

## Cover page

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## **Annexes**

**LISTED IN A SEPARATE DOCUMENT**

## ACRONYMS

AEZ	agro-ecological zone
AFD	Agence Française de Développement
AgBD	agrobiodiversity
Agrymet	specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), based in Niamey – “to inform and train”
AMESD	African Monitoring of Environment for Sustainable Development
ARENE	Agence Régionale de l’Environnement et des Nouvelles Energies
AU	African Union
AUC	African Union Commission
BD	biodiversity
C	carbon
CA	conservation agriculture
CAADP	Comprehensive Africa Agriculture Development Programme
CC	climate change
CEN-SAD	Community of Sahel-Saharan States
CCES	Strategic Programme (of the GM) on CC
CGIAR	Consultative Group for International Agricultural Research
CILSS	Comité Permanent Inter Etats de lutte contre la Sécheresse dans la Sahel
cm	centimetre
CO <sub>2</sub>	carbon dioxide
COMESA	Common Market for Eastern and Southern Africa
CS	carbon sequestration
CSO	civil society organisation
CST	Country Support Tool (of TerrAfrica)
EAC	East African Community
EC	European Commission
EC-AUC	European Commission and the Commission of the African Union
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EDF	European Development Fund
EFT	exotic fruit tree
EU	European Union
FAO	Food and Agriculture Organization (of the United Nations)
FFEM	Fonds Français pour l’Environnement Mondial
FFSs	Farmer Field Schools
GCCA	Global Climate Change Alliance (EU and developing countries)
GGWSSI	Great Green Wall for the Sahara and Sahel Initiative
GHG	greenhouse gas
GLASOD	Global Assessment of Human Induced Soil Degradation
ha	hectares
ICARDA	International Centre for Agricultural Research in the Dry Areas
ICRAF	World Agroforestry Centre
ICRISAT	International Crop Research Institute for the Semi-Arid Tropics
IFS	International Financing Strategy
IFT	indigenous fruit tree

IGAD	Intergovernmental Authority on Development (in Eastern Africa)
IIED	International Institute for Environment and Development
ILRI	International Livestock Research Institute
IPCC	Intergovernmental Panel on Climate Change
IPPM	integrated plant and pest management
IRA	Institut des Régions Arides (Medenine, Tunisia)
kg	kilogram
KP	Kyoto Protocol
LADA	Land Degradation Assessment in the Drylands
LAS	League of Arab States
LGP	length of growing period
LD	land degradation
m	metre
MEA	Multilateral Environmental Agreements
MS	Member State (either of AU or EU)
NAP	national action plan (UNCCD)
NAPA	national adaptation programme of action
NBSAP	National Biodiversity Strategies and Action Plans
NDVI	normalised difference vegetation index
NGO	non governmental organisation
NRM	natural resource management
NWFP	non-wood forest products
°C	degrees Centigrade /Celsius
OSS	Observatoire du Sahara et du Sahel
PES	payment for environmental services
PRSP	poverty reduction strategy paper
RAP	regional action plan (UNCCD)
RED(D)	reduce emissions from deforestation (and degradation)
SIC	soil inorganic carbon
SLM	sustainable land management
SOC	soil organic carbon
SRAP	sub-regional action plan (UNCCD)
SRES	Special Report (of IPCC) on Emissions Scenarios
SSA	Sub-Saharan Africa
SWALIM	FAO Somalia Water and Land Information Management
SWC	soil and water conservation
UMA	Arab Maghreb Union
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WAEMU	West African Economic and Monetary Union
WISP	World Initiative for Sustainable Pastoralism
WOCAT	World Overview of Conservation Approaches and Technologies

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### **EXECUTIVE SUMMARY**

The Great Green Wall for the Sahara and Sahel Initiative (GGWSSI) is Priority Action 2 of the Africa – EU Partnership on Climate Change (Annex 1) and is proposed to catalyse “sustainable development and poverty reduction in the desert margins north and south of the Sahara” (AU / CEN-SAD, 2009) to work in the zone which receives 100-400mm rainfall per year. The initiative is unique; it was initiated and is being led by Africa; also as it specifically focuses on the Saharan and Sahelian dryland ecosystems, providing a unifying foundation.

The original concept of GGWSSI has evolved from a tree planting initiative to the promotion of SLM practices, as a more ecologically appropriate and holistic approach to directly benefit local land users (farmers, agropastoralists and mobile pastoralists).

The GGWSSI will catalyse efforts to overcome the national level barriers to the mainstreaming of SLM in each country; improving the legal and policy framework for SLM, including promoting an inter-sectoral approach (working in synergy with existing SLM activities where present in the countries, *inter alia* TerrAfrica, LADA, SolArid) to review, adapt and ensure enactment of laws and policies which promote SLM – and publicise these. This will integrate land management issues in national development strategies, including poverty reduction strategy papers (PRSPs).

The GGWSSI is closely aligned to the TerrAfrica Initiative; in countries where TerrAfrica is already being implemented, the GGWSSI can compliment the international / national level activities with decentralized and ground level activities. Where TerrAfrica has not worked, the GGWSSI should work at both national level and also at local level, using the TerrAfrica Country Support Tool (CST).

The initiative will catalyse wide scaling-up of existing SLM “bright spots”, transforming degrading ecosystems into healthy functioning agroecosystems; increasing food production and food security (at local, national and regional levels); promoting renewable energy as an alternative to wood fuel; and helping the vulnerable rural people to adapt to the impacts of climate change. This will include valorisation of local knowledge, encouragement of land user innovation and also vital enhancement of knowledge on SLM approaches / practices and awareness raising about the predicted likely impacts of climate change (short, also medium and long term). The approaches which will be advocated will be ones which bring not only long term environmental benefits but also short term economic benefits – encouraging land users to “invest” in the practices. The initiative will bring wider economic benefits, reducing poverty and creating off-farm employment in agro-processing / agri-businesses.

The GGWSSI will contribute to the implementation of the continental strategic plans such as NEPAD/CAADP and NEPAD Environmental Plan, which the EC already supports, channeling EC investment in the circum-Saharan nations (where the EC has worked for many years on the same issues) into SLM, rural development, food security, but in an integrative way bringing benefits to land users via the new decentralized authorities. The initiative will also contribute to increasing environmental sustainability within the framework of the international environmental agreements, most notably contributing to the UN Convention to Combat Desertification's 10 year Strategic Plan.

Major risks of the initiative include: that it will re-centralise in countries which have benefited from decentralisation; the perception of duplication; that long term funding cannot be secured; also that land users / policy makers may aspire to high tech agriculture.

As a first action under the GGWSSI in each pilot / lead country, key decision makers should visit rural areas where SLMs are already being implemented, followed by both more detailed planning / designing and up-scaling of SLM successes. It is considered vital to associate *all* GGWSSI countries in the initiative from the start, by raising awareness about SLM, climate change and how SLMs can contribute to adaptation and bring other environmental and economic benefits.

Four scenarios for the institutional structure of the GGWSSI were proposed to the stakeholder meeting (6-7 May 2009); all involving overall leadership by AUC and CEN-SAD. One institutional structure of the GGWSSI has been validated by the African partners, which will ensure collaboration and knowledge sharing between people and organisations, to avoid "reinventing the wheel". AUC will ensure the political support and commitment and will rely on the CEN-SAD to implement the initiative. A specific GGWSSI coordination unit will be set up at the CEN-SAD headquarters and will work closely with the relevant scientific and technical institutions and centres of excellence in Africa and beyond. All the countries already have existing national SLM co-ordination structures, which should be used to support the GGWSSI. It is vitally important for the activities of the GGWSSI in each country to focus on decentralised authorities, including devolving finances to local decision makers and communities. A regional steering (of representative Ministers from each country) and small technical committee should be set-up. It is recommended that a wider network of technical experts is developed, keeping up-to-date electronically, meeting *ad hoc* around particular issues.

The review of funding options demonstrates the complexity of creating the required long-term, assured funding for this initiative. It is recommended that the EC and MSS' support the initiative in the long term (10-20 years) and avoid the uncertainties and delay of having to respond repeatedly to uncoordinated calls for assistance and ensure coherency at regional scale. A 'Dedicated Trust Fund' (AU / CEN-SAD 2009) should be created using funds from all involved countries. The development of this fund will demonstrate African ownership of the GGWSSI as well as the development of financial opportunities at both local and national levels (decentralized cooperation, local and national annuals budgets, national fund...). Other funding could be raised at the African Development Bank, other Development Banks and the private sector. Unfortunately, under the current rules of CDM and REDD programme, GGWSSI funding is highly unlikely.



To conclude, the EC and MSs' support for the GGWSSI should focus on promoting sustainable land management (SLM) catalysing the transformation of degrading ecosystems into healthy functioning agroecosystems to improve the livelihoods of vulnerable rural people

The GGWSSI is by definition a long term initiative – the full benefits of activities in drylands often take decades to demonstrate beneficial impacts. In reality the GGWSSI should not be thought of as being time-bound, but representing the catalyst to a change in how people manage and secure their livelihoods in these drylands, achieved through a variety of different approaches; implementing and changing international and national level agreements, laws and policies, but most importantly the up-scaling of on-the-ground SLM activities which have proved successful in the region.

