

## BEATING FAMINE IN THE SAHEL

26-28 February 2019, Sheraton Hotel, Bamako, Mali









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## EXECUTIVE SUMMARY

The 'Beating Famine in the Sahel' conference in Bamako, Mali, brought together 500 key stakeholders from 30 countries. Its purpose was to forge collaboration and synergies between multiple organizations and initiatives in order to scale up land restoration across the Sahel. It took place in February 2019 - the third in a series of 'Beating Famine' conferences (following Nairobi in 2012 and Lilongwe in 2015).

The conference was organised by the Global EverGreening Alliance, World Vision and the World Agroforestry Centre (ICRAF), with support from the Government of Mali and multiple international and local partners. It provided a rare opportunity for participants to share successful strategies in land restoration, to create a supportive network of practitioners and to mobilise partners for future endeavours.

Dr Dennis Garrity, UNCCD Drylands Ambassador, Chair of the Global EverGreening Alliance and Senior Fellow of the World Agroforestry Centre set the stage for the discussions: 'The massive scaling of simple, cost-effective land restoration practices across the Sahel is feasible. Farmermanaged natural regeneration (FMNR) is being practiced on 21 million hectares across the Sahel as a result of farmer-tofarmer spread. Tree cover on farmlands now averages 16%. There is enormous potential to further spread and intensify this practice.'

Dr Garrity went on to sound a clarion call for urgent action to scale up land restoration in the context of increased climate risks, loss of livelihoods, high population growth and the burgeoning masses of unemployed youth susceptible to violent extremism. He reminded participants that peace and stability in the Sahel cannot be fostered by military means alone - a rapid acceleration of economic and social development in rural areas is required.

'Agricultural intensification with land restoration can generate the large-scale employment and improved livelihoods that are needed,' Dr Garrity maintained. 'FMNR at higher tree densities is essential for such intensification, all the more so because trees provide a buffer micro-climate that increases the resilience of agricultural systems to climate change.

Dr. Garrity concluded that crises need not continue to beset the Sahel, if conference participants can act jointly in support of solutions already in their grasp.







Special statements addressed to the conference came from, among others:

Mr. Achim Steiner, Administrator, UNDP

Mr. José Graziano da Silva, Director General, FAO, Rome Mr. Gilbert F. Houngbo, President, IFAD, Rome, Italy. Mr. Ibrahim Lumumba Idi-Issa, Deputy Executive Secretary, CILSS

M. Jean-Marc Chataigner, Special Envoy for the Sahel, France Dr. Agnes Kalibata, President, Alliance for a Green Revolution in Africa

The conference heard the perspectives of diverse stakeholders, including policy makers, researchers, farmers, youth, womens' leaders, donor agencies, the private sector, religious leaders and civil society organisations.

26 diverse themes were addressed, including:

- Monitoring the spread of FMNR and land restoration successes using satellite imagery and remote sensing.
- Developing value chains for non-timber tree products from production through processing and marketing, including strengthening the capacity of rural women to generate income and manage natural resources.
- Building the evidence base for agroforestry as a key solution for climate-resilient, diverse and sustainable agricultural systems, providing ecosystem, economic and other benefits.
- Investing in rangelands restoration, notably through sustainable pastoralism.
- Building capacity to accelerate the scaling of landscape restoration, with a focus on the creation of learning and capacity building hubs, to give technical training to mid-career professionals.
- Giving training in the economic valuation of dryland ecosystem services to inform private sector priorities, attract investments, foster integrated planning for ecosystem management and influence policy.
- Using innovative media and communication strategies can be an effective vehicle for the massive scaling up of land restoration practices.
- Integrating FMNR/Evergreening Agriculture into relief programming in refugee camps.



- Developing effective approaches to empower women and youth in the scaling of regreening and the promotion of FMNR in the Sahel.
- Exploring synergies between land restoration and peacebuilding in relation to fostering pastoralist-farmer conflict transformation.
- Reforming policies to incentivize farmers and remove constraints to restore land and reinforce sustainable land use systems.
- Exploring how sustainable wood energy production and FMNR can contribute to Forest Landscape Restoration, in contexts where charcoal production and the cutting of trees for firewood degrades landscapes and soils.
- Using large-scale restoration and complementary water harvesting and conservation methods to foster resilience building, climate change adaptation and drought management.
- Demonstrating the benefits and policy imperatives of shifting public and donor funding from costly farm input supply subsidies (eg for chemical fertilizers) to proven, low cost regreening alternatives in order to achieve productive, sustainable and resilient farming systems.
- Demonstrating the urgency of restoring degraded natural resources to build community resilience and achieve Disaster Risk Reduction.
- Unlocking finance and developing a business perspective for investment in the restoration of degraded lands.

After a rich process of discussion and the sharing of practical experiences, teams from 14 countries produced Restoration Action Plans (available on request).

The 500+ participants also co-created and adopted the 'Beating Famine in the Sahel Conference Declaration', outlining the steps needed to restore 100 million hectares of degraded land by 2030 - the goal of the African Forest Landscapes Restoration Initiative (AFR100).

The organizers of the conference look forward to working with all those represented at the conference in the ongoing endeavour of restoring land, improving livelihoods and building climate resilience across the Sahel.





## BACKGROUND

West Africa, especially the Sahel, continues to be vulnerable to the impact of large-scale land and water degradation, soil infertility, climate change, population growth and a lack of socio-economic opportunities. They are raising the likelihood of increased chronic, acute malnutrition and insecurity in the region.

To address this situation, a number of organizations have employed Farmer-Managed Natural Regeneration (FMNR) and other evergreening and restoration initiatives, through the Great Green Wall for the Sahara and the Sahel, in a number of countries (e.g. Niger, northern Ghana, Mali, Burkina Faso, and Senegal), building on a history over more than 20 years of some remarkable successes of environmental and agricultural restoration. These successes are making West Africa a world leader of the land restoration movement.

It is estimated that FMNR has spread to 21 million hectares in the West African Sahel. An assessment of restoration opportunities in the Great Green Wall core intervention area has estimated the need of restoring 10 million ha/year by 2030 if we are to achieve the 2030 Agenda in the Sahara and the Sahel region. A combination of sustainable management and restoration strategies now exist, including FMNR, agroforestry tree planting, and sustainable land and water/soil management practices to restore the productivity of the production systems (crops, pastoral and forest landscapes). But while cost-effective and appropriate interventions are available, they are not yet widely enough known and applied.

World Vision and the World Agroforestry Centre (ICRAF) have worked together, with the support and cosponsorship of numerous collaborating organizations, to host Beating Famine conferences in Nairobi, Kenya in April 2012, and in Lilongwe, Malawi in April 2015. Together, in conjunction with WV Mali, the ICRAF Sahel Office, the Global EverGreening Alliance, together with FAO, UNDP, SOS Sahel, Oxfam, CRS, Sahel Eco, Groundswell International, and many other organizations, a third conference was held in Bamako, Mali from 26-28 February 2019. Approximately 500 representatives from national governments, international NGOs, UN agencies, regional institutions, CBOs, research institutions, financial and technical partners, private sector and international specialist organizations participated.





### OBJECTIVES

The conference intended to join multiple organizations and efforts into a more impactful movement. Through this conference, we sought to draw attention to and generate support for the African Forest Landscapes Restoration Initiative (AFR100) and its goal of restoring 100 million hectares of degraded land, as well as to the Great Green Wall for the Sahara and the Sahel Initiative, and the UN Action Plan for the Sahel. The conference built on the efforts and successes of key programs in the region such as World Vision and Groundswell International's 'Eco Agriculture in the African Sahel' project in Mali, Burkina Faso and Ghana and the EC-funded project on Scaling Up EverGreen Agriculture in eight countries, the EC-AU-FAO supported Action Against Desertification project in support of the Great Green Wall, and the 'Building Resilience in Africa Drylands Project' implemented by FAO with partners.







More specifically, the objectives were to:

- Share existing successful restoration strategies and seek to develop roadmaps for subsequent national-level FMNR and evergreening/restoration planning processes.
- Formalize an evergreening movement in West Africa using appropriate restoration strategies, which will link on-the-ground realities and implementers with government institutions, policies, and strategies, and with the support and guidance of international donors for widespread land restoration (galvanizing support for the AFR100 Initiative, the Great Green Wall, Land Degradation Neutrality, and the UN Action Plan for the Sahel).
- Create a supportive network of practitioners to support the further spread of FMNR on farmlands, adopt Assisted Natural Regeneration (ANR) on degraded rangelands and forestlands, and other restoration strategies including agroforestry tree planting, within West Africa, and to share lessons from, and to, other regions.
- Provide a platform to reflect on and disseminate key successes and challenges of the spread of evergreening and restoration strategies in West Africa, extract lessons applicable in other regions, and track the impact comprehensively.
- Mobilize technical & financial partners to expand the evergreening movement, with donors and governments committing new funds to scale up activities in all of the Sahelian countries and in the Sahelian zones of the West African coastal countries.
- Further raise awareness and enthusiastic participation in massive land restoration processes within the region and globally.



## THEMES

The themes for the conference sessions included:

- The regeneration and sustainable management of rangeland/pastoral landscapes
- Meeting the AFR100 restoration commitments costeffectively at a mass scale – the role of natural regeneration and evergreening/agroforestry practices
- The role of FMNR and evergreening as a window to managing conflict, reducing migration and promoting youth employment
- Improved soils for improved lives how FMNR and agroforestry areas contribute to better soils
- How to massively accelerate the scaling up of land restoration in the Sahel
- Shifting public and donor investment to regreening
- Sustainable wood fuel for household energy production
- Tracking the spread tools and systems for monitoring the spread of FMNR and land restoration successes
- Land restoration for resilience building, climate change adaptation and drought management
- Agroecology in the drylands
- Land restoration for food security and nutrition
- Mass media and communications role in scaling up: radio, participatory videos, national media
- Building up evidence on economic benefits from agroforestry and FMNR
- Uncovering the hidden costs of conventional versus agroecological cotton production
- Value chains and business development in tree-based systems
- Scaling up for land restoration with a focus on water
- Leveraging into the policy enabling environment to support NRM and agroforestry scaling up
- Urgent, short term relief efforts, disaster risk reduction - short term emergency relief efforts, e.g. connecting FMNR and Evergreen Agriculture to food relief programs
- Massive scaling up through the Great Green Wall
- Empowering women and youth in land restoration
- Training on using economic valuation to inform integrated planning for ecosystem management and influence policy
- Capacity building for scaling up land restoration through an EverGreening Africa Leadership Academy





## CONFERENCE SESSIONS





## OPENING HIGH-LEVEL PLENARY SESSION

10.30 am – 12.30 pm, Wednesday, 27 February, Baobab Hal

#### Moderator: Mounkaila Goumandakoye

#### Setting the Stage

Remarks by **Dr. Dennis Garrity**, UNCCD Drylands Ambassador Chair of the Global EverGreening Alliance and Senior Fellow, World Agroforestry Centre.

This conference is all about positive solutions to the massive scaling up of simple, cost-effective land restoration practices across the Sahel. It builds on the proposition that the Sahel knows how to beat famine, because there are really important solutions that are being adopted by millions of farm families that are making a difference. We are focusing on a number of them here this week, including:

- Farmer Managed Natural Regeneration of trees on farmland
- Agroecological farming with integrated crop-livestocktree systems
- Better rainwater harvesting and management over vast landscapes
- Solar electrification solutions to address the energy famine in the Sahel where less than 0.5% of rural households have any access to power at all
- And, of course, many others

The FMNR story alone is the source of great optimism and confidence. Very large parts of the Sahel had been virtually stripped of tree cover through the cycles of drought and farmland development. In fact, Rene Billaz has said: 'The Sahara is not stretching outwards into the Sahel. It is growing right under the feet of farmers and their animals.'

But the incredible news is that we now see millions of farm families throughout the region working to stop the desertification process – through FMNR on their own farms. In Niger, where the transformation has been most extensive, we are seeing a parkland renaissance in the process of evolving.

The most dramatic spread of this exceedingly beneficial regenerative practice is seen in Niger: > 7 m ha. But current estimates are that FMNR is now being practiced on 21 m ha across the region. Tree cover on farmlands now averages 16%. There is simply enormous potential to further spread and intensify this practice. Because it is a practice that all farmers can implement with no cash costs — this makes it highly scalable in all farming systems.





I will come back to the implications of this transformation in a moment. But first, let us step back and look at the interconnectedness of the region's major challenges. The current population explosion has enormous implications for stable, sustainable societies in the Sahel. It is creating a massive pool of youthful job seekers and the numbers are growing by hundreds of thousands in each country every year. This is a tinderbox, an explosion waiting to happen. And of course, it is happening, as extremist ideologies are attracting these unemployed young men.

We are all well-aware that fertility rates remain the highest in the world, around 6-7 children per woman, and population growth rates above 3%, and the Sahelian countries have not even begun the process of lowering them. This is a demographic explosion with populations doubling every 17 years.

Niger has just taken the very important and courageous step of adopting a birth control plan. Will it succeed? Will it be supported adequately by the international donor community, and will such policies be adopted by neighboring countries?

The new kinds of threats are not arising in the cities - they are building up in the forgotten countryside, which has been neglected for so long. For a long time the power elites assumed that the main dangers came from rebellious armies or from the streets of deprived neighborhoods in the capital city.

Rural people in peripheral regions were largely forgotten. Their political weight did not count. But now, the new menace is coming precisely from these peripheral rural areas long forgotten by the elites. The threat of rural jihadism is largely due to its ability to play upon the poverty and deprivation, hopelessness, unemployment, overexploitation of land and land conflicts in the remoter rural areas of the Sahelian countries.

Governments are now well aware that such threats cannot be addressed by military means alone, and that indeed it demands a rapid acceleration of economic and social development programs at the local level, particularly in the rural areas, which is where the extremist jihad movements have originated.

What is the solution to job creation in the rural areas? Fundamentally, it is agricultural intensification with land restoration. Intensive family farming is the only area of job creation that can possibly generate the large-scale levels of employment that could be sufficient to meet the emergency, at least in the short to medium term.





This must be combined with the development of more vibrant agricultural product business or value chains that purchase, trade, aggregate, process, transport, wholesale, retail and export farm products, and this will create large numbers of off-farm jobs in the rural areas as well.

This is the kind of efficient and labor-intensive agricultural development process that was the real 'green revolution' that I observed in over thirty years of work in Asia. Urbanization is often seen as a negative in Africa - but others see the robust demand for agricultural products, particularly more high-value tree products, that grows as urban population grows and urban wealth increases.

This can be a great stimulator for rural production and enterprise diversification. We are seeing this as a major stimulus to agriculture in the East African countries, and elsewhere. Policies need to support the scaling up of:

- FMNR for integrated soil fertility and land restoration
- Rainwater harvesting
- Solar power for the villages (only 0.2% of rural HHs have access to power now)

But there is yet another huge challenge descending upon the region: climate change.

Climate change will result in an increase in temperatures of 2°C by 2035, with reduction in yields of 15-20% by 2040 unless there is a breakthrough in agronomic research.

One of the most important breakthroughs is already being implemented — FMNR at higher tree densities to buffer microclimate of crops while also increasing Soil Organic Matter and soil fertility and better crop moisture relations.

Temperature reduction occurs in tree-based systems. We need to focus attention and promote FMNR as vigorously as possible now, and going forward.

So what is the alternative, if we do not succeed in the development of a more vibrant, climate-smart smallholder agriculture to help address the perfect storm of challenges in the Sahel? Serge Maicailof, former head of the French Development Agency, sees the Sahel eventually descending into what he calls 'an Africanistan', a perennial state of metastasizing insecurity and runaway outmigration within the region and external migration elsewhere. It would be a situation similar to the one that Afghanistan finds itself in today.

He notes that if the governments of the Sahelian countries, and their international partners, do not quickly understand these problems, and address them vigorously, there will be drastic consequences for the Sahelian peoples, for all of West Africa, and for European neighborhoods and democracies.

Serge is not saying that an Africanistan will happen, but he is warning us that it could, indeed happen, if we don't sound the alarm and focus our minds and our efforts much more clearly and comprehensively on addressing the perfect storm of challenges right away.

How we head off this alarming scenario of the Sahel as Africanistan is what I hope we will be reflecting deeply on during this session, and during many others in the coming days of this conference. And in the work that we do in the months and years to come.

Let us build the partnerships, and invest the energy and the resources to apply the solutions that we already know will create a much more vibrant, more intensified, more productive, and job-creating agriculture throughout the Sahel.

So that Mr. Michailof's dire warning, need never come to pass.



#### **Brief Statements**

- Mr. Achim Steiner, Administrator, UNDP
- Mr. José Graziano da Silva, Director General, FAO, Rome
- Mr. Gilbert F. Houngbo, President, IFAD, Rome, Italy. Represented by Mr. Lisandro Martin, Director for the West and Central Africa Region
- Representative of the World Bank
- Representative of the European Union
- Representative of the Africa Union
- Mr. Ibrahim Lumumba Idi-Issa, Deputy Executive Secretary, CILSS
- M. Jean-Marc Chataigner, Special Envoy for the Sahel, France
- Mr. Heiko Warnken, Ministry of Development Cooperation (BMZ), Germany
- Dr. Agnes Kalibata, President, Alliance for a Green Revolution in Africa

#### Voice from the Grassroots

**Ms. Sakina Mati**, Hero of Land Restoration Women awardee, farmer from Niger.

She shared her successful land restoration work. She noted that everyone in her neighborhood would try to plant trees, but they wouldn't grow due to the dry conditions. Her husband was forced to migrate because of the difficult farming conditions. She said that she tried Farmer Managed Natural Regeneration to establish trees on her farm, and she found that her fields yielded much more than those of her neighbors. Now everyone finds that trees are really useful in the fields. She and her neighbors now have many fruit trees on their farms as well. The major challenge is the lack of support by the government. 'We are always pushing but government is not assisting.'





#### Voice from African farmers' associations

**Mr. Ibrahima Coulibaly,** President of ROPPA.

Mr. Coulibaly noted that the Sahel is a difficult region, 'but Madame Sakina has regenerated her land with natural regeneration. It is an outstanding example of people observing and working with nature, and then producing more food in their challenging environment, without receiving a penny from the government.' He said that he is not advocating new policies. He declared that 'we need to implement the good practices that we have observed for 50 years. Let's give the same value to the local knowledge. You can't imagine all the pressure we are receiving for farmers to go into chemical-based farming. We need to have a balance.'

