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ANNEX 1

**FIRST ACTION PLAN (2008-2010) FOR THE IMPLEMENTATION OF THE
AFRICA EU STRATEGIC PARTNERSHIP ON CLIMATE CHANGE**

Annex 1 First Action Plan (2008-2010) for the Implementation of the Africa EU Strategic Partnership on Climate Change

PRIORITY ACTION 2: Cooperate to address land degradation and increasing aridity, including the Green Wall for the Sahara Initiative”

Objective

- Combat desertification and improve the livelihoods of the inhabitants of the countries of the Sahara and Sahel zones of Africa.

Expected outcomes

- Progress towards reversal of desert encroachment and soil degradation;
- Improvement of micro-climatic conditions and reduction of land degradation.

Activities

- Identify the relevant activities in the “Green Wall Initiative” adapted to the national and regional context;
- Enhance environmental sustainability within the framework of regional and international environmental agreements;
- Advance the implementation of the UN Convention to Combat Desertification;
- Improve the knowledge on land degradation and desertification;
- Control land degradation, promote sustainable land management with a view to integrate land management issues in national development strategies, including poverty reduction strategy papers (PRSPs), and increase land productivity and food production;
- Promote integrated natural resource management and conserve biological diversity;
- Address the problems of land degradation and increasing aridity at all relevant levels to respond to local needs and build on local and individual efforts and successes;
- Create awareness and promote wider public involvement in arresting desertification in a sustainable manner;
- Identify and promote alternative livelihoods and productive systems for the populations affected by desertification.

Actors

- AU Commission/NEPAD, African States, RECs, local communities;
- Regional technical institutions and networks;
- European Commission, EU Member States;
- AfDB, civil society and other interested actors.

Finance

- Appropriate financing sources in accordance with their respective scope and their relevance to objectives and activities concerned, their specificity and eligibility criteria, such as the 10th EDF, ENPI, DCI, and appropriate thematic programmes on Environment and Natural Resources;
- Bilateral contributions from EU Member States and African states;
- Private sector, African Development Bank.

ANNEX 2

SPECIFIC TERMS OF REFERENCE: AU-EU STUDY TO ASSESS THE SCOPE AND PRE-FEASIBILITY OF THE GREAT GREEN WALL FOR THE SAHARA AND SAHEL INITIATIVE

Annex 2 Specific Terms of Reference: AU-EU study to assess the scope and pre-feasibility of the Great Green Wall for the Sahara and Sahel Initiative

Joint AU-EU scoping study

In the framework of the AU-EU partnership on climate change, and as a follow up to above mentioned meeting in January in Brussels the need for a feasibility or scoping study on the GGWSSI was agreed as a prerequisite to provide decision makers in the AU, AUC, EU and the EC with sufficient information to identify initial priority activities of the GGWSSI to be supported in the context of the strategic partnership Plan of Action 2008-2010 partnership no. 6 (Action 2). The AUC confirmed its agreement to the proposed content of such a study in its letter to the EC dated 29 September 2008

The GGWSSI is a complex and ambitious concept that interacts with regional and international issues. A scoping study would be useful to analyse the coherence of the complex institutional, economical, political and financial architecture of the GGWSSI with the international context, while reinforcing European-African relationships. It would ideally improve policy coordination in the areas of agriculture, energy, trade, investments, etc, and thus ensure GGWSSI's sustainability in broader terms and at political level.

Description of the Assignment

The overall objective of the assignment is to assess the scope and feasibility of the Great Green Wall for the Sahara and Sahel Initiative, also with regard to possible EC/EU support to identified activities of the initiative. This includes a full update on the state of play of the GGWSSI, and comprehensive assessments and recommendations, in particular regarding institutional and financial issues, to support effective decentralized implementation, impact and sustainability of the identified activities.

Specific Objective

The study will assess the main characteristics and institutional setup, governance, potential initial partner countries and organisations and synergies and links to other relevant initiatives. It will also identify possible sources of funding, in particular from the EU (EC and MS), and best modalities to ensure efficient implementation and sound participatory approaches to help addressing the needs, capacities and potential of the target groups.

Tasks to be carried out

The tasks to be carried out are divided in 4 major steps as outlined below:

- Step 1 Assess the level of progress of the GGWSSI, characterise and map relevant and existing related policies, programmes and activities at country and regional level, assess their relevance and degree of implementation, analyze overlaps and real synergies, assess the potential of the GGWSSI compared to other initiatives and on this basis identify strengths and weaknesses of past and current initiatives.

- Step 2 On the basis of the above mapping define strategic policy, operational, institutional and technical orientations to consolidate and strengthen the actions developed in the vulnerable areas to combat desertification and to reduce poverty.

- Step 3 Based on the above develop realistic scenarios which promote synergies and optimal mobilization and utilization of resources which would otherwise be difficult for each country or region

- Step 4 Present, test and hopefully validate the scenarios at stakeholder meeting(s)

ANNEX 3

**CLASSIFICATION AND PREDICTIONS OF CLIMATE CHANGE FOR THE SAHEL,
SAHARA AND THE HORN OF AFRICA (BASED ON WASHINGTON, 2008)**

Annex 3 Classification and Predictions of Climate Change for the Sahel, Sahara and the Horn of Africa (based on Washington, 2008)

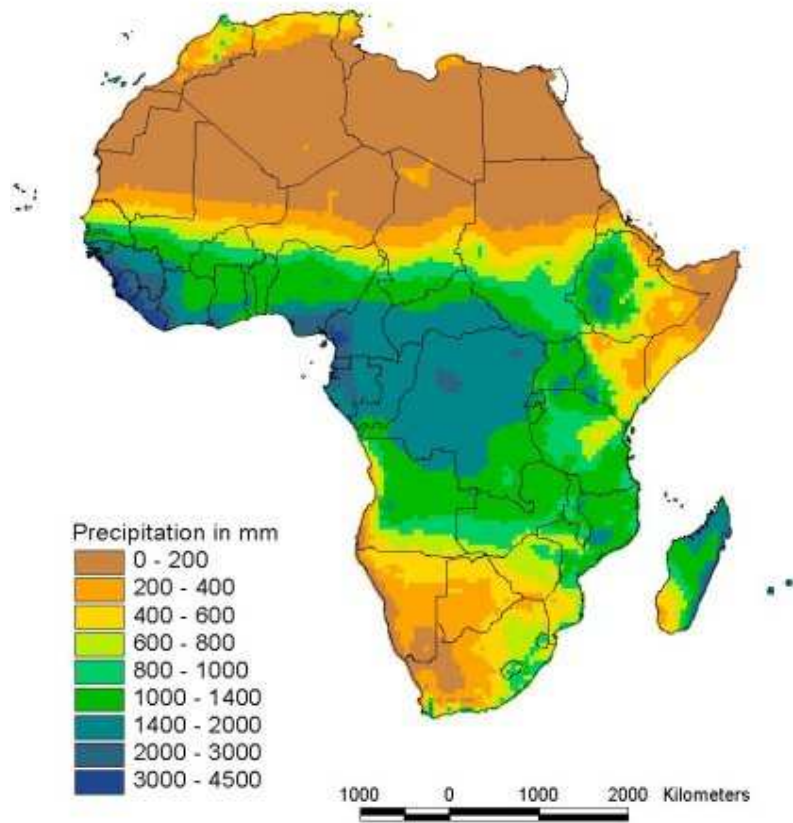
Region	Sub-region	Countries	Projected Climate Change
West Africa	Sahel	Mauritania, Senegal, Mali, Burkina Faso, Niger, Chad, western Sudan	The Sahel is by far the most studied region of projected climate change in Africa. Numerous papers have been published showing that an average of all the IPCC AR4 climate models result in wet conditions in the Sahel in the middle of the 21st century.
	Guinea Coast	Guinea, Sierra Leone, Liberia, Cote D'ivore, Ghana, Togo, Benin, Nigeria	Each of the three GCMs used for this analysis for the 21 st century behave differently in the simulations. One model simulates severe drying across the Sahel in the later part of the 21 st century, while another projects quite wet conditions throughout the century. In the third model, warming in the Gulf of Guinea leads to more modest drying in the Sahel due to a doubling of the number of anomalously dry years by the end of the century. An evaluation of the physical processes that cause these climate changes, in the context of the understanding about how the system works in the twentieth century, suggests that the third model provides the most reasonable projection of the 21 st century climate.
Horn of Africa		Ethiopia, eastern Sudan, Eritrea, Somalia	<p>Projections of climate show warming in all four seasons in all areas, which is likely to lead to greater frequency of heat wave events. Higher temperatures are likely to increase evaporation rates and, assuming other influences remain unchanged, increase surface water evaporation and higher soil moisture deficits.</p> <p>A range of annual rainfall changes are projected over Ethiopia, with some models projecting more rain, others less, but with mean model response for slightly wetter conditions, particularly in the annual mean and in the Oct/Nov/Dec season. There are modest changes in mean annual rainfall from all models for the 2020s (+0.4%) and 2050s (+1%). There are some marked regional differences in the size and direction of rainfall change and some models project large changes in rainfall – these cannot be discounted. As with East Africa, this topographically complex is a region which would benefit from “downscaled” (more detailed) climate information.</p>

ANNEX 4

AVERAGE ANNUAL PRECIPITATION MAP OF AFRICA

Annex 4 Average Annual Precipitation Map of Africa

Average annual precipitation



Source: http://www.fao.org/nr/water/aquastat/watresafrika/Afr_precip.htm

ANNEX 5

**SUSTAINABLE LAND MANAGEMENT PROGRAMMES AND TECHNIQUES
REVIEW TABLE**

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
Cairo Greenbelt, Egypt	-	Forest plantations and creation of green spaces Installation phase by army Maintenance phase integrated into the young graduates employment policy	Protection role only and not at all production (or very little) Atmosphere de-pollution mechanism	Success	Involvement of population: young graduates Employment creation	OSS (2008)
The Niamey Greenbelt , Niger	1965 - 1993	1965-1981: reforestation by forestry department 1982 – 1993 : reforestation with local communities participation	Protection and sanitation of urban environment Setting up of recreational areas (park, greenspace) Database on peri-urban environment and agro-sylvopastoral activities Training (reforestation techniques) for thousand persons Elaboration of a plan of arrangement and management of the green belt	Success	Protection of urban zones against sand encroachment and sanitation of urban atmosphere: the goal is well understood by local communities Strong involvement of local communities (food for work) Training and incomes increases Development of the forestry potential of the capital	OSS (2008)
Green Belt in the Timbuktu and Gao regions, Mali	1990	Phase 1: Intensive protection perimeter next to the urban area: mechanical dune stabilisation and biological fixation Phase 2: Extensive protection area to reduce pressure of the moving dunes in the area	Production of nursery plants by administration (20%), private producers (30%) and local communities (50%) Training of 300 nursery managers of which 80% were women Testing of different techniques (pilot sites and extrapolation) to stabilise sand dunes and plant trees	Success	Involvement of the different stakeholders: administration, private producers and local communities Gender issue taking into account	OSS (2008)
Green Belt, 100 sites, Mauritania	1975 - 1992	Phase 1 & 2: 1975-1986 Monospecific reforestation (<i>Prosopis juliflora</i>)	Most diversified and extensive experience	Quite successful	Quite successful : over 100 sites covered, long term protection without irrigation, involvement of local communities (contracts defining conditions and	OSS (2008)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		Phase 3: 1987-1992 Diversification of trees plantations			modalities for sharing the direct costs) More than 15 small greenbelts installed thanks to local initiatives (incentives in kind: tools and products not available locally) Difficulties to protect plantations due to poverty and lack of means especially at local level	
The Dakar Greenbelt, Senegal	Since the 40's	Network of natural forests completed by plantations, perimeters for the stabilisation of soils, green spaces and roadside plantations	Natural forests (part of the forestry regime) lost ground to urban expansion but this did not jeopardize the effectiveness of the system. Local institutions not able to ensure sustainable management	Success and Failure	Forestry regime allowed effective protection Lack of means to monitor and maintain of plantations by local institutions Low ownership by local populations (incivility) Grazing by livestock	OSS (2008)
North Africa Greenbelt	1997	Project devoted to food security more focused on fight against desertification rather than the concept of greenbelt	Studies ranging from renewable energy to reforestation Technical seminars and meetings about pastoralism and forestry Training sessions: cell culture, remote sensing, reforestation	Failure	Sectoral and punctual studies / organisation of meetings without direct link with the countries' work on the ground.	OSS (2008)
OTHERS SLM EXPERIENCES						
Burkina Faso Central Plateau	1980 - 2001	Soil and Water Conservation (SWC) practices	Positive impact of SWC practices on land reclamation for agriculture	Success	Participatory approach	Reij & Thombiano (2003)
Tigray, Ethiopia	Since 2000	Examples of thousands of hectares of rangeland with livestock excluded – local people can only cut and carry	Natural regeneration occurring	Success	Currently under-exploited – could provide more environmental and economic benefits. Possible issue that longer term,	C. Reij (2009) (pers. comm.)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		wood etc from these areas.			vegetation will degenerate due to absence of grazers – also possible invasion by AIPs	
Assisted Natural Regeneration, Maradi / Zinder, Niger	Synthesis about ANR implemented since the 80's	Protection and management of seedlings in the fields in order to re-create ligneous vegetation	Systematic protection of trees allowed the creation of agroforestry parks Production systems are more complex because of a better integration of culture, livestock and trees.	Success	Strong and voluntary involvement of local communities	USAID / IRG (M. Larwanou, M. Abdoulaye, and C. Reij), 2006
'Reverdissement du Sahel' in Niger (Zinder)	From 1980	Using assisted natural regeneration to encourage trees to grow in and around fields.	Creating agroforestry parks with 20-80 trees per hectare. The regreening is generating multiple economic and biophysical benefits, including: <ul style="list-style-type: none"> ○ A reduction in rural poverty ○ Adaptation to climate change ○ Increased resilience in drought years ○ Improved food security at the household level ○ Increased biodiversity ○ A substantial reduction in the time women and girls spend collecting firewood 	success	Adapting traditional practices with "new" knowledge and approaches using participatory methods	http://www.ca riassociation.org/gtd/blog/?p=304
Sahel re-greening – Christian Aid and Partners	1990s onwards	"Ally Ouedraogo has been farming his land on the edge of the Sahel in Burkino Faso for two decades, but in recent years climate change has made it much more difficult for him to grow his crops. As the dry seasons in the region have got dryer, the quality of the soil has deteriorated dramatically. It's a familiar story everywhere for farmers and their communities in the developing world as climate change begins to take a heavy toll."	Farmers are now being helped by Christian Aid partner, Reseau Marp, to reclaim their land from the advancing desert. With our help, they are pioneering new methods to cultivate the soil and grow enough crops to feed his family.	success	Adapting traditional practices with "new" knowledge and approaches using participatory methods	http://www.christianaid.org.uk/whatwedo/issues/climate_change.aspx

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
Dune fixing, Diffa region, Niger	1993 - 2008	Different projects to fix sand dunes and plant trees (Arabic gum) and sowing of herbaceous / ligneous	Fight against sand encroachment in the oases	Success	Decentralisation Strong involvement of local communities: committee of natural resources management Complementarities between mechanic and biological techniques to fix sand dunes	INRAN / DANIDA (2009)
Combating Deforestation in the dry zone of Nigeria	1930's	The first alarm on the southward movement of the Sahara desert into Nigeria was made by Stebbins in the 1930s. This led to an Anglo-French Forest Commission to investigate the evidence of desertification in the northern parts of Nigeria.	The report created some concern in the colonial administration; hence it led to a number of the border emirates to embark on planting trees to stop the encroachment of Sahara desert as far back as the 1940s.	Success	The impacts of these efforts can be seen today in many towns and villages in these frontline States.	Pers. Comm (email) Mr Fawusi Azeez Kolade
Combating Deforestation in the dry zone of Nigeria	1970's onwards	Since, various institutions have implemented tree-planting campaigns (Native Authorities, Local Government, State Governments, in 1978 the Federal Military Government went a step further to establish the National Committee on Arid Zone Afforestation. Including	Embarked on the establishment of shelterbelts, roadside and amenity tree planting in towns and villages including provision of seedlings for on-farm planting. Including over 126 million seedlings produced and distributed and supplied fencing materials to participants on woodlot establishment and farm forestry programmes (90% of the seedlings were forest trees, the remainder being fruit trees) –ca. 8,100 ha of shelterbelts and plantations were established from these efforts.	Varying	Despite these measures, the problems of drought and desertification are still present. Focused mainly on afforestation without involving local communities and traditional knowledge. The funding mechanism was based on Government annual budget which most of the times was not released as at when due. No involvement of private sector locally or donors. The stakeholders were limited. Publicity and mobilization mechanism was limited. Monitoring and evaluation were not	Pers. Comm (email) Mr Fawusi Azeez Kolade

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
Tree planting campaigns, Nigeria	? (on-going)	<p>The threat of the advancing desert necessitated the birth of tree planting campaign in Nigeria, which is an annual exercise, where trees are planted at a particular time of the year (mostly peak of rainy season). This exercise is more visible in the Northern states of Nigeria which are the worst hit by desert encroachment.</p> <p>The aim of the exercise is to sensitize the public on the importance of trees in our environment and also to discourage indiscriminate felling of trees due to its attendant consequences. Trees beautify our cities, promote healthy climatic conditions, improve quality of environment, and check desertification, landslide and erosion. Trees also encourage ecotourism, games, resorts and are also home to varieties of medicinal plants and wildlife. They also contribute to the process of carbon sequestration and act as carbon sink, which is important for reduction of green house gases and global warming.</p>	<p>“Despite these enormous challenges this campaign has been neglected. Where it is carried out it has been made ceremonial at the expense of tax payers’ money.”</p>	Failure	<p>adequate.</p> <p>The campaign was traditionally a three tier event with the federal government flagging it off, then the states and the local government councils follow suit. Areas that are most threatened by the surging desert are selected to launch the campaign, which indicates government readiness to roll back this very threatening monster.</p> <p>Problems cited:</p> <ul style="list-style-type: none"> ▪ chosen tree species, ▪ timing of campaigns, ▪ maintenance of tree seedlings after planting, ▪ enforcement of forestry legislation, ▪ need for alternative energy sources, ▪ research on genetic potentials of indigenous species, public awareness 	Dahiru, U.D. (2008)
Spontaneous agroforestry, Mali	post 1990	<p>Example of how a change in national policy catalysed increased trees Mali, 1990s</p> <p>1990 – foresters v. unpopular – even being killed by farmers</p> <p>1994 – change in forestry legislation, distinguished protected and on-farm trees as they harshly protected all</p>	Farmers’ had an interest in protecting their trees.	Eventually a success	Change in national policy Communication of the change in policy to local land users	C. Reij (2009) (pers. comm.)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		trees – but no immediate change (local people did not know of change). 1995 – NGO made a programme, broadcast by radio to inform farmers, who then were able to exert rights to refuse access to woodcutters.				
East Africa	-	Kenya: fragile ecosystems restoration Sudan: rehabilitation of ecosystems	Prevailing land use methods Sustainable use of resources in a natural reserve	Success Success	Decentralisation of responsibilities to local communities Optimizing local resources and know-how Local communities involvement	OSS (2008)
Greenbelt Movement - Kenya, also Ethiopia, Uganda and Tanzania	Established in 1977	The core programme is tree planting with local communities who request GBM assistance – it was initially designed to mobilize women to reduce the distance they walk to collect firewood. Initial step- civic and environmental education programme – followed by 9 further steps, including group formation (at least 5 households), registration of group with Forestry Dept. local community M & E. The Green Belt Movement addresses the underlying social, political, and economic causes of poverty and environmental degradation at the grassroots level. Its empowerment seminars help people make critical linkages between the environment, governance, and their quality of life. Participants develop a deep desire to better their own lives and communities. As they gain economic	As a result of GBM programs, hundreds of thousands of poor women in rural communities in Kenya have improved their lives, soil erosion has been reduced in critical watersheds, and thousands of acres of biodiversity-rich indigenous forests have been restored or protected. Yet, many Kenyans still live in poverty without access to basic services, education, and economic opportunities. The GBM seeks to expand its grassroots presence throughout Kenya and empower more individuals to address the underlying causes of poverty and environmental degradation.	Success where working – up-scaling	Addresses the underlying social, political, and economic causes of poverty and environmental degradation at the grassroots level. The Green Belt Movement's philosophy and approach is based on the premise that truly sustainable development can only take place through recognizing the intimate and fundamental link between the environment, democracy, and peace.	http://www.greenbeltmovement.org/ and pers. co.