#### **MAIN RECOMMENDATIONS**

1. The GGWSSI must up-scale best SLM practices in the circum-Saharan zone at local level (local land users);
2. Where TerrAfrica has worked, the GGWSSI must use the TerrAfrica frame, approach and tools to implement successful SLM activities on the ground, as the GGWSSI should operationalize the TerrAfrica Country Strategic Investment Framework on SLM;
3. Where TerrAfrica is not developed, the GGWSSI must also be included in the national investment framework of the countries prior to implementing activities on the ground;
4. A condition for the sound implementation of the GGWSSI is that all institutions work in their own zones / specialisms, according to their mandates, skills, experiences and fields of excellence.
5. According to the achievements of the circum-Saharan countries, the pilot / lead countries could be Algeria, Burkina Faso, Djibouti, Ethiopia, Mali, Niger, Senegal and Tunisia.
6. The implementation and thus the funding of GGWSSI should be long term (10-20 years);
7. The EC and EU MS should strongly support the process at national level, while also initiating support the regional level:
  - The EC should provide impetus at the regional level for the first two years of the action plan;
  - The EC should provide technical assistance to help the AUC to drive the process (the launch of the activities; making available / disseminating information on sound scientific and technical knowledge; promoting sharing of local knowledge and experiences between countries through workshops, field visits, new materials and a website; reporting at high political level, creation of the dedicated trust fund and the donors' platform);
  - EU MS should preferentially support the country level activities through their own cooperation strategic frameworks (although notably Finland will be more supporting West African at the sub-regional level).
8. The next steps which should be started in 2009 are:
  - At regional level, to implement the regional coordination unit and its activities;
  - At national level, to undertake the GGWSSI Design Study in the pilot / lead country and start exchanging experiences within and between all the countries;

- At both levels, to develop capacity building and raising awareness activities for all stakeholders (rural land users, decentralised authorities, national and regional policy makers) and mainstreaming of SLM in all institutions.

## **BACKGROUND TO THE STUDY**

The idea of a 'Green Wall for the Sahara' was first proposed by former Nigerian president Olusegun Obasanjo and presented initially to the Community of Sahel-Saharan States (CEN-SAD) and then to the African Union (AU) in 2005.

At the second EU-Africa Summit held in Lisbon in December 2007, the European Union and the African Union adopted the first Action Plan (2008-2010) for the implementation of the Africa EU Strategic Partnership. The Action Plan is part of the Joint Africa -EU Strategy and contains under the Africa-EU Partnership (N.6) on Climate Change a priority action to "*Cooperate to address land degradation and increasing aridity, including the "Green Wall for the Sahara Initiative"*" (Annex 1).

An initial consultation meeting on the Great Green Wall for the Sahara and Sahel Initiative (GGWSSI) organised by the European Commission took place in Brussels on 29/01/2008 with the objective to start defining more precisely the contents of the partnership.

One of the main recommendations of the meeting was the need to merge the two existing draft implementation/action plans so far produced at the level of OSS/CEN-SAD and AUC. The meeting also concluded that it would be necessary to clarify aspects of the initiative not yet covered by the preparatory work so far carried out and agreed on the idea of a joint EC-AUC feasibility/scoping study on the GGWSSI.

Another recommendation was to consider the GGWSSI not as a separate program or project but as a federative platform, which would more effectively help achieve sustainable development in the Sahara and Sahel zones and thus contribute to poverty reduction efforts.

As presented in the draft GGWSSI Plan of Action examined by a CEN-SAD Summit in June 2008 in Cotonou, the GGWSSI includes a number of clearly defined objectives and activities. However lessons learnt from past experiences and mistakes need to be built in the current proposed framework.

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 content of this study in its letter to the EC dated 29 September 2008.

## **AIMS AND OBJECTIVES OF THE STUDY**

### *Global Objective*

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 beneficiaries. (Full Terms of Reference in Annex 2)

## **INTRODUCTION**

A wide variety of pressures have led to the adoption of unsustainable land management practices in the circum-Saharan drylands, including continuous overstocking and overgrazing of rangelands; continuous cropping, with reductions in fallow and rotations, repetitive tillage and soil nutrient mining; rangeland burning; over-exploitation and clearance of savannas (for cultivation) . The impacts of these practices include loss of natural resources, changes in natural habitats and ecosystems, loss of agrobiodiversity and wild biodiversity, degradation of ecosystem services, decreases in productivity (of arable and rangeland) leading to poor harvests and food shortages, resulting in poor living conditions and poverty. Climate change is already exacerbating these problems, with increasing weather variability (droughts and storms) and is predicted to bring further challenges in the coming decades, with rising temperatures and changes in rainfall patterns (IPCC 2007 a & b; Washington, 2008).

The Great Green Wall of the Sahara and the Sahel Initiative (GGWSSI) is proposed to catalyse “sustainable development and poverty reduction in the desert margins north and south of the Sahara” (AU / CEN-SAD, 2009) to work in the zone which receives 100-400mm rainfall per year.

The goal of the GGWSSI is “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” (AU and CEN-SAD, 2009). [The relevant existing continental frameworks include the Comprehensive Africa Agricultural Development Program (CAADP), the Environmental Action Plan of NEPAD, the Regional, Sub-regional and National Action Programs to combat desertification (RAP, SRAPs and NAPs)].

The initiative offers the opportunity for the EC and EU MSs to support Saharan and Sahelian countries in their efforts to restore their agroecosystems, particularly to adapt to climate change. The initiative is unique among other on-going programmes and projects, as it was initiated and is being led by Africa. [In some countries, activities have already begun work on the GGWSSI – in others, an “entry point” of “key ministry” has already been chosen.] The GGWSSI also differs from other on-going programmes and projects as it specifically focuses on the Saharan and Sahelian dryland ecosystems, providing a unifying foundation.

The GGWSSI has high level political commitment, from the Heads of State in Africa (AU/CEN-SAD, 2009) and support from the Heads of State in the European Union (EU, 2008). However, at the country level, the AUC vision is not well known, indeed in most cases the only version of the initiative which is known as the Grande Muraille Verte (the 15km wide band from Dakar to Djibouti, principally involving tree planting). However, when the AU/CEN-SAD vision of broader sustainable land management (SLM) was outlined to those met during the study, the GGWSSI was welcomed by most land users, scientists, policy and

decision makers to restore agricultural livelihoods and ecosystem services across the dryland areas of countries both to the north and south.

This report is the result of analyses of available documentation and interviews with the different stakeholders already involved and who could be involved in a near future in the GGWSSI.

## **1. THE SCIENTIFIC EVIDENCE FOR CLIMATE CHANGE AND LINKS WITH LAND DEGRADATION AND LOSS OF BIODIVERSITY**

### **1.1 THE CLIMATE CHANGE SCENARIOS IN AFRICA**

African countries share with other developing countries the fact of being “especially vulnerable to climate change because of their geographic exposure, low incomes, and greater reliance on climate sensitive sectors such as agriculture” (Stern, 2007).

The historical climate record for Africa shows warming of approximately 0.7°C over most of the continent during the 20<sup>th</sup> century, a decrease in precipitation over large portions of the Sahel and an increase in precipitation in east central Africa (Desanker, 2002). Droughts and floods have increased in frequency and severity across Africa over the past 30 years. Over the 21<sup>st</sup> century, the warming trend and changes in precipitation patterns of the 20<sup>th</sup> century are expected to continue, increase in rapidity and be accompanied by an increase in the frequency of extreme weather events – droughts, floods and storms (Stern, 2007).

Predictions of the magnitude of changes in temperature and precipitation are subject to considerable uncertainties, but climate change scenarios for Africa indicate future warming across the continent ranging from 0.2°C per decade (low scenario) to more than 0.5°C per decade (high scenario) (Hulme *et al*, 2001; Desanker and Magadza, 2001) (also Annex 3). Under the medium-high emissions scenario (SRESA1B, used with 20 General Circulation Models for the period 2080-2099, annual mean surface air temperature is expected to increase between 3 and 4°C compared with the 1980-1999 (IPCC, 2007a). Other experiments indicate higher levels of warming with theA1FI emissions scenario and for the 2070-2099 period up to 9°C for North Africa (Mediterranean coast) in June to August (ibid).

Land users in drylands have used a wide range of strategies to cope with the climatic hazards they face from day-to-day and month-to-month. Arable farmers have minimised or spread risks by managing a mix of crop species, crop varieties and sites; staggering the dates of sowing and planting of crops; also adjusting land and crop management to suit prevailing conditions (Woodfine, 2009). Pastoralists have also developed useful strategies including: transhumance; destocking or distributing stock among relatives and friends in various places to minimise the risk of losing all animals if a drought strikes one particular area; and the opportunistic cultivation of food and cash crops to meet some of their needs. In recent decades, policies have tended to favour sedentarisation of pastoralist, with often negative implications in terms of coping with drought and degradation of grazing lands, especially around waterpoints, also falling watertables.

An aspect of climate change which is of particular concern is not the shift in long-term average climate, but rather the increased frequency and magnitude of climatic extremes. Isolated cases of drought have been dealt with quite successfully in the past either at the individual / household level or through well established social networks. Climate change is eroding these coping mechanisms by causing climatic extremes with a frequency and intensity that do not give the affected people enough time to recover. The recurrent droughts over the 20<sup>th</sup> century in Africa have already led to the degradation of the resource base and forced millions of farmers to sell their assets, in some countries forcing them into absolute destitution.

Climate change in the 21<sup>st</sup> century is likely to bring about a new set of weather patterns and extremes that are well beyond what the local communities are capable of dealing with, especially when coupled with the many non-climate constraints that undermine the adaptive capacity of these communities.