He said that 78% of the government budgets are spent in the capital cities. 'You can then imagine why we have such poor agriculture in our countries. We need mutual respect, and we need to respect the knowledge of the farmers. We need to create a new variety of farmers – starting with the children.'



#### Voice of the Global Youth

**Mr. Felix Finkbeiner**, Plant-for-the-Planet, organizer of The Billion Tree Campaign who has inspired millions of school children throughout the world to get engaged in tree planting, for their future and for the future of the planet.

When I was 9 years old we heard about Wangari Maathai of the Greenbelt Movement in Kenya. She asked us to continue her work with the Billion Tree Campaign. We were awed by this – the campaign had been so successful. We found a team of wonderful ecologists in the US. They came back to us with two important answers. They said that there are 3 trillion trees in the world, or 400 per person. We can plant one trillion trees on unused former forest land. Most of the potential exists in Africa, Southeast Asia and Latin America.'

The next goal of the Billion Tree Campaign is to plant a trillion trees. What's stopping us? I got to know many organizations, but the main limitation is funding. What is stopping that funding? The biggest challenge is transparency, without seeing the proof that this is happening. So, we built a platform that allows people to see the tree planting organizations. You login and see all the projects. There is a map of the project to see where the trees are being planted. There are high resolution satellite pictures – and you select your favorite project. We take no share of the donations. 100% of the funds goes to the project.'

#### **International Perspectives**

**Mr. Elvis Tangem,** Africa Union Commission, Great Green Wall Coordinator.

'Ambassador Garrity explicitly gave us the challenges in the drylands and the Sahel. These are areas of tremendous potential also. The young people constitute our biggest resource – we need to invest in them. The Sahel has huge potential for agriculture and livestock development. We just need to invest.'

Within the AUC there is a lot that is being done on land restoration. Through the CAADP the heads of state committed to spending a minimum of 10% of government budgets for agriculture. But the percentage of the budgets that have been spent in agriculture in the subsequent years since that declaration has actually declined dramatically, from 6% to 3%.'



**Mr. Ibrahim Idi Issa,** Deputy Executive Secretary of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS).

'Some of you may not know about CILSS. This regional body includes 15 members of ECOWAS, plus Mauritania and Chad. We invest in research and food security, fighting for a new balance in the Sahel. The concerns about climate change are still relevant today. We want to address a number of areas, including Natural Resource Management and climate change. We provide our assistance to governments to support strategies and policies for the management of natural resources. And we direct support to vulnerable communities. From there we design projects. We don't implement these projects directly. CBOs carry them out. We have a partnership with ROPPA to implement microprojects in the areas of our intervention in the member states. And we work on assisted natural regeneration also.'

**Dr. Fadel Ndiame,** Vice President for Policy at the Alliance for Green Revolution in Africa (AGRA), representing Dr. Agnes Kalibata, President of AGRA.

**Dr. Ndiame** gave brief remarks in support of the Conference objectives.

**Mr. Aboubacar Koulibaly,** Resident Representative, United Nations Development Programme, Mali, representing Mr. Achim Steiner, Administrator, UNDP.

Mr. Koulibaly expressed the gratitude of Mr. Steiner for this initiative, and that he is monitoring this conference. He said that 'the narrative on the Sahel is seen in a negative light – and the book Africanistan gives us a signal. It is development or jihad. The narrative on the Sahel should be made a positive one. This is one of the regions of the world where the agricultural lands are the widest in extent. Burkina Faso and Mali are countries with huge energy potential. The narrative should be seen from this perspective.'

Yes. There is great potential. But as Norman Borlaug, Nobel Peace Prize winner for his work to launch the Green Revolution, used to say 'you can't eat potential.'

'Mdme Sakina is doing extraordinary things. UNDP is identifying these things, putting them into the government policies, and scaling them up. The time is right to rethink some approaches. The core of the SDGs in agenda 2030 and agenda 2063 have a core principle of leaving no one behind. They deserve to be supported. We must think global. We should know the global issues, but we must act locally. I'd like to thank the organizers. There is a big problem with these meetings. We meet and we don't follow up. We need to scale up for wider impacts.'





#### Video message from Jose Graziano Da Silva, FAO Director-General

'Food security challenges are persistent and protracted in Sahel and SSA. Conflict and extreme climate are the driving forces. After 2015 we have noted the prevalence of hunger in Sub-Saharan Africa. This does not have to happen. Political will and effective partnerships have successfully defeated hunger.'

'One experience of success is from Brazil. It has eliminated extreme hunger in less than a decade. There is a flagship project that is called '1 million Cisterns in the Sahel'. Cisterns are an ancient form of providing rainwater: A simple and cost-effective solution for providing water and they improve rural women's well-being. From these success stories we draw some useful lessons.'

'Some African countries have designed encouraging progress. FAO calls for integrating peacebuilding efforts with sustainable development. We can be more effective in addressing the challenges of hunger, climate change, and youth unemployment. There is a clear financial needs gap to be solved. The UN system is revamping its appeals for the Sahel to be at the top of the international agenda.'

**Mr. Lisandro Martin**, Director for the West and Central Africa Region, IFAD, representing Mr. Gilbert Houngbo, President of IFAD.

Mr. Martin noted that IFAD works like a bank, making loans and grants to governments. The Sahel is the region with the highest rate of return on investments. The average yield of rice in Mauritania is now 5 tons per hectare. Meanwhile, 65% of women in Burkina Faso and Chad are involved in agriculture and 75% of the population of the Sahel is below 35 years of age.'

'IFAD is now moving toward a more program-based approach. The need is to work in partnerships. The Rome-based agencies are working together on a joint action plan for the Sahel. They don't work with a multiplicity of factors. We need to be focused. We have representatives from all sectors here. Let's emphasize the role of governments. And make sure they have the right skills.'





**M. Jean-Marc Chataigner**, Special envoy for the Sahel, France.

'As has been said by the previous panelists, in the Sahel we are facing challenges that are very impressive. Millions of youth are coming on to the employment market. Farmers and livestock breeders are very sensitive to the environment and to the threat of soil degradation.'

'Around the globe there have been agricultural revolutions such as in Europe and the United States. The Sahel must go directly from the preindustrial to the post-industrial era. But in Niger, for example, half of the children don't go to school.'

'We do see some amazing initiatives from the local level, for example in agroecology. Farmers' organizations, youth, and women's movements are strengthening. That is happening. We have huge human wealth in the region. We must be able to support these initiatives.'

'We are all doing small initiatives, but we need to move to upscaling. From the French part, the Sahel Alliance has been implementing this approach since 2017. We are trying to have outcomes in the most fragile and remote areas. Development and security must go hand in hand.'

**Mr. Heiko Warnken**, Ministry of Cooperation and Development of Germany (BMZ).

Mr. Warken noted that 'Germany through BMZ is the second largest investor to the Sahel after USAID. We are investing \$1.5 billion per year. We heard so many brilliant examples from Dennis Garrity at the beginning of the session. We have to join forces. We have to be engaged in all the different areas. Dennis was talking about population dynamics. We need to think holistically. We have to close the financial gap. We need to influence your political leaders and to have the support of your leaders and political elite. This influencing is also a part of our job. We are completely open to joining forces.'





**Mdme Anne Williams,** USAID Mission Director for Mali.

Ms. Williams congratulated ICRAF, World Vision and others for hosting this event. She said that she was glad to see so many people expressing their interest in beating famine and regreening the Sahel. 'I have heard about land security, job creation, and women's involvement. Everyone is right in saying that. And I am happy to be listening to all these panels, starting with Ms. Sakina. There are many good examples from across the world. How we can upscale all these good ideas? USAID is supporting agricultural lands, and inputs and outputs, the development of pastoralism and rangeland management, and the improvement of degraded lands.' She encouraged the conference to translate all of these initiatives into impact in cooperation with the communities.

#### **CONFERENCE CORE ORGANIZING TEAM**

- Dennis Garrity, Chair, Conference Organizing Committee
- Saidou Sabre, World Vision
- Ademonia Djalal Arinloye, World Agroforestry Centre (ICRAF)

#### **FACILITATION TEAM**

- Constance Neely, World Agroforestry Centre
- Mieke Bourne, World Agroforestry Centre
- Nora Berrahmouni, FAO
- Mounkeila Goumandakoye, Ministry of Rural Development, Niger





# Session 1: Tracking the spread: Tools and systems for monitoring the spread of FMNR & land restoration successes

#### **Facilitator and Speakers**

- Chris Armitage, Global EverGreening Alliance (GEA)
- Sebastian Mathews, GEA
- Salima Mahamoudou, World Resources Institute (WRI)
- Faustine Zoveda, FAO
- Peter Alele, CI/Vital Signs
- Jacob Wambaya, CRIFSUP
- David Smetana, ESRI

#### Abstract

This session explored and showcased some of the most promising tools and systems for monitoring the spread of FMNR and land restoration successes. Speakers provided insights into the requirements of various interest groups and conventions, the ways in which tools and systems can be applied across different contexts and at different scales, and the ways in which data can be most appropriately captured and verified, both remotely and at the field-level.

The session also explored the constraints, challenges and trade-offs associated with developing approaches that can be consistently applied across diverse contexts, the challenges associated with consolidating sensitive project data from a variety of actors spanning multiple sectors, and the innovative frameworks and technologies that are emerging to address these challenges.





# Session 2: Value chains and business development in tree-based systems

#### **Facilitator and Speakers**

- Jean-Marc Garreau, SOS SAHEL International, France
- Colonel Gora Ndiaye, Former Inspector of waters and forests, Region of Louga, Senegal
- Ms. Adeline Traore, Shea Products Union, (UGPPK) Houet, Burkina Faso
- Mr. Ahmat Agala, Focal Point Gum Arabic, Department of the Environment, Water and Fishing, Chad

#### Abstract

Agroforestry systems provide products sought on national and international markets. The development of value chains requires improving all stages from production to processing and marketing, without omitting the resource management and the organization of producers. From these three examples, SOS SAHEL illustrated the complexity of these value chains, their great potential for development, and their multiple benefits. Examples:

- The band of filao in Senegal to protect the coastline from coastal erosion. The industry that is regulated by the State is beneficial to women's groups.
- Shea butter in Burkina Faso has allowed the creation of a company completely run by women making high-quality shea butter, including a portion exported in organic quality.
- Production of gum Arabic in Chad mobilized a growing number of producers and fits into a complex multisectoral vision of rural development.







#### **Main Points of the Session**

Based on three examples drawn from field projects, SOS SAHEL illustrates the complexity of these value chains as well as their great potential for development and their multiple social, economic and environmental benefits.

- Colonel Gora Ndiaye, former Inspector of Water and Forests of Senegal presented the importance to protect the coastline from coastal erosion and the Niayes coastal plain from wind erosion. The State has delegated the exploitation and management of the forest to local communities and groups. The market gardening and forestry groups derive a range of income and benefits from this, particularly for their market gardening activities and for the development of villages. The Niayes market gardeners' union produces more than a third of the national production.
- Ms. Adjara Tiemtore, Public Relations Manager of the Union des Groupements des Productrices de Produits du Karité (UGPPK) in the Houet region of Burkina Faso, recounted how the women organized themselves to create a business producing shea products, a large tree that grows naturally in the Sahel. The company, run entirely by women, produces high-quality shea butter, half of which is exported in organic quality. The Union supports 5,000 women who are now financially self-sufficient. In a short film, a woman testifies how the union has enabled her to take charge of her children's schooling and to no longer have any food problems.
- Mr. Agala, Gum Arabic Focal Point at the Ministry of Environment, Water and Fisheries of Chad, pointed out that the gum Arabic industry supports more than 500,000 producers in Chad and is Chad's third largest export sector. Work on the sector's performance began by improving production with 28,000 producers, forest and land management, and then by coordinating the various actors that make up the sector, from production in very isolated villages, to export. Further, the growth of the sector must be based on a coherent vision of the multiple functions of acacia forests and gum production in rural development.



#### Major Insights from the Session

The session highlighted common points between the different experiences.

The experiences need to be supported by the public authorities, on the one hand to enable them to work within a favorable political and legislative framework, and on the other hand to support the investments necessary for the development of these sectors. In particular, farmers are asking for better support for resource protection, storage, and production processing at the national level.

None of the commodity chains operate in isolation. The forestry exploitation of the filao is closely linked to largescale market gardening. The shea parks are in agricultural areas, the management of the resource is linked to the management of domestic energy. The exploitation of gum arabic is a seasonal activity complementary to agricultural activities. Gum trees are exploited by livestock breeders.

Women play a major role in each of the three value chains. They occupy an important part of the value chain, and often the part that is the least remunerative. The value chains are becoming more important as women gain autonomy, organization and leadership.

There are many local initiatives and producers that are rapidly changing their practices. But these developments remain limited due to the lack of modest financing.

## Recommendations for Specific Actions to Accelerate Scaling Up

Recommendations to Governments:

- 1. States should strengthen mechanisms for multisectoral planning and action, and design value chains in an integrated approach between agriculture, livestock, forestry, and the environment in general.
- 2. To accelerate the transformation of the Sahel, the States and their technical and financial partners must set up mechanisms for financing local initiatives.
- 3. States, local authorities, and development partners must support women as a priority and invest much more in strengthening their organizational capacities and leadership.





## Session 3: (Building up) evidence on economic benefits from agroforestry and Farmer Managed Natural Regeneration (FMNR)

#### **Facilitator and Speakers**

- Silke Schwedes, GIZ (Initiative ELD)
- Amadou Tougiani Abasse, INRAN Maradi
- Vanja Westerberg, ALTUS Impact
- Salifou Nouhou Jangorzo, Université de Dan Dicko Dankoulodo, Maradi
- Chris Reij, World Resources Institute

#### Abstract

The establishment of SDG 15, as well as farreaching commitments on the national and international level to take action, reflect growing concerns about ongoing land degradation trends and loss of biodiversity. Initiatives like 'The Economics of Ecosystems and Biodiversity (TEEB)' and 'The Economics of Land Degradation (ELD)' drive the attention of political decision-makers, the private sector and civil society towards the loss of ecosystem services and their negative economic consequences, and at the same time highlighting the benefits of sustainable land management. Unsustainable agricultural practices are amongst the key drivers of land degradation, accelerated soil erosion, deforestation and loss of soil fertility. Agroforestry can be one of the key solutions towards the development of climate-resilient, diverse and sustainable agricultural systems, which provide multiple benefits. The session highlighted results from research on economic benefits, and undertook a needs assessment regarding further evidence (or to more effectively communicate existing evidence). Results from several case studies with emphasis on West Africa (Niger, Mali, and Senegal) were discussed.







#### **Summary of Presentations**

Dr. Vanja Westerberg presented the results from an ELD study in the Mopti region of Mali, which was realized in 2014. The study highlighted the potential co-benefits of agroforestry systems which associate Faidherbia Albida with millet. The study base is an ex-ante evaluation and showed that, based on a 20-year investment scenario, a benefit of 6 FCFA for each FCFA invested are achieved; through improved availability of fuelwood, animal fodder, nitrogen fixation and soil moisture. Accounting furthermore for carbon sequestration and groundwater percolation, the benefit-cost ratio to society was as high as 30. The study can be downloaded from the ELD's website: www.eld-initiative.org.

Dr. Salifou Nouhou Jangorzo presented the preliminary results of an ELD study undertaken in 2018 in the Maradi region on the economic benefits of FMNR. The study is a comparative analysis of two sites (without FMNR and with FMNR over 5 years), and it included a projection into the future with a time horizon of 20 years. The study showed the major advantages that the systems adopting FMNR have in favor of the ones without. Harvests from agricultural crops increased (12% maize, 7% sorghum and 3% niébé/per year). People observed an increased availability of wood, construction materials and pharmaceutical products. Only non-timber forest products for consumption and animal fodder are reduced (or not used anymore). Overall, the multiple benefits gained from FMNR convinced people in investing more in regulatory and supportive environmental services as well (CO2 reduction, flood control and infiltrations). Within the study framework, the willingness to pay was assessed, and added to the economic analysis. The study showed that FMNR, which is very cost-effective, has an investment return of more than 3000% after 25 years, when accounting for all environmental services (total value). The study was published later in the year on the website of the ELD Initiative.



Joachim Binam presented the results of an evaluation of potential benefits from FMNR on the livelihood systems of rural households. The study, which had been commissioned by ICRAF, was undertaken in four Sahelian countries in 2014 (Burkina Faso, Mali, Niger and Senegal). More than 1000 households were taken into account. The results showed that non-timber forest products like Karité or Faidherbia offer different products of important value for the households. However, direct monetary gains from selling products remain relatively weak due to the markets for nontimber forest products not being well-established. The presence of fertilizing trees within the crop fields had positive effects on the amounts harvested (15 to 30% more). The study showed that direct and indirect benefits from FMNR on rural households are significant. Agroforestry products also play an important role in diversifying nutrition and improving the nutrition status of the respective country. The study can be downloaded on the internet here.

The questions clarified, amongst others, that further studies concerning species other than F. albida are currently undertaken. Furthermore, a discussion on the possibilities of integration versus conflicts between farmers and herders took place (pruning of branches – fodder production). Regarding the evaluations themselves, it was recommended to also consider dung (contribution of animals to soil fertilization), pollination flows, birds as well as dust into the accounts, but all these aspects are quite difficult to capture. The audience also requested a definition of FMNR, especially regarding the desired tree density.

Definitions on FMNR can be found at the <u>FMNR</u> <u>Manual</u> by the FMNR Hub at World Vision.







#### Key Insights Emerging from the Session

- The case studies which have been presented demonstrated the economic and sociocultural benefits of FMNR and agroforestry to influence political decision-makers.
- Based on the multiple ecosystem services, which can be gained from FMNR, this technology already generates economic benefits after very few years.
- A principal demotivating factor is the legal framework regarding tree property.
- It was recommended to create a monitoring center for FMNR in the subregion.

## Recommendations for Specific Actions to Accelerate Scaling

- Change the legal framework to allow ownership of trees and thereby the provision of ecosystem service.
- Diversify FMNR systems with more species.
- Disseminate technologies which allow for integral management of FMNR.
- Carry on with initiatives on installing monitoring centers on FMNR and regreening.
- Establish public-private partnerships with communities in order to upscale sustainable land management.



## Session 4: Investing for rangelands restoration: Challenges and implication for food and nutritional security

#### **Facilitator and Speakers**

Five steps punctuated the session, which was facilitated by a moderator and three panelists.

