal framework/regulatory mechanism for restoration):
- Amend forest laws to allow participation, benefit sharing and long-term leasing for rural communities in drylands restoration actions.
 - Amend/strengthen legal frameworks to prevent maladaptive practices (i.e. forbidden land uses in a burned area after fire) and support resilient land uses (i.e. the use of controlled grazing for fire risk reduction).
- 2) Recommendations to overcome institutional constraints (inadequate inter-sectoral coordination and linkages between development plans and strategies to effectively implement drylands restoration; inadequate knowledge and capacities on CC-related impacts and sustainable natural resource management preventing successful project

identification, objectives –integrating ecological, social and economic aspects- development and implementation):

- Creation of decentralized forest management groups to the lowest possible community level.
 - Provision of technical and managerial backstopping.
 - Establishment of inter-sectoral coordination mechanisms for natural resource management.
- 3) Recommendations to overcome policy constraints (inadequate regional/trans-boundary cooperation frameworks and harmonization between national and regional policies and strategies; inadequate mainstreaming of forestry into national/sectoral policies; limited natural resource management national planning to guide intersectoral approaches; insufficient awareness about desertification at all levels of society):
- Update terms and definitions in all languages regarding forestry issues;
 - Mainstream landscape restoration into national planning and strategic documents to facilitate access to funding;
 - Harmonize forest policy between sub-regional and national levels.
- 4) Recommendations to overcome governance constraints (insufficient involvement of NGO, the private sector and rural communities in landscape restoration; inadequate collaboration and trust among all concerned stakeholders at the national and grass-root levels; poor enforcement of laws and regulations):
- Allocate clear land use rights in state-owned land and provide incentives to local communities for the sustainable management of natural resources.
 - Promote participatory approaches involving all concerned actors from national to grass-root level in the planning and management of restoration programmes.
 - Create local forest users associations.
- 5) Recommendations to overcome funding constraints (limited funding from bilateral and multilateral development agencies for landscape restoration and forestry in general; inadequate governmental funding for forest restoration and forestry activities):
- Create, promote and reinforce fiscal policies applying the “polluter pays” principle to re-invest benefits into restoration.
 - Create national forest funds, grant systems and low-interest credit facilities to support local communities and conduct restoration activities.
 - Promote synergies between the three Rio Conventions to increase/mobilize resources for restoration, and advocate for increased bilateral and multilateral funding support.
 - Evaluate and facilitate the potential use of carbon credits and REDD+ for restoration in drylands.
- 6) Recommendations to overcome socio-economic constraints (limited livelihood opportunities, financial and other kind of incentives for local communities to adhere/adopt sustainable management frameworks and undertake restoration work):
- Develop regulatory frameworks for multipurpose forest management and the adoption of multipurpose restoration goals.
 - Plan for short-term benefits for local communities when undertaking restoration work.

- Evaluate the cost of inaction (no restoring) as an awareness and advocacy tool for decision-makers, and promote payments for ecosystem services (PES) to support restoration work and compensate/recognize the essential role that the sustainable community uses of natural resources play in providing environmental services.

WG 3 - quality of plant material, nursery management, economic and ecological considerations for species selection.

- 1) Recommendations to overcome knowledge gaps (poor knowledge on the economic and ecological value of a wide range of native species in spite of the substantial efforts worldwide; insufficient knowledge on species production; insufficient research and mapping on species provenances/genotypes):
 - More research is needed on seed technology, plant physiology, plant production, plant genetics, and conservation of genetic resources.
 - Opportunity to share/transfer experiences on species CC-modelling (i.e. Mediterranean region), good breeding/gene conservation programmes (i.e. Turkey) to other countries/regions.
 - Need to strengthen the capacity of plant laboratory and nursery managers.
- 2) Recommendations to overcome knowledge management gaps (lack of knowledge, dissemination and knowledge exchange between scientists and practitioners and global/regional networking):
 - Need to develop good coordination mechanisms among stakeholders.
 - Need to strengthen the flow of information and knowledge in an understandable way from researchers to local practitioners and vice versa.
- 3) Recommendations to overcome resource gaps (lack of centres providing high quality plant material; insufficient availability of adequate plant material from suitable species; lack of appropriate technology for plant production):
 - Establish regional seed banks.
 - Increase funding and equipment for seeds and plant production.
 - Improve seed supply distribution systems and networks of nurseries at country/local level (i.e. good example in Eastern Africa).
- 4) Recommendations to overcome governance constraints (top-down decisions on the species to be used in restoration programmes):
 - Increase partnerships and networking opportunities at the global, regional and sub-regional levels to exchange good governance experiences.
 - Involve local stakeholders since the very early stages of restoration programme identification and planning, to implementation and monitoring.
- 5) Recommendations to overcome awareness constraints (resistance of local communities to use species with no demonstrated economic value; frequent resistance of public forest administrations to adopt modern ecological restoration approaches):
 - Undertake awareness and educational actions to increase the cultural link between people and native species.
 - Promote the multipurpose value of the species used in restoration interventions.