The study by Thornton (2006) used “downscaled” outputs of 2 global climate models (GCMs) and 4 IPCC SRES (Intergovernmental Panel on Climate Change - Special Report on Emissions Scenarios). By 2050, projected increases in temperature and changes in precipitation patterns and amounts combine to suggest that the lengths of growing periods (LGP) will decrease in most parts of Africa. Table 1 shows the predictions under the various models for most of the GGWSSI countries. Even under the scenario where temperature increases are of only between 1.0°C and 1.5°C, the general trend of currently marginal areas becoming more marginal is apparent.

**Table 1 Length of Growing period Change to 2050 by farming / livelihood system classification for different IPCC models (adapted from: Thornton, 2006)**

Country (IPCC model)	Livestock only, semi arid				Rainfed mixed crop and livestock systems, semi arid			
	ECHam4 Scenario A1	HadCM3 Scenario A1	ECHam4 Scenario B1	HadCM3 Scenario B1	ECHam4 Scenario A1	HadCM3 Scenario A1	ECHam4 Scenario B1	HadCM3 Scenario B1
Burkina Faso	2	2	2	1	2	2	1	1
Chad	2	2	1	1	2	2	1	1
Eritrea	2	2	2	2	2	2	1	1
Ethiopia	2	2				2	1	1
Gambia	2	1	1	1	2	1	1	1
Mali	2	2	2	1	2	2	1	1
Mauritania	2	2	2	2	2	2	2	2
Niger	2	2	2	2	2	2	2	1
Nigeria	2	2	1	1	2	2	1	1
Senegal	2	1	1	1	2	2	1	1
Somalia	2	2	2	2	2	2	1	2
Sudan	2	2	2	2	2	2	2	2

“2” signifies substantial loss (>20%) in at least 50% of the system in that country, “1” signifies moderate loss (5-20%) in at least 50% of the system

## 1.2 LINKAGES BETWEEN LAND DEGRADATION, CLIMATE CHANGE AND CONSERVATION OF BIODIVERSITY

Rural people in developing countries think about and manage resources in an integrated way, not by the subject areas of the MEAs and GEF “focal areas” and scientists now understand that there are synergies and trade-offs between land degradation, biodiversity and climate change (Berry and Olson, 2001 and WRI, 2005). Land degradation results in loss of biodiversity and contributes to climate change, while restoration of degraded land contributes to protecting biodiversity and mitigates / contributes to adaptation to climate change (Figure 1). These links are particularly strong in the drylands of the circum - Saharan.

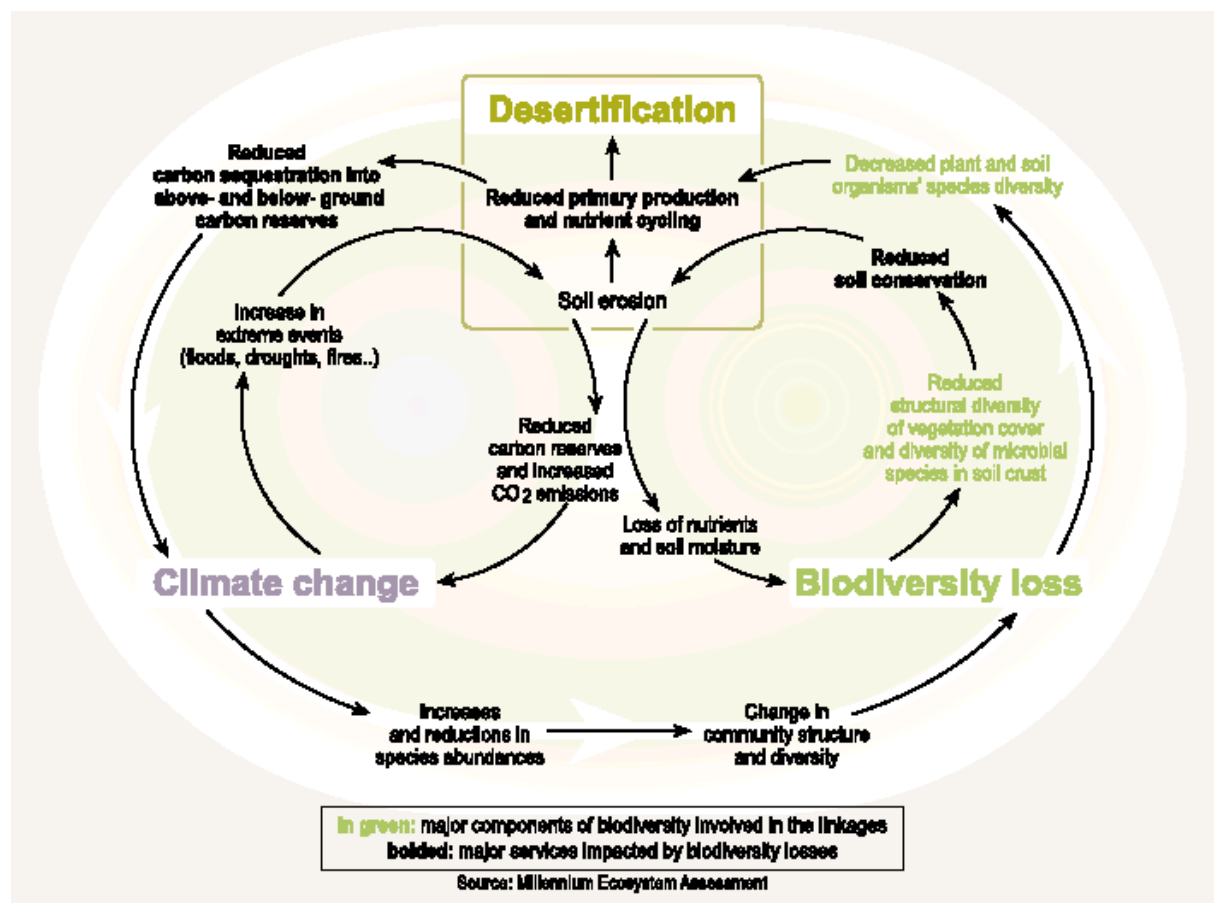


Figure 1 Linkages between land degradation, climate change and conservation of biodiversity (source: WRI, 2005)

[The major components of biodiversity loss (in green) directly affect major dryland services (in bold). The inner loops connect desertification to biodiversity loss and climate change through soil erosion. The outer loop interrelates biodiversity loss and climate change. On the top section of the outer loop, reduced primary production and microbial activity reduce carbon sequestration and contribute to global warming. On the bottom section of the outer loop, global warming increases evapotranspiration, thus adversely affecting biodiversity; changes in community structure and diversity are also expected because different species will react differently to the elevated CO<sub>2</sub> concentrations.]



OSS (2009) particularly reiterated that from a scientific viewpoint, biodiversity plays a key and positive role in the ecosystem functioning (Di Castri & Younès, 1990). Indeed, a higher biodiversity guarantees:

- better use of abiotic resources (Jonhson 1996), resulting in higher primary production;
- greater ecosystems stability (Pimm, 1991; Hobbs & al., 1995) to face usual or catastrophic environmental variations (climate change, land use changes, various stresses and disturbances);
- and greater regeneration capacity or resilience.

The concept of the GGWSSI is the African response to all these challenging issues.

## 2. THE GGWSSI - TOWARDS A FEDERATIVE PLATFORM

### 2.1 EVOLUTION OF THE GGWSSI CONCEPT

#### 2.1.1 From the original concept to SLM practices

There has been an evolution in thinking on the GGWSSI since 2005, from a massive tree planting initiative, extending from Dakar to Djibouti - 7,000 km in length, 15km wide south of the Sahara, in the expectation that it could halt southward advance of the desert; working in the 100-400mm ppt areas (an area of 105,000km<sup>2</sup> or 10.5 million hectares<sup>1</sup>), “where pastoralism remains the most rational strategy for the wellbeing of communities” (Neely and Bunning, 2008b).

This has advanced to the current vision of much more holistic and realistic set of national and (perhaps) transboundary initiatives (AUC 2006, OSS / CEN-SAD 2008) to encourage adoption of SLM practices, to

- Rehabilitate degraded crop, pasture, range and wood lands;
- Protect specific areas from sand encroachment (*inter alia* urban and oases).

Thus:

- Improving the livelihoods and well-being of local populations, including income generation for rural households (*inter alia* increases in agricultural productivity and sustainable energy supplies);
- Restoring the supply of ecosystem goods (*inter alia* wild food, wood for fuel and building, forage and fodder, medicinal plants, conservation of wild biodiversity, restoration of soil quality and protection of hydrological systems);
- Restoring ecosystem services (*inter alia* soil formation, gas regulation, climatic regulation, nutrient cycling, waste assimilation and disturbance regulation (de Groot et al, 2002) and thus protection of ecosystems’ stability and resilience in response to disturbances);
- Ameliorating local climatic conditions and contributing to both climate change adaptation and mitigation;
- Improving natural, human and social capital (including attention to land tenure, mainstreaming youth and gender);
- Resulting in the reduction of rural poverty and contributing to the economic development of the nations of the GGWSSI.