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		security, they are willing to protect shared resources such as forests, public parks, and rivers. The GBM started by addressing a serious problem with a simple solution: getting communities to plant trees as a symbol of their commitment.				
SOS Sahel – countries of the Sahel including Sudan		<p>Recognizing that herding animals over rangeland is one of the most viable and productive use of drylands and should be supported and encouraged, and with the supply of natural resources becoming increasingly variable due to climate change, the case for supporting such an adaptive and ecologically sound livelihood system is overwhelming.</p> <p>National NGOs with African boards are now operating successfully in Mali, Niger, and Ethiopia. In Kenya, the former SOS Sahel UK programme has been integrated within the work of an existing NGO, Resource Projects Kenya. Governance of the programme in Sudan remains temporarily the responsibility of SOS Sahel UK with the same long-term aspiration for an independent African organisation in Sudan.</p>	Overarching goal is to bring the ideas, experiences, and priorities of dryland people 'centre stage', ensuring that the realities of Africa's drylands and the Sahel in particular, inform policy-making and are prioritised in Africa and at the global level.	success	<p>"SOS Sahel exists to find meaningful solutions to poverty and vulnerability experienced by millions of people across the drylands of the African Sahel (Wets and East Africa)".</p> <p>The "believe that this poverty has its roots in the historical neglect of dryland areas, and particularly in discrimination against pastoralists (livestock herders) and nomadic groups." And ..." argue that herding animals over rangeland is one of the most viable and productive use of drylands, which should be supported and encouraged. With natural resources becoming increasingly variable due to climate change, the case for supporting such an adaptive and ecologically sound livelihood system is overwhelming."</p>	http://www.sahel.org.uk/
Holistic Rangeland Management, Namibia	2005 onwards	Kaokaveld in Cunene region of Namibia where the Mahimba and the Harero (the local tribes) livelihoods depend on grazing livestock.	<p>Increased above ground biomass across wide areas</p> <p>Improved livestock yields</p>	Success	Trying to emulate the large herds of wild animals that used to occupy the grasslands of the world - they stayed in tightly bunched herds and continually moved (we call this the predator prey	Ian Mitchell-Innes (pers. comm.) of Community Dynamics,

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
			Dispels the myth that cattle are a leading cause of land degradation and emphasises that it is possible to manage livestock better to maintain quality of rangelands.		relationship) if they wandered out of the herd, a predator would take them. It was under these conditions that the grasslands of the world developed. [It is not because of too many animals it is because of management -arguably there are not enough animals around to eat or tread the grass onto the ground and so we are forced to burn, which degrades the soil and exacerbates erosion.]	RSA also info in Neely and Bunning (2009)
Quasi-holistic Rangeland Management, Kenya	current	The overall aim of this programme is to reduce livestock densities through improved returns per head; improve rangeland and grazing management by and between communities.	Providing communities with ready access to improved markets for livestock of all ages and quality Promoting realistic financial investment opportunities that match returns from livestock	Success	Supporting grassland management and livestock committees to improve rangeland management, building on the traditional community approach. Provides alternatives for livelihood investment, for example rural banking schemes, in order to promote more sustainable land management. This is possible when communities' livestock income is supplemented with more diversified livelihood strategies.	http://www.nrt-kenya.org/
Mulch (including composts) and Crop Residues	traditional	Crop residues (stalks and leaves) left on fields after harvest, also composts produced from organic matter applied to arable fields immediately before or during the growing season.	The physical presence of crop residues on the soil surface protects the upper soil layer, reducing soil temperatures and hence water loss, both important factors for optimum for plant growth as air temperatures increase with climate change. It has been calculated that a layer of mulch reduces crop water requirements by 30 percent by reducing soil water loss by evaporation.	Success	Mulching, composts and retaining crop residues on fields will reduce the amount of rainwater which runs off bare croplands and it's flow rate, reducing soil erosion and contributing to an improved hydrological regime (at field to watershed level, reducing peak and low flows etc.). It will also reduce wind erosion. One limitation on the scope for use of mulch and crop residues in the drylands of the GGWSSI is the lack of availability of sufficient organic material – crop residues are often left in fields for livestock to graze in agropastoral systems.	(FAO, 2007) (Derpsch <i>et al</i> , 1991).

Title / Location	Time Period -	Description	Outcome	Success or failure	Key Factors / Comments	Reference
Low / Zero Tillage also Conservation Agriculture	traditional (CA novel)	<p>Soil tillage (manual, animal or tractor) aerates the soil, speeding microbial decomposition of organic matter and therefore leading to a reduction in SOC and release of C into the atmosphere.</p> <p>In the absence of tillage by hoe or plough, the structure of the soil is maintained. Soil fauna particularly benefit, maintaining a healthier soil ecosystem, with earthworms and termites performing biological tillage. The root channels in the soil are not destroyed by ploughing, thus serve as drainage channels for excess water, also airways for gas exchange. The surface mulch which develops protects the soil surface from the impact of heavy raindrops, reducing the erosive power of the water also reducing erosion by the wind and protecting the surface from excessive heat – all measures which will help land users adapt to climate change.</p> <p>Under CA, the aim is to continuously cover the soil surface in vegetative material.</p>	<p>At the farm level, reduced tillage systems in general and CA in particular will result in the:</p> <ul style="list-style-type: none"> • reduction in labour and work time (initially the system may take extra time for weeding, but within a short time less labour is required); • reduction in costs in the case of mechanized farmers: • longer lifetime and less repair of tractors, less power and fewer passes, hence much lower fuel consumption; • more stable yields, particularly in dry years; • gradually increasing yields with decreasing inputs; • increased profit, in some cases from the beginning, in all cases after a few years. <p>At the wider community, local and national level, widespread implementation of CA will: increase food security; reduced costs for road maintenance; reduce foreign exchange required to purchase fuel and agrochemicals.</p>	Success	Baker <i>et al</i> (1996) concluded that no technique yet devised by mankind has been anywhere near as effective in halting soil erosion and making food production truly sustainable as no-tillage.	(Derpsch <i>et al</i> , 1991), (Bellarby <i>et al</i> , 2008).
Crop Rotations	traditional	Restoration of the practice of crop rotation can increase the rate of accumulation of SOC at various depths in the soil profile, as different crop species have different rooting forms and depths, which in turn promote the distribution of organic matter throughout the soil profile.	Improved crop yields and reduced crop diseases	Success	The importance of rotations in arable systems is well known, as farmers traditionally recognised that diverse crop rotations are effective in maintaining soil fertility and health. In recent decades, external pressures (<i>inter alia</i> economic and demographic) have reduced the practice of crop rotations in land management across the world.	

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
Crop Diversification / Inter-Cropping	traditional	Farmers encouraged to plant a wider range of crops (species or varieties – ideally including local varieties, protecting and benefiting from local agrobiodiversity) either within single fields (inter cropping) or on different fields.	Given the challenges climate change, the value of crop diversification is once more being appreciated, as planting a range of crop species or varieties reduces the risk of serious impacts of failure of a crop.	Success	Diversified cropping systems and inter-cropping systems were elements of many traditional farming systems in Africa (e.g. cereals intercropped with N fixing legumes), but have been less practiced in the latter part of the 20 th century due to commercial pressures.	
Integrated Plant and Pest Management	1990 onwards	IPPM can assist farmers to raise and sustain crop yields in the face of the new challenges posed by climate change in the Sahel region as it provides farmers with the skills required to grow healthy crops.	Ensuring healthy crops is vital for adaptation of production systems to climate change (healthier crops are more likely to withstand the adverse effects of increased temperatures, droughts and unreliable or more intense precipitation).	Success	A further major benefit of IPPM is it reduces the need for agrochemicals; reducing input costs and avoiding their energy intensive production, with globally important mitigation benefits.	www.fao.org
Biochar		Ongoing research shows that carbonized materials (biochar) obtained from the chemical decomposition of organic matter by heating in the absence of oxygen (pyrolysis) are responsible for maintaining high levels of soil organic matter and available nutrients in anthropogenic soils (Terra Preta or Dark Soils, in Portuguese) of the Brazilian Amazon basin. Several variables have been identified (type of pyrolysis technology and its various factors, type of soils, depth at which this biochar is dug into the soils, amount of biochar per hectare, type of biomass to produce the biochar, etc. , etc.). Given its high potential, biochar has been recently considered to counteract global warming by sequestering carbon in soils, becoming a carbon-negative strategy, while enhancing agricultural practices and delivering other socio-	Terra Preta soils are thousands of years old and charcoal, as a relative stable form of carbon, is still found in these soils. The duration of charcoal or biochar's storage time ranges from millennial to centennial timescales. Whether biochar remains in soils for hundreds or thousands of years, it could be considered as a long-term sink for the purposes of reducing carbon dioxide emissions, with clear mitigation benefits. Biochar in soils will eventually contribute to adaptation by: <ul style="list-style-type: none"> • improving the structure and fertility resulting in a higher productivity of degraded lands; • increasing water retention, stimulating symbiotic nitrogen fixation in legumes and creating a favourable environment for the bacteria, microorganisms, fungi and nutrients required by plants; 	Under research – not yet proven	Biochar technology appears promising as it connects improving degraded soils, increasing crop yields, energy provision, climate change mitigation and rural development. It is appropriate in a range of contexts, from households, farms or villages that could produce biochar for their own use (some are already doing it) to larger scale plants (e.g. connected to paper mills) for use in local areas. There is a need for further research to determine the potential and the length of time it will take for additions of biochar to soil to contribute to adaptation. By definition, biochar is considered highly valuable for mitigation as it is inert; consequently it may have little short-term benefit in terms of improving soil structure for climate change adaptation.	http://www.globalbioenergy.org/bioenergyinfo/bioenergy-and-climate-change/detail/en/news/10791/i/code/ Woodfine (2009)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		<p>economical and environmental benefits.</p> <p>Pyrolysis can convert sewage wastes, trees, grasses, straw, corn stover, peanut, coconut and chestnut shells, olive pits, bark, sorghum, rice husk and other crop residues into biochar.</p>	<ul style="list-style-type: none"> reducing nitrous oxide emissions and leaching of nitrates into water; decreasing the need for chemical fertilizers and water irrigation; increasing land's productivity and food production. 			
Indigenous Fruit Trees	2000 onwards	<p>Richness and abundance of indigenous trees and shrubs in parklands and other forested landscapes of the Sahel is being eroded – reducing sources of products and services. [Trees provide food including fruits, fats, oils, leafy vegetables, nuts and condiments; traditional medicines; wood for fuel and construction; dyes; materials for household implements, handicrafts and clothing; fodder, forage and medicines for livestock.</p> <p>Trees also provide environmental services, including moderating soil temperatures, reducing erosion, improving soil fertility (N fixing, C sequestration).</p>	Work to bring indigenous trees species under improved management and cultivation – domestication.	Success	<p>Following farmer-driven and market-led process.</p> <p>ICRAF and partners initiating research to increase the production of indigenous fruit trees and make genetic material available to producers.</p> <p>Domestication will bring economic benefits, contributing to income diversification and enhancement of the livelihoods of rural communities.</p>	Kalinganire, A. et al (2008) and Teklehaimanot ,Z. (2008)
<i>Jatropha curcas</i> as a biofuel	21st century	<p>A non-edible plant grown in the Sahel as hedging, with oil traditionally used by women to produce soap.</p> <p>Proposed by a participant at GGWSSI Stakeholder workshop as a solution, to be grown on a commercial scale for export – creating jobs, income, greening the</p>	<p>Commercial pressure is encouraging countries to promote jatropha growing, although there are many uncertainties. Research is needed to domesticate and improve the plant's performance – also ensure suitable varieties are promoted.</p> <p>Impact on soil is another</p>	Variable - unproven	<p>Very little is known of the impacts that this embryonic yet rapidly expanding industry will have on the rural poor. For instance, biofuel production could be positive for pastoralists, providing additional jobs, animal feed and resources or it could be negative, leading to further land alienation on a large-scale.</p>	<p>http://www.sahel.org.uk/biofuels.html</p> <p>http://www.ifad.org/events/jatropha/index.htm</p>

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		<p>Sahel etc. However, concerns as this would transfer land from crop / livestock (i.e. food) production to "cash crop for export in a market which is not stable / proven.</p> <p>Jatropha is banned in both Australia and South Africa.</p> <p>Holds potential at the local scale, providing a source of energy for use in diesel generators (already used in Tanzania for village electricity supplies). However, manual presses to produce biofuel inefficient.</p> <p>Major developments likely during Phases I and II of the GGWSSI which may make this a sounder opportunity – but concerns over effects on rural poor, especially pastoralists.</p>	<p>environmental concern that, again, is not unique to biofuels.</p> <p>For rural areas that fertilize with crop wastes and manure rather than external inputs, biomass production could lead to dramatic declines in soil fertility and structure. But, there are also exceptions. Biofuel plants such as jatropha that grow on marginal lands have potential to improve soil quality and coverage and reduce erosion while their oilcakes can provide organic nutrients for improving soil.</p> <p>There are many different scenarios and rigorous lifecycle analysis of potential environmental impacts is needed of different biofuel production systems to ensure the development of environmentally friendly biofuel programmes.</p>		<p>Of immediate concern is the lack of consideration for pastoral livelihoods within the biofuel debate. Several gaps in knowledge were also uncovered regarding the risks and opportunities of biofuel development in dryland Africa. One of the most worrying, given the rapid expansion of Jatropha cultivation, was the lack of data in the public domain concerning the agronomy and economics of the crop under African conditions.</p> <p>When land is cleared for planting biofuel crops, the effect can be harmful to the environment, because expansion of biofuel crops can displace other crops or threaten ecosystem integrity by shifting from biodiverse ecosystems and farming systems to industrial monocultures.</p>	
Greening of India	2001 onwards	<p>National Agriculture Policy, 2000 underlines the need for diversification in agriculture with the promotion of integrated and holistic development of rainfed areas on watershed basis and augmentation of biomass production through agro and farm forestry with community involvement.</p> <p>Greening programme proposes to cover 43 million ha degraded land (regeneration of 15 m ha degraded forests under JFM, agroforestry in 10</p>	Poverty and environmental crisis are closely linked calling for holistic approach and lasting solutions through greening of all degraded areas with people's participation.	Success	<p>Greening India Programme is faced with the problem of lack of awareness about multiple roles/benefits of trees, especially their role in drought proofing, prevention of soil and water run-off, bio-remediation of agricultural land, supply of food, fodder, fuelwood, fibre and fertilizer.</p> <p>The greening programme suffers from low level of technology, low level of investment, inadequate research and extension, weak planning capability, wastage in harvesting and processing, market imperfections, excessive</p>	(Gov of India, 2001)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		<p>m ha irrigated and 18 m ha rainfed areas) under watershed approach.</p> <p>Greening programme has to address environmental challenges, livelihood security and sustainable development. Without greening environmental deterioration and economic decline will be feeding on each other leading to pollution, poverty, poor health, political upheaval and unrest.</p>			<p>government control, low level of people's participation and NGOs involvement, lack of private sector participation, unwanted restrictions on felling, transport and marketing of forest produce grown by the people, lack of inter-sectoral coordination.</p> <p>Situation in India not environmentally similar to the GGWSSI, but many of the issues and challenges – and proposed solutions, are the same.</p>	
Greening of China	current	National aim is to increase the forest coverage rate to 20% (from current 18.21%) in next 2 years.	<p>People across China managed to create 4.77 million hectares of forests in 2008, a rise of 22.1 percent compared with that of 2007, according to statistics released by the National Greening Committee.</p> <p>A total of 540 million people joined forestation efforts in the past year, planting 2.31 billion trees in mountains, city parks, on campuses and along highways and railways.</p>	Success	<p>"China will spend 60 billion yuan (8.77 billion U.S. dollars) annually on its greening, or tree-planting, campaigns in an effort to have 20 percent of the country's land covered by forests by 2010."</p> <p>Greening campaign only aims to plant trees – no information available on survival rates for seedlings, clearly human and other resources and ecosystems involved quite different from the GGWSSI.</p>	See web link below (1)
Meso-American Biological Corridor	1990's to present	Saving and restoring forest reserves and wildlife habitat is better done when these areas are connected. The concept of wildlife corridors has been around for about 20 years, but has found perhaps its most inspiring expression in the accomplishments in Central America. In this region, seven governments have agreed to coordinate their efforts to encourage a huge system of interconnected parks, reserves and wildlife corridors	<p>The Meso-American Biological Corridor has been gaining renown not as a two-thousand-mile-long nature preserve, but as a matrix into which other environmental projects can fit. These ideas include managing forests to preserving indigenous land rights to strengthening national environmental laws.</p> <p>They have found that shade coffee plantations contained more than 400</p>	Success	<p>"I think the Central Americans know their economic future is also dependent on the future of the natural resource base," says Stacy Rhodes, director of regional programs for the U.S. Agency for International Development, based in Guatemala City.</p> <p>"I think the Meso-American biological corridor is probably never going to be completed in its entirety," Bien says. "But I think insofar as parts of it can be made,</p>	See web link below (2)

Title / Location	Time Period	Description	Outcome	Success or failure	Key Factors / Comments	Reference
		that literally link North America to South America. The Meso-American Biological Corridor is a network of national and trans-border nature preserves to be interspersed with environmentally benign plantations.	<p>species of birds and former treeless pasture is more productive now it includes 8 species of tree.</p> <p>Costa Rica provides a particularly excellent case for how biocorridors can be encouraged using a variety of means; through tax incentives, preservation easements, education, decentralized administration, partnerships with international organizations, as well as outright land purchases.</p>		any single piece that can be added is better than not having it all."	