- 6) Recommendations to overcome policy and economic constraints (lack of incentives to invest in high quality seeds and plant species production; lack of payment opportunities for the environmental services provide by restored drylands):
- Identify opportunities and promote drylands restoration under carbon credits/REED+
 - Develop/improve governmental strategies, policy mechanisms and fiscal incentives (i.e. PES) to encourage and support private and community investments in native species plant production.
 - Adopt a regulatory framework to ensure the quality (i.e. certification) of plant material and strengthen control mechanisms when using exotic species and non-certified plant material.
 - Incorporate an economic component in restoration programmes supporting business plans and markets for products from the species used in restoration actions.
- 7) Recommendations to overcome planning and management constraints (genetic pollution and unknown provenances of the plant material used in restoration):
- Develop adequate in situ and ex situ genetic conservation programmes.
 - Improve planning and decision-making on the plant material used in restoration work.
 - Strengthen control mechanisms to avoid genetic pollution.

WG 4 - Field techniques, soil preparation, water and soil management, planning operations, natural regeneration, maintenance and protection of plantings

- 1) Recommendations to overcome challenges (ecosystem resilience to face inherent water constraints, poor soils and climate change; poverty alleviation; unsustainable land and water management; knowledge and knowledge sharing gaps on ecological restoration issues; lack of interest and buy-in of local communities; inadequate governance and legislation frameworks; lack of sufficient funding):
- Need for a good multidisciplinary diagnosis at the landscape level (i.e. watersheds) of problems, ecological and socio-economic features, restoration priorities and opportunities, and adequate available technologies for field restoration interventions, including effective soil and water (especial emphasis to the chronic water constrains in drylands) conservation practices used in agriculture and agro-forestry.
 - Identify candidate native species for restoration, conserve their genetic resources, and make a more diversified use of a wider range of species to increase the resilience in restored sites (i.e. combine re-sprouting species able to re-growth after disturbances, nitrogen-fixing species to improve soil fertility and fruit-producing species to attract seed-disperser fauna).
 - Involve all concerned stakeholders in the field restoration actions, making sure that practitioners have the necessary skills and knowledge to undertake the necessary work.
 - Manage the restored sites in a participatory way, including site protection, monitoring and evaluation.
 - Development of fiscal incentives for the restored areas (i.e. exoneration tax).
 - Development of employment and income generation opportunities linked to restoration (i.e. local enterprises offering services and seedlings for gardening, agro-forestry, etc).
 - Mobilize adequate funding for field restoration interventions and make sure that restoration projects are realistic.

- Mainstream vegetation restoration needs in all concerned sectoral policies so as to develop integrated restoration programmes and field interventions contributing to regain ecosystem functioning, biodiversity and productivity in healthy agriculture, rangeland and forestry systems.

5. Recommendations provided by the different regions² to improve the draft restoration monitoring tool and guide the structure and content of the expert report

Participants appreciated the opportunity to establish and extend their professional networks through this event and to provide input to the Restoration Monitoring Tool. They also gave valuable feedback on the structure and content of an expert report on drylands restoration integrating lessons learnt and guidelines.

General comments on the monitoring tool:

- 1) Target group:
 - MED: need to specify more precisely the target group, possibly splitting the tool in two sections - one for field practitioners and one for central government staff.
 - W&CA: The tool seems more suitable for field practitioners involved in restoration work. Governmental forestry institutions use more detailed national monitoring templates but lacking strategic analysis. If governmental central staff is the target, the tool will need to adjust contents and be harmonised with national monitoring systems.
- 2) Format: it is recommended to develop the tool in excel (MED)
- 3) Language: it is clear enough (W&CA), although in a few case studies the feedback received was that some technical concepts might not be easily understandable and need revision.
- 4) Contents: all working groups made recommendations to improve contents in the different sections of the tool. These comments will be incorporated in the second draft, due by mid July 2012.

6. Main Outcomes

The participants agreed to further support the process, collaborate in the development of operational guidelines for the restoration of degraded landscapes, and to contribute to the amendment of the Restoration Monitoring Tool.

Participants shared information on funding opportunities and on-going cooperation programmes on drylands restoration. A preliminary mapping of ongoing/planned projects and programmes and project ideas for funding at the country/regional levels was carried out.

² Med: Mediterranean Region; SSA: Sub-Saharan African Regions; W&CA: West and Central Asia

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

7. Next Steps

The final output of this phase of the process will be the delivery of a report on drylands restoration. A draft version will be available by mid July 2012, and it will be circulated for comments until 1st September 2012. The final report will be released by the end of October 2012 and will be launched in Istanbul in April 2013, at the 10th Session of the United Nations Forum on Forests, during a side event that will be organized by the Turkish Government.

The Restoration Monitoring Tool will be revised and finalized by mid July 2012, based on the recommendations provided by the workshop participants and by the 22 case studies where the tool was tested. The tool will be broadly disseminated, in an effort to increase the number of case study areas by the end of August 2012.

A follow-up workshop with a focus on field techniques will be organized towards the end of 2012 - most likely in Senegal. Opportunities for maintaining the networking efforts will be identified and promoted (i.e. the FAO working group on Arid Zone Forestry). The workshop participants welcomed the idea to develop a database at FAO to include all relevant information and case studies on good drylands restoration practices and facilitate the sharing of know-how among practitioners from the different dryland regions.

Finally, the participants agreed to update/improve the mapping exercise of ongoing and future project/programmes on drylands restoration, and to further develop project ideas that will be supported by FAO.

For further information and presentations, please visit:
www.cem.gov.tr/erozyon/AnaSayfa/workshop.aspx.