The other element of the GGWSSI which has evolved is the geographical area in which it should focus in the challenging sub-Saharan zone. Rightly, “the issue of increasing vegetation cover will receive high attention” (AU/CEN-SAD, 2009), with priority given to the 100-400 mm rainfall band– however it is countries which will “buy into” the initiative. The national level actions of the GGWSSI (legal and policy changes) will benefit whole countries and each nation will therefore have the freedom to choose locations for on-the-ground activities. It is envisaged that priority will be given to activities in “hot-spots” in the 100-400mm zone – but the consultants advise that, as these will be the most challenging areas in which to work, consideration be given to initially starting activities in areas in the countries south of the

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<sup>1</sup> Considering **10.5 million hectares**, assuming 460 tree per ha = at least **4,838 million tree seedlings** (figure assumes 100% survival – which is clearly not realistic)

Sahara within the 400-600mm rainfall band (Annex 4) (all activities in northern countries are in the 100-400mm band).

## **2.1.2 Focus on Sustainable Land Management**

### ***Definition***

“The concept of sustainable land management (SLM) ... refers to the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions” (FAO, 2007). SLM can make a significant and lasting difference, as it is the critical merger of agriculture and environment, with the twin objectives of:

1. Maintaining long term productivity and ecosystem functions (land, water, biodiversity);
2. Increasing productivity (quality, quantity and diversity) of goods and services (including safe and healthy food).

To achieve these objectives, SLM should be implemented across the wider landscapes by gaining incremental improvements within component systems through applying practices to the many components of production landscapes (home gardens, croplands, savanna, rangelands and woodlands), which will result in:

- improved plant management (e.g. adapted varieties/species – including higher agrobiodiversity, higher biomass and crop yields, better vegetative cover, improved livestock productivity);
- improved soil and nutrient management (e.g. minimum soil disturbance, restoration of soil biological activity, higher organic matter levels, integrated plant nutrition, rotations, improved soil structure, good rooting conditions);
- improved rainwater management (e.g. reduced raindrop impact and runoff, increased infiltration, improved soil moisture conditions, improved recharge of surface and ground water, improve rain use efficiency);
- reduced emissions of GHGs across all components of landscapes; and
- reduced vulnerability to storms, floods and drought (e.g. through windbreaks, control of runoff, control of flooding, also opportunities for water harvesting).

The SLM approach exploits the well known synergies between land degradation and the two other main global environmental change components; biodiversity and climate change (Berry and Olson, 2001). This approach to land degradation control, through attention to biodiversity and climate change, provides a stronger, more ecologically sound way of addressing the complex linkages between issues that have acknowledged global importance.

### ***Contribution to climate change adaptation and mitigation***

The GGWSSI is part of the Africa-EU Partnership on Climate Change (EU, 2008), thus the focus of the EC-support for the initiative should be on how the initiative can contribute first to adaptation and secondly to mitigation to climate change through SLM.

Adaptation refers to adjustments in human and natural systems to respond to actual or expected climate impacts. Sustainable land management practices (SLMs) are increasingly recognised as crucial to improving the resilience of land resources to the potentially devastating effects of climate change in Africa (and elsewhere), thus will contribute to

maintaining and enhancing productivity. The techniques which increase soil organic carbon content (SOC) are critically important (including the use of composts, mulch, zaï, low / zero tillage, conservation agriculture, rotations and crop diversification; holistic rangeland management; agroforestry and silvopastoralism), as restoration of SOC improves soil structure and consequently functioning, increasing rainfall infiltration and its capacity to store both plant nutrients and rainwater (Woodfine and Sperling, 2008). Trees whether in home gardens, agroforestry or silvopastoral systems, woodlots or shelterbelts further contribute to adaptation, as they provide vital shade (for crops, livestock and people), fruit, fodder, forage, fuel and can reduce storm damage.

Mitigation refers to a human intervention to reduce the "sources" of greenhouse gases or enhance the "sinks" that remove carbon dioxide from the atmosphere. Sustainable land management practices (SLMs) contribute to mitigating climate change, particularly through sequestering carbon (in trees, other above ground biomass and also, of particular importance in drylands, in soils), reducing emissions of carbon dioxide (protecting existing above ground biomass and reducing soil degradation), methane (improved livestock productivity, increased off-take) and nitrous oxide (biological nitrogen fixation using leguminous plants and trees, avoiding need for fertilisers); also reducing use of fuel (low / zero tillage and conservation agriculture) and agrochemicals (IPPM). Mitigation is of less immediate importance to the people of the GGWSSI – but in the longer term, this could provide an additional income source.

### ***Drivers of Success in SLM***

Annex 5, a table outlining SLM programmes and techniques and the review of lessons learned in Annex 6 provide examples of SLM projects and activities both in African countries and also in other developing countries. [Also see Annex 1 of the TerrAfrica Vision Paper (FAO, 2007).] The key factors identified from these examples are summarised in Table 2 (below), providing lessons for GGWSSI planning.

**Table 2 Lessons Learnt from SLM Projects and Programmes**

<b>Past Reasons for Failure</b>	<b>Proposed GGWSSI Approach</b>
given low political priority highly sectoral in approach	already has highest level (AU) political support aims to be intersectoral ( <i>inter alia</i> agriculture, forestry, water, land, education, finance)
generally failed to use participatory approaches adequately – often “top-down” with outsiders recommending actions	all on-the-ground activities should closely involve local communities / be participatory – “bottom-up”
used the army or forestry personnel to plant tree seedlings	involve local people in planning / decision making and implementing SLM activities on their own or communal land
focused on the practices of land users, assumed to be the “perpetrators” of land degradation and tended to disregard socio-economic and governance-related driving forces	will include attention to national and international legal and policy issues
ignored innate abilities of farmers / pastoralists	valorise local knowledge and encourage farmer innovation

tended to sway the balance of project benefits towards long term environmental sustainability at the expense of short-term livelihood needs were not well “publicized” - news of local success stories rarely reached national decision makers

will focus attention on ensuring that land users gain rapid economic benefits from the initiative, in addition to providing long term environmental sustainability communication at all levels, using a variety of media should be a key element of the GGWSSI

### ***Sustainability and Potential for Up-Scaling***

“A mosaic of success stories is now visible across many parts of the region, where better local management of soils, trees and water is generating better harvests and improved water availability” (Toulmin, 2007). However, such “bright spots” remain exceptions; vast areas of degraded croplands, pasture and rangeland, wood and parklands predominate in most of the countries. The vision of the GGWSSI is to address “the menaces of land degradation and desertification” (AUC/CEN-SAD, 2009). This requires that the initiative focus on the sustainability and up-scaling (or replication) of these successes, linking bright spots, as the Meso-American Bio corridor links protected areas (Annex 5).

Sustainability requires that local people both fully understand and have an economic interest in the long term success of sustainable land management practices. This may seem a trite statement, but experience in the region shows that projects and programmes often fail to ensure this, thus may succeed in the short-term but this ceases when project intervention ends. This was exemplified clearly to the study team when they visited one former project site – local people had participated while there was funding (although even this was meagre), but halted immediately the funding cease, apparently unaware of the long-term benefits of continuing the SLM. This is a matter of education / awareness raising – and the careful selection of locally appropriate SLMs (including ensuring that the whole chain of supplying any required inputs and also marketing for produce are in place), there is no single “silver bullet”.

Up-scaling depends on the lessons from successful projects being shared, including with:

- neighbouring farmers, agropastoralists and pastoralists;
- decentralised authorities;
- policy and decision makers at national level – particularly the Ministry of Finance;
- education, research and training organisations, including universities and research organisations;
- other land users facing similar land management problems in the sub-region and region.

## **2.2 GGWSSI FOR CLOSING THE GAPS IN NATIONAL POLICIES AND REGIONAL PROGRAMMES AND INITIATIVES**

### **2.2.1 Linkages between with UNCCD, UNFCCC, UNCBD**

Climate change, biodiversity and land degradation are closely linked, although at the international policy level, three multilateral environmental agreements (MEAs) were elaborated in the 90’s (Annex 7). However, it is clear that each convention highlighted the need to ensure synergies to implement them at regional, sub-regional and national level. Annexes 8 and 9 outline the synergies between the international and regional commitments of the African countries to implement the MEAs, the New Partnership for African Development

(NEPAD) and other strategic frameworks, highlighting the potential role of the GGWSSI in achieving certain commitments and implementing cross-cutting activities.

As a federative platform of the nations of the circum-Saharan, the GGWSSI should serve as a powerful tool to implement and achieve the main commitments and activities involving all stakeholders at local, national, sub-regional and regional levels.

The results obtained by the SLM activities undertaken under the umbrella of the GGWSSI initiative should be reported to the different Conference of the Parties (COP) for each MEA. Thus the GGWSSI will contribute to monitoring the progress made by the countries to promote sustainable land management, adapt to climate change and conserve/restore biodiversity.

The GGWSSI interventions will contribute to the implementation of the UNCCD, particularly towards achieving the targets of its 10 Years strategic plan. The GGWSSI can also both contribute to and benefit from using the UNCCD monitoring-evaluation system with common indicators at local and national levels; also the sharing of knowledge in order to evaluate trends / impacts of SLM to fight against desertification.

### 2.2.2 Implementation of the main MEA in the GGWSSI countries

A range of plans, projects and initiatives are currently being implemented at the national, sub-regional and regional level. The study team has endeavored to collate information about existing policies, particularly in the countries visited, to identify synergies and potential duplication. However, as time was short and access to information difficult, there remains a lack of knowledge, thus a vital first step in the implementation of the GGWSSI in each country must be a detailed review of all existing policies and national frameworks, institutions and on-going projects to clearly define the linkages between projects implemented under the 3 conventions

The national action plans, programmes and strategies include national action plans (NAPs of UNCCD), national adaptation programmes of action (NAPAs of UNFCCC), National Biodiversity Strategies and Action Plans ( NBSAPs ) (see Table 3).