(1) http://news.xinhuanet.com/english/2009-03/11/content_10994601.htm

(2) <http://lanic.utexas.edu/project/sdrp/corridor.html> and <http://ecoworld.com/features/2005/12/19/the-mesoamerican-biological-corridor/>

ANNEX 6

REVIEW OF LESSONS LEARNED

Annex 6 Review of Lessons Learned

The OSS/CEN-SAD introductory note to the initiative (OSS, 2008), provides a detailed overview of green dam, green belts and green anchors activities undertaken in the circum-Saharan zones (North Africa region, Algeria, Burkina Faso, Egypt, Kenya, Mali, Mauritania, Niger, Senegal, Sudan, Tunisia) since the 70's to implement, summarising the lessons learnt from all these experiences. These lessons particularly recognise that without a **strong involvement of local communities**, efforts to plant trees will be unsuccessful – the **participative approach is vital** to achieve successful re-greening in the arid and semi-arid zones of the Sahel and Sahara. The Algerian and Nigerian experiences can be used as fine examples of failure; the army planted enormous numbers of tree seedlings without reference to the local population. Compounding the problem of **lack of follow-up care of seedlings** (which has been proved vital in many programmes, notably the Greenbelt Movement's tree planting activities in Kenya), **scientific and ecological knowledge** (*inter alia* soil type, depth, water availability) does not appear to have been used to choose the most appropriate sites nor the most appropriate species (single species plantations of often introduced species, with low value to local people, induced low stability of ecosystems and low resilience to disturbances).

The OSS/CEN-SAD introductory note (OSS, 2008) also observes the need to undertake wide sustainable land management, but does not refer to the lessons learnt from experiences about re-greening in the Sahel through the implementation of projects undertaken by local communities (see special issue of Journal of Arid Environment, 2005 about the "Greening of the Sahel", Hutchinson et al. 2005). These particularly point out that the greening trend (observed using series of low resolution remote sensing imagery) cannot be explained solely by increasing rainfall during the period 1982 – 1999 (Olsson et al. 2005, Anyamba and Tucker 2005, Nicholson 2005, Herrman et al. 2005). While extensive, the greening is not uniform, suggesting that **factors other than rainfall may be contributing to greening of some areas and not others**.

Comparison studies show success stories in the Sahelian region, particularly in the Central Plateau of Burkina Faso, Maradi – Zinder region in Niger, Mali and in the Tigray in Ethiopia (Rasmussen et al. 2001, Mortimore and Turner 2005, Reij and al, 2005, Tappan and McGahuey 2007, Reij and Smalling 2008). These studies have found evidence of significant transitions from degradational land use trajectories to more sustainable and productive production systems, including increases in cereal yields, higher densities of trees, improved soil fertility management, locally higher groundwater tables, reductions in rural poverty and decreased out-migration. These success stories coincided with growth in rural populations and the introduction of structural adjustment policies, highlighting the **innate ability of farmers and agropastoralists to manage their resources under conditions of variable rainfall, finite land resources and low biological productivity** (Reij, and Waters-Bayer, 2001). The biophysical and management changes that have been identified suggest that they are less the helpless victims of environmental change than agents who try to make the best use of productive and investment opportunities (Hutchinson et al. 2005).

Soils in the rainfed croplands of the countries of the GGWSSI are generally highly degraded, due to a wide range of factors, including depletion of organic matter (SOC) and plant nutrients. The physical, chemical and biological structure of these soils has been damaged by repeated tillage, reduction in the use of fallows and mono cropping without use of beneficial rotations. **A range of low cost SLM practices can be implemented by arable farmers to restore soil properties and functioning, including the addition of more compost and other organic matter to the soil surface, low / zero tillage, conservation agriculture, use of zaï (planting pits), crop rotations, crop diversification (species and variety) and integrated plant and pest management (IPPM)**. These have all been proven in Africa to contribute to raising crop yields in good seasons and minimising losses in poor seasons. Biochar is currently being promoted as a "win-win" approach to sequester carbon (for CC mitigation) and improve soils (to restore degraded lands). However, it is unproven and seems particularly unlikely to work in drylands where there is an inherent limit to available organic matter (required to produce biochar). There are also questions as to the efficacy of biochar to improve soils in the short term (see Annex 5).

Dryland resources are heterogeneous and dispersed (patchy), tied with seasonal rainfall patterns (temporary), differing through time (variable) and characterised by erratic climatic patterns

(unpredictable). The net productivity of drylands is low and the animal and plant populations that it can sustain fluctuate unpredictably, depending on a number of variables, of which precipitation patterns play a major role. **SLM practices in pasture and rangelands aim to maximise the capture, infiltration and storage of rainwater into the soils**, promoting conditions that increase vegetation cover, SOC, conserving above and below ground biodiversity.

The most promising SLM practice to restore degraded rangeland is “holistic” or sustainable grazing management; in which grazing is considered to be a management tool which can enhance the vigor of mature perennial grasses. Sustainable grazing increases the longevity of perennial grasses, promoting fragmentation of decadent, over mature plants by encouraging basal bud activation, new vegetative and reproductive tiller formation as well as seed production and seedling. Sustainable grazing management requires:

- an understanding of how to use grazing to stimulate grasses to grow vigorously and develop healthy root systems;
- using the grazing process to feed both livestock and soil biota; ideally maintaining 100% cover (plants and litter) 100% of the time;
- revitalising natural soil forming processes;
- providing adequate rest from grazing without over resting, as grazing on the most palatable grasses provides a competitive advantage to the less palatable grasses for water and nutrients.

Based on these principles, extensionists and advisors can help settled agropastoralists and also transhumance pastoralists to better manage their livestock for specific local conditions in the different parts of the countries of the GGWSSI. This will improve vegetation cover over the soil, increase water infiltration/retention and improve plant diversity/mass, control the time plants are exposed to grazing, increase animal density and trampling, distribute dung and urine, and improve livestock quality and productivity while maintaining grasslands with livestock – with major adaptation benefits.

Trees will be vitally important elements of the GGWSSI – particularly in agropastoral and silvopastoral systems. Most farmers and agropastoralists in Africa are well aware of the benefits of conserving / planting trees around homesteads and in their fields, as they play a critical role in terms of ecological services and securing livelihoods and food security for people living in drylands (Teklehaimanot, 2008). The presence of an ecologically appropriate density of locally adapted and valuable trees has the potential to increase food productivity both from raised crop and pasture yields, attributed to improved soil conditions (moderating soil temperatures, reducing erosion, improving soil fertility through nitrogen fixation and nutrient cycling of their leaf and root biomass). Indigenous trees can also provide much needed fruits, fats, oils, leafy vegetables, nuts and condiments, also other non wood forest products (NWFPs) (honey, traditional medicines for humans and animals, fodder, timber, cordage, dyes and fuelwood) (Kalingarine et al, 2008) – diversifying income opportunities, as exemplified in the development of wood markets in Niger, Mali, (CRC PREDAS, 2006). Trees also contribute shade for people, livestock and crops – which in view of the predicted temperature increases due to climate change (Annex 3) will be increasingly important in future.

In approaching efforts to plant trees in the circum-Sahara, the GGWSSI should learn from the experiences and approaches developed by the Greenbelt Movement, although the environmental, social and economic situations are rather different. The GBM started by addressing a serious problem with a simple solution: getting communities to plant trees as a symbol of their commitment – which is the approach already being used by Senegal. The Green Belt Movement addresses the underlying social, political, and economic causes of poverty and environmental degradation at the grassroots level. Its empowerment seminars help people make critical linkages between the environment, governance, and their quality of life. Participants develop a deep desire to better their own lives and communities. As they gain economic security, they are willing to protect shared resources such as forests, public parks, and rivers.

Most of the studies relating to the Green Wall of the Sahara and the Sahel have, to-date, mainly focused on tree planting. However, experience shows that **many large scale exercises in planting tree seedlings have very low success rates** (e.g. Dahiru, 2008). Recent studies on **assisted natural regeneration of trees from tree stumps or allowing growth of seeds held in the soil’s natural seed bank have shown positive results** (Reij, 2008; Reij *et al*, 2005; Reij and Steeds, 2003;

Reij and Smaling,2008) . **Some tree planting will also be necessary and beneficial, for example to introduce valuable NWFPs including improved (domesticated) indigenous fruit trees** – using seedlings produced in locally run tree nurseries (Kalingarine et al, 2008).

The GGWSSI must catalyse the transformation of currently degraded landscapes to functioning agroecosystems by promoting local land users to adopt complimentary SLM practices in all components of the dryland landscapes, including:

- Sustainable Rainfed Agriculture (including agroforestry)
- Holistic Rangeland Management (including silvopastoral systems)
- Assisted Natural Regeneration
- Participative Forest Management
- Integrated Watershed Management

The Greening of India campaign included action at national policy level and the National Agriculture Policy, 2000, which underlined the need for diversification in agriculture with the promotion of integrated and holistic development of rainfed areas on watershed basis and augmentation of biomass production through agro and farm forestry with community involvement. Although more focused on tree planting than is envisaged in the GGWSSI, the myriad of problems facing the programme have much in common with the GGWSSI countries from which lessons should be drawn.

“Greening India Programme is faced with the problem of lack of awareness about multiple roles/benefits of trees, especially their role in drought proofing, prevention of soil and water run-off, bio-remediation of agricultural land, supply of food, fodder, fuelwood, fibre and fertilizer. The greening programme suffers from low level of technology, low level of investment, inadequate research and extension, weak planning capability, wastage in harvesting and processing, market imperfections, excessive government control, low level of people’s participation and NGOs involvement, lack of private sector participation, unwanted restrictions on felling, transport and marketing of forest produce grown by the people, lack of inter-sectoral coordination.”

Source: Gov. of India (2001)

The greening campaign in China (see Annex 1) is on an even more massive scale, as the government is reported to be planning to spend 60 billion yuan (8.77 billion U.S. dollars) annually on its greening, or tree-planting, campaigns in an effort to have 20 percent of the country's land covered by forests by 2010. Clearly the economic, social and environmental conditions are very different in China, where “a total of 540 million people joined forestation efforts in the past year, planting 2.31 billion trees”. However, those working on the GGWSSI should monitor this programme.

Also of relevance to the GGWSSI are lessons from the Meso-American Biological Corridor, in which seven governments agreed (in the early 1990s) to coordinate their efforts to encourage a huge system of interconnected parks, reserves and wildlife corridors that literally link North America to South America. **It’s success has been in part due to the local appreciation that economic future is (also) dependent on the future of the natural resource base** and the realistic attitude of all involved who recognised that **“(it) is probably never going to be completed in its entirety, but insofar as parts of it can be made, any single piece that can be added is better than not having it all.”** The corridor has been developed in Costa Rica by a variety of means; through tax incentives, preservation easements, education, decentralized administration, partnerships with international organizations, as well as outright land purchases.

Jatropha, an inedible plant already grown in drylands (e.g. Mali) for hedging and oils (used locally to produce soap) is being proposed by some (including a participant at GGWSSI Stakeholder workshop) as a solution for the GGWSSI, to be grown on a commercial scale for export to produce biodiesel – creating jobs, income, greening the Sahel etc. However, there are major concerns as this would transfer land from crop / livestock (i.e. food) production to cash crop for export in a market which is not proven. Jatropha can be grown in marginal areas (i.e. degraded crop and pastoral lands) – where it could initially be focused – and the diesel could be used to produce electricity for local use (using

diesel generators). A major risk of this would be that production on marginal land would inevitably be low and diesel production using manual presses is not as efficient as a large-scale commercial operation). Thus, there may follow commercial pressure to move *Jatropha* growing to better land, replacing food production..... risking food security.

Wider Level Catalysts for SLM

The changes towards more sustainable land management often coincide with changes in wider legal and policy frameworks (Reij and Smalling 2005, Warren 2005) allowing a better ownership by farmers, with increased rights and responsibilities. For example, Reij and Smalling (2008) underlined that in 1988 the government of Mali agreed to comprehensive reforms with two major components: more decentralized management of the irrigation areas; also liberalization of rice milling and marketing. Farmers were involved in water fee determination, management of maintenance and through their participation in management committees, oversight of performance contracts. The reforms triggered the following impacts:

- Paddy yields increased from 1.5 to 5.5 tons ha⁻¹, total production more than tripled to about 300,000 tons;
- Diversification of income occurred through the introduction of dry season crops, notably onions which reached 70,000 tons in 1999;
- Water fee collection increased from 60% to 97%;
- Thirty-thousand hectares have been rehabilitated and the irrigated area is being expanded by another 30,000 ha.

These observations exemplify the arguments proposed in a recent paper on land degradation control and its global environmental benefits (Gisladdottir and Stocking, 2005), which reviews the good ways and bad ways to promote land degradation control. The authors observed that there has been a tendency to see land degradation control as “a purely technical exercise and self-evidently worthwhile for human society to pursue” (ibid). It has been tackled by addressing the degradation itself, often based on subjective choice of information, rather than its causes and symptoms and that this is a “myopic and techno centric view” of how to reverse such processes as soil erosion and deforestation. Using the pejorative terms ‘desertification’ and ‘land degradation’, they describe a process that is negative; they imply a perpetrator, the land user and their simplistic message is that the guilty have been identified and there is a person to blame. Measures to control land degradation have, therefore, tended to focus at the most local of levels and with the practices of land users.

In the last two decades, it has been acknowledged that the **primary drivers of degradation often occur at levels beyond the land user with, for example, the policies that drive land users to have to mine their soil resources in order to survive** (see Figure below). It is usually the weakest, the local land users (pastoralists, small farmers), who are labelled as the perpetrators. Yet local to global linkages pervade, which must be considered [including those not directly related to land degradation, at multiple levels up to the global].

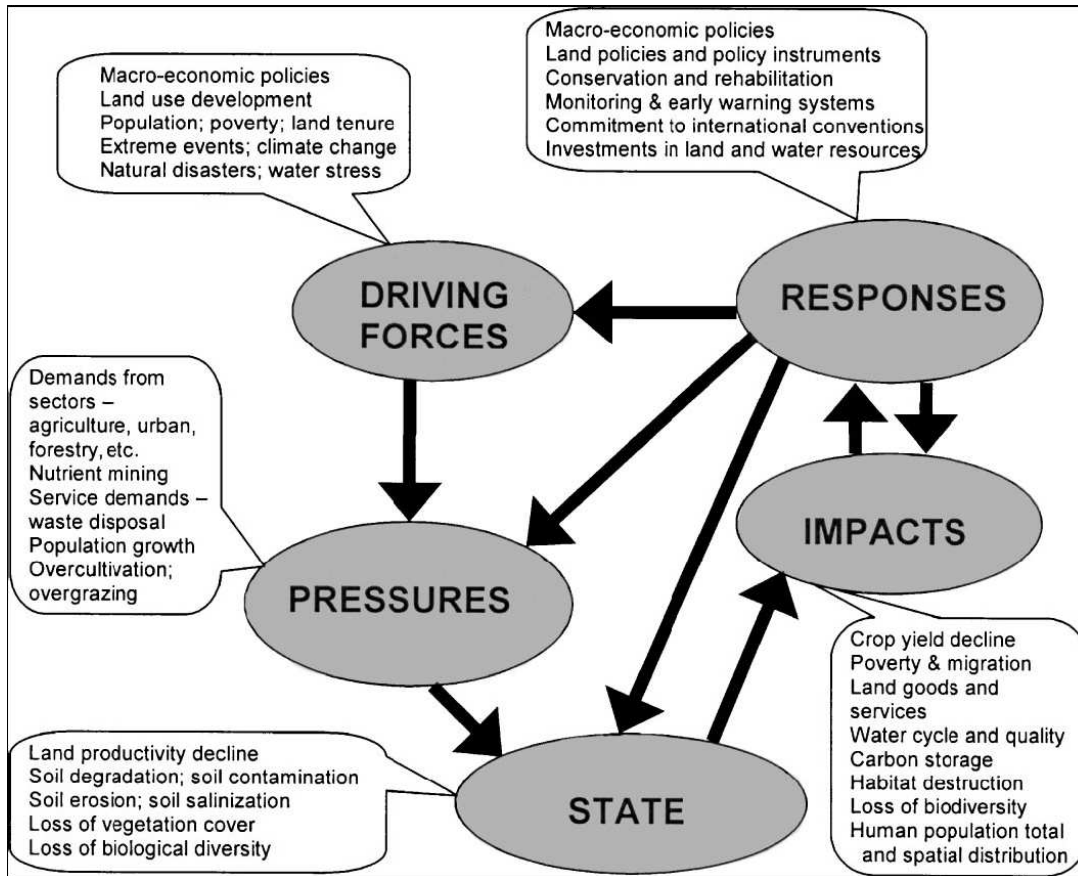


Figure: The DPSIR (Driving, Force, Pressure, State, Impacts and Response) Conceptual Framework applied to potential land degradation control interventions (source Gisladdottir and Stocking, 2005)

Transition to SLM requires collaboration and partnership at all levels – land users, technical experts, legal and policy-makers – to ensure that the causes of the degradation and corrective measures are properly identified and that the policy and regulatory environment enables the adoption of the most appropriate management measures.

ANNEX 7

LINKAGES BETWEEN ENVIRONMENTAL CONVENTIONS

Annex 7 Linkages between Environmental Conventions

Since the Rio Summit (1992), the concept of Sustainable Development integrated the environment as one of the fundamental components of development. This new vision has been confirmed through numerous international conventions including the UN Convention on Climate Change, the Convention on Biological Diversity and the Convention for the Fight against Desertification. There is no doubt that the Earth Summit with its Agenda 21 and its three environmental conventions constitute the overall framework of international cooperation in conservation of natural resources and environment.

Chapter 12 of Agenda 21

"Human beings in the affected or threatened areas are central concerns in the fight against desertification and mitigating the effects of drought".

"Desertification is caused by complex interactions among physical, biological, political, cultural and economic."

"Desertification and drought affect sustainable development because of the correlation between these phenomena and serious social problems like poverty, poor health and nutrition, food insecurity, as well as those arising from migration, displacement of population and demographic dynamics.

Before the second World Summit on Sustainable Development (Johannesburg, South Africa, 26 August - 4 September 2002), UN (2002) emphasized that "to ensure sustainable development, it's needed to improve the quality of life of all the world population without increasing the use of natural resources beyond what the planet can support. If different measures are probably needed in every region of the world, it remains to establish a truly sustainable way of life, we must act in an integrated way on three main fronts: economic growth and equity, conservation of natural resources and environment and social development".

The United Nations Framework Convention on Climate Change

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

In particular, it was stressed that the parties will prepare, in cooperation, adaptation to climate change impacts, developing and designing appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods (Article 4).

The United Nations Convention on Biological Diversity

The objectives of this Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of the genetic resources [...] (Article 1).

Each Contracting Party shall, in accordance with its particular conditions and capabilities:

- Develop national strategies, plans or programs for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, *inter alia*, the measures set out in this Convention;
- Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies, (Article 6).

To achieve these objectives, each Contracting Party shall concentrate its efforts on:

- the identification and monitoring of biodiversity (Article 7);
- in situ conservation (Article 8);
- ex situ conservation (Article 9);
- sustainable use of components of biological diversity (Article 10);

- incentive measures (Article 11);
- research and training (Article 12).