- Moderator: Razingrim Ouédraogo, IUCN
- Gilles Vias, Directeur Pays (Mali), Vétérinaires Sans Frontières-Belgique
- Le Come, Catherine, SNV, Global
- Livestock Coordinator, STAMP & MODHEM Project Manager
- Maty Ba Diao, Coordonatrice Régionale du PRAPS/CILSS

Note-taking and reporting was facilitated by **Adoulaye Moussa Diarra**, Wold Vision, ECO-Agric.

#### Abstract

Rangeland ecosystems dominate many West African countries, and livestock farming accounts for around 40% of agricultural GDP. Rangelands are an important source of food and income for pastoral communities and play a critical role in climate change mitigation and biodiversity conservation. However, more than a third of rangelands are affected by land degradation as a result of overexploitation and mismanagement of resources. These pressures are driven by numerous factors, including weak land tenure, land grabbing, and conflicts with agriculture and mining. Rangeland degradation contributes in turn to greater poverty and instability in the region and is a factor in outmigration. Restoration of rangeland landscapes brings multiple social, economic, and environmental benefits. Global attention to landscape restoration is currently high, as shown by commitments to the AFR100 initiative and the Bonn Challenge. However, rangelands are poorly reflected in current restoration initiatives and commitments. This is against the spirit of such initiatives and is contrary to the principles of Land Degradation Neutrality, as laid down by the UNCCD.

This session raised public awareness on the benefits of rangelands and the opportunities for rangeland restoration. It examined rangeland restoration approaches, particularly through support for sustainable pastoralism. The event concluded with a discussion on tactics for raising rangeland restoration in global and national policy dialogue.





#### **Summary of Main Points**

- The first stage consisted of an introduction that illustrated the importance and beauty of the landscapes of the livestock routes. However, these landscapes are confronted with climatic hazards, overexploitation, poor management of resources and land degradation. All this leads to the decline of ecosystem services provided by rangeland ecosystems.
- The second stage of the session examined the efforts made in recent years to strengthen pastoralism in West Africa. Panelist Maty Ba Diao, Regional Coordinator of PRAPS/CILSS, helped to save this step through a presentation on regional actions to strengthen pastoralism in West Africa: analysis of progress and gaps.
- The third stage was a reflection on Natural Resource Management and Food Security of Vulnerable Households in the Sahel. This was facilitated by Gilles VIAS FRANCK, Country Director (Mali), Vétérinaires Sans Frontières-Belgium.
- The fourth stage was the sharing of successful experiences of civil society (NGO, CBO) private collaboration to improve the resilience of livestock keepers to climate change. This was facilitated by Catherine Le Come, STAMP Project Coordinator, SNV.
- The last and fifth stage was a Q&A, including contributions to strengthening rangeland management and increasing the resilience of local communities including pastoralists. There were also interventions on how to promote rangeland restoration and its prioritization in national and global policies and dialogues.





#### Major Insights from the Session

- Pastoralism is a land use system that contributes to nature conservation. It valorizes marginal lands with very restrictive agroclimatic conditions.
- There is a growing political will to promote pastoralism (political and regulatory framework) however this remains insufficient to effectively strengthen the scaling up of good practices in sustainable land management in rangelands and the development of sustainable pastoralism. This is a weakness in the implementation of policies.
- There is the emergence of a pastoral civil society that is becoming increasingly strong and that needs to be encouraged and strengthened especially in terms of coordination, strengthening of negotiation, and leadership capacities.
- A commitment of actors (Governments, NGOs, International Organizations, Research Institutes, etc.) is already underway and working towards the proclamation of an International Year of Rangelands and Pastoralists, anything that will increase the commitment at the global level for the restoration of rangelands and the resilience of pastoral communities.
- Global attention to landscape restoration is currently high, as shown by the commitments made to the AFR100 initiative and the Bonn Challenge, etc. However, rangelands are poorly reflected in current restoration initiatives and commitments.

- Insufficient investment. Investment for rangeland restoration and the promotion of sustainable pastoralism should be prioritized in national, regional and global investment plans.
- Nowadays the use of communication tools such as the telephone is part of the daily life of the communities. Thanks to these tools, it is possible to strongly contribute to the fight against land degradation in rangelands, conflicts and also increase the resilience of communities, especially pastoralist communities.



## Recommendations for Specific Actions to Accelerate Scaling Up

- Strengthen the implementation of rangeland policies and coordinate intervention mechanisms while putting communities at the center of dialogue and consultation mechanisms.
- Increase investment in support of sustainable rangeland management and sustainable pastoralism.
- To mobilize and accelerate the process for the proclamation of an International Year of Rangelands and Pastoralists by the United Nations.
- Strengthen the implementation of pastoral land policies to protect pastoral lands and rangelands, and facilitate and strengthen pastoral mobility.
- Scale up good practices that have shown tangible evidence of rangeland restoration and the resilience of pastoral communities to climate change through structuring projects and programs.



Session 5: Capacity building for scaling up landscape restoration the role of a leadership academy, online training and other tools

#### **Facilitator and Speakers**

- Robert Winterbottom, GEA
- Dennis Garrity, GEA
- Karin Bucht, ELTI, Yale University
- Sarah McKenzie, FMNR Hub, World Vision
- Mathieu Ouedraogo, MARP Network
- Abasse Tougiani, INRA, Niger

#### Abstract

This session explored the needs and opportunities for capacity building to strengthen and accelerate the scaling up of landscape restoration, with a focus on facilitating and accelerating the widespread adoption of FMNR. The session began with a presentation on the mission, framework for operation and recent developments related to the formal establishment of the EverGreening Africa Academy. The Academy aims to strengthen the technical capacity of early to mid-career professionals working in forestry, agriculture, community development and related sectors with a role to play in implementing the scaling up of evergreening practices such as FMNR.

The session also included two presentations to present recent experiences with online learning, including 1) the proven approaches and established networks of the Environmental Leadership and Training Initiative (ELTI) managed by the Yale University School of Forestry and Environmental Studies, and 2) online training on FMNR provided through the FMNR Hub and supporting training programs of World Vision Australia.

The session concluded with a panel of practitioners and resource persons sharing their ideas about the needs and opportunities for capacity building initiatives that could play a major role in accelerating the widespread adoption and scaling up of FMNR.







#### **Session Description:**

<u>Purpose</u>: to review the role of a proposed EverGreening Africa Leadership Academy, online training and other tools to build capacity and accelerate the scaling up of landscape restoration.

<u>Dr. Dennis Garrity</u>, Global Evergreening Alliance presented the goals, approach and planned activities, partners and anticipated clients of the Evergreening Africa Academy (EAA).

<u>Karin Bucht</u>, Yale University, School of Forestry and Environmental Studies Environmental Leadership and Training Initiative (ELTI) discussed the scope and activities of ELTI and examples of the role of online training programs aimed at empowering people to achieve restoration successes.

<u>Sarah McKenzie</u>, FMNR Online Training and Knowledge Advisor, World Vision Australia reviewed recent experiences with online training on FMNR offered through the FMNR Hub and related activities to support the scaling up of FMNR and evergreening.

<u>Sadou Doumbo</u>, OASIS Program, University of California, Berkeley, underscored the importance of integrating a consideration of population growth and the importance of family planning in capacity building programs.

A panel with representatives of government technical departments (Dr. Bing Christophe, Ministry of Environment of Cameroun) and NGO field practitioners (Mathieu Ouedraogo, Reseau MARP, Burkina Faso) commented on the presentations and shared their perspectives on key capacity building needs, constraints, and opportunities to accelerate the scaling up of FMNR and related restoration practices.



#### Key Insights Emerging from the Session

- Clear need for continued strengthening and expansion of capacity building activities.
- Opportunity to leverage online training courses and other capacity building tools and initiatives developed to date by evergreening partners.
- There is a definite role for online training, and we have learned much about how to overcome the challenges of internet connectivity, working in multiple languages, targeting of specific user groups, adaptation of content, and mobilizing partnerships.

#### Recommendations for Specific Actions to Accelerate Scaling

- To reach the needed scale and extent of capacity building through online training, workshops and other training activities, it will be important to make the most of opportunities to work with local schools, universities and other training partners and development programs, and to implement a training-of-trainers approach.
- Ensure that awareness raising encompasses the broader context and sustainable development challenges that must be addressed in conjunction with concerted efforts to scale up restoration, including attention to population growth and food security.
- Make provision for ongoing support to training participants both during training courses and after course completion, including continued assistance with peerto-peer learning.




# Session 6: Training on using economic valuation to inform integrated planning for ecosystem management and influence policy

# **Facilitator and Speakers**

- Chris Magero, International Union for Conservation of Nature (IUCN)
- Dr. Vanja Westerberg, ELD
- Fayçal Siddikou Boureima, Global Convergence, IUCN consultant
- Sareme Gebre, IUCN Business and Biodiversity Programme
- Speaker from the Global Mechanism, UNCCD

# Abstract

The global, national and local benefits to be expected from the Great Green Wall (GGW) initiative are manifold, including higher land productivity and biodiversity, reduced greenhouse gas emissions, improved adaptation options and capacities.

The cultural and socio-economic weaknesses of private sector engagement in the GGW include sparse knowledge of the values of dryland ecosystems. Livelihoods in the Sahel and the GGW region are largely dependent on the landscape which is the heart of ecosystem services that support livestock production, crops, energy and income within households. However, the available knowledge on ecosystem services values is inadequate and highly disjointed, without any synthesis elaborating on the returns on investment in these services.

This training workshop aimed to increase the capacities of stakeholders in identifying investment priorities and attracting private sector actors by "enabling investments" for the implementation of sustainable land management policies, and the scaling up of good practices.







# Key Insights Emerging from the Session

- Soil degradation is ubiquitous around the globe affecting 40% of pastures, 12% of agricultural land and 26% of forests.
- The cost of land degradation impacts is not being internalized, leading to overexploitation of natural resources.
- Valuation of ecosystem services provides an opportunity to reveal the cost and economic impact of land degradation and benefits that can accrue from sustainable land management.
- The benefits of sustainable land management are multiple and include soil fertility, improved water retention capacity of soils, improved soil health, provides sustainable pasture for livestock, engaged stakeholders including local authorities and land managers.
- The challenges for accessing the multiple benefits of ecosystem services in the Sahel include:
  - Land problems including land tenure, land use conflicts, and lack of appropriate legislation on land among others.
  - Lack of appropriate policies that ensure the engagement of all stakeholders, encourage enterprises that are environmentally and socially responsible and lack of financing activities.
  - The complexity of sustainable land management, including the various technical skill needed for adoption in each context, tools, and investment to encourage the reversal of land degradation.
- To realize land restoration, stakeholders must be engaged at different levels. First is action at the individual's level and within families. Next, communities have to take action through integrating restoration action into community development plans and implementation of the relevant actions. The third intervention involves the state, to create an enabling environment for the realization of restoration.
- These groups can intervene by participating in land restoration activities, sharing experiences in restoration, identifying community champions who can drive the restoration agenda, while the state can build capacity, ensure compliance and support communities with technical skills.



#### **Recommendations for Specific Actions to Accelerate Scaling**

- Ecosystem Services Assessment and Valuation is a very useful tool; not only for realizing the economic cost of land degradation and demonstrating the value of land restoration, but supporting private sector investment in sustainable land management within the Great Green Wall countries and the Sahel.
- Multiple benefits from ecosystem services can only be realized by demonstrating the value of ecosystems in the Great Green Wall and subsequently presenting investment options in pastoralism and agriculture that improve ecosystem health and restores land.
- Land degradation neutrality in the GGW can only be attained through the collaboration, actions and engagement of multiple stakeholders, starting with individuals (farmers and pastoralists), communities and governments.





# Session 7: Improved soils for improved lives – FMNR/agroforestry contributes to better soils

### **Session Description and Speakers:**

- 1. **Bationo André**, IFDC, Lead of the session Presentation title: Soil organic carbon dynamics, functions and management in the West African agro-ecosystems
- 2. **Bayala Jules,** ICRAF, Presenter Presentation title: Regenerated trees in farmers' fields increase soil carbon across the Sahel
- Bado Vincent, ICRISAT, Presenter (presentation delivered by Bayala Jules on his behalf as he was not able to come) Presentation title: Sustainable management of soils and lands in WAS: The role of Agroforestry
- Diedhou Ibrahima, University of Thies, Senegal, Presenter Presentation title: The Remarkable Optimized Shrub-intercropping System (OSS) for Improved Yields, Landscape Regeneration, and Beating Famine in the Sahel
- Singh Virendra Pal, CIAT & Global EverGreening Alliance, Presenter Presentation title: Neem (Azadirachta indica) Agroforestry in India: A solution to many problems
- 6. Wigelt Jes, TMG research, Presenter

### Key Insights Emerging from the Session:

- Carbon has three main functions

   (biological, physical and chemical) which
   can decline quickly when soils are cultivated
   without actions to replenish it.
   Woody species in the farmlands play a
   critical role in reducing soil erosion and
   sequestering carbon in the soils.
   Organic amendments such as manure,
   crop residues, and compost can drastically
   increase yield but are available in limited
   quantities. FMNR can contribute to
   increasing the biomass source of organic
   matter.
- 4. There are new rapid methods to produce compost and machinery to chop crop residues for composting that need to be widely promoted for increasing the availability of organic matter.
- 5. There is a need to combine both organic and inorganic fertilizers for sustainable crop production.
- 6. The use of neem oil for urea coating improves nitrogen use efficiency and reduces the cost of nitrogen fertilizer.





# Recommendations for Specific Actions to Accelerate Scaling

We recommend:

- A network of long-term trials on the impacts of FMNR in sustainable land management and crop production.
- The use of neem oil for urea coating as it is done in India to increase the efficiency of nitrogen fertilizer.
- To promote the use of organic soil amendments together with inorganic fertilizers.





# Session 8: Restoring drylands and empowering smallholder farmers: Lessons from the Drylands Development Programme

## Moderator and Speakers

Moderator: Dr. Patrice Savadogo, World Agroforestry (ICRAF)

Name	Position	Presentation title
Dr Phosiso Sola	DryDev Coordinator, Eastern Africa, World Agroforestry (ICRAF)	Drylands Development Programme (DryDev) scope, approaches, achievements and lessons,
Mr. Assefa Tofu,	DryDev Program Manager World Vision, Ethiopia	FMNR for land restoration and resilience building in Ethiopia
Mrs. Jedidah Mwendwa	Policy & Advocacy – Livelihood, DryDev Programme, World Vision, Kenya	Accelerating impact through farmer to farmer extension; A case study in Makueni, Kitui and Machakos Counties
Mrs. Salamatou Bagnou	DryDev Country Coordinator CARE, Niger	Greening drylands and empowering small holder farmers: lessons from the Drylands Development Programme in Burkina Faso, Mali and Niger (Video)
Mr. Bianivo Mounkoro	DryDev Country Coordinator Sahel Eco, Mali	
Mr. Dabre Abdoulaye	DryDev Focal Point, SNV Burkina Faso	
Mr. Gango Abdoulaye	DryDev Focal Point, Tree Aid	
Dr. George Okwach	DryDev Programme Manager, World Agroforestry (ICRAF)	Drylands Development Programme (DryDev): towards the programme close, and future outlook

### Panelists

- Professor Tidjani Amadou
   Didier, Faculty of Agronomy,
   University of Niamey, Niger
- Mr. Bougouna Sogoba, Director of AMEDD, Mali
- Dr. Jonathan Muriuki, World Agroforestry, Kenya
- Mr. Damango Moumouni, Representative of Nederland Embassy in Mali

# Rapporteur

Dr. Catherine Dembele



#### Abstract

The Drylands Development Programme (DryDev) is a multisectoral initiative that began in 2014 and seeks to transform rural livelihoods of smallholder farmers in five drylands countries of the Sahel and the Horn of Africa. DryDev is a Dutch-funded, six-year programme implemented by ICRAF and a consortium of development partners in Ethiopia, Kenya, Burkina Faso, Mali and Niger. It is a multisectoral initiative that began in 2013 and seeks to transform rural livelihoods of smallholder farmers in the five target drylands countries.

Significant progress has been made, and numerous lessons and evidence have been generated in enhancing food and water security, economic development and environmental sustainability. This session shared experiences, presented evidence and facilitated learning among policy-makers, scientists, extension agents and farmers. It started with a brief keynote address on programme approaches and outcomes, followed by case studies on the integration of water management and landscape restoration, and it wrapped up with a reflection by panelists on the deliberations. They drew on their knowledge and experience to highlight further gaps in integrating water management in forest and land restoration strategies and initiatives.

#### **Main Points of the Session**

The significant progress that has been made, and numerous lessons and evidence generated in enhancing food and water security, economic development and environmental sustainability were shared through oral presentations and a video. More than 70 participants, including policy-makers, scientists, extension agents and farmers, attended the DryDev session.

The presentation started with a brief overview of the programme approaches and outcomes, followed by case studies on empowering smallholder farmers and creating resilience through landscape restoration, climate-smart agricultural production and marketing, and institutional development. A summary of the achievement of the Sahelian countries was presented through a video.

The discussion and the thought of four panelists highlighted that the success of DryDev programme is essentially due to sustainable approaches adopted by the team. These approaches integrated several various options allowing farmers to choose according to their specific context (social, economic, etc.), the concept of co-learning and linking projects to national priorities, processes and targets.

The DryDev team was also advised to relate not only the successes but also the failures as lessons learned, and to look for the sustainability of the achievements so as to avoid losing the gains that have been made and repeating the same work within the same sites a few years down the line. The team was also encouraged to develop a synergy with other stakeholders, projects and programs in the countries and give special attention to policy, governance, rights and land tenure to ensure the sustainability of interventions for scaling DryDev lessons.





#### Key Insights Emerging from the Session

- The ICRAF-led DryDev programme has been a success story that can provide good lessons for other regional projects and programmes.
- The success is due to the good approaches adopted including; i) integration of several various options and building on farmers' priorities, ii) considering watershed and larger landscape area for project implementation, and iii) colearning allowing farmers to learn from farmers, leading to farmers to farmers extension, farmers to learn from researchers and vice-versa.
- Linking projects to national priorities, processes and targets.
- Various ideas of scaling out were outlined and discussed.