**Table 3 National action programmes of the GGWSSI countries to implement the three environmental conventions (UNCCD, UNCBD and UNFCCC)**

(in blue: the suggested pilot / lead countries)

Countries	NAP/CD	NBSAP	NAPA of the LDC
Algeria	2004	2005, completed	-
Burkina Faso	2000	1998, completed	2007
Cap Verde	2000	1999, completed	2007
Chad	2000	1999, completed	-
Djibouti	2000	2001, completed	2006
Egypt	2005	1998, under revision	-
Eritrea	2002	2000, completed	2007
Ethiopia	2000	2006, completed	2008

The Gambia			2000	1999, completed	2008
Libya			-	Under development	-
<a href="#">Mali</a>			<a href="#">2000</a>	<a href="#">2001, completed</a>	<a href="#">2007</a>
Mauritania			2002	1999, completed	2004
<a href="#">Niger</a>			<a href="#">2000</a>	<a href="#">2000, completed</a>	<a href="#">2006</a>
Nigeria			2001	2006, completed	-
Saharawi Republic	Arab	Democratic	-	-	-
<a href="#">Senegal</a>			<a href="#">2000</a>	<a href="#">1998, completed</a>	<a href="#">2006</a>
Somalia			-	-	-
Sudan			2000 / 2006	2000, completed	2007
<a href="#">Tunisia</a>			<a href="#">2000</a>	<a href="#">1998, under revision</a>	-

[The listed NAPAs have been made available to the UNFCCC Secretariat. The date of submission determines eligibility to apply for funding for implementation under the LDC Fund (Least Developed countries), which is managed by the Global Environmental Facility (GEF).]

NAPAs contain a list of ranked priority adaptation activities and projects, as well as short profiles of each activity or project, designed to facilitate the development of proposals for implementation. To facilitate access to this information based on the NAPAs, listings of projects and project profiles were made, grouped by country and according to main sectors for which an activity falls. Some projects and activities are very cross-sectoral in nature and difficult to classify into any one sector. Such projects have been put into a 'cross-sectoral' group. For more information, see the NAPA project database: [http://unfccc.int/cooperation\\_support/least\\_developed\\_countries\\_portal/napa\\_project\\_database/items/4583.php](http://unfccc.int/cooperation_support/least_developed_countries_portal/napa_project_database/items/4583.php)

[Note: Unfortunately, the quality of many of the national action plans. (whether NAPs or NAPAs) remains problematic, as the analyses are often superficial and the lists of projects added to them tend to be shopping lists with weak linkages.]

The emergent countries make regular communications to the Climate Change COP.

A range of country-specific national plans / policies and the poverty reduction strategy papers (PRSPs for the World Bank) are also in various stages of implementation. [PRSP are prepared by the member countries through a participatory process involving domestic stakeholders as well as external development partners, including the World Bank and International Monetary Fund. Updated every three years with annual progress reports, PRSPs describe the country's macroeconomic, structural and social policies and programs over a three year or longer horizon to promote broad-based growth and reduce poverty, as well as associated external financing needs and major sources of financing. Interim PRSPs (I-PRSPs) summarize the current knowledge and analysis of a country's poverty situation, describe the existing poverty reduction strategy, and lay out the process for producing a fully developed PRSP in a participatory fashion.]

The NAP, NBSAP and NAPA are not yet fully implemented, and for example the NAPs pre-date the recent increasing attention on the synergies between LD, CC and BD and certainly the focus on using agriculture as the engine for development – which is currently “vastly underused” (World Bank, 2007). The Niger NAP does link LD with poverty, asserting that “Desertification control and the natural resources management must also be foreseen from the angle of poverty control.” The GGWSSI is thus an opportunity to enhance the synergies and minimise the trade-offs between them, serving as an integrative tool. The GGWSSI will also contribute to monitoring the progress made by the countries to promote sustainable land management, adapt to climate change and conserve/restore biodiversity, including the trends and progress in the implementation of NAP/CD, SRAP, NAPA and NBSAP.

### **2.2.3 The importance of decentralisation and land tenure policies**

#### ***Decentralisation***

Most of the countries of the GGWSSI have been undergoing a programme of decentralisation and have reached varying stages along this pathway (see detail in Annex 10).

The main lesson or conclusion reached is that in countries where decentralization has been embraced as a national goal or strategy and a national policy put in place (for example Burkina Faso and Senegal), the process of decentralization has proceeded much faster as a result of the institutional and legal reforms that were initiated. In other countries, decentralization has taken place as part of the overall global democratization process. In the countries where the process of decentralization has been much slower, it has not been as effective. Factors responsible for this include sociopolitical influences left over from past centralized systems of governance; weakness or absence of policies, laws and regulations concerning decentralization; and lack of strong and effective central authorities to articulate and enforce decentralization policies, laws and environmental standards.

A key factor in the effectiveness of decentralisation is subsidiarity (i.e. environmental and other decisions should be taken at the lowest possible level of public authority closest to the population concerned). High levels of government should have a subsidiary function, performing only those tasks that cannot be performed effectively at a more immediate or local level. In the decentralized governance of natural resources, it is expected that decision-making at a given governance level will be limited to issues that cannot be managed at the next lower level without compromising the interests of other off-site stakeholders (as might occur, for example, in the decentralization of river basin management to sub-basin level). The subsidiarity principle requires the development and adaptation of rules to guide the division of decision-making, implementation and enforcement of regulations, and dispute resolution among levels of government and among institutions at each level. These rules are necessary safeguards to the security of power transfer and to facilitate accountability (adapted from UNDP, 2006b).

A major limitation in the effectiveness of decentralisation of governance of natural resources has been that it has not been accompanied by funding and thus staffing to implement the new roles and responsibilities.

The GGWSSI, working at local level, should contribute to highlighting the benefits to all levels (up to the Ministry of Finance) of more effective decentralized governance of NRM. It is vitally important that the initiative does not enable central governments to re-assert control



at local levels where decentralisation has been successful – thus particularly it is important that governments devolve GGWSSI funds to decentralized authorities.

### ***Land tenure***

“Insecurity of land tenure is a socio-political condition that can be made – and unmade (its origins lie in 19th and 20th century policies which failed to accord indigenous and customary occupancy their deserved status as private property interests). This has deprived millions of poor of the protection they need to withstand the worst effects of social transformation and the commoditisation of land.

A new wave of global land reform is underway within which the legal status of customary rights held by rural Africans and other indigenous populations around the world is improving. In a small but growing number of cases in Africa, customary rights are now accorded equivalent legal force with those acquired through non-indigenous systems and may be registered under state law. Support for the devolved governance of these rights at local levels, and building upon customary norms, is also growing.” (UNDP, 2006a)

The GGWSSI can work alongside TerrAfrica and the Drylands Development Centre of UNDP and others to particularly ensure that the customary rights of traditional land users in the GGWSSI zone (pastoralists and agropastoralists) are secured, ensuring that the commons remain the capital of the rural poor and restoring customary tenure regimes.

Annex 11 provides specific examples of how these issues are already being dealt with in West and North Africa, which can be used to help guide GGWSSI activities in this subject.

### **2.2.4 Ensuring synergies with existing regional initiatives and projects**

An array of regional projects and programmes exist which compliment, have synergy with and or raise issues of potential duplication with the proposals for the GGWSSI. Annex 12 provides a guide to the key initiatives, namely:

#### *Regional Initiatives*

- TerrAfrica (World Bank)
- NEPAD’s CAADP
- Action Plan of the Environment Initiative of NEPAD
- MENARID (of the International Fund for Agricultural Development - IFAD)

#### *Regional Projects*

- SolArid of the Global Mechanism (GM)
- Land Degradation Assessment in drylands project (LADA)
- African Monitoring of Environment for Sustainable Development (AMESD)

Table 4 shows that from a geographical and subject focus, the GGWSSI is the only initiative (or organisation) which is comprehensively covering the full range of SLM/NRM topics, including the interlinked LD, CC and BD – and focusing only on the circum-Saharan countries.

**Table 4 Analysis of Geographical and Subject Focus of Relevant Organisations, Initiatives, Projects and Programmes (based on current understanding / available information)**

Project / Programme / Key Organisation	Geographical Focus					Subject Focus								
	North Africa	West Africa	North-East Africa	Sub-Saharan Africa	Other Developing Countries	SLM	NR M	Agro-forestry	Silvo-pastoral	LD	Pastoral	Livestock	CC	BD
GGWSSI														
OSS														
Dryland Development Centre (DDS) of UNDP														
International Livestock Research Institute (ILRI)														
World Agroforestry Centre (ICRAF)														
World Institute for Sustainable Pastoralism (WISP) of IUCN														

Project / Programme / Key Organisation	Geographical Focus					Subject Focus								
	North Africa	West Africa	North-East Africa	Sub-Saharan Africa	Other Developing Countries	SLM	NRM	Agro-forestry	Silvo-pastoral	LD	Pastoral	Livestock	CC	BD
WOCAT														
TerrAfrica														
SolArid														
MENARID														
LADA														

SLM-sustainable land management; NRM = natural resource management; LD = land degradation; CC = climate change; BD = biodiversity

The GGWSSI should work with the existing on-going projects and initiatives, also gaining from the expertise of the specialist institutions in Table 4, but also from organisations with wider but complimentary mandates (*inter alia* FAO, IFAD, ICARDA, GEF, ICRISAT/Desert Margin Programme, INSAH, IRA), to avoid reinventing the wheel, thus speeding and maximising the beneficial impacts of the GGWSSI on the landscapes and livelihoods of rural people in the circum-Saharan.