The United Nations Convention to Combat Desertification

The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.

Achieving this objective will involve long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level (Article 2).

Obviously, it is important to bear in mind that in the context of the implementation of the Convention to Combat Desertification (UNCCD), the Parties shall give priority to affected African country Parties, in the light of the particular situation prevailing in that region, while not neglecting affected developing country Parties in other regions. (Article 7).

Synergy and implementation of the three international conventions on environment

Synergy is defined as “interaction or cooperation of two or more organizations, substances or agents to produce a combined effect greater than the sum of their individual effects”. Scientifically, synergy is defined as “the interaction between a set of components in a system which reinforce each other” (Reijntjes et al. 1992 in Mouat et al, 2006). Components of a farm system are said to interact in synergy when, apart from their primary function, they enhance the conditions for the other components. Therefore, in the context of the environmental Conventions, synergy will promote effective coordination of activities among the implementing institutions at national and local levels.

In this frame, the UNCCD underlined the need to encourage the Parties to coordinate the activities carried out under this Convention and, if they are Parties to them, under other relevant international agreements, particularly the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, in order to derive maximum benefit from activities under each agreement while avoiding duplication of effort. The Parties shall encourage the conduct of joint programmes, particularly in the fields of research, training, systematic observation and information collection and exchange, to the extent that such activities may contribute to achieving the objectives of the agreements concerned (Article 8).

ANNEX 8

COMMITMENTS OF COUNTRIES FOR THE IMPLEMENTATION OF THE MULTILATERAL ENVIRONMENTAL AGREEMENTS, POVERTY REDUCTION STRATEGY PAPERS AND THE ENVIRONMENTAL ACTION PLAN OF NEPAD

Annex 8 Commitments of Countries for the Implementation of the Multilateral Environmental Agreements, Poverty Reduction Strategy Papers and the Environmental Action Plan of NEPAD

Commitment	CCD	CCC	CDB	Principles about Forests	RAMSAR	PSRP	NEPAD	<i>Potential role of GGWSSI</i>
Training and capacity building	X	X	X	X	X	X	X	X
Local participation / Participatory approach	X	X	X	X		X	X	X
Exchange of data and information	X	X	X	X	X		X	X
Implementation of national and regional action plans	X	X	X	X			X	X
Research / Reinforcement of science in Africa	X	X	X	X	X		X	X
Land planning for protected areas			X	X	X		X	-
Policies / legislative reinforcement	X	X	X	X	X			X
Education / sensitisation of populations	X	X	X	X			X	X
Environmental impact studies	X		X	X			X	-
Reporting to COP and NEPAD	X	X	X				X	X
Exam of obligations and evaluation of the implementation : monitoring – evaluation	X	X	X	X				X
National inventories		X	X	X				-
Data collection and analyses	X		X	X				X
Integration of NAP/CD within the PRSP and national development plans	X					X		X
Establish strategies to fight against desertification and mitigate drought effects integrating the poverty alleviation strategies	X						X	X
Test and promote measures and appropriate adaptation strategies to CC		X					X	X
Monitoring	X		X					X
Centres of technical information sharing	X		X					X
Prevention and control of alien invasive species							X	-
Strengthening sub-regional, regional and international cooperation							X	X

Commitment	CCD	CCC	CDB	Principles about Forests	RAMSAR	PSRP	NEPAD	<i>Potential role of GGWSSI</i>
Set up a regional network of excellence centres (combat desertification, renewable energy...)							X	X
Cooperation within the intergovernmental organisations							X	X

(adapted from OSS, 2003)

ANNEX 9

JOINT ACTIVITIES TO IMPLEMENT THE MEA, THE PSRPS AND THE ENVIRONMENTAL ACTION PLAN OF NEPAD

Annex 9 Joint Activities to Implement the MEA, the PSRPs and the Environmental Action Plan of NEPAD

Joint Activity	CCD	CCC	CDB	Principles about Forests	RAMSAR	PSRP	NEPAD	Potential role of GGWSSI
Integrated management of basin watershed: - agro-forestry - SWC/DRS (protection and restoration of soils)	X	X	X	X	X		X	X
Conservation <i>in situ</i> of biological resources (protected areas)	X	X	X	X	X		X	X
Long term monitoring / systematic observations using indicators	X	X	X	X	X		X	X
Information dissemination / data sharing / data bases	X	X	X	X	X		X	X
Intensive agriculture - resistance to drought - salinity - culture using different plant varieties - aquaculture	X	X	X	X	X			X
Utilisation of wastewater	X	X	X	X	X			X
Eco-tourism	X		X	X	X			? (ONLY RELEVANT IN SOME COUNTRIES (E.G. THE GAMBIA))
Clean energies: - solar - aeolian	X	X	X	X				X
Evaluation of productive resources (lands, water...)	X		X			X		X
Early Warning Systems	X	X					X	?
Utilisation and conservation of humid zones					X		X	-
Sustainable management of carbon sequestration wheel and reservoirs		X					X	X

(adapted from OSS, 2003)

ANNEX 10

DECENTRALISATION

Annex 10 Decentralisation

During the colloquia dealing with the local development and the natural resources management in arid zones (Paris, 2008), one major question was raised: does decentralization promote better the taking into account of the natural resources management by the local municipalities of the South?

Answering this question requires knowledge of a number of criteria: the history of natural resource management practices and the relations between municipalities, state and citizens, various levels of local resources and skills. It is also necessary to understand the local situation to appreciate the role of the local authorities.

The origin of the decentralization process

In some countries like Morocco or Algeria, the municipalities have a long history but have no independent management or decision making role. In others, such as Mali, Niger, Benin and Guinea, decentralization is very recent. The establishment of local communities has a number of catalysts since the 1970s, with the bankruptcy of new states to develop basic infrastructure and growing disappointment of citizens vis-à-vis highly centralized States. In the early 1990s, came the strong winds of democracy and the emergence of multiparty politics, when decentralization was presented as a "natural" to democracy, sometimes on the order of external donors. This is the general framework with specific details country – dependent, as all are different.

Sharing power

Based on these different processes, the number and size of local governments have very different modalities such as elections, territorial stratification etc. The dynamic is not the same, the transfer of resources and skills is variable and the guardianship of the States is more or less strong. Consequently, there are many characteristics related to a vision of sharing power. Municipalities, regions, rural communities... there are also various levels of community depending on the country. Natural resources are not managed in the same way in different situations, for example comparing a small community and a rural community with the size of a department, or if all of the affected population exceeds 80 000 person.

Funding

Today, local communities have 3 funding sources:

- the State – which is often very poor, which transfers some resources;
- community's own resources – which are generally very low;
- external donors.

Local communities' responsibilities

In the predominantly French-speaking countries, the skills of communities are marked by the French administrative system. The state transferred some, but the level of transfer also depends on the countries: it is strong in some (e.g. Uganda, Tanzania, South Africa), partial (e.g. Morocco, Tunisia) or low (Niger), which demonstrates variable willingness of the states to abandon their responsibilities in health, management of water etc. Although responsibilities have been transferred to local communities, often this has not been accompanied with the financial and human resources required to implement them.

Decentralisation process in West Africa

The speed of the decentralisation process in West Africa increased in recent years. For instance, in Burkina Faso, decentralization is complete with: 13 regions, 45 provinces and 350 communes. In each commune there is an Environment Service. The regional and provincial authorities assist the communes to reinforce their competences. The case is the same in Mali, with a strong decentralisation process characterised by the creation of 700 communes.

ANNEX 11

LESSONS ON LAND TENURE

Annex 11 Lessons on Land Tenure

West Africa

In 1994, during a sub-regional conference held in Praia (Cape Verde) entitled “Land tenure issue and decentralisation in the Sahel” allowed planning a regional strategy to manage land tenure avoiding conflicts and allowing social stability and peace within the States and between the states of the sub-region.

However, after 9 years, the regional forum about “Rural Land Tenure and sustainable development in the Sahel and in West Africa” highlighted:

- how the stakeholders implemented activities for the equitable, peaceful and efficient land management in order to improve agricultural, animal and fishery production but also to ensure NRM (i.e. water, forests)
- the deep changes that occur in the sub-region concerning demography, urbanisation, democratisation, sub-regional integration required to renew the land tenure issue and policies.

Particularly, it is important to take into account the contribution of the civil society in the process. The rural / farmers organisations played a key role and they are aware about their role, their responsibilities and their capacities to influence the public policies on land tenure.

The decentralisation process is viewed as the appropriate level of entry in the sub-region, to establish a peaceful, sustainable and efficient land tenure management.

Nevertheless, a number of limitations to the process were underlined by the participants of the regional forum. They appealed to decision makers to have:

- political courage to apply efficiently the law and rules about land tenure and to take them into account in the policies and projects of decentralisation,
- political will to :
 - transfer skills about land tenure management and financial resources to local communities
 - ensure land equitable access for the most vulnerable social categories (women, pastoralists, young people, poor framers and migrants).

Few instruments have been efficient and relevant during the past decade such as: rural codes, national programmes about “terroirs” management but can be reinforced.

The forum pointed out that the process must be reinforce thanks to flexible process and innovative solutions to define laws and rules that favour the local practices to manage land tenure allowing the mastery of the local resources management by the local communities. In this way, the local communities are responsible about the sustainable use of their local resources.

The forum invited the Chiefs of member states of CILSS, UEMOA and ECOWAS to take the appropriate actions to discuss, negotiate and adopt a joint land tenure political instrument such as a sub-regional land tenure charter. This charter should allow to safe the investments, preserve local communities rights and manage the national interests of each states.

This declaration of Bamako was respectively approved by the Chiefs of States and of governments of ECOWAS and CILSS, in December 2003 during the ECOWAS summit (Accra, Ghana) and in January 2004 during the CILSS summit (Nouakchott, Mauritania).

In November 2006, the CILSS organised a workshop in Bamako to give renewed impetus to the process launched in 2003. This workshop analysed the state of advancement of the process and the evolution of land tenure, also to write a “roadmap” for the elaboration and the implementation of sub-regional land tenure charter in the Sahel and in West Africa, thanks to the consultation of all stakeholders involved in the process.

Under the umbrella of ECOWAS and UEMOA, the CILSS is responsible for the implementation of the process.

The roadmap comprises 3 main components:

- Component 1: Ownership and steering of the process
[Thanks to exchanges and consultations with the key stakeholders, the process should be launched again at the beginning of January 2007]
- Component 2: consultation around the charter issues
This step should allow capitalising the land tenure policies in each country, to identify the crucial issues of the charter and to discuss them through a consultation process (joint understanding of the crucial issues, better information about the state of advancement in each country and better knowledge on the charter's issues, consensus on the charter's issues – Beginning of 2008)]
- Component 3: elaboration, adoption, ratification and implementation of the charter
 - The charter project should be elaborated in 2008
 - The draft charter will be discuss through consultations and the results are validated in each country in 2009
 - The charter project will be validated at regional level in 2012
 - The charter will be ratified between the beginning of 2013 and the end of 2015
 - The charter will be implemented from 2015 to 2020.

The process is still on-going.

North Africa - A case study in Southern Tunisia (Jeffara region)

The land tenure status is viewed as a determinant factor of the socio-environmental evolutions in the southern presaharan Tunisia. Indeed, three periods illustrated the evolution of land tenure during the twentieth century in the Jeffara region. The first period (1901 – 1964) was market by the creation of “collective land” concept without a clear status thanks to the law of 14 January 1901. This was done to avoid conflicts between stakeholders (tribes, members of tribes, colons, administration of state). In 1935, the status was clarified through a decree attributing the civil responsibility to tribes (a council of management, elected by heads of family, manage the goods of the community). The second period (1964 – 1974) was characterised by the progressive privatization of the communal lands and the third period (1974 – 1998) by the spatial extension of the privatized land.

After 40 years, 70% of the collective land was attributed to private owner. This allows the integration of these former collective lands in the economy thanks to the development of agricultural (*mise en valeur agricole*) favouring access to credit and incentives for agricultural development.

This has resulted in a strong agricultural development and transformations in the space marked by the extension of the tree planting and the installation of important actions to fight against erosion and to collect water runoff. This strong agriculture was accompanied by a local development characterised by an expansion of agricultural production and the emergence of new centres of settlement. However, the privatization of collective land has not always resulted in an agricultural development. Indeed, the problems of drought and the difficulties of supporting a sustainable agricultural development that meets the wishes of the population have resulted in the abandonment trends and the research of new strategies to multiply the activities and functionality of the space. This phenomenon was especially demonstrated in old “*jessours*” areas.

To conclude, further studies are needed to study the spatial pattern of land tenure changes and their impacts on agricultural productivity and the environment in the Jeffara region.

ANNEX 12

REGIONAL PROJECTS AND INITIATIVES

Annex 12 Regional Projects and Initiatives

1. Regional Initiatives

TerrAfrica

“TerrAfrica, through multi-stakeholder partnerships, is advancing this alternative vision that will strategically address the knowledge and technology, policy and institutional and financial barriers and bottlenecks to adoption and scaling up the many local level African land management within the integrity of the landscape. By bringing the necessary elements together to obtain multiple ecological and socio-economic benefits together, SLM is a thread that fundamentally links multiple sectors, actors and scales. This in turn requires the development of a supportive enabling environment by mainstreaming the concepts and principles of sustainable land management across central and local government development policies and programmes (including agriculture, environment, energy, finance, education, and rural development among others), and forging multi-stakeholder partnerships and programme-based approaches to make efficient use of national and international investments.” (FAO, 2007).

“TerrAfrica builds upon the convergence of similarly minded global and regional efforts (*inter alia* the UNCCD, GEF, AGRA, the NEPAD Action Plan for the Environment and CAADP, and the Paris Declaration) coupled with a growing body of locally successful SLM efforts to build a collective business model for SSA. The mutually reinforcing aims of TerrAfrica are to provide support for: (i) coalition building amongst the key stakeholders; (ii) improving the development, management and dissemination of SLM knowledge; and (iii) leveraging and harmonizing the investment funds required for the promotion of SLM at the local and country levels. The timing is right for an attainable vision.” (FAO, 2007).

TerrAfrica is “a primary vehicle for consultation and action with the direction and support provided by a group of African governments, [NEPAD](#), [the World Bank](#), [the UNCCD’s Global Mechanism \(GM\)](#), [the UNCCD Secretariat](#), [the GEF Family](#), [IFAD](#), [the FAO](#), [UNEP](#), [AfDB](#), regional and sub-regional organizations, as well as multilateral organizations including [the European Union](#) and [the European Commission](#), bilateral donors, civil society and scientific organizations including [FARA](#) and [CGIAR centers](#).” (FAO, 2007)

NEPAD’s CAADP

The New Partnership for Africa’s Development (NEPAD) has identified agriculture as central to poverty alleviation, food and nutrition security and attaining the Millennium Development Goals (MDGs) in Africa. The Comprehensive Africa Agriculture Development Program (CAADP) (including livestock, Forest and Aquaculture agendas as articulated in the CAADP Companion document) provides a common framework for stimulating and guiding national, regional and continental initiatives on enhanced agriculture productivity.

Under CAADP, Africa’s governments have further identified four continent wide entry points (Pillars) for investment and action in pursuing increased and sustainable productivity in agriculture, forestry, fisheries and livestock management (Bwalya et al, 2009). These include:

- Pillar 1 Extending the area under sustainable land and water management;
- Pillar 2 Improving Market access through improved rural infrastructure and trade-related interventions;
- Pillar 3 Increasing food supply and reducing hunger across the region by increasing small holder productivity and improving response to food emergencies;
- Pillar 4 Improving agricultural research and systems to disseminate appropriate new technologies, and increasing the support to help farmers adopt them.

Each of these pillars incorporates policy, institutional reform and capacity building and has a framework through which the challenges prioritised by CAADP might effectively and efficiently be achieved.

CAADP is now acknowledged as a key entry point for both national and international development partner support to the agricultural sector in Africa. Thus, the plans for the GGWSSI will contribute to the CAADP as they are aligned to Pillar 1, also to parts of Pillars 3 and 4.

It is not a set of supranational programs to be implemented by individual countries. It is rather a common framework, reflected in a set of key principles and targets that have been defined and set by the Heads of State and Government, in order to: (i) guide country strategies and investment programs; ii) allow regional peer learning and review; iii) facilitate greater alignment and harmonization of development efforts.

These key principles and targets include:

- agriculture-led growth as a main strategy in attaining targets on food security and poverty alleviation (MDGs)
- exploitation of regional complementarities and cooperation to stimulate growth;
- application of principles of policy efficiency, dialogue, review, and accountability;
- usage of partnerships and alliances, including farmers, agri-business and civil society;
- shared responsibilities and collective commitment among the various African institutions, from the AU institutions (AUC, NEPAD Secretariat and REC) to national governments, the civil society and private sector institutions;
- assignment to individual countries the role and responsibility of program implementation, the coordination to designed Economic Regional Communities (RECs) and facilitation to the NEPAD Secretariat.

Action Plan of the Environment Initiative of NEPAD

“The Action Plan of the Environment Initiative provides an environmental policy framework for addressing environmental issues in Africa, including implementation of MEAs. The Action Plan was developed in a consultative and participatory process with African experts by NEPAD together with the African Ministerial Conference on the Environment (AMCEN), UNEP, and GEF. The African Union adopted the Action Plan in July 2003.

The Action Plan links two defining features of Africa — poverty and environment — recognising the common and shared sustainable development problems and concerns in the different States of the continent. This regional action plan, covering the first decade of the 21st century, promotes Africa’s sustainable development and therefore takes a long-term approach. It emphasises processes, projects and related activities that enlarge Africa’s economic prospects through sustainable environmental management.

The Action Plan integrates economic growth, income distribution, poverty eradication, social equity, and better governance. It covers eight sectors, many of which are already the subject of various MEAs: combating land degradation; drought and desertification; wetlands; invasive species; marine and coastal resources; cross-border conservation of natural resources; climate change; and cross-cutting issues. Indeed, one of the specific objectives of the Action Plan is to support the implementation by African States of their commitments under the global and regional environmental agreements to which they are party.” (UNEP, 2009).

The Action Plan lies on four area of intervention:

- **Area of intervention 1: Fight against land degradation, drought and desertification.**
- **Area of intervention 2: Conservation of humid zones in Africa**
- **Area of intervention 3: Prevention and control of invaders (alien) species**
- **Area of intervention 4: Conservation and sustainable utilisation of coastal and marine resources**
- **Area of intervention 5: Conservation and management of transboundary natural resources (freshwater, biodiversity, forests and plant genetic resources)**

Cross-cutting issues

- Health and Environment
- Poverty and Environment
- Transfer of environmentally sustainable technologies
- Assessment and early warning system of natural disasters

MENARID (of the International Fund for Agricultural Development - IFAD)

“IFAD is the lead agency of the MENARID programme that brings together all GEF agencies to promote integrated sustainable land management in the drylands of the Middle East and North Africa region. The main objective of MENARID is to advance the mainstreaming of sustainable land management, improving governance for natural resource management, and coordinating investments to decrease vulnerability to climate change and improve ecosystem resilience and integrity.” (IFAD, 2009)

The overall objective of MENARID is twofold:

1. to promote INRM in the production landscapes of the MENA region;
2. to improve the economic and social well-being of the targeted communities through the restoration and maintenance of ecosystem functions and productivity.