# Recommendations for Specific Actions to Accelerate Scaling

- Ensure there are sustainability building blocks to avoid losing the success and repeating the same work within the same sites a few years down the line.
- Developing synergies with other stakeholders, projects and programs in the countries is important.
- Give special attention to policy, governance, rights and land tenure to ensure the sustainability of interventions.
- Ensure that the programme impacts are determined, quantified and tracked by the national systems and reports.





# Session 9: The role of mass media and communications in scaling up land restoration

## **Facilitator and Speakers**

- Christopher Reij, WRI
- Amadou Tangara, Tree Aid Mali
- Niels Dierckx, Program Direction, justdiggit.org
- Frithjof Finkbeiner, Plant-for-the-Planet
- The Network Institute of Free University, Amsterdam
- Antony Butts

# Abstract

The media have proven to be an exceptionally effective vehicle for the massive scaling up of simple, low-cost practices for land restoration such as FMNR. This session discussed a number of experiences in deploying media solutions for this purpose. These included the experiences of Tree Aid Mali and Farm Radio Mali; work on linking ICT, mobile phones and radio in Mali by the Network Institute of Vrije Universiteit Amsterdam; and innovative communication and extension work in promoting FMNR in the Dodoma region of Tanzania by JustDiggit.

# Key Insights Emerging from the Session

### Justdiggit.org

- Awareness-raising by applying a broad spectrum of standard communication techniques to reach funders in Europe and farmers locally.
- Delivery channel partners with TV/radio stations and billboard owners can provide a platform free of charge. This reaches farmers and policy makers to build credibility and trust. Radio also to be leveraged as it reaches a wider number of rural audiences. Utilizing local opinion leaders and well-known figures can amplify messages.
- Using local media companies with expertise in communicating with local audiences.
- The use of engaging short films at screenings to boost awareness.





#### **Trees for Climate Justice**

- We must harness wealthy or influential figures to mobilise audiences.
- Promote Corporate Social Responsibility to corporations to offset their emissions.
- Build awareness of the benefits and simplicity of afforestation.
- How to mobilize people to plant trees
  - Visibility / publicity social media.

# Recommendations for Specific Actions to Accelerate Scaling

- We need to create cohesive campaigns between activists and those who are affected by activism, mainly the farmers and their communities.
- Capitalizing on familial and traditional influencers to trigger the new generation and carry the messages and practices of land restoration.





# Session 10: Connecting FMNR/Evergreen Agriculture practices to food relief programs

### **Facilitator and Speakers**

- **Tony Rinaudo**, World Vision Australia
- Cathy Watson & Clement Okia, World Agroforestry (ICRAF)
- Geoffrey Ocen Kotchwer, World Vision Uganda
- Christopher Hoffman, World Vision East Africa Regional Office
- Assefa Tofu, Project Manager, Dry Dev, Ethiopia. World Vision Ethiopia,
- Charles Otieno, Team Lead Technical Unit World Vision International

#### Abstract

An unprecedented 68.5 million people around the world have been forced from their homes. Among them are nearly 25.4 million refugees. (UNHCR, 2018). Many of these people are living in refugee camps and settlements, and they rely on local natural resources to one degree or another. One of the great impacts of camps and settlements is the harvesting of trees for fuel wood, construction, and the clearing of land for agriculture. In this way, refugees sometimes exert a heavy toll on the local environment, with long lasting negative impacts, affecting local populations and increasingly, discouraging host governments from opening their borders. This session explored current and possible future solutions and how to turn a crisis into an opportunity.





**The purpose** of the session was to showcase practical examples where FMNR/Evergreening Agriculture has been integrated into relief programming, highlighting difficulties encountered and how they were overcome and quantify some of the impacts.

### The session content included -

WV Ethiopia's experience through the DryDev program implemented at sub-watershed level, sequentially integrating Evergreen Agriculture using contextually appropriate techniques including physical soil and water conservation, FMNR, tree planting, water management, contextbased agricultural commodity production and value chain development. World Vision Somalia's experience in supporting FMNR and other NRM techniques was used to regenerate semi-arid landscapes in Somalia in a long term relief setting. West African experiences of using a food for work program relates to introducing FMNR into a whole region. If managed well, the best of a bad situation can be created through the targeted use of assistance for building capacity and realizing behavior change.

### Key Insights Emerging from the Session

- Importance of integrating humanitarian relief (when needed), with Natural Resource Management, improvement in agricultural and livestock husbandry systems and market linkages.
- Importance of mindset change (for both communities and change agents) as the foundation for sustainable development and graduation out of poverty.
- Crisis situations are tragic, but offer golden opportunities to bring about positive change at scale.
- Emphasis needs to be on empowerment and taking responsibility on the part of the beneficiary. Not dependency.
- Importance of creating an enabling environment that encourages continuation or interventions and sustainability beyond the relief period.





#### **Recommendations for Specific Actions to Accelerate Scaling**

- Funding for relief programs should include funds for NRM, crop and livestock improvement, value chain development, produce marketing and follow up beyond the relief delivery period.
- Focus on mindset change, empowerment, capacity building, creation of favorable policy environment and risk mitigation.
- Build local institutional capacity to continue and grow the activities commenced during the relief phase.





# Session 11: How to Massively Accelerate the Scaling Up of Land Restoration in the Sahel

## **Facilitator and Speakers**

- Susan Chomba, ICRAF
- Elvis Tangem, Africa Union Commission GGWIS
- Amaury Hoste, Delegation of the European Union in Mali
- Patrice Savadogo, ICRAF
- Diawary Bouare, Oxfam Mali
- Seyni K Traore, Direction Nationale Des Eaux et Forêts (DNEF), Mali
- Peter Alele, Conservation International
- Patrick Worms, ICRAF

# Abstract

Approximately 65% of the agricultural land in Sub-Saharan Africa is classified as degraded. African land degradation is estimated to cost US \$58 billion annually, while reducing the agricultural Gross Domestic Product by 3%. Recently, there has been a growing momentum towards reversing land degradation through large-scale restoration on the continent. For example, the Bonn Challenge promises to restore 150 million hectares by 2020; and 350 million hectares by 2030. Responding to the Bonn challenge, the African Union pledged to restore 100 million hectares by 2030. Other multilateral and bilateral initiatives, such as the Regreening Africa Programme, have since emerged.

There is a pressing need for scaling up solutions across the vast areas that remain degraded. So how do we consolidate and accelerate the ongoing initiatives and activities? How do we ensure land restoration is driven by and suited to local needs? That the reported outcomes and impacts are evidence-based? How do we ensure governments are making conducive policies, investments and citizen mobilization? And how do we mobilize funding and coordinate the diverse sets actors involved in regreening on the African continent?





This session brought together partners under the African Forest Landscape Restoration Initiative (AFR100), the Great Green Wall Initiative of the Sahel, and the Reversing Land Degradation in Africa by Scaling-up Evergreen Agriculture (Regreening Africa) Project, along with governments, farmer associations and funding agencies to discuss these pressing questions.

This session aimed to identify the fundamental drivers of scaling to help actors massively accelerate the regreening process in the Sahel, and Africa as a whole.

The speakers came from a diverse set of backgrounds and institutions which was a key factor for sharing different perspectives. These included scientists from World Agroforestry (Dr. Patrice Savadogo and Dr. Susan Chomba), Dr. Jes Weiglet, from TMG Research, Mr. Fofana Soumana, Representative of the Mali Government, International NGOs working in the Regreening Africa Programme, Oxfam country director in Mali, Mr. Diawary Boure, and a representative of Pan African initiatives on land restoration, Mr. Elvis Tangem, from the Great Green Wall Initiative. The vibrant discussions were facilitated by Mr. Patrick Worms of World Agroforestry (ICRAF) who is also the president of the European Agroforestry Federation.

#### Key Insights Emerging from the Session

There is no silver bullet to scaling. Land restoration is a complex process that requires the understanding of drivers of land degradation. These drivers are biophysical, socioeconomic and political. In the Sahel region, low precipitation and pastoral livelihoods may not be compatible with traditional tree planting approaches hence the need for FMNR, water harvesting technologies and other restoration practices. Climate-related risks such as droughts and flooding, conflicts, prohibitive policies on land and tree tenure, youth unemployment, gender inequality and migration are key factors that hinder land restoration. Land restoration must be structured in recognition of these factors if they are to be successful and sustainable.





- Accelerating land restoration requires building strategic partnerships, coordination and leveraging the unique strengths of various stakeholders (development partners, INGOs, CBOs and farmer associations, research institutions and government agencies), in order to reduce duplication and build synergies.
- There is a need for bottom-up participatory approaches at the local level. Investment in capacity development of local extension agents, facilitation and recognition of community leaders/champions of land restoration (men, women and youth) can play a big role in influencing other community members and creating a restoration movement from below.
- In our efforts to restore degraded lands, we must understand there is no one size fits all solution. There is no single tree that caters to all farmers' needs, no single practice/technology is sufficient to address all land restoration needs. We need to design land restoration approaches using a mix of different tree species, invest in water harvesting technologies and soil conservation practices in order to meet different needs of the farmers (social and economic); considering the biophysical characteristics of the land to be restored.
- Value chain development through improved harvesting technologies, processing and value addition of agroforestry products; and linking farmers to markets, provides economic benefits which serve as crucial incentives for land restoration.

Integrating research in development is the new paradigm shift to doing development differently. Research supports evidence-based decision making, planning and policy processes, helps to avoid repeating past mistakes and building on successes, and mitigates against unintended consequences. Most important, research helps us to document the impacts of land restoration initiatives beyond the "number of trees planted" or "size of the area restored". These impacts include transformed rural livelihoods and economies, improved nutrition of women and children, empowered local communities including women and youth, above and below ground carbon sequestered, improved soil properties such as infiltration, nutrients added, etc.



## Recommendations for Specific Actions to Accelerate Scaling

- Form a land restoration movement in each country through partnerships across governments, NGOs, CBOs, farmer associations and research institutions on land restoration in each country.
- Integrate women and youths in land restoration activities by ensuring they are represented in various committees, ensure their views and perspectives are heard and integrated in planning and implementation processes.
- Co-design land restoration activities with local communities and build incentives for scaling through value chain development.
- Ensure a diversity of tree species are used in land restoration and avoid promoting one or two species because this reduces genetic diversity, increases the risk of pest infestation and most importantly, the fact that no single tree species can meet all the needs of the farmers and restoration targets of the land in need of the same.
- Communicate ongoing land restoration efforts through various forms of media (e.g. community meetings in villages, churches and mosques, radio, printed material, television, social media, etc.) to influence others to join in land restoration efforts and make this a priority for Africa.





# Session 12. Agroecology in practice in the Sahel

#### **Facilitator and Speakers**

- Caterina Batello, Facilitator
- Makhfousse Sarr, FAO
- Nora Berrahmouni, FAO
- Amadou Allahoury, FAO, Mali
- Ibrahima Coulibaly, President, ROPPA
- Jules Bayala, ICRAF
- **Emile Frisson**, IPES Food
- Marie Kiebre Toe, Burkina Faso
- Khady Ndoye, Sénégal
- Johannes Goudjanou, Benin



## Abstract

In April 2018, FAO organized an international symposium with an objective for agroecology to move from dialogue to action at the regional and national levels. It provided an opportunity to share ideas and experiences, and to discuss policies and actions that would ensure that agroecology contributes to the achievement of the Sustainable Development Goals (SDGs) and supports family farming. In this perspective, FAO is part of a dynamic support for agroecology transition initiatives at national and regional levels to address the climate and food and nutrition security challenges. Agroecological approaches are a paradigm for sustainable agriculture, and they present a real alternative to reconcile productivity, environmental protection and social equity. The initiatives presented during the session focused on supporting the agricultural sector, a social and economic pillar of West African societies that accounts for 35% of the Gross Domestic Product and employs 65% of the active population.

# Key insights from the session

Holistic and inclusive development of land through agroecology is needed in order to support, enhance, capitalize on the knowledge, know-how, and skills for the future and to strengthen the coherence of advocacy and actions at the local, national and sub-regional levels.

# Recommendations for specific actions to accelerate scaling up

Strengthen partnership and alliance with ministries of agro-silvo-pastoral sectors to support the transition to diversified agroecological production systems, climate change mitigation and adaptation, while improving livelihoods, resilience and youth employment.



# Session 13. Strategies for empowering women and youth to engage in land restoration

#### **Facilitator and Speakers**

- Kadidia Cisse, CARE Mali
- Fatoumata Batta, ANSD, Burkina Faso
- Pierre Dembele, Executive Secretary, Sahel Eco
- Dan Banuoko, Program Director CIKOD, Northern Ghana



#### Abstract

An effective approach to scale out regreening, Natural Resource Management, and promotion of FMNR in the Sahelian countries of West Africa must empower both women and youth to engage and benefit from this process. The absence of gender aware and youth-sensitive strategies can significantly undermine efforts for land restoration and sustainable environmental management. While this insight is often acknowledged in theory, many initiatives to scale out FMNR and land restoration find it a challenge.

Major socio-cultural constraints inhibit the ability to engage both women and youth in household and community level decision-making. In many contexts, women's role in obtaining firewood, or youth's interest in earning money through charcoal production, or setting fires for hunting, or work in land preparation, have had detrimental effects. This session highlighted case studies from Burkina Faso, Mali and Northern Ghana in empowering and engaging women and youth and ensuring that they have a direct interest to adopt new Natural Resource Management and agroecological practices for regreening. These include:

1. The experience of the FFBS approach in the Pathways, Women and Agriculture project, **Pierre Diallo, CARE** 

2. Key Information and Principles of Good Practice for Women's Empowerment in Family and Community-Based Regreening Initiatives, **Fatoumata Batta, ANSD, Burkina Faso** 

3. Empowering women through awareness raising on ANR, strengthening the organization, processing and marketing of non-timber forest products by women: key lessons and principles of good practice, **Pierre Dembele, Executive Secretary, Sahel Eco** 

4, Strategies for Engaging Youth in Land Restoration and ANR at the Household and Community Level, **Dan Banuoko, Program Manager, CIKOD Northern Ghana** 



#### **Discussion Questions :**

- How can we bring about women and youth associations?
- CARE's field results in the practice of the FFBS approach
- The process of land allocation to women.
- What are the inputs from the state?
- What degree of empowerment of women is needed?
- Strategies for sustaining FMNR.
- Are the session documents exclusive to the Burkina Faso?
- Challenges of youth in Ghana.
- Youth engagement for the sustainability of our work.
- The opportunities for harnessing Africa's youthful population to address the agricultural sector's challenges.
- The risks of failure to engage youth in a timely manner.

#### Major Insights from the Session

- Local capacity building is essential.
- The importance of engaging men and boys to empower women and girls.
- Use of the media in the process of information and behavior change.
- The module is a systemic and gradual process walk according to the pace of your community.
- Engage ALL youth groups.
- Consistent self (institutional) reflection.
- Make it accessible for women.
- As the level of participation reaches empowerment levels, facilitator roles must be reduced.
- Capacity building of women on production techniques has greatly facilitated adoption at the household level.
- Women's involvement in the control of the means of production at the household level has been an important factor in improving their agricultural production and yields.

#### Recommendations for specific actions to accelerate scaling up

- Secure access to productive resources.
- Improve its participation in decision-making.
- Reduce inequalities.
- Support agents of change.
- Increase accessibility for women farmers, agricultural extension services, production resources and financial services.
- Involve more men in the process of empowering women in agriculture.





# Session 14. Case study: the experience of Sahel Eco in promoting FMNR in Mali

## **Facilitator and Speakers**

Pierre Dembele, Sahel Eco, Mali

## Abstract

Farmers in the arid areas of the Sahel in Mali face a number of challenges including food insecurity, loss of soil fertility, climate change, deforestation, and rural poverty. A number of good agroforestry practices, such as FMNR, and sustainable land and water management have been promoted by various stakeholders. They have had promising results in increasing vegetative cover and crop yields, and in restoring soils.

Several studies, and the testimonies of farmers, have revealed that FMNR makes it possible to increase agricultural yields. Many soils are poor and have low levels of organic matter, which means that even if farmers could afford to buy mineral fertilizers, their use would be inefficient. To improve the soil's ability to store moisture and retain nutrients, soil organic matter must be increased, but smallholder farmers generally do not have enough livestock to adequately fertilize their fields (5-10 tons of manure are usually needed per hectare). In such conditions, the best way to increase soil organic matter is to increase the density of trees in the field. Trees increase soil organic matter and they fix atmospheric nitrogen. N-fixing species such as Faidherbia albida, can double crop yields.

The increase in the number of trees on farms through FMNR also contributes to the production of firewood and reduces women's working time for firewood collection. FMNR increases community incomes through the sale of agricultural production, timber, fodder, edible leaves, and other products. There has also been an improvement in the production of aerial grazing for animals.

Despite these many advantages, there are still several constraints that hinder the widespread adoption of FMNR.





# Session 15: Unearthing synergies: land restoration and transforming pastoralist-farmer conflict

#### **Speakers:**

- Dr Alan Channer, Environment, Peacebuilding and Communications Specialist, GEA, London, UK
- Imam Dr Muhammad Ashafa & Pastor Dr James Wuye, Co-Executive Directors, Interfaith Mediation Centre, Kaduna, Nigeria
- Hartmut Behrens, Director of Projects on Climate Change Adaptation GIZ, Bamako, Mali
- Louise Helen Brown, Senior Climate Change Officer, African Development Bank, Abidjan, Ivory Coast
- Patrick Worms, Senior Science Policy Advisor, ICRAF Nairobi, Kenya
- Kelechi Eleanya, Yale University



An exploration of the potential synergies between land restoration, peace-building and climate change adaptation, with particular reference to resolving pastoralist-farmer conflict in the Sahel. Mobile pastoralists and sedentary farmers have co-existed peacefully in the Sahel for centuries. However, over recent decades, a combination of land degradation, climate change, population pressure and political manipulation have strained relations between them to the breaking point in many regions. Tens of thousands of people have been killed and hundreds of thousands displaced as a result of pastoralist-farmer conflict in Nigeria alone. The resulting insecurity hampers development, erodes governance and allows non-state armed actors to flourish. Forging synergies between land restoration and peace-building provides a key entry point to both reviving landscapes and restoring livelihoods in these adverse circumstances. Trees are vital to pastoralists and farmers alike, and collaboration in Farmer Managed and Pastoralist-assisted Natural Regeneration can confer a win-win-win for both communities and the environment. This session explored peace-building successes between pastoralists and farmers after lethal conflicts in Kaduna State, Nigeria, and sustainable land management successes, involving the reinvigoration of farmerpastoralist reciprocal ties, by the Barahogon Associations of Mali. Both of these initiatives are pioneering bottom-up approaches led by faith and traditional community leaders. Learning from the dynamics of each initiative will help generate land-peace programmes for scaling-up across the conflict-prone regions of the Sahel.