The following are considered the key areas of synergy:

### **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. (FAO, 2007).

The GGWSSI is an African-owned programme which is technically truly aligned to TerrAfrica, which itself is so far largely operated from outside Africa. [The TerrAfrica Vision Paper (FAO, 2007) fully details the vision, including the economic, ecological and social consequences of land degradation and the required “Shifts in Emphasis to Achieve SLM”.]

TerrAfrica has, to-date, not worked on-the-ground (but is creating the legal and policy conditions necessary to support SLM) – the GGWSSI should reap the benefits of the TerrAfrica activities at national level, focusing most of its activities with land users.

Another area where the GGWSSI differs in emphasis is that TerrAfrica recognises climate change as an exacerbating factor in land degradation, whereas for the Africa-EU Partnership on Climate Change, this should be given even greater emphasis - that using SLM (built upon scientific knowledge, local experience and farmer innovation) the GGWSSI will help adaptation to the inevitable short and medium / longer term changes in climate in the circum-Saharan countries. The GGWSSI should also be used to help unite the poor and vulnerable countries of the circum-Saharan to not only adapt to climate change but also to lobby to benefit from the post Kyoto climate agreement, gaining recognition for the fact that there are huge opportunities for low cost carbon storage in dryland soils.

The GGWSSI compliments TerrAfrica as it will include the countries north of the Sahara – and hence provide the unique ecosystem focus for the GGWSSI.

### **NEPAD’s CAADP**

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). The pillar of particular relevance to the GGWSSI is:

Pillar 1                      Extending the area under sustainable land and water management.

However, the GGWSSI will depend on developments under Pillar 2:

Pillar 2                      Rural infrastructure and trade-related capacities for market access

and contribute to:

- 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.

### **Action Plan of the Environment Initiative of NEPAD**

The Action Plan aims to integrate 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).

### **MENARID**

The MENARID programme 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) It is understood that this will involve the development of numerous separate proposals to the GEF – thus this could be highly bureaucratic and require co-financing.

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 is designed to be the North African equivalent of TerrAfrica, thus there should be alignment and complementarity between the initiatives.

### **SolArid**

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 *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 will also promote *South-South Cooperation between Maghreb and Sahel (francophone)* countries – a principle which the GGWSSI will extend to benefit the Anglophone countries.

## **LADA**

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.

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.

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. GGWSSI has to learn and enhance the achievements of LADA.

## **AMESD (African Monitoring of Environment for Sustainable Development)**

“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) Information from AMESD will be useful in the monitoring and evaluation of the GGWSSI, at national and regional levels.

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Other projects and programmes exist, notably those of international, national and local NGOs (*inter alia* SOS Sahel and Christian Aid) – which the GGWSSI must learn from and support.

### **3. ANALYSIS OF THE OPPORTUNITY TO USE GGWSSI AS A FEDERATIVE PLATFORM TO IMPLEMENT THE AFRICA – EU STRATEGIC PARTNERSHIP AND ENSURE SYNERGIES WITH ONGOING INITIATIVES AND PROGRAMMES**

#### **3.1 RELEVANCE OF THE GGWSSI FOR THE IMPLEMENTATION OF THE LISBON STRATEGY**

The Lisbon Strategy provides a general framework for long term Africa-EU partnership that will be implemented through successive Action Plans in the short term and a strengthened political dialogue at all levels, producing concrete and quantifiable effects in all areas of partnership.

Amongst other, the new approaches that sustain the implementation of its new long term partnership rely on:

- the recognition and full support from the EU to the efforts of Africa and the preponderant role that the continent must play to create the needed conditions to ensure economic and social sustainable development and the effective implementation of development programs;
- the importance of Africa in showing firm and determined political commitment to assume its responsibilities to support the goals and priorities of the partnership.

The GGWSSI initiative is fully supported at the highest political level, by the AU and its member states, particularly the circum-Saharan countries. Moreover, the AU – CENSAD propose to build a concrete plan of action to fight against desertification, to preserve NRM and biodiversity, to mitigate the effects of climate change with the view to reducing poverty and enhancing natural resources in the Circum-Saharan zones. This is the first time that the African continent has tried to develop a joint initiative in which local communities, civil society, national, sub-regional and regional institutions will contribute all together. This African initiative, launched at the regional level, will contribute to regional integration.

The initiative will channel EC support to addressing the challenges of meeting of the Millennium Development Goals, in particular MDG 1 (Poverty and hunger), MDG 7 (Sustainable Environment) and MDG 8 (elaboration of a partnership for development).

To achieve the MDG 7, the EU and the AU recognise the need to reinforce their cooperation to address the environmental variability and climate change issues. The countries around the south of the Sahara are among the poorest countries of the world and they need international support to face climate change. In this context, the GGWSSI is an initiative which can develop SLM to improve local livelihoods, adapt and mitigate climate change, conserve and develop agro-biodiversity, increasing productivity of agro-pastoral zones, thus contributing to food security and poverty reduction.

Until now, the EC Delegations' commitment at national level in these countries has focussed on the support for infrastructure (roads, water and sanitation) – contributing to improving trade, regional integration and health conditions and on the financing of regional and national projects focussed on climate change adaptation, conservation biodiversity, forestry and agriculture. However, all these have been independent projects (Annex 13), dealing with specific issues without any linkages [with the notable exception of TerrAfrica]. There also

small but important project in countries where delegations support NGOs, for example in food security – through SLM.

Thus, the GGWSSI initiative is welcomed as it provides a means for the EC and MSs to become strongly involved in rural development through SLM to adapt to climate change, resulting in improved food security and rural poverty reduction. The EC and MSs could contribute efficiently to the donor platform dialogue to strengthen its action ensuring complementarities.

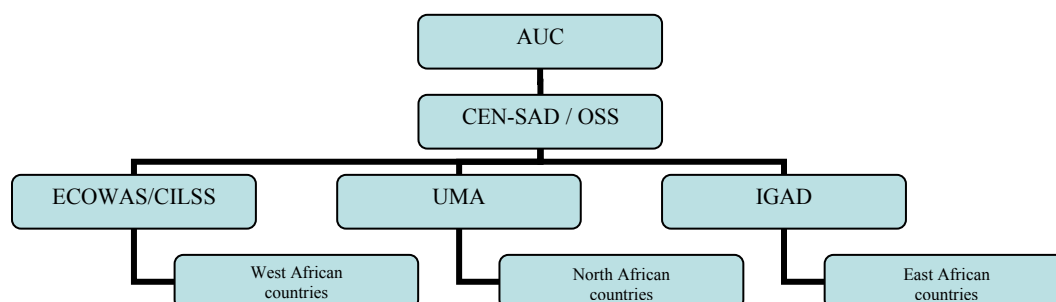
### 3.2 STRATEGY OPTIONS AND JUSTIFICATION FOR IMPLEMENTATION STRATEGY

#### 3.2.1 Institutional Structure

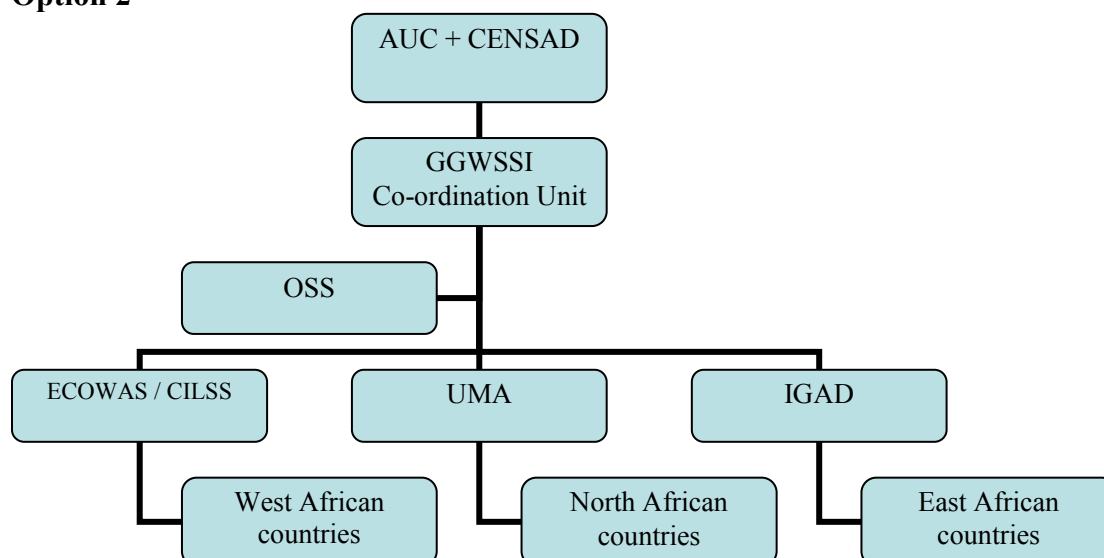
The terms of reference for the current study (Steps 2 and 3) required that the team develop realistic scenarios for the institutional structure of the GGWSSI. The key advice prior to the start of this study was that the EC prefers to assess the capacity of existing structures, before considering creating new ones. The study team has therefore prepared four possible scenarios for the institutional structure of the GGWSSI (see Interim Report, Figure 2 and Annex 14).