MENARID will address the above-mentioned constraints and work towards further mainstreaming INRM, improving the governance of natural and water resources (ground water and trans-boundary water systems), and coordinating investments that will: (i) promote enabling environments to mainstream the INRM agenda at national and regional scales, and (ii) generate mutual benefits for the global environment and local livelihoods through catalyzing INRM investments for large-scale impact.

The purpose of this programme framework is to provide overall guidance in identifying strategic priorities for GEF investments in integrated natural resource management (INRM) in the Middle East and North Africa (MENA) region. These strategic priorities should maximize GEF’s impacts in achieving global environmental benefits through selected investments supporting the GEF focal areas for land degradation, international waters, biodiversity, and climate change while contributing at the same time to improving livelihoods and reducing poverty. The operational objectives of MENARID are to promote INRM in the production landscapes of the MENA region and to improve the economic and social well-being of the targeted communities through the restoration and maintenance of ecosystem functions and productivity.

The programming framework reflects GEF-4’s transition from single-project interventions to a more programmatic approach for GEF-supported activities. It allows GEF-4 to target its limited resources for priority issues of regional concern and to realize higher visibility and greater impact by linking project interventions in a programmatic context. It also allows a shift towards an integrated and landscape approach to address processes that provide people with ecosystem goods and services from local to wider scales of operation. The landscape approach will embrace ecosystem principles. While the focus is on land degradation, synergies with other focal area objectives are also encouraged, including: adaptation to climate change, biodiversity conservation in production landscapes, and reductions in pollution and sedimentation of international water bodies. The options identified are more indicative than prescriptive and should be used as such by countries and agencies in developing and submitting projects to GEF, that could demonstrate the focal area synergies and added value that will be gained from experience sharing among the projects.

MENARID will implement three programme results such as:

PR1: Harmonized approaches and coordinated INRM investments (targeting 10 per cent of the MENARID envelope);

PR2: INRM mainstreamed, enabling environment promoted and good practices up-scaled/ disseminated (targeting 25 per cent of the MENARID envelope);

PR3: Restored ecosystem integrity and improved livelihoods including increased adaptation to climate change (targeting 65 per cent of the MENARID envelope).

In order to address these thematic areas effectively, the MENARID programme is organized into four closely-integrated components that combine to deliver on the PRs and to an overall impact on both livelihoods and ecosystems in a coherent manner. The four MENARID components are:

Component 1 (Relates to PR1): Coordination and harmonization of approaches to INRM investments at national and local levels

Component 2 (Relates to PR2): Mainstreaming and promoting enabling environments for INRM

Component 3 (Relates to PR3): Restoration of arid and semiarid ecosystem integrity and improved livelihoods, including increased adaptation to climate change

Component 4 (Relates to PR1 and PR2): Knowledge management, sharing and up-scaling of best practices

2. Regional Projects

SolArid of the Global Mechanism (GM)

At the *regional level* the GM, under its SolArid programme, has signed a Partnership Agreement with CENSAD. This agreement forecasts the establishment of a Partnership and Resource Mobilisation Platform. The objective of this Platform is:

1. support countries in the investment needs assessment for the implementation
2. support to the elaboration of integrative regional projects,
3. the identification of potential financing sources for the implementation of regional programmes, including the Great Green Wall;
4. the support to the establishment of South-South Partnerships,
5. Capacity building activities on resource mobilisation strategies

In the spirit of the Green Wall for the Sahel and Sahara Initiative the Partnership and Resource Mobilisation Platform intends to strengthen the implementation of existing continental frameworks and plans addressing the menaces of land degradation and desertification in the margin of the Sahara desert (RAP, SRAPs, NAPs...).

At the *national level* the GM supports countries in the elaboration and implementation of National Integrated Financing Strategies to combat desertification. One component of the IFS is to support mainstreaming of SLM programmes into the national socio-economic development frameworks. One of the issues will be, without doubt, to support mainstreaming of the national component of the Green Wall Initiative into the appropriate national development frameworks.

At the *local level* SolArid intends to promote a strong decentralised cooperation programme to the benefit of African Local Communities geographically covered by the Green Wall Initiative. SolArid is already in touch with potential partners in France: Ministry of Foreign Affairs (Délégation pour l'action extérieure des collectivités locales), AFD, FFEM, ARENE (Région Ile-de-France). The SolArid proposal is to launch an enthusiastic communication campaign towards French local communities on the "Green Wall Challenge" and on the contribution they could provide through the decentralised cooperation. SolArid could become the space for partnership building. This idea was very well received by the French Partners mentioned above.

SolArid will also promote *South-South Cooperation between Maghreb and Sahel countries*. In this spirit Tunisia expressed its interest to contribute to this Initiative through SolArid. Negotiations with Algeria led to its agreement to financially and technically support the Green Wall through South-South cooperation with one Sub-Saharan Country (to be determined). This agreement is not yet official but the discussions run around the Algerian support to the elaboration and implementation of a Pilot Integrated Rural Development Project in a Sub Saharan country. This would be an opportunity for Algeria to share its experience in the field and to transfer methodologies and technologies related to the Algerian Integrated Rural Development Approach.

LADA

The Land Degradation Assessment in drylands project (LADA) is developing tools and methods to assess and quantify the nature, extent, severity and impacts of land degradation on dryland ecosystems, watersheds and river basins, carbon storage and biological diversity at a range of spatial and temporal scales. It also builds the national, regional and international capacity to analyse, design, plan and implement interventions to mitigate land degradation and establish sustainable land use and management practices.

Its results contribute to the following Environmental Goals of GEF:

- OP1 – conservation and sustainable use of the biological resources of arid and semi-arid areas
- OP12 – to catalyze widespread adoption of comprehensive ecosystem management interventions
- OP15 – mitigating the causes and negative impacts of land degradation on the structure and functional integrity of ecosystems through sustainable land management practices.

The project will contribute to the Developmental Goals of UNCCD and UN multi-lateral agencies to improve people's livelihoods and economic well being.

Using the methods developed, LADA is assessing the baseline condition of land degradation at global and national scale to highlight the areas at greatest risk. These assessments are integrated with and supplemented by detailed local assessments focusing on root cause analysis of land degradation and on local (traditional and adapted) technologies for sustainable land management. Areas where land degradation is well controlled are also included in the analysis.

LADA follows a participatory, ↓ decentralized, country-driven and integrated approach and makes ample use of participatory rural appraisals, expert assessment, field measurements, remote sensing, GIS, modeling and other modern means of data generation and processing, networking and communication technologies for sharing of information at national and international levels.

The proposed approach is to develop a methodological framework, rather than a rigid method. It is expected that the framework would give enough flexibility, in terms of the procedures, techniques and state of the databases to accommodate the particular circumstances of the country or region where it is applied. Also, the methodology is designed to be able to accommodate new information that will come in the future with the development of studies and technology.

In Africa, [Senegal](#), [South Africa](#) and [Tunisia](#) have been selected for conducting pilot studies.

At local level, the LADA methodology for land degradation assessment has been prepared in collaboration with the University of East Anglia and the WOCAT. It consists in a manual and several annexes meant to provide guidelines for the characterization of local areas in terms of land degradation and conservation measures.

The local assessment is to be made according to low cost, speedy procedures, following a participatory approach in order to obtain a stronger involvement of the local stakeholders. The assessment aims at identifying not only the actual status and circumstances of land degradation, but also its historical development and the perception of it by the people, in order to allow a better understanding of the phenomenon, and provide pertinent information for the definition of response measures. To this end, both biophysical and socio-economic indicators are taken into consideration for the assessment.

The local assessment is meant to have a strong linkage with the national assessment through the use of the national LUS map as a basis for identify and sampling the assessment areas.

The LADA project has started developing an indicator toolbox containing a set of indicators that can be measured at global, national and local scale and which allow for extrapolation at these different scales. The LADA indicators are relatively easy to measure or obtain and are therefore of low cost. The LADA indicators are related to several conditions of the land, in such a way that they can describe the system in a cost-effective way. The LADA indicators are organized through the *DPSIR* framework. This conceptual framework allows comparing different indicators at different scale levels, and facilitates finding cause-effect relations between indicators. The indicator toolbox is being developed in collaboration with the Desertlinks project, and it is hosted on the [Desertlinks](#) website.

At all stages of intervention within the LADA project, substantial attention is given to *training, institutional and technical capacity building, with the final goal of improving policy and decision-making capability*. A particular emphasis is put on multi-stakeholder involvement and participation, especially of land users and farmers at the local level and of policymakers at national and global levels. Local professionals and extension agents are being trained in field assessment of land degradation through adopting a farmer-perspective and using a sustainable rural livelihoods approach. The capacity building activity has a special focus at regional level, through the establishment in the LADA countries of six regional training centres on land degradation issues. The regional centres will be created with the collaboration of the national partners, trainers identified and the *curricula* developed.

The capacities developed and the knowledge base produced by the project, constitute a platform for policy making at national and global level. All the information is made available to interested parties

through workshops, publications, web-based information systems and the increased expertise of the national organizations involved. LADA communicates and exchanges land degradation information in order to complete the linkage between research and the policy decision-making process. It does this through policy guidance (in UN-CCD's Regional, Sub-regional and National Action Programmes), with GEF and other implementing agencies in land degradation control, and the identification of priority actions, such as policy and institutional reforms and development investments at all levels. LADA is already actively engaged in similar projects in Central Asia (CACILM) and the Caribbean, and has various complementary actions within the Terrafrica programme, the SWALIM project and cooperates with the UN-CBD.

African Monitoring of Environment for Sustainable Development (AMESD)

The AMESD program is implemented by the AUC and funded by the EU through the 9TH EDF. The program addresses the need for improved environmental monitoring towards sustainable management of natural resources.

“The overall objective of the program is to enhance environmental monitoring for preparedness and adaptation to environmental change, including sustainable management of the environment, thereby contributing to poverty alleviation in the poorest areas of the world.

The purpose of the program is to increase the information management capacity of African regional and national institutions in support of decision makers at different levels (regional, national and local) and to facilitate sustainable access to Africa-wide environmental information derived from earth observation technologies.” (AMESD, undated)

AMESD is to maintain the PUMA-installed meteorological satellite receiver stations in every AU country, which capture 2km resolution data from EUMETSAT. The program will also install a network of 50 more stations (and train ~200 people), enriching the information for land applications (first to open February 2010), mostly national, but also 5 regional centres [Of particular relevance to the GGWSSI, AMESD is working with ECOWAS (AGRHYMET, Niamey) and IGAD (ICPAC, Nairobi).] The stations will provide “added value” products, to provide up-to-date alerts etc for decision makers, e.g. to assist pastoralists to locate good grazing (but local Ministries to develop system to disseminate info to beneficiaries). For example, the CICOS (Kinshasa) centre for the Congo Basin will provide information on river levels, vital as 50% of food perishes en route down river (when levels drop and barges grounded for days / weeks).

The intention is that governments could use local radio to disseminate information.

AMESD is also intended to provide in required to support single African voice in MEA negotiations (e.g. COPs).

Eventually value added regional products could be up-linked to satellite, checked at EUMETSAT in Germany then re-broadcast by satellite for countries in source region.

ANNEX 13

RECENT EU-SUPPORTED PROJECTS IN THE GGWSSI COUNTRIES

Annex 13 Recent EU-supported Projects in the GGWSSI Countries

Main sector	Region	Country	Project title
Adaptation specific.	ACP - AFRICA	Reg East. Africa -	Drought cycle management in the greater Horn of Africa – learning, documenting and capacity building project
Adaptation specific.	ACP - AFRICA	Reg East. Africa -	Making Natural Resource Management Innovations Work at Multiple Scales for Increased Food Security in the Highlands of Eastern Africa.
Agriculture	ACP - AFRICA	Chad	Appui à la Récupération des Terres Dégradées pour la Promotion d'une Agriculture Durable et amélioration de la nutrition des populations vulnérables dans la Sous-préfecture de Bitkine
Agriculture	ACP - AFRICA	Chad	Promotion de la culture du sésame dans les diocèses de Doba, Goré, Laï et Moundou
Agriculture	ACP - AFRICA	Burkina Faso	Projet de valorisation des potentialités naturelles et d'appui à la production agricole des unions par filière dans les provinces du Loba et du Tuy (CISV)
Agriculture	ACP - AFRICA	Burkina Faso	Appui à la production agropastoral durable de la province de la Gnagna (SOS-Sahel International)
Agriculture	ACP - AFRICA	Burkina Faso	Initiative FERSOL (CILSS)
Agriculture	ACP - AFRICA	Reg Africa -	TerrAfrica - Sustainable Land Management: Support to the development of the TerrAfrica platform
Agriculture	ACP - AFRICA	Reg Africa -	Mainstreaming the UN Convention to Combat Desertification (UNCCD) in Africa
Agriculture	ACP - AFRICA	Reg East. Africa -	Transboundary environmental project: conservation of natural resources and sustainable development in pastoral semi-arid regions of Eastern Africa
Agriculture	ACP - AFRICA	Burkina Faso	Partenariat et innovations agropastorales pour relever la fertilité des sols des zones peuplées de l'Ouest du BF FERTIPARTENAIRES (CIRAD)
Agriculture	ACP - AFRICA	Ethiopia	Sustainable Community-Managed Rural Development Project in Hintallo-Wajerat and Adua Woredas, Tigray, Ethiopia: A Four Agency Initiative Using the Watershed Approach
Agriculture	ACP - AFRICA	Burkina Faso	Projet d'appui à la sécurité alimentaire par la fertilité des sols dans les régions du centre nord et du plateau central (Deutsche Welthunerhilfe EV)
Awareness Raising	ACP - AFRICA	Reg Africa -	L'information Environnementale corporative au service des grands défis régionaux d'Afrique
Biodiversity/Prot. Areas	ACP - AFRICA	Benin	Projet d'Aménagement du Parc National W
Biodiversity/Prot. Areas	NEIGHBOURHOOD	Morocco	Appui à l'amélioration de la situation de l'emploi de la femme rurale et gestion durable de l'Arganeraie dans le Sud-Ouest du Maroc (Projet Arganier)
Biodiversity/Prot.	ACP - AFRICA	Chad	Conservation et Utilisation Rationnelle des

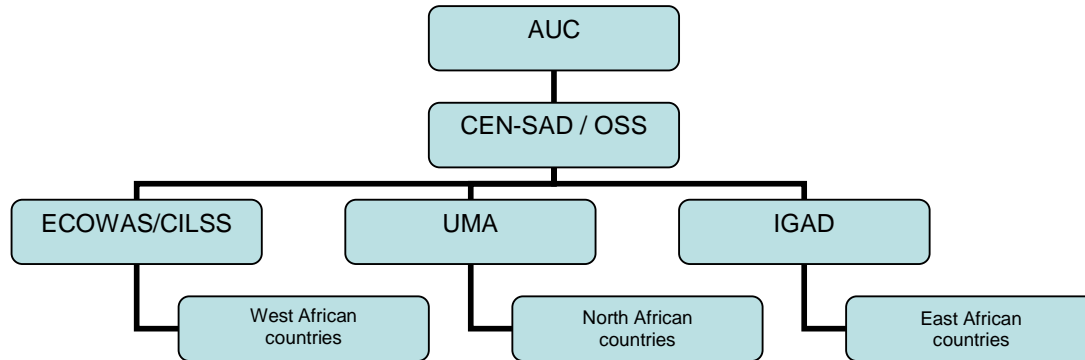
Main sector	Region	Country	Project title
Areas			Ecosystemes soudano-saheliens – phase 2 (curess 2)
Forestry	ACP - AFRICA	Reg Central Africa	Gestion participative des ressources forestières et promotion d'initiatives économiques éco-compatibles dans la Vallée du Logone.
Forestry	ACP - AFRICA	Reg Africa	Programme transfrontalier de conservation et de gestion durable des écosystèmes sahariens de la région Termit (Niger) et de l'Egueï (Tchad)
Waste Management	ACP - AFRICA	Burkina Faso	Projet d'amélioration de la fertilité des sols dans 30 villages de Koubritenga par l'utilisation des excréta humains hygiénisés (CREPA)

ANNEX 14

INSTITUTIONAL SCENARIOS

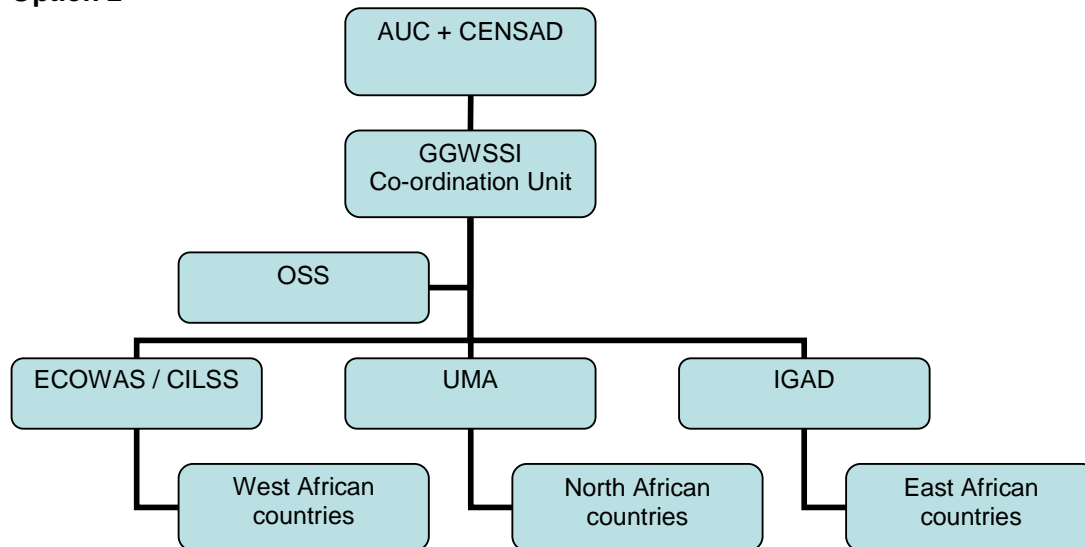
Annex 14 Institutional Scenarios

Option 1

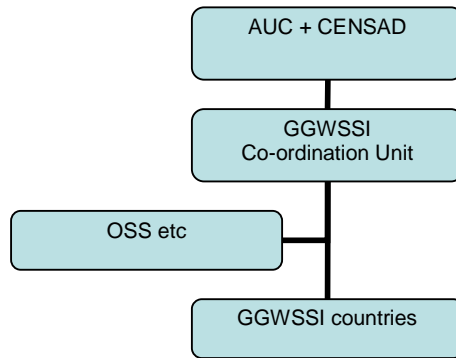


OSS is supporting CEN-SAD on scientific and technical aspects making available all useful information produced at international, regional, sub-regional and national levels (UNDP, UNEP, CGIAR institutions – ICRAF, ICRISAT..., national research institutions particularly the north African ones).