## Key Insights Emerging from the Session

- Conflicts triggered by land degradation and climate change require a twin remedy: mediation and land restoration. The two taken together are prerequisites for successful climate adaptation strategies in Sahelian regions affected by both insecurity and land degradation.
- Climate finance offers an important opportunity for investment in concurrent land restoration and peace-building.
- Addressing barriers to investment at the local level, sharing and replicating successes, and scaling up land restoration through results-based finance and engagement of the private sector will facilitate the flow of climate finance into communitybased restoration initiatives.
- Religious leaders in Africa are very well-placed to catalyze and spearhead social mobilization for large-scale land restoration, and deserve to be more involved in land restoration programmes.
- Spirituality remains a relatively untapped source of motivation to safeguard the natural environment in Africa.

#### Recommendations for Specific Actions to Accelerate Scaling

- Conceive and implement integrated land restoration and peace-building programmes in conflict prone regions of the Sahel.
- Identify and eliminate barriers at the local level for climate finance to support the scaling up of integrated land restoration and peace-building programmes.
- Integrate religious leaders into the planning and execution of land restoration and peace-building programmes in the Sahel.



# Session 16: Leveraging the policy enabling environment to support the scaling up of land restoration for food security

## **Facilitator and Speakers**

**Facilitator:** Dennis Garrity, Drylands Ambassador, UNCCD & Chair, GEA

# Panel 1

- Ambassador J M Chataignier, Special Envoy for the Sahel, French Cooperation
- Robert Guei, FAO Subregional Coordinator for West Africa
- Emily Frison, IPES Food
- Remi Hemeryck, SOS Sahel
- Mary Allen, Practical Action Bamako
- Razingrim Ouedraogo, IUCN
- Pascal Kabore, IFAD

### Panel 2

- Mr. Heiko Warnken, Ministry of Development Cooperation (BMZ), Germany
- Remi Hemryck, President, SOS Sahel
- Agnes Kalibata, President, AGRA
- Emile Frison, IPES Food
- Patrick Kipalu, Rights and Resources Initiative
- Fadel Ndiame, AGRA (absent)
- Rohini Cheturvedi, GEA, Tata Foundation
- Pal Singh, CIAT, GEA
- Patrick Kipalu, RRI
- Niek van Duivenbooden, PDIDS/EES







#### Abstract

Policy reform has been shown to be a crucial aspect to incentivize farmers and remove roadblocks to the massive adoption of restoration practices in the Sahel. For example, policy changes have stimulated the spread of FMNR across millions of small-scale farms in Niger, Mali, and other countries in recent years. There are many additional policy directions that could support more effective land restoration and food security in the drylands. This session brought together a diverse group of policymakers and professionals. They discussed and highlighted the most critical policy areas where progress is needed to further reinforce advances in achieving sustainable land use systems in the region. The session was conducted as two successive 'hard talk' dialogues among the panelists that sought to bring out the most critical policy areas that demand more focused attention.

### **Session Description**

Discussion of the most critical policy areas where progress is needed to further reinforce advances in achieving sustainable land use systems in the region, from the perspective of a diverse group of policy makers and professionals. Organized as a "hard talk" question – response session, facilitated by Dennis Garrity, with the participation of two panels:

### **Discussion Notes:**

- The session focused on policies for scaling up.
- What are the real policy problems from the perspective of a diverse group of panelists?
- Plenty of good policies but not always implemented?
- Is there a need for policy reform in specific areas?





# Panel 1 Discussion:

**Question for Amb Chataignier:** In some states, the majority of national budget was spent in the capital. Are governments waking up to the crisis? Governments reflect the society and the nation. For some time, focus on urban issues, with less attention to agriculture. Urgent situation – impact of insecurity on schools. Governments and society are waking up. Still a tension between responding to needs of urban centers and rural populations.

**Question for Robert Guei:** Issue of policy integration and harmonization. FAO assisting government and harmonization of policies of ministries dealing with environment, agriculture, fisheries, rural organizations, multiple sectors. Land restoration not just a matter for environment but also sustainable agriculture practices. Need to change our way of working – by the United Nations and others – insist on working together, across sectors and with communities.

Question for Emile Frison: Working to develop new approach for agriculture; tell us about the new paradigm for agriculture that you are proposing - and how it could be applied to the conditions of the Sahel? Regreening involves trees and is assigned to environment, while agriculture is focused on intensification and industrial model of high-input agriculture that is not sustainable. Which kind of intensification? Re-label regreening as sustainable agricultural intensification to contribute to sustainable food systems. See how to find common ground with lots of different approaches, nuances of permaculture, climate smart agriculture, agroecology and other models and approaches that seem to be in opposition; do more to highlight common goals and bring specific approaches and groups together - and together change from support for non-sustainable industrial agriculture.

**Dennis:** Yes, and in the Sahel, especially important to avoid problems created by a failure to support agroecological intensification.



Question for Mary: What obstacles had to be overcome to support the adoption of FMNR - and where do we go from here with enabling policies for FMNR? In Mali, FMNR was stimulated by a grassroots response to widespread land degradation – and response of farmers to find a way to keep agriculture productive. With new Forestry Code – understood it applied to the forest domain - and not to trees on farms. So farmers felt that they were able to protect and manage trees in their cultivated fields. First, policies need to permit paysan to have the rights to manage trees in their fields. Second, communities need to develop and adopt by-laws (convention locale) to govern access and use of trees in fields. Third, stipulated that adopting practice of FMNR was a requirement to obtain credit. Fourth, encouraged communes to promote FMNR in their development plans. Fifth, supported FMNR training and targeted young farmers to raise their awareness of FMNR benefits, etc.

**Dennis:** Key for FMNR success in Seno plains was the recognition that farmers had rights to the trees in their fields.

**Question for Razingrim:** What are the most promising solutions to address problems of pastoralism communities? In the Sahel, we cannot overlook importance of pastoralism. First step, support the organization of herders into groups to represent their interests. Also, give attention to land rights for herders – taking account of the need of herders to move seasonally (transhumance). Recognize that conflict areas are often those used by herders.

**Question for Remi:** What can you tell us about the outcomes of the Niamey meeting on climate change financing and the new green initiative. In Niamey, good to see a convergence, agreement on the need for agroecology investments. Need to think about ending support for "projects" and shifting to different approaches, mechanisms. Provide resources directly to local communities to achieve SDGs. Invest in local governance and support for civil society organizations. Support local level implementation of sustainable agriculture strategies. Agree with Mary – how to invest massively in education and professional training, for youth, women – for agriculture and also renewable energy and other areas.







**Question for Kabore, IFAD:** Will IFAD be following a program approach across multiple countries? Success with IFAD in supporting FMNR in Niger hasn't been duplicated in other countries. How can a programmatic approach take advantage of IFAD own successes in supporting FMNR? Yes, there are examples of IFAD successes in Niger, also Mali and Burkina. What about knowledge management and capitalization of experiences? We seem to have forgotten what we learned – and do not build on what has been learned by communities. Need to move towards longer term commitment that supports local ownership of knowledge and capitalization of experiences in land restoration and NRM.

**Salima:** In Niger, ministry of environment supported policy / regulatory reforms to secure farmer rights to trees, but it was opposed by ministry of finances who wanted to keep revenue from taxes, permits on use of trees.

**FAO:** Countries need to do more to invest directly in critical sectors like agriculture, with less dependence on exterior aid.

**France:** Invest in developing national capacity to negotiate.



#### Panel 2 Discussion:

**Question for Rohini:** Experience with Forest Dept in India and relevance for Sahel; Restoration Atlas. Gov't of India has strengthened laws to secure community rights to forests. 2 million families live in and around forest areas. Talk about collaboration, but still need to do more – e.g. where is participation of WWF in this conference? Land Conflict Watch platform documents extent of conflicts over land and resources. Blocks success with restoration. WRI Restoration Atlas useful to assemble data from conservation and land rights organizations.

**Question for Singh:** Was involved in implementing landmark agroforestry policy in 2014, with spinoffs on policy. Should Sahelian countries consider adoption of an agroforestry policy? Agroforestry was traditional system in India, but not formally recognized. Banks recognized field crops – not AF tree crops; many restrictions on felling and transport of trees – even when trees are on farm and part of AF system. No agreement on support for AF across forestry, agriculture, rural development, finance, other ministries and departments. Consulted all departments, drafted AF policy and convened meeting to review and comment on draft AF policy – amended policy approved by Parliament. Now agreed that no licenses required by industries using trees from AF systems on farms. Now Nepal drafting new AF policy and Bangladesh interested as well.

**Dennis:** Africa – India exchanges being supported by Bridge initiative.

**Question for Patrick Kipalu, RRI:** Land tenure security for women – needs to be a foundation for scaling up. How can it happen, and what is RRI doing to support tenure security? Direct link between tenure security and poverty. Agrees – central question, tenure security for rural producers. Number of poor continues to increase. IFAD study revealed that unless land rights were secure, development projects contribute to rich getting richer, poor getting poorer. Key questions – who decides and how decisions are made about land use.

**Niek**: 30 years ago, worked on a World Bank design for development 5th region of Mali. Now working on integrated development of Sourou for irrigated agricultural development. RAMSAR site, transboundary management issues with Mali and Burkina. 26 communes. Applied strategic environmental assessment (EES) with local participation.





#### Key Insights Emerging from the Session

- Governments and other actors do recognize the growing "crisis" reflected in conflicts, food insecurity, vulnerability to climate change and other challenges and threats to peace and sustainable development.
- Countries in the region are still struggling with policy harmonization and integration across sectors, and with effective decentralization.
- Continued need for advocacy to push for needed policy and institutional changes.

#### **Recommendations for Specific Actions to Accelerate Scaling**

- Policy reform and implementation processes need to go beyond engaging environment, forestry, agriculture, rural development and be sure to include finance and education.
- Policy formulation should identify and build on the emerging "common ground" that recognizes the importance of:
  - Sustainable agricultural intensification based on agroecological approaches.
  - Strengthening land and tree tenure and devolving rights to manage trees in agricultural landscapes.
  - Increased investment in capacity building, particularly among producer groups and community-based organizations.
  - Concerted efforts to refocus and strengthen institutional support for massively scaling up regreening through the organization of an EverGreening Africa Academy with training programs targeting mid-level professionals in forestry, agriculture and rural development.
  - Engagement, empowerment.
  - Mobilization of women and youth.
- Policies should take more account of local initiatives and grassroots innovations, so that bottom-up efforts are encouraged and reinforced by top-down policies for leadership, empowerment and devolution of rights and decision-making authority.





Session 17. How can sustainable wood energy production complement FMNR approaches and contribute to Forest Landscape Restoration (AFR100) goals?

#### **Facilitator and Speakers**

- Jacques Nyembe, GIZ
- Heiko Warnken, BMZ
- Eric Rabenasolo, DG Forests, Ministry of Environment, Madagascar
- Representative of Togolese Ministry of Environment and Forestry
- GIZ Mali FMNR and Evergreen Agriculture Expert

### Abstract

Without wood, 4 out of 5 people in Sub-Saharan Africa cannot cook food or sterilize water (IEA 2014). The demand for energy wood (fuelwood and charcoal) is set to increase by 2030 by 40%, despite the growing improvements in access to electricity and gas. With urbanization, the demand mainly for charcoal will continue to rise.

The production of charcoal will increase negative impacts on forests and trees in the landscape, but it could also have positive impacts on employment and income in rural areas. In the long term, alternative energy supplies (electricity, gas, etc.) need to be utilized. In the medium and short term, however, the growing demand for wood needs to be met sustainably. Currently, one third of global wood energy supply is not harvested in a sustainable manner. In SSA, forest degradation is mainly linked to unsustainable wood energy use. Wood harvested for fuelwood and charcoal is not replanted, or it takes too long to regrow. This destroys forested areas and soils, and puts people living in regions with already degraded landscapes in the Sahel, at risk.

The AFR100 initiative aims to bring 100 million hectares of forest and tree-rich landscapes under restoration by 2030. One of the most successful FLR approaches in the Sahel region is FMNR. Approaches like FMNR and political initiatives and concepts need to consider how energy wood can be supplied sustainably in the future.

The Federal Ministry of Economic Development and Cooperation (BMZ) implemented by GIZ and KfW is promoting sustainable wood energy production in many countries in SSA. In Madagascar the approach has been successfully tested and provides a good practice example for the sustainable provision of wood energy. It has not only increased the sustainable supply, but it has also protected natural forests and doubled the income of the participating population. Togo provides an example of how FLR and sustainable wood energy supply can be brought together. In Mali, FMNR has been successfully tested together with approaches to provide sustainable wood energy.



# Session 18: Land restoration, food and nutrition

## **Facilitator and Speakers**

- Dougbedji Fatondji, ICRISAT
- Larwanou Mahamane, ICRISAT
- Patrice Savadogo, ICRAF

# Abstract

This session focused on the land restoration approaches to improve food access, nutrition and livelihoods of rural populations living in arid and semi-arid zones where food insecurity and land degradation are severe and interconnected problems. Land degradation leads to soil fertility decline with the loss of its natural productivity, and the reduction of ecosystem services. Many technologies are being tested as a promising solution to land restoration, thereby mitigating climate change and the resilience of the rural population.

The presentations of scientific findings focused on

(i) multi-scale land bio-reclamation of degraded lands that offer an appropriate strategy and means of diversification of food sources,

(ii) successes in upscaling land restoration techniques that create a paradigm shift to effective and sustainable tree, crop and livestock production for more profitability and landscape and livelihood resilience, and (iii) boosting yields on existing agricultural lands through sustainable agricultural practices and water management, combined with the use of new drought-resistant crop varieties.

This session was moderated by Dr. Dougbedji Fatondji of the International Crops Research Institute for the Semi-Arid Tropics.





#### **Main Points of the Session**

The session was made of 4 interventions: Dr. Jules Bayala presented the Grain Legume and Dryland Cereals (GLDC) program, a CRP-funded program that has sponsored the session. The program is composed of 5 flagships among which Flagship3 led by Dr Bayala is targeting Natural Resource Management and land degradation for the staple crops cereals and legumes production. In general, the program is following 2 pathways with the first on integrative solutions (organized around FPs) and the second about scaling up/out.

The Second presentation of Dr. Larwanou Mahamane working at International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) focused on what is the role of Africa 100 (AFR100) flagshipped by the African Union Commission to support land restoration and country-led initiatives. The initiative has concluded to the commitment of 3 countries to restore over 100 Million hectares of land by 2030. In face of increased demography projected, Dr. Larwanou reflected on the efforts in meeting land degradation neutrality (10 Million hectares for committed versus 100 Million projected) and what could be the best policy option that can make land restoration actually politically and economically feasible to implement.

Following Dr. Larwanou, Dr. Dougbedji Fatondji from ICRISAT presented the initiative for economic and nutritional benefits and bridging rural household food gap through regeneration of degraded landscapes in Niger. He outlined the use of BDL (Bio reclamation of Land) a system developed by ICRISAT as a promising option to allow women to increase their revenues by USD \$200 and to solve the challenges of lack of nutritional balance in the daily diets during the post-harvest period until maturity of the new crop. The BDL is an integrated system aiming at increasing food production and income of women through the utilization of degraded lands for the production of rain-fed fruit trees and vegetables. The outcomes of the GLDC program were presented by ICRAF representatives and partners. They focused on two main outcomes of the program:

> 1) the joint initiative of GLDC with the Drylands Development program (DryDev) where highlights were given on restoration of panning sites to promote youth inclusion in the agricultural sector in Burkina Faso. 2)The second component of the outcomes, through a video, focused on the best agroforestry and farming practices to increase productivity for enhanced rural household food and nutritional security. These include land management options (the improved Zai, half-moons, the contour bunding, Sahelian bocage, microdosing, tree planting techniques, and the use of improved germplasm of food tree). Other research questions were related to the community use of food trees across 3 Sahelian countries where disparities were found in terms of consumption and benefits generation of food tree products.



## Key Insights Emerging from the Session

Three fundamental questions emerged from the presentations:

- i. Considering the target set under AF100, the limited commitment of countries and the demographic rate in the concerned region, what does this translates?
- ii. What extra efforts are needed both at national and regional levels to upscale land restoration?
- iii. What are the policy implications?

From the above questions, the following insights were derived.

- Land restoration actions in the Sahel are more likely to benefit most of the GLDC crops (millet, sorghum, cowpea, and peanut) which are key staple food and income generation crops in this region.
- Reaching the targets of restored lands is a two-way issue with the governments setting the targets and all key stakeholders reporting their achievements in land restoration.

The DryDev program and other similar initiatives must align their outputs with 4 pillars of food security namely:

- Availability, accessibility, use and stability. Across the multi-sectoral and multistakeholder contexts, strategies should be in place to make the different stakeholders aligned with the four pillars.
- Involving all key stakeholders is a prerequisite to be able to scale up the lessons learned of different experiences to different environments and circumstances.
- There is a strong need for both intensification and specialization according to the potentialities of various regions.





#### **Recommendations for Specific Actions to Accelerate Scaling**

- To achieve the objective of land restoration a coordinated regional action with sound political intervention is the only option.
- The scaling up of the results of the small scale effects projects are currently supported by a
  holistic approach allowing the states to introduce this information in a multi-sectorial
  development through the department in charge of planning ministry.
- Projects and programs with success stories should make a return to national policies in the form of capitalization of results.
- The use of a network of interest groups (producers, transformers) linked with microfinance provider and training of trainers should be tested as promising models for scaling most of technologies coming to land restoration.
- The monitoring and evaluation of the different projects and programs should have to follow standard indicators such as the one produced by FAO to check their alignment with the contribution to food security.