**Figure 2 Institutional Scenarios for the Great Green Wall of the Sahara and the Sahel Initiative, as proposed by the study team**

#### Option 1

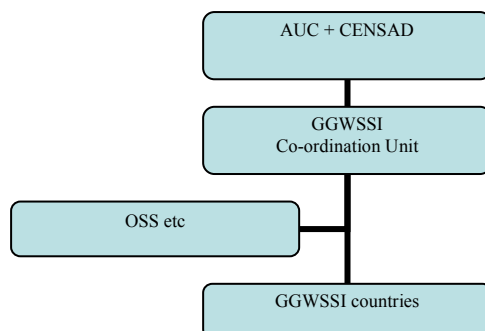


#### Option 2

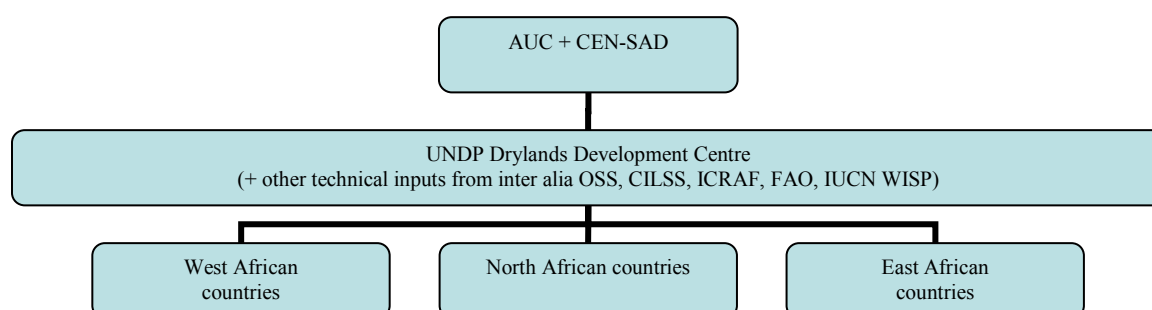




### Option 3



### Option 4



In order to not consider GGWSSI as one more initiative that will need additional support from financial and technical bilateral and multilateral partners, and particularly from EC, the study team advises that the GGWSSI should be integrated with the other regional initiatives based on existing structures (avoiding the creation of a new one). Thus the GGWSSI will compliment existing activities.

A condition for the sound implementation of the GGWSSI is that **all institutions work in their own specialism(s), according to their mandates, skills, experiences and field of excellence.**

For guidance, Annex 15 provides a listing of the various regional and sub-regional organisations of the Sahel and Saharan countries and maps of the countries covered in each REC are provided in Annex 16. The available information for those organisations which are identified as those the AUC wish to be involved in the structure of the GGWSSI has been collated in Annex 17. The information outlines their characteristics including their mandates, skills and experience and identified needs relating to involvement in the GGWSSI.

All four scenarios for the institutional structure of the GGWSSI prepared by the study team (Figure 2 and Annex 14) involve the overall leadership of the AUC and CEN-SAD, which is considered essential to support the African leadership of the initiative. [A SWOT analysis for the preferred / each scenario was undertaken at the consultation workshop (6 and 7 May in Burkina Faso), using the participants' expertise, as the team found published information scarce – see Annex 18]

Under scenarios 1 and 2, this African leadership is re-enforced by ownership at sub-regional level, through the co-ordinating role of the sub-regional organisations ECOWAS, IGAD and UMA respectively in west, east and north Africa. Various people interviewed for this initiative expressed doubts about the interest and capacity of the RECs in the GGWSSI – citing that they had hardly played a role in SLM policy making, nor have a voice at the COP of the UNCCD. It is hoped that this new initiative will give them a *raison d'être* and improve their integration.

Under scenarios 1 and 2 the existing regional technical organisations (OSS and CILSS) will be the providers of technical inputs to the initiative. This however leaves a gap for the countries of east Africa – although this may be a role which IGAD could also fulfil (this has not as yet been confirmed due to communication problems – and that IGAD were not represented at the study's workshop or final meeting).

The main difference between scenarios 1 and 2 is that under scenario 2 it is proposed that the EC establish a GGWSSI co-ordination unit close to the AUC – following the model recently established for the AMESD. Nevertheless, to reinforce the African ownership, the coordination unit will be created and led by AUC / African experts; possibly, with a technical assistance from EC.

Scenario 3 is proposed as an option which works directly from a GGWSSI co-ordination unit (possibly following the AMESD model or based at CEN-SAD headquarters) to the national level. This could be supported by the range of technical organisations in Scenario 4 (see below).

Scenario 4 has been developed in which the many other organisations working on drylands, agroforestry, soils, agriculture, pastoralist – although not specifically or only focussed on the GGWSSI area, are directly encouraged to provide technical expertise. This scenario has specifically been proposed as it has become very clear during this study that enormous amounts of relevant information and research results already exists but remains unavailable as others are not aware of its existence.

The consultants recommend that whatever the final institutional structure of the GGWSSI, it is important to ensure collaboration and knowledge sharing between organisations to avoid “reinventing the wheel”.

[Readers should note that since the development of the TORs, the AU have published an Implementation Plan for the Great Green Wall of the Sahara and the Sahel Initiative (AU/CEN-SAD, 2009), which clearly maps out the structure which they intend to adopt (Annex 19). This most closely matches scenario 1.]

Strengthening of regional and sub-regional institutions is a vital component of Phase 1 of the GGWSSI (refer to Annex 17):

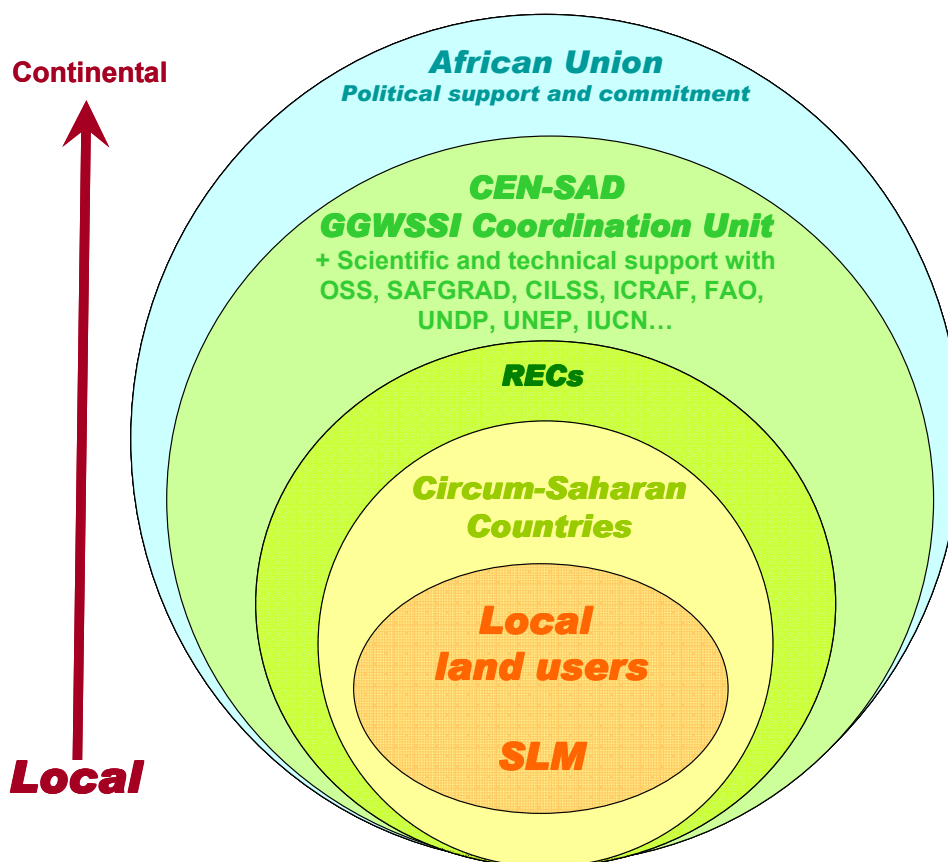
- The Department of Rural Economy and Agriculture, which is within the Division of Environment and Natural Resources in the AUC has a small staff – and already has a very wide and challenging remit. This department should be reinforced with dedicated staff, to efficiently link the AU / AUC with the implementation unit and support the

wider GGWSSI. One program officer should be dedicated to the coordination of GGWSSI at the AUC level.

- The Rural Development and Natural Resource Management Department of CEN-SAD currently have a staff of only two. This small team must be reinforced with administrative and technical staff to form the fully operational coordination unit. The study team propose that the GGWSSI coordination unit is created within this department – with a staff of at least 3 persons (one program officer to deal with each sub-region), under the leadership of one regional coordinator (from the existing members of staff - preferably the Director of the department), with support from the existing departmental assistant). The study team recognises that the Rural Development and Natural Resource Management Department of CEN-SAD was created recently but the Director has sound experience in managing regional programmes, thanks to her professional experience and background at OSS. Her very good knowledge of political and institutional issues, work accomplishments and her good relationships with the donors (particularly with the Global Mechanism), should ensure the effective implementation of the coordination.
- The small but efficient team at OSS requires to be reinforced to improve its scientific and training capabilities through inputs from external experts on specific issues.
- CILSS has experience in the coordination and management of sub-regional projects (including EU). Thanks to its new partnership with ECOWAS, it can develop, duplicate and extend all its programmes/projects within the CILSS and ECOWAS member countries – for example the GGWSSI, which could require additional capacity. CILSS has two efficient technical institutions (INSAH and AGRHYMET) which can contribute training and capacity building for the GGWSSI (e.g. M&E using remote sensing).
- ECOWAS can directly raise funds based on their existing policies on the environment (ECOWAP) and agriculture (ECOWEP) that can be implemented by the CILSS (already involvement in the NEPAD/CAADP development).
- UMA - Relies on OSS to implement technical sub-regional projects but could be major player to up scale GGWSSI in non AU member countries.
- IGAD activities have recently focused on the vital role of managing / avoiding conflicts to ensure peace in East Africa It also has a mandate to fight against drought and desertification realise peace, economic prosperity and regional integration in East Africa. In 2008, IGAD produced a strategy document on the environment highlighting the economic and social conditions. [Regrettably, despite numerous attempts, the study team has not received a response yet on the GGWSSI from IGAD, but hope this will be available for information into the Final Report.]