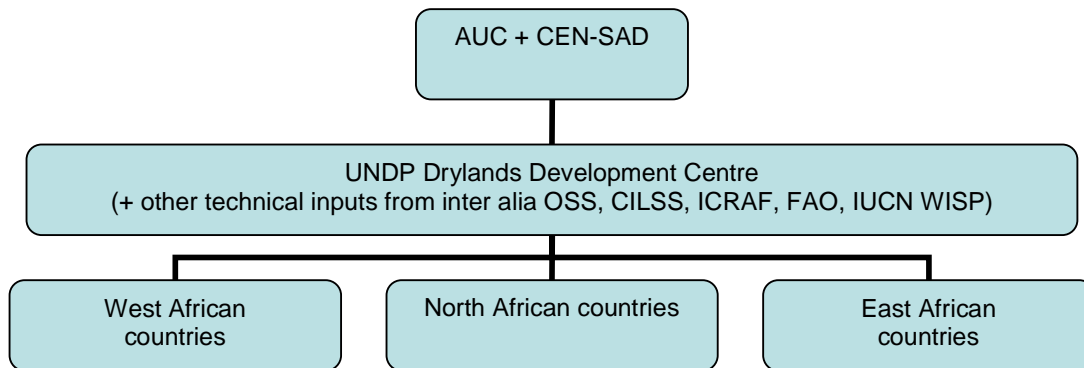
Option 2



Option 3



Option 4



ANNEX 15

**LIST OF MEMBER COUNTRIES IN EACH REGIONAL AND SUB-REGIONAL
ORGANISATION**

Annex 15 List of Member Countries in each Regional and Sub-Regional Organisation

	AU	CEN-SAD	OSS ¹	AMU	CILSS	IGAD	ECOWAS	WAEMU	ECCAS
Algeria	X		X	X					
Angola	X								X
Benin	X	X					X	X	
Botswana	X								
Burkina Faso	X	X	X		X		X	X	
Burundi	X								X
Cameroon	X								X
Cape Verde	X		X		X		X		
Central Africa	X	X							X
Chad	X	X	X		X				X
Comoros	X	X							
Congo	X								X
Democratic Republic of Congo	X								
Djibouti	X	X	X			X			
Egypt	X	X	X						
Equatorial Guinea	X								X
Eritrea	X	X	X						
Ethiopia	X		X			X			
Gabon	X								X
Gambia	X	X	X		X		X		
Ghana	X	X					X		
Guinea	X	X							
Guinea-Bissau	X	X	X		X		X	X	
Ivory Coast	X	X					X	X	
Kenya	X	X	X			X			
Lesotho	X								

¹ Other members: Countries: Canada, Italy, France, Germany, Switzerland; Sub-regional organisations: CEN-SAD, CILSS, IGAD, UMA; UN organisations: FAO, UNESCO, UN General Secretariat, Executive Secretariat of UNCCD; NGO: ENDA-Tiers Monde

	AU	CEN-SAD	OSS ¹	AMU	CILSS	IGAD	ECOWAS	WAEMU	ECCAS
Liberia	X	X					X		
Libya	X	X	X	X					
Malawi	X								
Mali	X	X	X		X		X	X	
Mauritius	X			X					
Mauritania	X	X	X		X				
Morocco		X	X	X					
Mozambique	X								
Namibia	X								
Niger	X	X	X		X		X	X	
Nigeria	X	X					X		
Rwanda	X								
Sahrawi Arab Democratic Republic	X								
Sao Tome & Principe	X	X							X
Senegal	X	X	X		X		X	X	
Seychelles	X								
Sierra Leone	X	X					X		
Somalia	X	X	X						
South Africa	X								
Sudan	X	X	X				X		
Swaziland	X								
Tanzania	X								
Togo	X	X					X	X	
Tunisia	X	X	X	X					
Uganda	X		X				X		
Zambia	X								
Zimbabwe	X								

ANNEX 16

MAPS OF MEMBER COUNTRIES OF THE RECS

Annex 16 Maps of Member Countries of the RECs

CEN-SAD



Source: www.cen-sad.org/new/dmdocuments/donnees_censad/fr_donnees_censad.doc

ECCAS



Source: Maps from the World Bank web site: www.worldbank.org

WAEMU



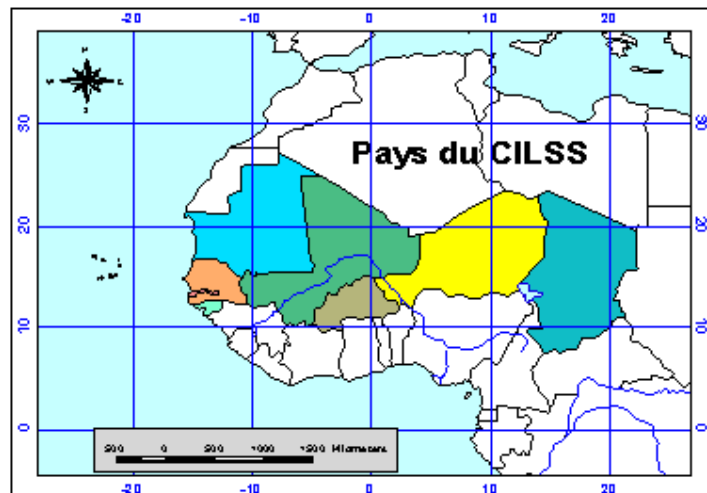
Source: Maps from the World Bank web site: www.worldbank.org

ECOWAS



Source: Maps from the World Bank web site: www.worldbank.org

CILSS



Source: web site of the Regional Centre AGRHYMET
www.agrhymet.ne/

COMESA



Source : <http://commons.wikimedia.org/wiki/File:Africa-countries-COMESA.png>

IGAD



Source: Maps from the World Bank web site: www.worldbank.org

AMU



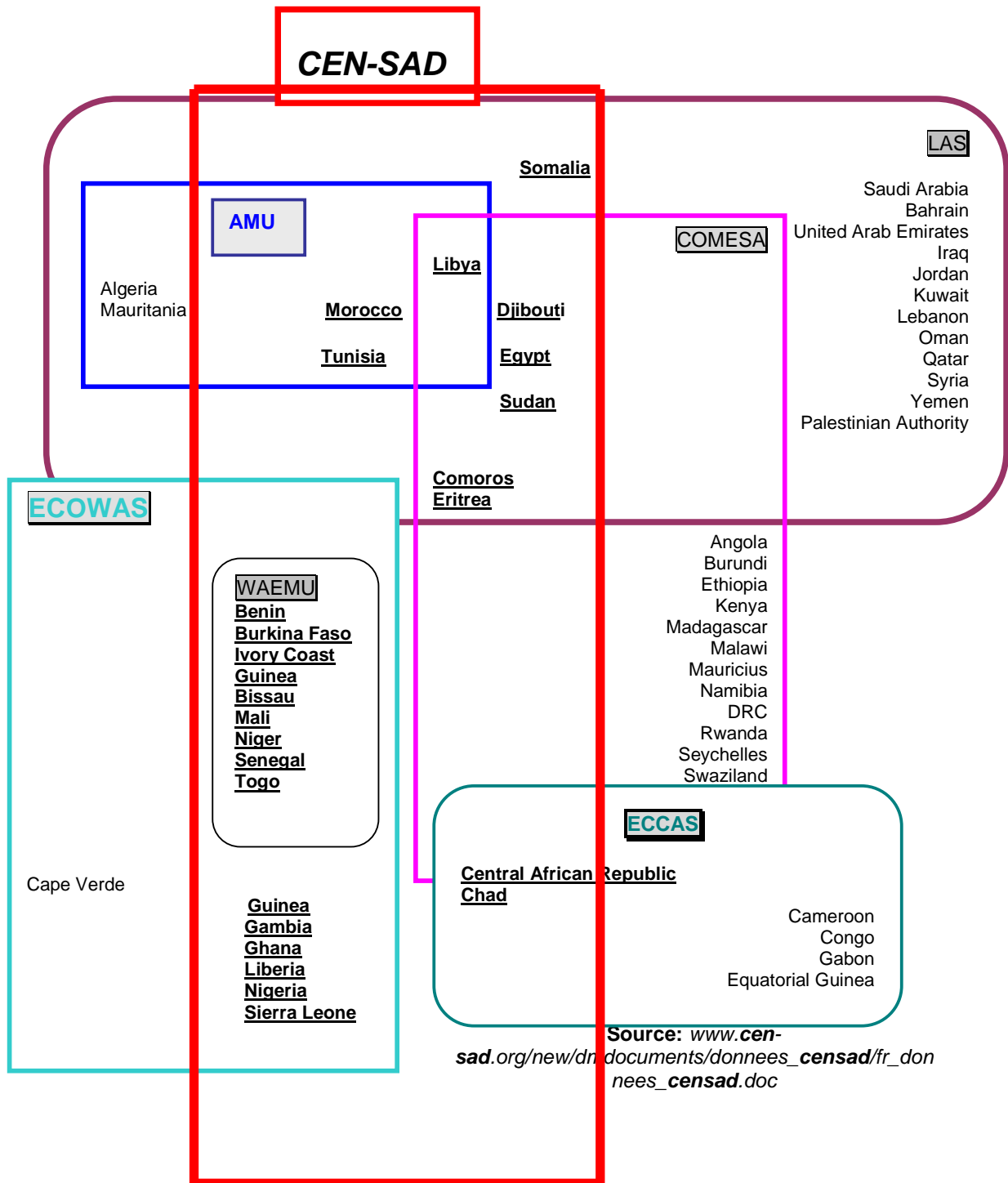
Source: [http://commons.wikimedia.org/wiki/File:Africa_\(Arab_Maghreb_Union\).png](http://commons.wikimedia.org/wiki/File:Africa_(Arab_Maghreb_Union).png)

LAS



Source: http://fr.wikipedia.org/wiki/Ligue_arabe

Location of the CEN-SAD member countries
compared to the existing RECs



ANNEX 17

**CHARACTERISTICS OF THE REGIONAL AND SUB-REGIONAL
ORGANISATIONS**

Annex 17 Characteristics of the regional and sub-regional organisations

Organisation	Geographic zone	Field interventions of	Mandate	Skills and experiences	Identified needs
African Union Commission (AUC)	Africa	Political and strategic/technical	<p>Making possible regional integration, as a tool for accelerating the economic, social, cultural and political development of African countries.</p> <p>Acts as the executive/administrative branch or secretariat of the African Union.</p>	<ul style="list-style-type: none"> - High political commitment - Some financing capacities (the “Big Five” contributing members) - Experience in managing EU projects (i.e. AMESD) 	<ul style="list-style-type: none"> - Wide ranging mandate and limited number of staff
Community of Sahel-Saharan States (CEN-SAD)	Circum-Saharan Africa	Political and Technical	<p>Establishing a global Economic Union based on the implementation of a community development plan that complements the local development plans of member States and which comprises the various fields of a sustained socio-economic development: agriculture, industry, energy, social, culture, health...</p>	<ul style="list-style-type: none"> - High financing capacities - Has scope to mobilise African institutions 	<ul style="list-style-type: none"> - Reinforce the existing very small team of the Rural Development and NRM Department (recruit project officers)
Economic Community Of West African States (ECOWAS)	West Africa	Political and Economical	<p>Promoting economic and political integration at the regional level (West Africa)</p>	<ul style="list-style-type: none"> - Can directly raise funds - Existing policies on the environment (ECOWAP) and agriculture (ECOWEP) – within CAADP - Rely on CILSS for project management 	<ul style="list-style-type: none"> - None

Organisation	Geographic zone	Field interventions of	Mandate	Skills and experiences	Identified needs
West African Economic and Monetary Union (WAEMU)	West Africa	Political and Economic	<ul style="list-style-type: none"> - Strengthen the competitiveness of economic and financial activities of the Member States in the framework of an open and competitive market environment and a streamlined and harmonized legal - Ensure the performance and convergence of economic policies of Member States through the establishment of a multilateral surveillance procedures - Create between Member States a common market based on the free movement of persons, goods, services, capital and the right of self-employed or employed, and a common external tariff and a commercial policy - Establish a coordination of national sectoral policies through the implementation of joint actions, and possibly of common policies in the following areas: human resources, land management, agriculture, energy, industry, mining, 		<ul style="list-style-type: none"> - Not researched (added after Burkina workshop)

Organisation	Geographic zone	Field interventions	Mandate	Skills and experiences	Identified needs
			<p>transport, infrastructure and telecommunications</p> <ul style="list-style-type: none"> - Harmonize for the proper functioning of the common market, the laws of Member States and particularly the system of taxation. 		
Economic Community Of Central African States (ECCAS)	Central Africa (only Chad in GGWSSI)	Political and Economical	ECCAS aims to achieve collective autonomy, raise the standard of living of its populations and maintain economic stability through harmonious cooperation. Its ultimate goal is to establish a Central African Common Market.	<ul style="list-style-type: none"> - Trade - Economic development - Peace and security 	<ul style="list-style-type: none"> - Not researched (only added after Burkina workshop – not contact has replied)
Inter-Governmental Authority on Development (IGAD)	East Africa	Political and Economical	<p>Fight against drought and desertification, realise peace, economic prosperity and regional integration in East Africa.</p> <p>In 2008, produced a strategy document on the environment highlighting the economic and social conditions, a situational analysis, a overview of the state of the environment and natural resources in the region and an outline of the evolution of environment and natural resources policy and strategy.</p>	<ul style="list-style-type: none"> - Strong commitment to manage/avoid conflicts and insure peace in East Africa 	<ul style="list-style-type: none"> - Not known (no replies to team's contacts)
Arab Maghreb Union (AMU)	North Africa	Political and Economical	Reinforce brotherhood that binds the Member States and their peoples, achieve the	<ul style="list-style-type: none"> - Relies on OSS to implement technical sub-regional projects 	<ul style="list-style-type: none"> - Could be major player, if diplomatic tensions could be overcome

Organisation	Geographic zone	Field interventions	of	Mandate	Skills and experiences	Identified needs
				<p>progress and well-being of their communities and defend their rights</p> <p>Realise free movement of persons, goods and capital among member states</p> <p>Adopt a common policy in all areas</p>		
Observatory of the Sahara and the Sahel (OSS)	Circum-Saharan Africa	Scientific and Technical (independent international organisation)		<p>Provide an adequate framework for North-South -South partnership: mobilise and reinforce member countries' capacity to tackle the environmental issues they face with a view to underpinning sustainable development and combating desertification in circum-Saharan Africa</p>	<ul style="list-style-type: none"> - Coordination of regional projects - Experiences to manage EU funding - Skills to mobilise all stakeholders at regional scale - Subsidiary of the action 	<ul style="list-style-type: none"> - Reinforce the small but efficient team to improve its capabilities to elaborate scientific and technical summaries / provide training on key issues (increasing consultancy, not recruitment)
Comité Permanent Inter Etats de lutte contre la Sécheresse au Sahel (CILSS, including + INSAH (Institut du Sahel) + AGRHYMET (Regional Centre for Agriculture, Hydrology and Meteorology)	West Africa	Scientific and Technical		<p>To insure food security thanks to preservation of natural resources and to implement the UNCCD at the sub-regional level (West Africa)</p>	<ul style="list-style-type: none"> - Recognised as a centre of excellence by NEPAD - Thanks to its new partnership with ECOWAS, CILSS can develop, duplicate and extend all its programmes/projects within the CILSS and ECOWAS member countries - Two efficient technical institutions (INSAH and AGRHYMET) - Experience in training and capacity building, coordination and management of sub-regional projects (including EU projects) 	<ul style="list-style-type: none"> - Some capacity building may be required

SWOT ANALYSIS OF THE PROPOSED INSTITUTIONAL SCENARIOS

Annex 18 SWOT Analysis of the Proposed Institutional Scenarios
(Compiled using results of the study's stakeholder workshop)

Option	Strengths	Weaknesses	Opportunities	Threats
1	<ul style="list-style-type: none"> Takes into account the existing structures Political and scientific anchorages AU is at the top & provides political leverage Reflects integration and favours synergies with the ongoing /existing programmes Each sub-regional organisation is responsible for one SRAP/CCD 	<ul style="list-style-type: none"> Failure to take account of the WAEMU Coordination role of CEN-SAD not clearly mentioned Role of the technical partners of the UN systems OSS positioning is not adequate Role of African technical partners not reflected ECCAS not included 	<ul style="list-style-type: none"> Potential for advocacy at global scale Promotion of South-South inter-regional cooperation 	<ul style="list-style-type: none"> Potentially complex multi-level arrangement, which could absorb funds and limit the beneficial impacts of activities to support the main beneficiaries – the rural land people. Capacities of RECs and other organisations in some doubt.
2	<ul style="list-style-type: none"> Specific Coordination Unit for the Great Green Wall 	<ul style="list-style-type: none"> Anchorage of unit (AU or CEN-SAD) is not clear AU and CEN-SAD are on the same level Technical partners of the UN system and African technical partners are not mentioned Respective roles of AU and CEN-SAD are not defined ECCAS not included 	<ul style="list-style-type: none"> Possibility to mobilise specific resources for the Great Green Wall 	<ul style="list-style-type: none"> Coordination unit may duplicate existing structures Fear of conflicts for leadership at highest level Potentially complex multi-level arrangement, which could absorb funds and limit the beneficial impacts of activities to support the main beneficiaries – the rural land people. Capacities of RECs and other organisations in some doubt.
3	<ul style="list-style-type: none"> Direct relationship between the unit and the countries 	<ul style="list-style-type: none"> Lack of the sub-regional organizations in the organogram Unit does not benefit from expertise of sub- 	<ul style="list-style-type: none"> All the countries are at the same level of information 	<ul style="list-style-type: none"> No ownership of the programme at sub-regional level Possible issue regarding attention to transboundary issues Coordination unit may duplicate

Option	Strengths	Weaknesses	Opportunities	Threats
		<p>regional organizations and other technical institutions</p> <ul style="list-style-type: none"> • Role of technical partner of the UN system and the African technical partners not reflected • Role of OSS etc. is unclear • AU(C), CEN-SAD at the same level - should be split • No definition of their roles • ECCAS not included 		<p>existing structures</p> <ul style="list-style-type: none"> • Fear of conflicts for leadership at highest level
4	<p><i>Option was not analysed as it was rejected outright by participants of the workshop – study team had included this in an effort to encourage consideration of the inclusion of UN / CIGAR and other institutions within the structure of the GGWSSI, and feel it did have the desired effect.</i></p>			

**AU/CEN-SAD AGREED INSTITUTIONAL IMPLEMENTATION ARRANGEMENTS
FOR THE GGWSSI**

Annex 19 AU/CEN-SAD Agreed Institutional Implementation Arrangements for the GGWSSI
(source - AU/CEN-SAD, 2009)

Political Coordination

The African Union Commission and the CEN-SAD Secretariat will provide overall oversight and coordination for the implementation of the Initiative. For this purpose they will put in place an appropriate institutional mechanism. Furthermore, AUC and CEN-SAD will liaise with the relevant Regional Economic Communities (RECs) such as ECOWAS, IGAD and MAU to achieve this. The latter will then be responsible for monitoring and reporting on the performance of the programs' implementation in their relevant area. The Commission and CEN-SAD will further be responsible for organizing the coordination meetings of the Technical and Steering Committees.