Session 19. Large-scale restoration and water mobilization for resilience building, climate change adaptation and drought management

## **Facilitator and Speakers**

- Nora Berrahmouni, FAO
- Speaker from IER, Mali
- Tiipalga, Burkina Faso
- Tera Union, Niger
- Moctar Sacande, FAO
- Coumba Sow, FAO
- Valere Nzeyamana, FAO
- Representatives from AUC, PAGGW, EU, AfDB, UNCCD

### Abstract

Climate change in the Sahel is putting at risk agriculture, forestry, pastoral production and food systems. Crop and forest producers, tree growers and herders are facing increasing challenges related to climate change. Common problems affecting the productivity and livelihoods of local communities are drought, erratic rains, floods, heat, crop and animal disease outbreaks. These challenges are undermining the social, environmental and economic conditions of the local population, which lead to rural unemployment, further poverty and uncontrolled migration. Well-targeted climate change adaptation and mitigation measures will help improve the social and economic conditions of the local populations living in fragile ecosystems of the Sahel and build their resilience.

The session was designed around a panel discussion where speakers were invited to respond to questions and showcase approaches and practices implemented in field projects supported by FAO and partners hand-in-hand with Sahelian communities. It focused on nature and community-based solutions (mobilization of biodiversity, water and communities) for enhancing the resilience of livelihoods and landscapes in the Sahel: (i) The first panel discussion focused on large-scale restoration for small scale farming: combining the science with local knowledge, including through land preparation, water harvesting technologies, and the use of the locallyadapted and rich biodiversity of the Sahel (trees, shrubs and grasses) to meet the ecological, social and economic needs in support of the Great Green Wall for the Sahara and the Sahel Initiative – cases studies from the AAD project in support to the GGW.

(ii) The second panel focused on improving access to and efficient and sustainable use of water resources through water harvesting and water storage using rain water cisterns and small-scale irrigation techniques, adapted and renewable energy-based technologies for agriculture development, restoration, and efficient water use.

(iii) The last session was a panel of high-level decision makers / representatives to get their feedback, and share their thoughts and ideas for scaling up.

Panel 1: from the team and partners of the Action Against Desertification project in support of the FAO Great Green Wall (which brings together 9 countries): Research, NGOs, local authorities.

### Panelists:

- Sidi Sanogo (Institut de l' Economie Rurale (IER), Mali
- Serge Zoubga (Tiipalga), Burkina Faso
- Arouna Compaore (Municipalite de Tera), Niger
- Moctar Sacande (FAO)


#### Panel 2: Water resource mobilization and drought management

#### Panelists:

- Makhfousse Sarr (FAO- Senegal) Un million de citernes pour le Sahel
- Valere Nzeyimana (FAO-RAF) Mobilisation durable des ressources en eau

#### **Remarks/ conclusions by:**

• Elvis Paul Tangem Coordinator Great Green Wall, African Union Commission (AUC)

#### Major Insights from the Session

- 1. The results achieved by the Action Against Desertification project in support of the Great Green Wall, in terms of large-scale land restoration (restoration of 50,000 hectares) show that the Great Green Wall works and that effective solutions exist. Key ingredients of this approach include:
  - Communities at the center of the approach; the first step is to understand their needs and preferences in terms of useful tree species. Local, adapted species should be used, with direct socioeconomic benefits to the communities, especially through the production of herbaceous fodder in the first year after the restoration work.
  - Water management: mechanized soil preparation with adapted technologies that mimic manual labor (half moons) to improve rainwater infiltration, which is essential for scaling up land restoration on thousands/millions of hectares.
  - A major challenge is to mobilize seeds of local species (trees, shrubs, herbaceous plants) of quality and especially in sufficient quantity to meet the massive needs of large-scale restoration. The examples of Niger, Burkina, and Mali with the training of village technicians in seed collection is the way forward with the support of seed centers.
  - **Monitoring and evaluation are essential** and can be carried out with innovative tools such as Collect Earth developed by FAO.
  - The other major challenge is water in the Sahel. The different technologies
    presented during the session such as the 1 million cistern initiative for the Sahel
    and the artificial recharge of the aquifers ensure the sustainable mobilization of
    water resources for the different needs of the communities.

#### Recommendations for specific actions to accelerate scaling up

- The ecosystem wealth of the Sahel: its biodiversity, key to resilience and socio-economic development, must be used through sustainable seed supply systems of local species adapted to the needs of the communities.
- Integrate and intensify the different restoration strategies involving planting and direct seeding of local species.
- Assisted Natural Regeneration (ANR), agroecology, water resource mobilization, development of agroforestry and pastoral product value chains in order to deploy the Great Green Wall.



# Session 20: Shifting public and donor investment to regreening

#### **Facilitator and Speakers**

- Peter Gubbels, Groundswell International
- Fatoumata Batta, ANSD, Burkina Faso
- Dan Banuoko, Program Director, CIKOD

#### Abstract

This session reviewed the heavy public cost of fertilizer subsidies (taking up the majority of Ministry of Agriculture budgets), and the myriad of problems in administering them; their lack of sustainability, as they do not address fundamental soil fertility needs; their poor or negative cost effectiveness; and their lack of impact over time.

It then presented evidence for viable alternatives based on experiences in Malawi with fertilizer tree-based farming that reduces fertilizer subsidies and delivers better-lasting results. Efforts to influence policies, incentives, institutional changes, training of extension staff were discussed.

It then focused on the progress being made to develop strategies and programs to promote fertilizer tree-based farming, linked with reforms of FISPs at a national level, lessons learned, efforts to influence policies, incentives, institutional changes, and extension staff training in Ghana and Burkina Faso.

Finally, the session articulated a vision with recommendations for how to re-allocate public/private resources from fertilizer subsidies to fertilizer tree-based farming with integrated soil fertility management as a cost-effective way forward.

#### The session content

## The Problem, as it relates to a review of the Maputo Declaration:

- Heavy public cost of fertilizer subsidies (taking up the majority of Min of Agriculture budgets).
- Myriad of administrative problems with fertilizer subsidies.
- Lack of sustainability, does not address the soil fertility problem.
- Poor or negative cost effectiveness.
- Lack of impact over time, negative externalities.





#### **Evidence of Viable Alternatives**

The Malawi research shows that tree-based farming/evergreening methods are a way to reduce the need for fertilizer subsidies for providing nitrogen and organic matter at little or no cost to farmers; the World Bank cost benefit assessment of the program shows how tree-based farming can reduce fertilizer subsidies by over half and deliver better lasting results, and sustainable land use.

Efforts to date to influence policies, incentives, institutional changes, training extension staff in FMNR, in Malawi, but also Kenya, and with COMESA on tree-based farming, and commitments.

#### Key Insights Emerging from the Session

- Other countries are undertaking strategies and programs to promote tree-based farming; linked with reform of the FISP at a national level.
- There are many lessons learned about effective strategies, but it varies by context.
- There needs to be a transition period to shift farmers from nitrogen fertilizer to tree-based farming.
- Advocacy efforts are required to influence policies, incentives, institutional changes, training extension staff in FMNR, in Ghana and Burkina Faso.

## Recommendations for Specific Actions to Accelerate Scaling

- Undertake studies on land use management and the long term effect of chemical fertilizers on soil health, soil structure.
- Undertake pilot programs in selected regions to help small-scale farmers test and adapt FMNR /tree-based farming and compost/cover crops as a way to reduce dependency on expensive chemical fertilizers.
- Re-orient public expenditure to support appropriate incentives that enable different categories of farmers to sustainably intensify their agriculture, based on sustainable land use, tree-based farming and FMNR even if this requires a substantial shift of resources away from fertilizer subsidies.

- Support existing research institutions in each of a country's diverse agroecosystems and regions to develop "best practices" for sustainable intensification of agriculture based on evergreening techniques, in particular tree-based farming and FMNR.
- Strengthen public agricultural extension programmes to more effectively transfer region-specific best practices for sustainable land use through FMNR and related evergreening practices with a focus on bi-directional learning between researchers, extension officers and farmers to adapt best practices in light of farmers' knowledge and practical experiences.



## Session 21: Land Restoration for Resilience Building, Climate Change Adaptation and Drought Mitigation

#### **Facilitator and Speakers**

- **Assefa Tofu**, Project Manager, DryDev, Ethiopia. World Vision Ethiopia, Integration of landscape restoration and market oriented agricultural development Resilience Building
- Prof. Richard Dick, Professor of Soil Microbial Ecology, Ohio Eminent Scholar School of Environment & Natural Resources Ohio State University, Management of Indigenous bushes – impact on soil biota and drought mitigation
- Elie Kodsi UNDP Senior Technical Advisor Global Centre on Resilient, Ecosystems and Desertification United Nations Development Programme Implementing Land Degradation Neutrality for Resilience Building and SDG Acceleration in the Sahel
- Raymond Mehou, Head global program food security and strengthening resilience, GiZ, Mali
- Tidane Fall, Country Director, Action Against Hunger, Mali

#### Abstract

This session explored how land restoration through practices such as Farmer Managed Natural Regeneration, bush regrowth management, and integrated development approaches increased resilience, helped communities adapt to climate change and provided strategies for drought management. These approaches also included Natural Resource Management, tree planting, soil conservation, water harvesting, irrigation, improved crops and livestock, farmer group formation and value chain development.

Exciting research findings from Senegal described how intensive management of native bushes increases adaptation and drought tolerance, through processes such as hydraulic lift and water re-distribution, and increased soil microbial activity. A versatile farm-tree-modelling tool was described and presented, which helps farmers predict the impact of on-farm trees through FMNR and tree planting.





#### **Session Description**

The purpose of the session was to highlight how land restoration through the practice of FMNR contributed to resilience building, climate change adaptation and drought management.

#### The session content:

- The status of resilience, climate change adaptation and drought management in the absence of FMNR induced land restoration.
- How FMNR contributes to climate adaptation and drought management – temperature, windspeed, hydraulic lift, soil microbial life, alternative income streams and livelihood options, impact on crop yields, fodder and livestock, soil moisture.
- How FMNR contributes to resilience.

#### Key Insights Emerging from the Session

- Doubling of agricultural productivity is achievable within five years, provided there is mindset change, coordination of different actors for planning, monitoring, learning and continued improvement, resources are leveraged, activities are integrated in sequence.
- Optimized shrub cropping systems increase drought resilience and crop yields, lower temperatures and shorten days to maturity
- The significant work of the UNDP: 119 countries have engaged in land degradation neutrality (LDN) target setting; 77 countries have established LDN targets and associated measures, 46 countries have formally adopted targets.
- Practical, achievable pastoral land restoration techniques have been demonstrated by GiZ at Cran Cran, Mali.

## Recommendations for Specific Actions to Accelerate Scaling.

- Systems level thinking and acting are required at – specific area landscape, country, region, continent and global levels.
- Optimized shrub-cropping systems (OSS) need to be piloted on farms across the Sahel region.
- Take to scale proven practical, cost effective, achievable land restoration techniques.





# Session 22: Towards more sustainable cotton production in West Africa - the case of Benin

#### **Facilitator and Speakers**

- Silke Schwedes, GIZ
- Vanja Westerberg, ALTUS Impact
- Luc Gnacadja, GPS-Dev

#### Abstract

Cotton is the world's most important non-food crop. Africa grows around 10% of the world's total cotton harvest. Of the 12 leading African cottonproducing countries, 8 are in West Africa. Cotton was celebrated as 'white gold' when it was introduced in the 1960s, but negative environmental and health impacts became evident over time. This highlighted the need for improved soil fertility management and a more cautious use of pesticides. This session took a critical look at the impacts of cotton production systems to increase resilience, help communities adapt to climate change, and provide strategies for drought management. It discussed the options for a transformation towards biological production, soil restoration, crop rotation, and integrated soil fertility management. It also focused on the political aspects, as well as on-theground action.

#### Overview of the session

Cotton is the world's most important non-food crop. About 10% of the world's cotton is harvested in Africa, and 8 of the 12 major cotton-producing countries in Africa are in West Africa. The negative health and environmental consequences of cotton farming became increasingly evident over time and highlighted the need for better soil fertility management, and limited use of pesticides. This session took a critical look at the impacts of cotton cultivation and showed the different opportunities for action, both at the policy level, and in the field.





#### Dr. Vanja Westerberg from ALTUS

IMPACT/Initiative ELD presented the results of the 2016/2017 ELD study on "hidden economic costs" in conventional cotton production. Based on interviews with more than 200 conventional cotton farmers, and 100 organic cotton farmers, a detailed assessment of the costs of damage to households as well as the costs of supporting the cotton industry for public accounting in the municipality of Banikoara was carried out. The analysis showed that the environmental and health costs for a farmer growing cotton on 5 ha of land are about 114,000 CFA francs, reducing his real income from cotton production by 23%.

Taking into account government subsidies for seeds, fertilizers and pesticides, the net value of cotton production is reduced by 66% for an average sized farm. On the contrary, it has been proven that the adoption of sustainable soil management practices such as crop rotation or permanent land cover can reduce farmers' dependence on mineral and chemical inputs. The study can be downloaded from the ELD Initiative website, <u>www.eld-initiative.org</u>.

Dr. Hervé Guibert of CIRAD first gave an overview of the African cotton sectors, which produce fiber (1.5 million tons in 2016/2017) but also oil (about 340,000 tons), mainly sold locally, and cake (about 1.4 million tons), feed for livestock. Cotton growing is integrated into food crops and the technical progress disseminated through its extension (harnessed cultivation, fertilization, etc.) has benefited all crops.

The access to inputs and credit that accompanies cotton growing and the organization of its producers can facilitate the dissemination of technical alternatives. Constraints to its sustainability exist at several scales:

> (i) soil degradation and its organic status, pressure from bio-aggressors still managed essentially by the use of pesticides at the parcel level,

(ii) labor scarcity at the farm level,(iii) land and livestock pressures at the territorial level, and

(iv) climate change and global price variations at the global level.

Studies show that the evolution of these soils under conventional cropping systems is marked by a significant and rapid decline in carbon stock and mineral elements despite the fertilization provided and by acidification. The proposed solutions on which CIRAD and its partners are working are based on the principles of agroecology: alternatives to ploughing, production and sharing of biomass, the introduction of legumes, agroforestry and crop-livestock integration, requiring actions at the plot level but also at higher scales. Threshold control was a first alternative to programmed systematic treatments.

Other technical innovations within the framework of integrated management of bio-aggressors, such as cotton pruning developed in Mali, can save 40 to 60% of the insecticides applied. Sustainable modes of motorization adapted to the scale of the farm are being tested in Benin and Senegal. Formerly mainly focused on crop productivity, which significantly increased yields, cotton research is now focusing on the sustainability of the crop.

It thus integrates the environmental, economic and social dimensions by proposing alternatives based on agroecological management of the systems, and by better involving producers, their organizations and civil society at the territorial level. To do so, it develops tools such as modeling and multi-criteria analysis of production systems.

Then, Dr. Emmanuelle Sekloka of the TAZCO Project presented the Project and its components. The TAZCO Project was initiated by the Government of the Republic of Benin with funding from the State of Benin, AFD and with the technical assistance of CIRAD. It responds to the urgent need for an agroecological transition in the production systems in the cottongrowing areas of Benin.



Its specific objective is to support an ecologically and socially sustainable transition of cotton-based cropping systems through experimentation, on the scale of two agricultural campaigns, of agroecological practices adapted to the specificities of village territories.

At the technical level it's expected a) to improve soil fertility by reducing the use of nutrients exogenous to the ecosystem (GIFS, AC, AF), b) to naturally regulate the attacks of bio-aggressors, c) to improve the performance of production systems through Livestock Agriculture Integration (LEI), and d) to maintain or improve the efficiency of natural resource use (CES). In addition, the project aims to promote concerted dynamics between producers and all actors of agricultural development in Benin.

Mr. Kado Alphonse SIMBA, Technical Advisor ProSOL Benin gave an overview of the ProSOL Project which aims to implement sustainable and broad impact approaches to the protection and rehabilitation of degraded soils in Benin. This was achieved through the implementation of SLM measures, the political and institutional anchoring of SLM and knowledge management. In the cotton zone, the main problems are forest destruction, water erosion and the heavy use of pesticides and mineral fertilizers (soil acidification). The categories of measures taken to reverse these trends are:

- Integrated Soil Fertility Management (ISFM).
- Conservation Agriculture (CA).
- Soil and Water Conservation (SWC).
- Integrated Agriculture and Livestock Management (IALM).
- Agroforestry and Individual Forests (AFI).
- Adaptation to Climate Change (ACC).

#### Major Insights from the Session

- Although the cotton producing areas are not in the Sahel itself, the problems of natural resource degradation that arise in the Sahel also arise in other areas. In Mali, this problem of degradation was reported particularly for the Center (by CMDT).
- The sustainable cultivation of cotton is now becoming a central concern in order to limit migratory phenomena and allow cotton to be a real locomotive crop for other speculations.
- During the session the solutions of the different projects (CIRAD, TACZO, ProSOL) were exposed and all these measures are based on the principle of agroecological agriculture.

#### Recommendations for Specific Actions to Accelerate Scaling Up

For the scaling up of sustainable cotton it was recommended:

- Incentives such as phosphorus-calcium amendment for soil acidity correction.
- Conditional incentives to support farmers who implement improved fallows.
- Supporting producers to access seed and specific minimum tillage equipment
- An exchange of high-performance vegetative materials (leguminous plants, grasses), which improve soil fertility.
- Support farmers to start fencing large fields with hedgerows.
- Need for policy for concerted management of spaces, taking into account permanent grazing areas for the breeders.
- Development of training tools for the different target groups (universities, agricultural councils, producers) for an operational appropriation of agroecological technologies.



# Session 23: Climate smart agroforestry technologies upscaling and resilience building in Mali

#### **Facilitator and Speakers**

- Mark Doyle / Macki Cissoko, USAID, Mali
- Ann Degrande, ICRAF
- Aminata Fofana & Mamadou Diallo, CRS Mali
- Baou Diane & Lassana Traore, Aga Khan Foundation, Mali
- Souleymane Goita & Josue Goita, World Vision, Mali

#### Abstract

Poverty rates remain high in Sub-Saharan Africa, with 76% of the total population and 87% of the rural population living on less than two dollars a day. Although 80% of Malians rely on small-scale agriculture for food and income generation, the country is affected by chronic food insecurity. The causes of food insecurity in Mali include low soil fertility and land degradation, water scarcity, a weak enabling environment, inadequate policies for sustainable agricultural intensification, and recurrent climate change and variability. Nutritional insecurity is more severe in rural areas where the population, mainly pregnant women and children, can hardly meet their basic caloric needs. Addressing these constraints in the rural areas of Mali requires participatory, innovative approaches that bring together all development stakeholders, including smallholder farmers and local communities, to adopt context-adapted, proven, and appropriate agroforestry practices.