The Republic of Senegal as mandated by the Summit of the Leader and Heads of State will continue to assist program preparation and coordination under the umbrella of the AUC and CEN-SAD General Secretariat.

The Steering Committee

The Steering Committee will be composed of Ministers, who will be designated as appropriate by the participating countries. The Commission of the African Union and CEN-SAD General Secretariat will also be members. The Steering Committee will provide policy guidance for the implementation of the Program.

The Steering Committee may meet once per year to consider annual reports of the Technical Committee and to follow up on policy issues. For efficiency, the meeting of the Steering Committee may be held immediately after a sector meeting of Ministers in charge of agriculture, water and environment of CEN-SAD. The Secretariat service of the Steering Committee will be provided by AUC and CEN-SAD General Secretariat.

Technical Committee

Experts from the participating countries will form the members of the Technical Committee. In addition, the Committee will also have relevant experts from other African States, representatives from AUC, CEN-SAD General Secretariat, relevant RECs, technical institutions and development partners as relevant. The Technical Committee will provide technical oversight for the on-the-ground implementation and advice to the Steering Committee on needed policy orientation.

The Technical Committee could meet half yearly to guide the program. The meetings of the Committee will be organized by AU and CEN-SAD with the support of sub-regional technical organizations such as OSS and CILSS that may be designated by their relevant RECs. A sub-committee of the Technical Committee may be constituted for a closer and more frequent follow-up of programme implementation.

Given the importance of the Initiative and the potential for its replication in other parts of the continent, the AUC will be responsible for reporting on the progress of its implementation to its relevant Organs for sustainable continental ownership.

Coordination of Implementation

At the national level, the Governments would need to ensure the creation of effective national coordination mechanisms. Given the existence of such mechanisms in the context of the Rio Conventions, the Governments, for purpose of efficiency and effectiveness, should strengthen and use these structures to coordinate implementation.

The Regional Economic Communities through relevant technical institutions such as CILSS, ICPAC (IGADs Climate Prediction Application Centre) and OSS, in collaboration with Senegal, will provide support in preparation and coordination of the regional, national and trans-boundary implementation programs. To this end, the RECs should ensure that the GGWSSI is integrated into their existing environmental programs and activities, such as the Sub-regional Action Programs of the UNCCD and other programs on biodiversity and climate change as appropriate. They will also need to ensure that a mechanism is established for regular reporting to and decision-making by their policy organs.

ANNEX 20

COUNTRY ANALYSIS – MALI CASE STUDY

Annex 20 Country analysis - Mali case study

Sustainable Land Management in Mali

Since 2007, the Government has formalized the decision to develop a SLM programmatic approach and requested support from the TerrAfrica partnership during a joint mission (World Bank, GM, GTZ and UNDP, April 2007) that led to a first SLM roadmap. Mali is a fine example of the strong multilateral, bilateral and national cooperation to face environmental challenges, addressing both land degradation and poverty alleviation.

In accordance with the agreed activities, the Government has set up a National SLM Committee with a technical secretariat whose objective is to formulate and implement the Country SLM Strategic Investment Framework (CSIF) in consultation and coordination with all stakeholders. In parallel, recognizing the importance of SLM and the need to support the National SLM Committee, the Development Partners Environment Working Group decided to extend its mandate to SLM and to involve other Development partners concerned by the topic. Other activities agreed are related to the elaboration of the national SLM committee Terms of References (ToRs) and its annual work program as well as the elaboration of the ToRs of the CSIF. The CSIF formulation will incorporate a set of analytical studies including a SLM institutional and expenditure review and a cost-benefit analysis. The ToRs of these studies have been compiled and discussed at a national workshop convened by the Government in November 2007. On the investment side, targeted support from UNDP and the World Bank under the GEF Strategic Investment Program for Sustainable Land Management in Sub-Saharan Africa (SIP) will be channelled to ensure that land degradation issues will be addressed in northern and southern Mali over the next four years. By the end of 2007, under the leadership of the Ministry of Environment and Sanitation and the World Bank (WB), the SLM taskforce was established and the common SLM action plan was adopted. The GEF/SIP targeted investments were planned by UNDP and WB. The Cost-Benefit Analysis was underway (NEPAD, 2007) and the CSIF is being elaborated.

SLM and Climate Change in Mali

In the framework of its project of support the environmental policy in Mali, GTZ undertook a mission to Bamako in January 2009. The minutes of this mission reported the following:

“Sustainable land management is a component of adaptation to climate change (CC) in Mali. At the same time, the measures taken or proposed in the context of SLM by institutions contribute, mainly, to reducing the vulnerability of rural populations to climate change and increasing their capacity to cope with climate challenges.

Thus, the CSIF / SLM is a framework to embed climate change adaptation through sustainable development in Mali and therefore focus investment by technical and financial partners (TFP). The SLM technical team can act as a promoter of innovative instruments of environmental and climate policy in the public debate. In this way, the Ministry of Environment and Sanitation and the GTZ had discussed the integration of impacts of CC in the CSIF / SLM using the "Climate Proofing"². This approach is both to assess the sensitivity of the planned investment to climate change and to better contribute to the adaptation to CC. Moreover, the German Cooperation is mobilizing funding for pilot innovative measures to adapt to climate change. This should allow testing of innovative measures to adapt to climate change in accordance with the National Action Plan for Adaptation (NAPA) to expand knowledge base and help inform the ongoing discussions on the application and integration of adaptation measures in the CSIF / SLM.

In order to apply the Climate Proofing, different steps have been proposed:

- **at the strategic level:**
 - Develop a guidance note (3-5 pages), which clarify the relationship between SLM and adaptation to CC, the impact of CC on SLM in Mali, the experiments of its adaptation to CC in arid zones and possible entry points for the CC in the SLM.
 - On this basis, discuss the need to revise the sub-components / activities of the preliminary CSIF / SLM during a workshop of the SLM technical team and then, decide how to incorporate any changes in an appropriate manner. The mission

² Method developed by GTZ

recommends prioritising components and subcomponents for SLM, to increase the added value integrating the CC.

- **programs and projects level:**
 - hold one or two information sessions (1.5 h) on the Climate Proofing Method for interested actors and those involved in SLM (communities, ministries, civil society, private sector, TFP);
 - implement the Climate Proofing in pilot cases (program / project under review or in the planning stage, identified by the SLM technical team and FTP);
 - using this application, adapt the method to the Malian context, evaluate and present experiences;
 - identify an appropriate institutional anchor if an extension of the implementation of the Climate Proofing is planned;
 - strengthen the capacities of institutions involved in SLM for the use of the Climate Proofing through participation in the pilot case and develop accompanying material;
 - disseminate information and experiences of the Climate Proofing in the context of SLM in Mali at the national and international levels.

GTZ noted that the potential scenarios of regional climate change in Mali forecast that from 2025 the degradation of climatic conditions will have negative impacts on agriculture and ecosystems. Given the shortcomings of models and data, accurate forecasts for the local and regional scale are not yet feasible. However, results from global scale models of climate change have produced results that have mobilised various initiatives to implement NAPA.

In Mali, numerous CC initiatives are already supported by donors, including:

- Studies undertaken in the context of the Dutch Program of Assistance
- Preparation of an "Adaptation to climate change (2009-2011)" by SIDA
- Co-financing initiatives by DANIDA
- Project "Strengthening of national climate policy and strategies for adapting to CC," in preparation with GTZ
- Project « Implementing MALI NAPA Priority Interventions to build resilience in the agro-pastoral sectors to the adverse impacts of climate change », project proposal to LDCF, in preparation, FAO
- Enhancing Adaptive Capacity and Resilience to Climate Change in the Agriculture Sector in Mali; PFI (project identification form) submitted to the GEF by the UNDP
- Second National Communication
- EC: Evaluation of EAP/CD³ in order to integrate the environment and CC issues in the decentralization programme
- Support for the various initiatives undertaken by NGOs (Interco-operation, DANIDA, GEF Microfinance)
- WB: support for several studies related to the adaptation issue (including costs and benefits of adaptation at the local level, preparation of a database) as part of the SLM process

Discussions during the visit have yet to *propose specific measures and sites for pilot innovative measures to adapt to climate change*. This will require extensive discussions. Regarding the selection criteria, the mission proposed the following:

- **Relationship with NAPA:** The measure should provide answers to the challenges identified in the NAPA and be consistent with the CSIF / SLM.
- **Innovative character:** Given that a pilot measure can have only limited influence, its added value is reflected by the relevance of new knowledge (in terms of approach or method) or the visibility of experiences.
- **Continuity and vulgarization:** Given the limited duration of the project, a partnership with a strong institutional anchor will be essential to ensure the continuity and the vulgarization of the results, once the project is completed.

³

GTZ propose the following next steps on adaptation:

- Develop a matrix of CC interventions planned or underway (under the FTP platform)
- Deepen the debate on appropriate approaches, including:
 - Integration of risk mitigation measures in a communal planning approach (in cooperation with the Program of Support to Local Authorities (PACT⁴), the Regional Directorate for the Conservation of Nature (DRCN⁵), others)
 - Strengthen the initiatives undertaken by NGOs (in line with the criteria mentioned above)
- Take advantage of the process of preparing the project on capacity building on adaptation to break a common vision on the concept of adaptation-SLM.

The Global Alliance on Climate Change (GCCA)

The European Commission is proposing to build a new alliance on climate change between the European Union and the poor developing countries that are most affected and that have the least capacity to deal with climate change. Assistance under the GCCA will focus on five areas: implementing concrete adaptation measures; reducing emissions from deforestation; helping poor countries take advantage from the global carbon market; helping poor countries to be better prepared for natural disasters, and integrating climate change into development cooperation and poverty reduction strategies.

Recognising that Mali is one of the Least Developed Country and so, one of the most sensitive to CC, the Mali was selected as a pilot country.

According to the capabilities of the Ministry of Environment and Sanitation (no real overall sectoral policy on the environment, weak managerial capacity, but still good coordination between sectors and with FTP...), global or sectoral budget supports are not possible.

Operational anchoring of the NAPA with the Strategic Framework for Growth and Reduction of Poverty (CSCR⁶) and sectoral programs remains low. Thus, the EU proposes the following interventions that reflect the added value of the EU and the current programs:

Strategic (overall contribution to NAPA, with integration of mitigation measures) The Strategic Environmental Assessment (SEA) of Transport Sectoral Program No. 2 is being finalized (EU funding).

Tools for decision support and monitoring The Environmental Program of Support to Combat Desertification (PEALCD7, 8 ACP end in June 2009) funded the forest inventory in 4 regions and the Forestry Information System (SIFOR) which is now the official system in Mali. A good knowledge of heritage timber and its evolution enables a sound analysis of the status of the potential for carbon sequestration and its development (links with the domestic energy strategy and other factors of climate change). It is proposed to cover the inventory of the 3 remaining forest regions. SIFOR is initially one interface of consultation of forest inventories. With some changes, it can also become a tool or the tool to monitor NRM action in the field.

Outreach interventions (contribution to the priority 12, 13 and 14 NAPA) The Environmental Program of Support to Combat Desertification funded from the 8th EDF has worked to bring practical strategic tools in support of decentralization and the fight against desertification. This experience can be extended to other NRM, including reforestation. The next pilot local level forest inventory should contribute to the decentralized management of NRM (a national policy) and through which "reforestation drawing rights" should be undertaken by local authorities. The EDF is currently financing the "Fund for the Fight against Sand Encroachment" which could support communal reforestation.

⁴ Programme d'Appui aux Collectivités Territoriales

⁵ Direction Régionale pour la Conservation de la Nature

⁶ Cadre Stratégique de Croissance et de Réduction de la Pauvreté

⁷ Programme Environnemental d'Appui à la Lutte Contre la Désertification

Institutional Support This is a response to the needs of the Ministry of Environment (among others) on strategic and programmatic guidance for environmental issues and climate change (technical assistance and other ad hoc support).

In order to operationalize the GCCA in Mali, technical assistance will be provided to the government structures to support the conceptualization, formalization and monitoring of environmental issues and climate change. This assistance will increase the capacity of ECD to administer the projects. The global support is evaluated at 5.700 000€ for 3 years (2009-2011).

The Global Mechanism support

In January 2008, the Global Mechanism and the Government of Mali defined a country programme dealing with the: "Support to the resources mobilisation for the Sustainable Land Management in Mali". The programme aims to achieve the following objectives and results:

Specific Objective	Results
Work to create a general climate conducive to finding solutions for sustainable financing of Sustainable land management actions (amplification successes, knowledge management, mainstreaming)	<ul style="list-style-type: none"> • The civil society organizations (CSOs) in Mali are more and more involved as stakeholders in the activities related to the Convention and its financing and their initiatives in advocacy, awareness and education take into account the problems about desertification / land degradation and drought • Innovative sources and funding mechanisms are sought to combat land degradation and mitigate the effects of drought, including those from the private sector • Mali integrates its NAP/CD and issues related to the SLM and land degradation in its development plans and in its relevant sectoral and investment plans and policies while intensifying its efforts to mobilize financial resources from financial institutions, mechanisms and international funds, such as the GEF
Develop an integrated framework for investment to mobilize national, bilateral and multilateral resources to increase the effectiveness and impact of interventions on SLM	<ul style="list-style-type: none"> • A framework for partnership on sustainable land management is established by consensus • Mali implements an integrated investment framework to mobilize national, bilateral and multilateral resources to increase the effectiveness and impact of SLM interventions

Linkages between GGWSSI / SLM / CC in Mali and Implications for the European Union

In Mali, the donors' platform is working hard to create a synergistic framework to link CC and SLM activities at all level from policy framework to ground activities.

Actually, the EU is not fully associated to the TerrAfrica partnership but is strongly involved in the GCCA that is being implemented. Even if EU is supporting the development of the TerrAfrica platform, EU is not yet involved in the SLM actions at national and local level.

The GGWSSI, which will contribute to raising knowledge of and implementing SLM activities on the ground, should be fully integrated into national investment frameworks (CSIF / SLM). This will help EU and MS to:

- better link CC to SLM;
- participate more efficiently to rural development thought environment protection (and not only with the development of infrastructure and sanitation);
- contribute to carbon sequestration thanks to reforestation ...

ANNEX 21

APPROPRIATE SLMS FOR THE GGWSSI

Annex 21 Appropriate SLMs for the GGWSSI

Crop Management

- Mulch and Crop Residues
- Crop Rotations
- Fallows
- Crop Diversification / Inter-Cropping
- Zero and Low Tillage, also Conservation Agriculture
- Organic Agriculture
- Fertiliser Management
- Integrated Plant and Pest Management
- Zai / Tassa

Pasture and Rangeland Management

- Sustainable Grazing Management (e.g. "Holistic" Grazing)
- Silvopastoral Systems
- Integrated Crop-Livestock Systems
- Limiting Use of Fire in Range Management

Livestock Management

- Management of Domestic Animals (higher off-take, improved feeding)
- Increased off-take
- Diversification (fewer cattle / sheep / goats / poultry)

Forest Management

- Avoid Deforestation;
- Assisted Natural Regeneration;
- Reforestation / Afforestation;
- Agroforestry;
- Fire Reduction.

Forests need to be kept healthy so they can maintain their biodiversity and the environmental services they provide, including carbon storage (for climate change mitigation). The following SLM practices will boost forests' resilience and resistance to climate change (adaptation):

- avoiding forest fragmentation;
- improving forest connectivity;
- preventing conversion to high-intensity forestry;
- encouraging sustainable use;
- maintaining natural disturbance regimes such as fires;
- actively managing invasive species (AIPs).

Improved Rainwater Management

- Rainwater Harvesting
- Supplementary Irrigation (to prevent crop failure)

Conserving / Restoring Agrobiodiversity and Habitats

- Protection of Agrobiodiversity
- Restoration of Natural / Near-Natural Vegetation

POSSIBLE FUNDING SOURCES FROM THE EUROPEAN COMMISSION

Annex 22 Possible Funding Sources from the European Commission

The study team has reviewed available documentation on EU funding and wishes to highlight the following:

Intra-ACP Co-operation 10th EDF (ACP= African Caribbean and Pacific)

"In accordance with the ACP-EC Partnership Agreement, intra-ACP cooperation is embedded in the regional cooperation and integration framework and covers all regional operations that benefit many or all ACP States" (EU-ACP, 2009). The "operations may transcend the concept of geographic location. The general principles governing intra-ACP cooperation are subsidiarity, complementarity and visibility." Of particular relevance to the GGWSSI, "cooperation falls into three main areas: global initiatives, "all-ACP" initiatives and pan-African initiatives."

The response strategy identifies three clusters of action, of which the second and third should be able to support elements of the GGWSSI, namely:

- "Measures helping the ACP States to *protect themselves against exogenous shocks in the area of climate change and environmental pressure and aiming at integrating the ACP States both among themselves and in the world economy*;
- More specific *measures to support integration in Africa*, by means of peace-building activities, institutional capacity-building for the African Union and *assistance to develop tools and strategies to address specific common challenges, notably in the area of agriculture and rural development*.

Key priorities relevant to the GGWSSI include:

Within the overall heading of "All-ACP initiatives", climate change is prioritised and thus this measure should provide a source of funding for the GGWSSI, as the document specifically states that these "*problems do not recognise national borders, they need to be addressed at global level, such as by intra-ACP cooperation*" (EU-ACP, 2009)

This includes the Global Climate Change Alliance (GCCA) was designed to provide a platform for dialogue and a shared vision between the EU and the *developing countries hardest hit by climate change*. It will specifically support adaptation strategies and – where it benefits poverty reduction objectives – participation in the global carbon market (by reducing emissions from deforestation and *enhancing participation in the Clean Development Mechanism*).

The support for renewable energy under this "All-ACP initiatives" will also be able to support the ACP countries in the GGWSSI as it "*covers energy security, access to sustainable energy services and climate change*".

The EU-ACP document (2009) notes the importance of, *inter alia* wind, solar, geothermal and biomass resources, which are becoming "increasingly economically and commercially viable.... They are available locally in different forms and can often be more reliable and affordable than fossil fuel products or grid electricity that needs to be transported over long distances." This is of especial importance for the countries of the GGWSSI, particularly those south of the Sahara, where most rural people rely on woodfuel and woody resources are also used to produce charcoal for use in urban areas..... and it is this reliance on wood which has caused the massive reduction in tree cover which has done much to catalyse the pervasive land degradation across the region.

The strategy on the environment is to "focus on implementation of the three Rio Conventions and of the other major multilateral environmental agreements (MEA) to complement the action already planned under the thematic budget line "environment and sustainable management of natural resources" under the DCI" (EU-ACP, 2009). Explicit attention will be paid to *promoting synergies across the themes of combating climate change, desertification, loss of biodiversity and renewable energy*. These are precisely the priorities for the GGWSSI.

"The overall objective of this intra-ACP programme is to provide effective assistance to achieve the ACP States' objectives and priorities in the context of regional cooperation and integration, notably inter-regional (including ACP-wide, pan-African and continental) and intra-ACP cooperation."