The USAID Feed the Future SmAT-Scaling project has responded to the current technology diffusion challenges, in the context of climate change and sustainable agricultural intensification, in a way that catalyzes adoption. This session brought together national and international NGOs, private sector and government partners to present and discuss 5 years of achievements, challenges and lessons learned, in bringing technologies to scale under drastic climate change in security-affected zones in Mali.





### Session 24: Land Restoration for Disaster Risk Reduction and Resilience

#### **Facilitator and Speakers**

- **Olaf Westermann**, Senior Technical Advisor on Climate Change, CRS
- Mary Allen, Senior Advisor for Agriculture and Livelihoods, Practical Action
- Ibrahim Bakoye, Climate Change Adaptation and Livelihoods Team Lead, CRS Niger
- Peter Gubbels, Director of Action Learning and Advocacy for West Africa, Groundswell International
- Amanda Lewis, Agriculture and Livelihoods Technical Advisor, CRS West Africa Region

#### Abstract

Building resilience entails understanding vulnerabilities, capacities, risks and stressors and engaging stakeholders for community-owned solutions to achieve a more stable future. Mary Allen from Practical Action explains the 'Vulnerability to Resilience' framework, while CRS and Groundswell International illustrate with on-the-ground applications from the Sahel, Ethiopia and Malawi.

In each case, restoring degraded land and supporting Natural Resource Management led to increased food security and resilience to shocks and stressors. CRS's Community-led Disaster Risk Reduction approaches empowered communities to undertake restoration for enhanced resilience, and engagement with local governance structures improved capacity to access services and tackle bridge-building for systems-level change.

Groundswell International shared lessons on how to strengthen local governance for resilience. CRS presented evidence on how community watershed restoration ultimately reduced the need for food assistance in a subsequent drought in Malawi. These case studies demonstrated the urgency of restoring degraded natural resources as critical to building community resilience.





#### Key Insights Emerging from the Session

- Strengthening local governance is essential for scaling out land restoration, risk reduction and resilience. This needs to include strengthened interaction between local community-level authorities and traditional institutions and locally elected councils.
- Impact and sustainability occur when communities develop and control their own plans, and this requires strong local governance, while also dove-tailing with national-level priorities and plans that create the supportive enabling environment ("bottom up meets top down").
- We cannot reach each community individually, so we need to help communities reach each other by inducing and accelerating spontaneous "selfspreading" through deliberate scaling up strategies, including farmer-to-farmer exchange.
- An integrated approach to resilience is key land restoration is part of the picture, but we must address other elements of vulnerability, and the Vulnerability to Resilience Framework can help us consider those other elements.
- On a practical level, we need to calculate and consider the cost efficiency/cost-benefit of land restoration scaling strategies, considering the multiple benefits.

## Recommendations for Specific Actions to Accelerate Scaling

- With the urgency of climate change, we cannot wait for "self-spreading" to reach everyone; what we can do is catalyze faster change by <u>using intentional scaling</u> <u>strategies to accelerate the spread</u> of these land restoration practices.
- NGOs cannot reach all, but they have the flexibility to <u>test innovative approaches</u>, figure out what works, and demonstrate results. That learning can then be leveraged to show governments and other partners what strategies to get behind and bring to scale.

 We must <u>empower and build</u> <u>capacity of local community</u> <u>governance systems and structures</u> to incorporate scaling of land restoration for disaster risk reduction and resilience into their mandates and plans.



## Session 25: The business of restoring degraded lands: taking successes to scale and unlocking finances

#### **Facilitator and Speakers**

- Salima Mahamoudou, WRI
- Marie Veyrier, Global Shea Alliance
- Patrick Ross, ICRAF
- Tim Bennet

#### Abstract

There has never been a better time to invest in land restoration. Restoring degraded land has the potential to become big business. Entrepreneurs and community co-operatives are finding new ways to make money from sustainably managed farms and forests. Some are responding to governmental incentives; others are responding directly to the market, restoring land to generate new products and services, or to differentiate their offerings from the competition.

This discussion was around the development of a business perspective to land restoration. The Global Shea Alliance shared some of the emerging challenges in meeting shea demand in Ghana, as well as the promising prospects of responding to market demand with integrated restoration approaches.

ICRAF presented their "Tree-Crop Approach" to land restoration while emphasizing the need to ensure a cash-flow for communities during the first years of implementation. WRI concluded by sharing their recent work in linking bankable restoration businesses with impact investors and other types of innovative financing. The session was a deep dive on to "scale up restoration with business models".





#### Key Insights Emerging from the Session

- Need for the private sector to bridge the financing gap for landscape restoration.
- Investing in other aspects of the value chain to ensure the economic incentives are aligned with restoration is key to make restoration viable and sustainable.
- Private companies exist in the restoration businesses. They need financial capacity and investment to strive.
- Cluster approaches are key to scale up and de-risk restoration for investment.

## Recommendations for Specific Actions to Accelerate Scaling

- Integrate trade, agricultural, and investment components in landscape restoration to catalyze private sector investment.
- Raise awareness of impact investors to de-risk and show the profit brought by landscape restoration.
- Cluster small projects and companies to scale projects and attract investment.
- Replication of success is key to mitigate risk for investors.





### PROGRAMME

#### Day 1 – Tuesday 26th February 2019

9.00	<ul> <li>Day 1- Tuesday 26<sup>th</sup> February 2019</li> <li>Opening Plenary - Baobab Grand Ballroom</li> <li>Welcome and Introductions Gathering Perspectives</li> <li>Objectives Conference Flow, Themes and Expected Outcomes</li> </ul>						
10:30	Morning Tea						
11.00 Thematic Sessions Set 1	Baobab Room 1 1. Tracking the spread: Tools and systems for monitoring the spread of FMNR & land restoration successes	Baobab Room 2 2. Value chains and business development in tree-based systems	Balanzan Room 3. Building up evidence on economic benefits from agroforestry and FMNR	Karite Room 4. Investing for rangelands restoration: Challenges and implication for food and nutritional security			
12,30	Lunch						
13.30	Baobab Room 1	Baobab Room 2	Balanzan Room	Karite Room			
Thematic Sessions Set 2	5. Capacity Building for Scaling up Landscape Restoration	6. Training on using economic valuation to inform integrated planning for ecosystem management and influence policy	7. Improved soils for improved lives – how FMNR & agroforestry contribute to better soils	8. Restoring drylands and empowering small holder farmers: Lessons from the Drylands Development Programme			
15.00	Evening Tea						
15.30 Thematic Sessions Set 3	Baobab Room 1 9. The role of mass media and communications in scaling-up land restoration	Baobab Room 2 10. Connecting FMNR and evergreen agriculture to food relief programs	Balanzan Room 11. Training on using economic valuation to inform integrated planning for ecosystem management and influence policy	Karite Room 12. How to massively accelerate the scaling-Up of land restoration in the Sahel			
17.00	Plenary Daily Summary Session - Baobab Grand Ballroom Learning from Sessions 1-8 Input to Conference Declaration						
18.00	Visit Exhibits and Posters						



### Day 2 – Wednesday 27th February 2019

8.30	Baobab Room 1	Baobab Room 2	Balanzan Room	Karite Room		
Thematic Session Set 4	13. Agroecology in practice in the Sahel	14. Strategies for empowering women and youth to engage in land restoration	15. Case study: the experience of Sahel Eco in promoting FMNR in Mali	16. Unearthing synergies: I the transformation of paste	and restoration and oralist-farmer conflict	
10.00	Morning Tea					
10.30	Plenary High-Level Session - Baobab Grand Ballroom Key Note Presentation High Level Panel					
12.00	Lunch					
13.30	Baobab Room 1	Baobab Room 2	Balanzan Room	Karite Room	Zaban Room	
Thematic Sessions Set 5	17. Leveraging the policy enabling environment to support the Scaling-up of land restoration for food security	18. How can sustainable wood energy production complement FMNR approaches and contribute to Forest Landscape Restoration (AFR100) goals?	19. Land restoration and food nutrition	20. Large-scale restoration and water mobilization for resilience building, climate change adaptation and drought management	21. Shifting public and donor investment to regreening	
15.00	Afternoon Tea					
15.30 Thematic Session Set 6	Baobab Room 1 22. Land restoration for resilience building, CC adaptation & drough management	Baobab Room 2 23. Towards more sustainable cotton production in West t Africa – the case of Benin	Balanzan Room 24. Climate smart agroforestry technologies up- scaling and resilienc building in Mali	Karite Room 25. Land restoration for disaster risk reduction and resilience	Zaban Room 26. The business of restoring degraded lands: taking successes to scale and unlocking finances	
17.00	Plenary Daily Summary Session - Baobab Grand Ballroom         Learning from Sessions 9-16         Second Round Inputs to Conference Declaration         Motivating the Movement					



### Day 3 – Thursday 28th February 2019

9.00	Plenary Summary Session and Stage Setting
	Learning from Sessions 17-24
	Stage Setting for Action Plans Panel of Experience from Core Evergreen Countries
10.30	Morning Tea
11.00	Structured Sahelian Regional and Country Action Planning
12.30	Lunch
13.30	Plenary Session
	Sharing Our Future Plans
15.00	Evening Tea
15.30	Plenary Closing Session
	Adopting the Declaration
	Celebration and High-Level Closing
17:00	Close



## CONFERENCE PARTNERS

This conference has been brought to you through the collaboration of multiple organizations working on improving the resilience of natural resources across the Sahel, and their contribution to economic development.

#### These organizations currently include:

- World Vision & the FMNR Hub
- The Global EverGreening Alliance
- World Agroforestry Centre (ICRAF)
- FAO
- Groundswell International
- Margaret A. Cargill Philanthropies
- GIZ/BMZ Germany
- UNDP
- IUCN
- World Resources Institute (WRI)
- Oxfam
- SOS Sahel
- Sahel Eco
- ICRISAT
- CILSS
- AMEDD
- Global Shea Alliance
- CRS
- IFDC

#### A special thanks to all of our generous donors to the Conference:

- UNDP
- World Vision Mali
- GIZ/Economics of Land Degradation
- IUCN
- FAO
- OxFam Mali
- SOS Sahel
- ICRAF DryDev Project
- CILSS/PARISS

- Global Shea Alliance
- AMEDD
- Both Ends
- World Resources Institute
- CRS
- IFDC
- Sahel Eco
- ICRISAT



### THANK YOU TO OUR SPONSORS AND PARTNERS

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# BEATING FAMINE IN THE SAHEL

CONFERENCE DECLARATION

Bamako, Mali, February 28th 2019







We, the 561 participants of the "Beating Famine in the Sahel Conference", representing 30 African countries – governments, multi-lateral organisations, regional agencies, the private sector, international and national NGOs, farmers, women, youth, other civil society organizations, research organizations and universities –



## NOTE THAT:

1. The long-term trends in land degradation, and the effects of climate change in the Sahel, have contributed to bringing the region to a state of crisis.

2. On the other hand, there are highly effective and proven regreening and land restoration practices that have already been successfully implemented in the Sahelian region.

3. Among these practices, Farmer-Managed Natural Regeneration (FMNR) of trees is a rapid, low-cost and easily replicated approach for farmers, pastoralists, youth and rural women to restore degraded landscapes, boost agricultural productivity and provide other benefits such as greatly increased access to firewood, and income from the development of value chains for non-forest tree products.

4. Several countries in the Sahelian region, notably Niger, Burkina Faso, Mali and Ghana, as well as many other African countries, have implemented successful programs of FMNR across tens of millions of hectares.

5. FMNR has given rural communities a compelling reason to organize, negotiate and set local dryland restoration management regulations and plans.

6. In addition to significant progress with Farmer-Managed Natural Regeneration (FMNR), other major advances in agroecology and land restoration have been made. These include soil and water conservation methods through planting and seeding native species of trees, shrubs and grasses; permeable rock bunds; stone-lines, "Zai" microcatchment planting pits, half-moon basins and other water harvesting techniques; conservation farming; intercropping of perennials and legumes with cereals; crop/livestock/tree integration; affordable localized irrigation, and ways to increase and better manage local compost and manure production for improved soil fertility, particularly when combined with chemical fertilizer, and rotational mobile grazing of livestock on rangelands.





7. An integrated approach, adapted to each specific social and agroecological context, combining land restoration approaches is at the root of successful resilience of agricultural and pastoral systems to climate change.

8. Small scale farmers and pastoralists can protect and regenerate much higher densities of trees on their land, and thus create an enabling environment for ambitious land restoration, while also adapting to the effects of climate change.

9. It is possible to accelerate impact through widespread landscape regeneration, restoration of agro-ecosystems, and livelihood diversification, by massively scaling-up the best, proven, low cost regreening innovations with all possible speed.

10. Land degradation exacerbates the effects of climate change, and is also accelerated by climate change. Rehabilitation of degraded land by regreening practices can be both a climate adaptation measure and a climate mitigation measure for the Sahel.

11. Pastoral livestock systems are a source of livelihood for many families in the Sahel. Mobile rotational grazing is an important strategy for holistic management of rangelands.

12. Regreening, including agroecology, holistic grazing management on rangelands, and land restoration must become part of effective peace building and security in the Sahel. Regreening is a critical element in resolving conflicts by providing livestock herders with secure access rights to their traditional pastoral lands, as well as enabling them to regreen these lands in an effective and scalable way, while also enabling sustainable intensification of agriculture by smallholder farmers.

13. Women and youth are the largest groups that are dependent on agriculture and pastoralism – and yet they are the least empowered and supported. Success in regreening depends on empowering women to have a voice in decision making and securing access to productive resources, particularly land. It also depends on motivating women by ensuring that they benefit directly from FMNR, agroecology and land restoration innovations, not only from family and community land, but also on their own fields. If half of the rural population, women, are by-passed by training and support, and if they do not directly benefit from regreening, scaling efforts will founder. Youth comprise over 60% of the population of the Sahel. If the youth are not enabled to see that their futures are tied to sustainable management of natural resources, if they are not deeply involved in the decision making in their communities, or if they do not benefit directly from regreening practices, scaling out initiatives will ultimately fail.

14. The drive and dynamism of the private sector is crucial for success. The largest group in the private sector are the smallholder farmers and pastoralists themselves. It is essential to help them earn income through improved marketing for their crops, tree products and livestock. Innovative business models built on better soil management, logistics, extension, pricing, quality control and marketing are found in the Sahel and across Africa.

15. Successful scaling requires filling gaps in our knowledge, assessing impact and improving the effectiveness of investments to scale-up land restoration and associated regreening initiatives.

16. Context-specific and decentralized regreening action depends on strengthening the capacity of local governments to develop and coordinate context specific plans for regreening in close collaboration with rural communities and pastoralists.

17. Government reforms are needed to ensure that their policies secure and protect the rights of communities and individuals to their lands. This includes supporting the formulation of community-based land-use plans and bylaws, and ensuring that land users, including rural women, youth and pastoralists have secure land tenure and exclusive rights to manage and sustainably exploit trees and other natural resources on their land.



Recognising that the careful management and stewardship of these agroecological systems is the basis for combating land degradation and the effects of climate change, and also of a successful strategy to beat famine, end malnutrition, create massive numbers of rural jobs and reduce conflict around resource use,

## WE THEREFORE EMPHASISE THE NEED TO:

1. Take bold action that fosters synergies achieved through multi-actor collaboration and coordination to accelerate the urgently needed transformation from current land use practices, and to restore degraded agricultural and pastoral lands to their full productive use.

2. Take focused action to scale-up low cost land restoration, climate change adaptation and regreening initiatives across both agricultural and pastoral zones on a massive basis. This will significantly contribute to improved food, nutrition and water security, sustainable management of fuel wood for energy security, climate resilience and poverty reduction especially for hundreds of millions of smallholder farmers and pastoralists.

3. Deepen our understanding of key drivers and enabling policies that can massively increase the impact and accelerate the widespread adoption and scaling out of FMNR, agroecological farming and other regreening management practices.



4. Provide additional resources to local governments to scale out regreening initiatives, driven by rural communities, for context specific and decentralized regreening action.

5. Strengthen harmonized approaches by integrating the adoption of other, complementary land restoration and regreening technologies with these tree-based agroecological and livestock management systems, and by widespread mobilization of communities. This involves fully recognizing the existing work of communities and amplifying the voices of local regreening champions.

6. Foster multi-stakeholder coalitions to undertake massive scaling initiatives immediately, as the spearhead of a wider regreening movement across the Sahel, starting with a vast mobilistion of rural communities and local governments. Without such support, millions of smallholder farmers and pastoralists will not be able to adapt to irregular rainfall, more severe and frequent droughts and higher temperatures associated with climate change. Without such support, existing farming systems will continue to be characterized by declining soil fertility, loss of vegetative cover, accelerated soil erosion and land degradation, and increasing food and nutrition insecurity.

7. Substantially increase support for adaptive research undertaken with small holder farmers and pastoralists, strengthen monitoring and evaluation of agroecological farming and natural resource management solutions, and increase deployment of remote sensing.

8. Reinforce community-led processes through awareness raising, mobilization and strengthening of individual and organizational capacities to lead efforts to transform their lands, thereby achieving a critical mass of practice for regreening in each agricultural or pastoral context. This will require support for mobilizing local community resources.





9. Give priority attention to engaging and providing benefits to women and youth within initiatives to scale up regreening. This can entail fostering women's local savings and credit groups, developing value chains for non timber forest products, training a mass of local volunteers to promote FMNR and agroecological innovations, engaging youth for improved stewardship of each community's natural resources and enforcing community bylaws to preventing bush fires and over-cutting of trees.

10. Encourage the private sector to increase its engagement in regreening activities and to inspire other business actors, including micro-credit institutions to support, and to benefit from regreening. Policymakers and their donor partners must do more to encourage and engage the private sector through appropriate incentives.

11. Overcome the bottle-necks for local governments to harness international finance for climate change mitigation and climate adaptation.

12. Assist rural advisory services to evolve their attitudes, develop a deep conscientiousness, and strengthen their institutional capacity to enable smallholder farm families to adapt the principles of agroecology and in particular agroforestry approaches such as FMNR to their specific contexts, and to encourage the application of regreening practices for land restoration.

#### In order to realise a new vision of an evergreen agriculture in the Sahel,

## WE THEREFORE URGE:

13. Governments to step up their actions on restoration of degraded lands and regreening by making long term and sustainable financial provisions for this work through their annual budgets across various ministries. In addition, more funds need to be allocated to support local integrated development plans designed with Strategic Environmental Assessments.