Within “All-ACP” initiatives

Global Climate Change Alliance (GCCA)

Overall objective - To address climate change as a threat to progress towards achieving the MDGs.

Main expected results

- Improved resilience of ACP countries to the effects of climate change.
- Lower rates of deforestation.
- Better participation in the global carbon market.

Renewable energy

Overall objective - To contribute to combating climate change and to achieving the MDGs and WSSD objectives on energy by:

- improving use of renewable energy resources;
- improving energy security and access to renewable and sustainable energy services and mitigating CO₂ emissions in ACP countries;
- improving capacity management, governance and frameworks in the energy sector.

Environment

Overall objective - To contribute to sustainable management of the environment and natural resources by means of specific activities in ACP countries.

Specific objectives

- To strengthen the capacity of ACP States to fulfil their obligations under the MEAs.
 - To strengthen their negotiating capacity in connection with the relevant Conventions.
-

The Environment and Natural Resource Thematic Programme (ENRTP) is an annual global budget line (21 04 01), for which calls for proposals are issued each year (for 2010, due in October 2009). The global budget for 2007-2013 is about 804 million euros.

The objectives of this thematic programme are:

- Developing countries to achieve the Millennium Development Goals by providing tools and examples of good practice and innovative approaches;
- Promote management of natural resources, including energy across all EC external assistance;
- Promote coherence in EU policies that affect the global environment and the global security of energy supplies or those of partner countries;
- Promote international environmental governance and EU environmental and energy policies abroad;
- Support sustainable energy options in partner countries and regions.

The priorities of ENRTP thematic programme are the following:

- Capacity building for environmental integration in developing countries;
- Supporting civil society actors and consultative platforms;
- Environmental monitoring and assessment with data gathering;
- EU initiatives for sustainable development as: EU Water Initiative, climate change, biodiversity, desertification, forests, illegal logging and forest governance, fisheries and marine resources, compliance with environmental standards (for products and production processes), sound chemicals and wastes management;
- Sustainable production and consumption;
- Poverty and the environment under new forms of aid delivery;
- Strengthening expertise for the EU and promoting coherence;
- Developing institutional support and technical assistance;
- Creating a favourable legislative and policy framework to attract new business and investors in renewable energy and in efficient energy production and use.

Due to the legal base, some priorities in this programme are open to countries that are covered by the ENPI and EDF regulation (notably neighbourhood countries). This thematic programme fits very well with the GGWSSI main objectives.

However, "EuropeAid implements programmes and projects around the world, wherever assistance is needed. It delivers support through regional and country-specific approaches across a variety of sectors. In addition, programmes with a global reach allow the European Commission to provide similar support to countries that have shared problems, even if they are thousands of kilometres apart." (EC, 2009).

To conclude, many instruments of EU can be use to fund the GGWSSI at national level and according to ACP or MENA division creating special call for proposals for the implementation of the GGWSSI in the sub-Saharan countries (ACP) and in the North African countries (MENA). The current grants and tenders can also reinforce the aid of EU for the initiative's activities, linking rural development (infrastructures, sanitation, water availability/accessibility, food security) to SLM activities.

Thus for Phase 1, EU country delegations could support implementation / launch of activities at the country level at the same time with the same financing effort in North, West and East Africa for the first two years. However, the study team found that national programmes in all the countries visited are already allocated and it was found that none of the EU Delegations visited had programmes which they agreed related to SLM / agricultural sector.

At the request of various interlocutors during the study, the team proposes that the EU and MSs endeavor to create a special fund (or budget line) to ensure 10-20 years finance for the GGWSSI and avoid the uncertainties and delay of having to respond repeatedly to call for *proposals* and ensure coherency at regional scale. This would allow direct funding of the national level activities for all the countries involved in the GGWSSI in Phase 2. It would be an innovative instrument to set-up the climate change partnership as part of the global AU-EU strategic partnership.

**PROVISIONAL BUDGET FOR PHASE 1 (2 YEARS) FROM GGWSSI
IMPLEMENTATION PLAN (AU/CEN-SAD (2009))**

Annex 23 Provisional Budget for Phase 1 (2 years) from GGWSSI Implementation Plan (AU/CEN-SAD (2009))

Activities	Budget US\$
Develop of eligibility criteria and indicators	50 000
Development of questionnaires and country visits	75 000
Capitalization of scientific and technical information and knowledge	150 000
Regional zoning through land use and soil classification	175000
Countries Sensitization/mobilization	130,000
Pilot activities	755 000
• Identification and citing of activities	25 000
• Implementation of activities	500 000
• Institutional support to Focal Point	230,000
Program Coordination	425 000
• Regional Coordination	150 000
• Technical committee	105 000
• Regional committee (for trans-boundary activities)	105 000
• Regional workshop	82 000
Identification and initiation of trans-boundary activities and programs	200 000
Development of regional investment program	150 000
Accompanying programs	300, 000
• Formulation and implementation of regional scientific research program	100 000
• Conception and implementation of regional training networks	
• Conception and implementation of mechanisms for consultations and exchange of views	70 000
• Development of stakeholder platform, resources mobilization and creation of a dedicated trust fund	70 000
	60 000
Launching program	150 000
<i>Total</i>	<i>2, 572, 000</i>
Contingency of 5%	128, 000
Grand total	2,700,000

SELECTION OF PILOT COUNTRIES USING OBJECTIVE CRITERIA

Annex 24 Selection of Pilot Countries using Objective Criteria

Circum-Saharan Countries	AU members	International commitments and National Strategic Framework	National Investment Strategy	Existing donor platform	Commitment to the implementation of NEPAD through - CAADP - Environmental Action Plan	Implementation of regional initiatives / programmes
Algeria	Yes	Plan de développement	-	-	Yes	Menarid (IFAD)
Burkina Faso	Yes	Programme d'Action Décennal National Land Management Programme	Yes	-	Yes	TerrAfrica (WB)
Cap Verde	Yes	Plan d'Action National pour l'Environnement	-	-	Yes	-
Chad	Yes	-	Yes	-	Yes	
Djibouti	Yes	-	Yes	-	Yes	
Egypt	Yes	-	-	-	Yes	Menarid (IFAD)
Eritrea	Yes	-	-	-	Yes	
Ethiopia	Yes	Document de stratégie pays (DSP) Rural Development Policies and Strategies Environmental Policy and Conservation Strategy Plan for Accelerated Sustainable Development to End Poverty(PASDEP) Sectoral and cross sectoral policies and strategies(Water, Energy, Biodiversity, etc) Carbon Fund REDD of FCPF of the WB Potential Assessment for CDM Plan for Accelerated Sustainable Development to End Poverty	Yes	Yes	Yes	TerrAfrica (WB)
Gambia	Yes	Plan de développement économique et social à moyen et long terme	-	-	Yes	
Libya	Yes	-	-	-	Yes	Menarid (IFAD)

Circum-Saharan Countries	AU members	International commitments and National Strategic Framework	National Investment Strategy	Existing donor platform	Commitment to implement NEPAD through the - CAADP - Environmental Action Plan	Implementation of regional initiatives / programmes
Mali	Yes	Cadre Stratégique de Croissance et de Réduction de la pauvreté (CSCR) 2007-2011 Programme de développement économique et social (PDES) Global Climate Change Alliance	Yes	Yes	Yes	TerrAfrica (WB)
Mauritania	Yes	Plan national d'Action pour la Nature et l'Environnement (PANE)	-	-	Yes	TerrAfrica (WB)
Morocco	No	Plan de développement économique et social	-	-	Yes	Menarid (IFAD)
Niger	Yes	Stratégie de Développement Rural (SDR) Stratégie de Développement Accéléré et de Réduction de la Pauvreté (SDRP) Plan d'Action du programme Pays 2009 – 2013 lying on three main programmes: 1. governance 2. implementation of MDG 3. NRM	In progress	Yes	Yes	TerrAfrica (WB)
Nigeria	Yes	Stratégie nationale pour l'autonomisation et le développement économiques	-	-	Yes	-
Saharawi Arab Democratic Republic	Yes	-	-	-	Yes	-
Senegal	Yes	Plan de développement économique et social	Yes	Yes	Yes	-

Circum-Saharan Countries	AU members	International commitments and National Strategic Framework	National Investment Strategy	Existing donor platform	Commitment to implement NEPAD through - CAADP - Environmental Action Plan	Implementation of regional initiatives / programmes
		Cadre de dépenses sectoriel à moyen terme (CDS-MT) 2008-2010				
Somalia	Yes	-	-	-	Yes	-
Sudan	Yes	-	-	-	Yes	-
Tunisia	Yes	Plan de Développement Economique et Social	Yes	Partial	Yes	Menarid (IFAD)

- Unknown by the study team, required more investigation

Circum-Saharan Countries	Existence of arid zone P < 400 mm	SLM / Green Belt Experiences: Success or failure (see details in Annex 1)	Long Term environmental observatories	Decentralization process
Algeria	Yes	Partial success	National environmental monitoring mechanism (three observatories in progress)	Yes
Burkina Faso	Yes	Initial failure and recent partial success in assisted natural regeneration	-	Yes
Cap Verde	Yes	-	-	-
Chad	Yes	-	-	-
Djibouti	Yes	-	-	-
Egypt	Yes	Success	National environmental monitoring mechanism (in progress)	-
Eritrea	Yes	-	-	-
Ethiopia	Yes	Success	-	Yes
Gambia	No	-	-	-
Libya	Yes	-	-	-
Mali	Yes	Success	National environmental monitoring mechanism (in progress)	Yes
Mauritania	Yes	Quite successful	-	-
Morocco	No	-	-	Yes
Niger	Yes	Success	National environmental monitoring	Yes

Circum-Saharan Countries	Existence of arid zone P < 400 mm	SLM / Green Belt Experiences: Success or failure (see details in Annex 1)	Long Term environmental observatories	Decentralization process
			mechanism: ROSELT Niger	
Nigeria	Yes	Failure	-	-
Saharawi Arab Democratic Republic	Yes	-	-	-
Senegal	Yes	Success		Yes
Somalia	Yes	-	-	-
Sudan	Yes	-	-	-
Tunisia	Yes	Success	The OZADD network (Observatoire des Zones Arides pour le Développement Durable)	Yes

ANNEX 25

PEOPLE MET AND CONSULTED DURING RESEARCH PHASE

Annex 25 People Met and Consulted during research phase
(excluding those at stakeholder workshop and final Brussels meeting)

People Met

Country	Organisation / Project	Name	
Belgium	European Commission	Mr Jozias BLOK	
	European Commission	Mr Christopher NIEHAUS	
	European Commission	Mr Philippe STEINMETZ	
	European Commission	Mr Etienne COYETE	
	European Commission	Mr Pierre CARRET	
	European Commission	Ms Maria VINK	
	European Commission	Mr Peter BRINN	
Germany	European Commission	Mr André LIEBART	
	CCD Project, GTZ	Ms Anneke TRUX	
	CCD Project, GTZ	Ms Levke SOERENSEN	
	Global Donor Platform	Mr Yilenew ZEWDIE	
	UNCCD	Ms Elysabeth DAVID	
Burkina Faso	UNCCD	Mr Boubacar Cissé	
	EC Delegation	Mr Amos TINCANI	
		Mr Stéphane MEERT	
		Mr Amadou HEBIE	
	CILSS	Félix de Valois E. COMPAORE	
		Miss Edwige BOTONI	
		Mr HAMADOU	
		Mr NDIAYE	
	IFAD / SolArid	Mr François TAPSOBA	
	ECOWAS	Mr Innocent OUEDRAOGO	
	European Union Delegation to Mali (telephone discussion)	Mr Alain HOUYOUS	
	Ministry of Environment and Livelihoods	Mr HEGIA (Secretary General)	
		Mr Adama DOULKOM (Forestry)	
	Niger	Ministère de l'Environnement et de la Lutte contre la Désertification	Mr Issouf BAKO (Minister of the Environment)
			Mr Mamadou MAMANE (General Secretary)
Direction Générale de l'Environnement et des Eaux et Forêts		Col. Maïna BILA – Directeur Adjoint	
		Mr Hamadou MARICHATOU – Directeur de la Restauration des terres et du reboisement	
		Col. Laminou ATTAOU – Coordinator of GGW in Niger	
TerrAfrica		Mr Azara MALAM SULLY	
ROSELT (Niger)		Col. Issoufou WATA	
Consultant, NRM and monitoring-evaluation specialist		Mr Aboudacar ISSA	
GTZ		Mr. Werner Petuelli	
		Mr Mamadou Abdou Gaoh SANI	
		Miss Andrea WETZER	
European Union Delegation		Mr Paul VOSSEN	
		Mr Aymeric ROUSSELL	
AFD		Mr Ali BETY	
Maradi Regional Government		Mr Ali MAAZOU, (Governor of Maradi Region)	
IFAD / IRDAR		Farmers of Dan-Kada	
PPILDA		Mr Maharou BODO (responsible for infrastructure)	
		Mr Tassi OUMOUSA (Agroeconomist)	
	Miss Oumanatou EKADE (sociologist)		
	People of Dan-Saga		
EU-Tear Fund ASAPI	Farmers		
Agryhmet	Mohamed Yahya Ould Mohamed Mahmoud, (General Director)		
	Mr Issa GARBA (agro-pastoralist expert)		

Country	Organisation / Project	Name
		Mr Ibrahim M'BASS (information systems expert)
		Mr Henri SONGOTI (expert in software designer)
	Conseil National sur l'Environnement et le Développement Durable (CNEDD)	Miss Aï Kassomou MANOU, Unité technique Diversité Biologique, Eau et Développement Durable
		Mr Assadek CHAM CHAM, Unité technique PAN/LCD/GRN (NAP/CD/NRM)
		Mr Mamoudou IDRISSE, Unité technique Suivi-Evaluation
		Miss Solange BAKO, Unité technique Changement Climatique, Environnement Urbain et Cadre de la vie
	University of Niamey	Dr Fodé MADE (Vice Rector) Dr Dan LAINSO (Faculty of Agronomy)
		Dr Saad MAHAMANE (Faculty of Sciences)
		Dr Ali MAHAMANE (Faculty of Sciences)
	DANIDA	Mr Boubacar GAMATIE
	UNDP	Mr Ada LAOULY
Kenya	World Agroforestry Centre (ICRAF)	Mr Tony SIMONS (Deputy Director)
		Prof. August TEMU (Director of Partnerships)
		Dr Peter Aking MINANG (working on alternatives to slash and burn, also new focus on CC)
		Dr Ramni H. JAMNADASS (leads global research programme on tree genetic resources and domestication – GRP1)
	ANAFE (African Network for Agriculture, Agroforestry & Natural Resources Education)	Miss Aissétou DRAMÉ YAYÉ (manages network of universities and colleges in Africa, providing scholarships, developing curricula)
	African Forest Forum	Prof Godwin KOWERO (Executive Secretary)
	Greenbelt Movement	Miss Juliana MUGURE
	UNDP Dryland Development Centre	Mr Philip DOBIE (Director)
		Mr Eric PATRICK (Policy Specialist)
		Miss Sarah ANYOTI (Programme Specialist)
		Miss Yuko KURAUCHI (Programme Officer)
	Regional Centre for Mapping Resources for Development	Mr L. Vincent MTARONI (GIS Officer)
		Miss Catherine KUNYIHA (RS Technician)
		Mr John GITAU (web mapping specialist)
		Mr Lawrence O. OKELLO (Chief Technician)
Ethiopia	EU Delegation to the AU	Mr Pavel MIKEŠ (Political Advisor – for MDGs, Science and Technology)
	Free University of Amsterdam	Dr Chris REIJ
	GTZ	Mr Amare WORKU (Former Head of Forestry, Land Use and Soil Conservation, Ministry of Agriculture and Rural Development, Govt of Ethiopia)
	African Union Commission	Mr Almami DAMPHA (AU Dept of Rural Economy and Agriculture, Division of Environment and Natural Resources)
		Mr Abebel Hailu GABRIEL (Head of the Dept. of Rural Economy and Agriculture),
		Miss Fatoumata J. NDOYE (Consultant, MEAs in Dept of RE and Agric.)
	EC Delegation to Ethiopia	Dr Jonathan McKEE (Programme Manager, Rural Development and Environment)
		Mr Paulo CURRADI (Head, Rural Development and Food Security)
	African Monitoring of Environment for Sustainable Development (AMESD)	Mr Etienne KAISIN (Team Leader)

Country	Organisation / Project	Name
	Food and Agriculture Organisation (FAO) – Sub-Regional Office for East Africa	Dr Lamourdia THIOMBIANO (Deputy Representative, Senior Soil Resources Officer)
		Mr Hassan ALI (Assistant to the FAO Rep. in Ethiopia)
	Environmental Protection Agency	Dr Ababu Anage ZELEKE (Head of Ecosystem Department and UNCCD Focal Point for Ethiopia)
		Shimeless SIMA (Soil Fertility Team Leader)
Tunisia	African Bank of Development	Mr Vincent CASTEL
		Mr Jean-Louis KROMER
	OSS	Mr Youba SOKONA
	FAO (LADA)	Mr Reza NAJIB
		Mr Hédi HAMROUNI
	EU Delegation	Mr Massimo MINA
		Miss Giulia BUSCOSI
		Miss Françoise MILLECAM
	GTZ	Mr Jorg LINKE
		Miss Valeria TROUDI,
		Miss Maike POTTHAST
		Mr Ali ABAAB
	IRA	Mr Mohamed Ali BENABED
		Mr Mongi SGHAIER
		Mr Mohamed OUESSAR
		Mr Houcine TAAMALAH
		Mr Mohamed NEFFATI
	Ministry of Environment	Mr Najeh DALI – General Director
		Mr Nabil HAMADA – Focal point of CBD
	(former Executive Secretary, OSS)	Mr Chedli FEZZANI
	CEN-SAD	Miss Wafa ESSAHLI
Senegal	EU Delegation	Miss Cristina VICENTE RUIZ
	Direction de l'Environnement et des Etablissements Classé	Mr Ernest DIONE
	Direction de l'Environnement et des Etablissements Classé	Miss Fatou GUENE
	Technical Advisor, Ministry of Livestock	Dr Abder BENDERDOUCHE
	Director General, National Agency for the Great Green Wall	Col. Matar Cissé
	National Agency for the Great Green Wall	Mr Papa SARR
	UNDP	Mr Arona FALL
	IUCN	Mr Racine KANE
	Amb. Pays Bas	Mr Alioune DIALLO
	USAID	Mr Peter TRENCHARD
	IRD	Mr Jean-Marc HOUGARD
	IRD	Mr Robin DUPONNOIS
	Canadian Cooperation	Mr Babaca DIOP

People Contacted by Telephone / Email

Country	Organisation / Project	Name
USA	World Bank / TerrAfrica	Mr Christophe CREPIN
Mali	World Bank / TerrAfrica	Mr Taoufiq BENNOUNA
The Netherlands	Free University of Amsterdam	Dr Chris REIJ
Italy	SolArid, GM	Youssef BRAHIMI
	MENARID, IFAD	Naoufel TELAHIGUE
UK	IIED	Camilla TOULMIN
Senegal	University	Prof. DIA