14. Governments and development partners to place rural communities at the centre of all scaling initiatives.

15. Governments and NGOs to provide assistance that is informed by a local decisionmaking framework in order to make the suite of complementary, improved land and water management practices relevant to local culture, laws, climate, soils, cropping and grazing systems.

16. Governments to review their commitments of the Malabo Declaration to achieve Zero Hunger by 2030 by investing 10% of their annual budgets to agriculture, giving high priority to policies and programmes that enable small scale farmers and pastoralists to adopt evergreening practices.



17. Governments, multi-lateral agencies and international non-governmental organisations to better harness the international finance coming on stream to help mitigate and adapt to climate change.

18. Governments to create incentives for adopting agroecological farming and land restoration practices. This requires significant reform of current agricultural development policies, including the management of fertilizer subsidies. It is essential to adopt the integrated soil fertility management approach, which combines organic and chemical fertilizer. It also requires changing key extension messages and adapting technical training to better promote regreening practices.

19. Governments to review policies and legislation to improve the enabling conditions for local investment in agroforestry, FMNR, alternative energy, agroecology, conservation farming, rotating mobile grazing, land restoration, and sustainable natural resource management, and to rationalize food and agriculture policies to avoid perverse incentives that discourage widespread adoption of such practices.

20. ECOWAS to authorize CILSS to establish an inter-governmental mechanism to monitor progress in regreening through the use of remote sensing technology.

21. The private sector to invest in regreening and climate resilient practices.



## FINALLY, WE RESOLVE TO:

22. Sustain the momentum in accelerating the scaling-up of land restoration that was generated during this conference, by moving to fully implement the action plans that we jointly developed. This includes developing close coordination with related inter-state initiatives such as the Great Green Wall, and the AFR100. We are convinced that these initiatives are vital to achieve the Sustainable Development Goals, national Climate change plans and the Nationally Determined Contributions from the Paris Climate Accord.

23. Create a Sahelian EverGreening platform to bring together all of the many non governmental organizations and government entities for the purpose of mobilizing their combined strengths for massive scaling-up of evergreening for land restoration in the Sahel. The purpose of this platform will be to encourage commitments and coordinated action by all stakeholders in the Sahel, and in West Africa for land restoration and sustainable management.

24. Cascade these targets down to subnational level to fully engage local governments and communities in creating national evergreening movements in every country.



#### We thank the Government of Mali for hosting the Conference, and the many donors and partner organizations that made this historic event possible.

In particular, for their leadership in organizing the meeting, we thank:

World Vision, The World Agroforestry Center (ICRAF), The Global EverGreening Alliance, and The Food and Agriculture Organization of the UN (FAO)



We look forward to working together to sustain the momentum generated by this Conference to achieve the aspirations that laid down in this Declaration.





## VAINCRE LA FAMINE DANS LE SAHEL

## **DECLARATION DE BAMAKO**

Bamako, Mali, le 28 février 2019







Nous, les 561 participants à la Conférence Vaincre la Famine au Sahel, représentant 30 pays africains et leurs gouvernements, organisations multilatérales, agences locales, le secteur privé, ONG internationales et nationales, agriculteurs, femmes, jeunes, autres organisations de la société civile, organismes de recherches et universités,



## AVONS CONSTATÉ QUE :

1.La tendance à long terme de la dégradation des sols, et les effets des changements climatiques dans le Sahel, ont contribué à amener la région à un état de crise.

2.D'autre part, il existe des pratiques de reverdissement et de restauration des sols hautement efficaces et éprouvées qui ont déjà été appliquées avec succès dans la région sahélienne.

3.Parmi ces pratiques, la régénération naturelle assistée des arbres (RNA) est une approche rapide, peu coûteuse et facile à reproduire par les agriculteurs, les éleveurs, les jeunes et les femmes. Elle permet de restaurer les paysages dégradés, stimulant ainsi la productivité agricole, la production de bois de chauffe, et offrant des opportunités de développer des marchés pour des produits forestiers non ligneux.

4.Plusieurs pays du Sahel, dont le Niger, le Burkina Faso, le Mali et le Ghana, ainsi que de nombreux autres pays africains, ont avec succès mis en œuvre des programmes de RNA.

5.La RNA a donné aux communautés rurales une raison impérieuse d'organiser, de négocier et d'établir des réglementations et des plans locaux pour la gestion de la restauration des terres arides.

6. En plus des progrès importants réalisés grâce à la RNA, d'autres avancées majeures en agroécologie et en restauration des terres ont été réalisées. Celles-ci incluent des méthodes de conservation du sol et de l'eau par la plantation et l'ensemencement d'espèces d'arbres, d'arbustes et de graminées indigènes ; des digues de roche perméables ; des cordons pierreux, des bassins de plantation « Zaï », des demi-lunes et d'autres techniques pour la collecte des eaux ; l'agriculture de conservation ; la culture associée d'arbres et d'arbustes et de légumineuses avec des céréales ; l'intégration des cultures, de l'élevage et des arbres ; les installations d'irrigation localisées et à prix accessible ; des méthodes pour accroître et améliorer la production et la gestion de compost et de fumier pour une amélioration de la fertilité des sols, surtout avec l'utilisation complémentaire d'engrais chimiques, et el pâturage raisonné en rotation.





7. Une approche intégrée, adaptée à chaque contexte social et agroécologique, combinant diffrentes approches de restauration des terres, est la fondation qui assurera la résilience des systèmes agricoles et pastoraux aux changements climatiques.

8. Les petits agriculteurs et pasteurs peuvent protéger et régénérer des densités d'arbres bien plus élevées sur leurs terres, créant ainsi un environnement propice à une restauration ambitieuse des terres, tout en s'adaptant aux effets du changement climatique.

9. Il est possible d'accélérer l'impact grâce à la restauration à grande échelle des paysages, la régénération des agroécosystèmes, et la diversification des moyens de subsistance, en intensifiant rapidement et à grande échelle les meilleures innovations de reverdissement éprouvées et rentables.

10. La dégradation des sols exacerbe les effets du changement climatique, et elle est également accélérée par ce même changement. La réhabilitation des terres dégradées par des pratiques de reverdissement peut être à la fois une mesure d'adaptation au climat et une mesure d'atténuation des changements climatiques pour le Sahel.

11. Les systèmes pastoraux sont une source de subsistance pour de nombreuses familles du Sahel. Le pâturage en rotation est important pour la gestion holistique des pâturages.

12.Le reverdissement – y compris l'agroécologie, la gestion holistique des pâturages, et la restauration des terres – doit faire partie de la construction de la paix et la sécurité effectives au Sahel.

13. Le reverdissement est un élément essentiel dans la résolution des conflits, fournissant aux éleveurs des droits d'accès sécurisés sur leurs pâturages traditionnels, et reverdissant ces terres de manière efficace et évolutive, permettant une intensification durable de l'agriculture par les petits exploitants agricoles. 14. Les femmes et les jeunes sont les groupes les plus importants qui dépendent de l'agriculture et du pastoralisme - et pourtant, ils sont les moins autonomes et les moins soutenus. Le succès du reverdissement dépend de l'autonomisation des femmes afin qu'elles puissent participer à la prise de décision et obtenir un accès aux ressources productives, en particulier la terre. Cela dépend également de la motivation des femmes en veillant à ce qu'elles bénéficient directement de la RNA, de l'agroécologie et de la restauration des terres, et ce non seulement sur les terres familiales et communautaires, mais aussi sur leurs propres champs. Si la moitié de la population rurale, les femmes, ne reçoit ni formation ni soutien, et si elle ne bénéficie pas directement du reverdissement, les efforts de mise à l'échelle échoueront. Les jeunes constituent plus de 60% de la population du Sahel. Si les jeunes ne comprennent pas que leur avenir est étroitement lié à la gestion durable des ressources naturelles ; s'ils ne sont pas profondément impliqués dans les décisions et la gestion de leurs communautés ; et s'ils ne bénéficient pas directement des pratiques de reverdissement, le passage à l'échelle échouera.

15. La motivation et le dynamisme du secteur privé sont essentiels à la réussite. Le groupe le plus important du secteur privé comprend les petits exploitants agricoles et les pasteurs eux-mêmes. Il est essentiel de les aider à gagner des revenus en améliorant la commercialisation de leurs cultures, de leurs produits forestiers et de leur bétail. Des modèles innovants de business construits sur une meilleure gestion des sols, de la logistique, des services d'extension, de la politique des prix, du contrôle de la qualité et de la commercialisation et du marketing se trouvent déjà dans le Sahel et en Afrique.

16. Pour réussir la mise à l'échelle, il faut combler les lacunes de nos connaissances, évaluer l'impact et améliorer l'efficacité des investissements visant à intensifier la restauration des terres et les initiatives de reverdissement associées.

17. Une action de reverdissement spécifique au contexte et décentralisée dépend du renforcement de la capacité des gouvernements locaux pour élaborer et coordonner des plans de reverdissement spécifiques au contexte, en étroite collaboration avec les communautés rurales et les pasteurs.

18. Les gouvernements doivent entreprendre des réformes pour que les politiques garantissent et protègent les droits des communautés et des individus à leurs terres. Cela comprend l'appui à la formulation de plans et de règlements municipaux d'utilisation des terres ; et à veiller à ce que les utilisateurs des terres, y compris les femmes rurales, les jeunes et les pasteurs, disposent d'un foncier sécurisé et de droits exclusifs en matière de gestion et d'exploitation durable des arbres et d'autres ressources naturelles sur leurs terres.



Reconnaissant que la gestion et l'intendance attentives de ces systèmes agroécologiques constituent la base de la lutte contre la dégradation des terres et les effets du changement climatique, ainsi que d'une stratégie efficace pour vaincre la famine, mettre fin à la malnutrition, créer un nombre considérable d'emplois ruraux et réduire les conflits liés à l'utilisation des ressources,

## NOUS SOULIGNONS LA NÉCESSITÉ DE :

1.Prendre des mesures audacieuses qui favorisent les synergies obtenues grâce à la collaboration et la coordination multisectorielles, afin d'accélérer cette et urgente transformation radicale et urgente des pratiques d'utilisation des sols actuelles et restaurer ainsi les terres agricoles et pastorales à leur pleine utilisation productive.

2.Prendre des mesures ciblées pour étendre à grande échelle et à moindre cout, les pratiques de restauration des terres, d'adaptation aux changements climatiques et de reverdissement.

3.Approfondir notre compréhension des forces motrices et principaux facteurs affectant l'adoption généralisée et la mise à l'échelle de la RNA, de l'agriculture agroécologique et d'autres pratiques de gestion du reverdissement.


4. Fournir des ressources supplémentaires aux gouvernements locaux pour mettre à l'échelle les initiatives de reverdissement, sous l'impulsion des communautés rurales, pour une action spécifique au contexte et décentralisée.

5. Renforcer une approche harmonisée en intégrant l'adoption d'autres technologies complémentaires de restauration des sols et de reverdissement, avec ces systèmes de gestion de bétail et d'agroécologie basées sur les arbres, et la généralisation de la mobilisation des communautés. Cela implique de reconnaître pleinement le travail existant des communautés et d'amplifier les voix de champions locaux du reverdissement.

6. Encourager des coalitions multipartites à entreprendre immédiatement des initiatives de mise à l'échelle massive, qui deviendraient le fer de lance d'un mouvement de reverdissement plus large à travers le Sahel, en commençant par une vaste mobilisation des communautés rurales et des gouvernements locaux. Sans ce soutien, des millions de petits exploitants agricoles et pastoraux ne pourront s'adapter aux précipitations irrégulières, aux sécheresses plus graves et plus fréquentes, et aux températures élevées associées au changement climatique. Sans ce soutien, les systèmes agricoles existants continueront d'être caractérisés par une baisse de la fertilité des sols, la perte de couverture végétale, l'érosion et la dégradation des sols accélérées, et par l'insécurité alimentaire et nutritionnelle croissante.

7. Une augmentation substantielle du soutien à la recherche adaptative entreprise avec les petits exploitants agricoles et éleveurs, le renforcement du suivi et de l'évaluation de l'agriculture agroécologique et des solutions de gestion des ressources naturelles, et une meilleure utilisation de la télédétection.

8. Renforcer les processus menés par les communautés à travers la sensibilisation, la mobilisation et le renforcement des capacités individuelles et organisationnelles pour parvenir à une masse critique de savoirs et de pratiques pour le reverdissement dans chaque contexte agricole ou pastoral. Ceci nécessitera du soutien pour mobiliser les ressources locales des communautés.





9. Prioriser l'engagement et les avantages aux femmes et aux jeunes au sein des initiatives de reverdissement. Il peut s'agir d'encourager des institutions locales de microcrédit gérées par les femmes, le développement de marchés pour des produits forestiers non ligneux, la formation d'une masse critique de bénévoles locaux pour promouvoir la RNA et les autres innovations agroécologiques, l'engagement des jeunes pour une meilleure gestion des ressources naturelles de chaque communauté, et l'application des règlements communautaires pour éviter le brûlis et la coupe excessive des arbres.

10. Encourager les efforts du secteur privé, de manière à accroître son engagement dans les activités de reverdissement, et à inspirer d'autres acteurs commerciaux, y compris les institutions de micro-crédit, à soutenir le reverdissement et à en tirer parti. Les décideurs et leurs partenaires donateurs doivent faire davantage pour encourager et faire participer le secteur privé par le biais d'incitants appropriés.

11. Surmonter les obstacles qui empêchent les gouvernements locaux d'exploiter les financements internationaux pour l'atténuation du changement climatique et l'adaptation à celui-ci.

12. Aider les services de conseil rural à évoluer leurs attitudes, se conscientiser au changement vital vers le reverdissement, et renforcer leurs capacités institutionnelles pour permettre aux exploitations agricoles familiales à adapter les principes de l'agroécologie, en particulier les approches agroforestières telles que la RNA, à leurs contextes spécifiques, et pour encourager l'application de pratiques de reverdissement pour la restauration des terres.

## Afin de réaliser la vision nouvelle d'une agriculture toujours verte au Sahel,

## NOUS EXHORTONS :

13. Les gouvernements d'intensifier leurs actions en faveur de la restauration des terres dégradées et du reverdissement, et ce en finançant durablement ce travail en l'inscrivant dans les budgets annuels des divers ministères concernés. En outre, des fonds supplémentaires devraient être alloués pour soutenir des plans locaux de développement intégré conçus sur base d'Évaluations Environnementales Stratégiques.

14. Les gouvernements de partenaires de développement de mettre les communautés rurales au centre de toutes les initiatives de mise à l'échelle. `

15. Les gouvernements et les ONG de fournir une assistance qui s'appuie sur un cadre décisionnel local afin que la série de pratiques complémentaires et améliorées de gestion des terres et de l'eau soit adaptée à la culture, aux lois, au climat, aux sols, et aux systèmes de culture et de pâturage locaux.

16. Les gouvernements à revoir leurs engagements vis-à-vis de la Déclaration de Malabo visant à atteindre l'objectif « zéro faim » d'ici 2030, en investissant 10% de leurs budgets annuels dans l'agriculture, donnant la priorité aux politiques et programmes qui encouragent les petits agriculteurs et pasteurs à adopter des pratiques de reverdissement.



17. Les gouvernements, agences multilatérales et ONG internationales de mieux exploiter le financement international qui se met en place pour aider à atténuer les effets du changement climatique et à s'adapter à celui-ci.

18. Les gouvernements de créer des incitations à adopter des pratiques d'agriculture agroécologique et de restauration des terres. Pour cela, il faut réformer en profondeur les politiques de développement agricole actuelles, notamment la gestion des subventions aux engrais. Il est essentiel d'adopter l'approche intégrée de la gestion de la fertilité des sols, qui combine les engrais organiques et chimiques. Il s'agit également de changer les informations clés données aux fermiers et d'adapter la formation technique pour mieux promouvoir les pratiques de reverdissement.

19. Chaque gouvernement à revoir ses politiques et sa législation afin d'améliorer les conditions propices aux investissements locaux en agroforesterie, RNA, énergies alternatives, agroécologie, agriculture de conservation, pâturage mobile en rotation, restauration des terres et gestion durable des ressources naturelles, et de rationaliser les politiques agricoles pour éviter les incitations perverses qui découragent l'adoption généralisée de telles pratiques.

20. ECOWAS d'autoriser CILSS à établir un mécanisme inter-gouvernemental pour contrôler les progrès de reverdissement à travers l'utilisation de la technologie de télédétection.

21. Le secteur privé d'investir dans des pratiques de reverdissement et de résilience climatique.



## ENFIN, NOUS DÉCIDONS DE :

22. Maintenir l'élan d'accélération de la mise à l'échelle de la restauration des terres généré lors de cette conférence, en mettant en œuvre les plans d'action que nous avons conjointement développés. Cela inclut le développement d'une coordination étroite avec des initiatives inter-États, telles que la Grande muraille verte du Sahara et du Sahel et AFR100. Nous sommes convaincus que ces initiatives sont vitales pour atteindre les Objectifs de développement durable, les plans nationaux d'adaptation au changement climatique, et les contributions déterminées au niveau national de l'Accord de Paris sur le climat.

23. Créer une plate-forme sahélienne pour le reverdissement EverGreening, afin de rassembler toutes les entités gouvernementales et nongouvernementales dans le but de mobiliser leurs forces combinées pour une mise à l'échelle massive du reverdissement pour la restauration des terres au Sahel. L'objectif de cette plateforme sera d'encourager les engagements et actions coordonnées de toutes les parties prenantes au Sahel et dans l'Afrique de l'Ouest pour la restauration et la gestion durable des terres.

24. Faire cascade de ces objectifs au niveau sous-national, afin d'impliquer pleinement les gouvernements et les communautés dans la création, dans chaque pays, de mouvements d'une agriculture toujours verte .



## Nous remercions le Gouvernement malien d'avoir accueilli la Conférence, ainsi que les nombreux donateurs et organisations partenaires qui se sont réunis pour rendre cet événement historique possible.

En particulier, pour leur leadership dans l'organisation de la réunion, nous remercions :

World Vision Le Centre mondial pour l'agroforesterie (ICRAF) Alliance Mondiale pour le Reverdissement L'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO)



Nous nous réjouissons de pouvoir travailler ensemble pour maintenir l'élan généré par cette Conférence et réaliser les aspirations énoncées dans cette Déclaration.



All images from the conference were taken by Leela Channer