Following the deliberations of the working group (including a SWOT analysis – see Annex 18) at the Burkina Faso stakeholders’ workshop the following institutional structure (Figure 3) was validated by the African partners and is recommended by the study team.

**Figure 3 Institutional Scenario for the Great Green Wall of the Sahara and the Sahel Initiative, as validated by the African partners at the GGWSSI's Stakeholder Workshop, 7 May 2009**



**At the national level**, all the countries already have existing SLM co-ordination structures, which should be used to support the GGWSSI. The Ministry / organisation with technical leadership of the initiative (“key ministry”) will assist in the country-level SLM / NRM activities, with the support of all sound existing scientific and technical institutions.

The GGWSSI should be integrated in the national policy and strategies (i.e. rural development strategy in Niger; social and economic development plan in Tunisia) and in the strategic investment programmes, for instance those developed with the support of TerrAfrica in Ethiopia, Mali and Niger. The country analysis of Mali (Annex 20) demonstrates the synergies between existing initiatives, projects and programmes that contribute to building and complimenting national strategies.

The study team advises that it is vitally important for the activities of the GGWSSI in each country to work at local levels, with the decentralised authorities and NGOs; the initiative should not centralise but concentrate on valorising local empowerment, including devolving finances to local decision makers and communities.

### **3.2.2 Regional Steering and Technical Committees**

The AU Concept Paper on the GGWSSI (AUC, 2006) includes a “Steering Committee of Ministers, designated by Member States directly concerned with the establishment of the Green Wall as well as select Ministers from other Regions of Africa could be set up at the regional level to monitor the implementation of the project and to report to relevant Policy Organs of the AU for policy and other implementation directives as well as to keep the projects under the radar in the development programmes of the concerned countries.” Also a very large “Technical Committee” to “meet quarterly for the first three years of planning and implementation and half-yearly thereafter, to guide the programme. A sub-set of the Technical Community of representatives in Addis Ababa may be constituted for a closer and more frequent follow-up of project implementation with the AU Commission.”

This has been refined in the implementation plan (AU/CEN-SAD, 2009) and, as proposed by CEN-SAD to the study team during their recent mission, it is recommended that at the political level the initiative should be guided by the Heads of State, who meet annually at AU meetings. It is generally agreed that a Steering Committee, based on one of the AU’s Specialised Technical Committees – most probably that of Agriculture, Rural Development, Water and the Environment, with representatives of the involved countries. The study team recommend that the Steering Committee must be kept small to be efficient.

Within the AU, sectoral meetings on agriculture, the environment and water resources take place every two years, where GGWSSI technical matters should be discussed (CEN-SAD can invite additional participants). It is strongly believed that there is no need for an extra system of meetings to be developed for the GGWSSI – particularly as the whole initiative is in the framework of a partnership on climate change.

The study team recommend that a network of technical experts is developed by the GGWSSI coordination unit, keeping up-to-date electronically (email, telephone and video conferencing), meeting *ad hoc* around particular issues (inter alia CGIAR ICRAF, ICRISAT, DDC/UNDP, FAO, IUCN WISP) as used, for example, by African Forest Forum.

### **3.3 ANALYSIS OF DIFFERENT PARTNER ORGANISATION ROLES**

The GGWSSI “network” (i.e. national, sub-regional and regional organisations) should be formalised rapidly, defining clear roles, responsibilities and commitments of each institution at national, sub-regional and regional levels.

The study team advises that it is important for the GGWSSI (e.g. the AUC/CEN-SAD) to set-up contractual mandates with the different institutions, in order to implement specific activities with defined time schedules – perhaps through a Memorandum of Understanding.

#### ***AUC***

- Political backing for the GGWSSI within Africa and with other donors (EU and others).

#### ***CEN-SAD***

- Co-ordination unit (covering - ecological/environmental; socio-economic/political; agri-processing / business; initiative financing; knowledge sharing and training);
- Coalition and lobbying on behalf of the countries of the GGWSSI at international level regarding dryland issues – e.g. PES.

### ***RECs***

- Co-ordination of training (using technical experts) and capacity building;
- Reinforcing mainstreaming and national ownership.

### ***Technical Level (OSS / CILSS / UNDP Dryland Development Centre and others)***

- Provision of scientific and technical guidelines;
- Provision of technical training – in collaboration with national universities and government institutions.

### ***National Level***

- Identifying “bright spots” for up-scaling;
- Prioritising “hot spots” - areas for on-the-ground implementation;
- Reviews of existing policies and legislation in the range of relevant Ministries which impinge on SLM;
- Catalysing legal and policy changes to support SLM;
- Training trainers in SLM / NRM.

### ***Decentralised Local Level***

- Government, decentralised authorities, NGOs (international and local) and private sector players working with local communities – up-scaling “bright spots”, including working on development planning and SLM with land users.
- In the longer term, promoting development of agri-businesses and agro-processing.

## **3.4 ROLE OF STAKEHOLDERS (FARMERS / PASTORALISTS / LOCAL GOVT / SPECIALISED INSTITUTIONS / UNIVERSITIES)**

### **3.4.1 Description of beneficiaries**

The principal beneficiaries of the GGWSSI will be the local populations, especially the poor families (men, women, young people and children) directly affected by the problems caused by land degradation and climate change, who will take part in / benefit from the implementation of SLM activities.

The **secondary beneficiaries** are the **national institutions**. The GGWSSI will contribute to implementing the national strategic investment frameworks and national strategies for development. It will also contribute to disseminating useful information for the implementation of the MEA; raising ecological literacy.

The **tertiary beneficiaries** are the **sub-regional and regional organisations**. The GGWSSI will reinforce the regional integration as it will unite nations to promote sustainable land management and adaptation to climate change. These stakeholders can provide political support but also scientific and technical support based on their great experience. They can make available all exiting scientific knowledge and findings to improve SLM activities and also to elaborate summaries at sub-regional and regional scale to assess environmental changes and provide information to follow the implementation of MEA.

### 3.4.2 Reasons for the choice of these beneficiaries

The first and major beneficiaries are the **local populations** because they are the most affected and most vulnerable to the impacts of climate change, land degradation and biodiversity loss. The initiative should work with existing groups [farmer / village organisations, women's groups and where these do not exist, instigate creation of such groups as these have been proved key to successful up-take of similar actions (e.g. Greenbelt Movement in Kenya)]. The key challenge is to get millions of land users to appreciate the economic benefits to them and their households of investing in SLM of crop, range, savanna and woodlands, which will greatly reduce the recurrent costs of GGWSSI. Development strategies will be developed with and for them to ensure this.

The **national institutions** from a wide range of sectors (*inter alia* agriculture, forestry, environment) will benefit from GGWSSI thanks to its integration in the national policies framework and thanks to the involvement of all technical and financial partners (donor platform) to avoid duplication of efforts, favour the inter-sectoral harmonization of approaches and development of a joint vision. In some cases this may mean enhancing the capacity of national institutions or changing their focus. However, it is vital to avoid significant increases in the recurrent costs of institutions, since the key challenge is to catalyse millions of land users to adopt SLM practices.

Each within its mandate (Annex 17), the **sub-regional and regional organizations**, play key roles in the implementation of 3 Rio Multilateral Environmental Agreements (with different degrees of effectiveness). The role and mandate of these entities are rarely revisited to take account of the evolution of knowledge, of the wider issues and required actions but also to take into account their complementary and comparative advantage. The GGWSSI will help to create synergies and build capacity at sub-regional and regional level.

### 3.4.3 Identifying needs and constraints of beneficiaries

#### At local scale

To ensure improved livelihoods for the local population, it is vital to integrate traditional knowledge as well as people's adaptive capacity. In the GGWSSI, the local population must be considered as full participants and partners in the implementation of SLM and development activities, using participatory approaches to enable local people to find solutions which are environmentally and technically effective and socially acceptable. A major constraint will be the low levels of literacy among the rural people in some of the countries. The GGWSSI should prioritise ensuring that information for these groups is made available using appropriate means of communication (*inter alia* well trained local "extension" or similar workers, either from the public or private sector).

#### At national and sub-regional scale

At national and sub-regional levels, the often urban-based institutional and policy makers in each region and country are disconnected from field realities and must increase their understanding of the changing environmental situation, also the potential benefits of up-scaling existing successes. This will help them guide development of national and regional policies. At this level, the most important challenges relate to improving the policy development process and identification of reliable, relevant and useful indicators for the monitoring of policies and programs.

The GGWSSI can contribute to strengthen the capacities of these institutions to improve their capacities for research-development, analysis of environmental changes, vulnerability assessment and to develop operational adaptation strategies. They will be able to fully play their roles for their countries members and create a catalyst at the national level.

Weakness of the knowledge, capacity and lack of finances are major constraints to the effective participation of the African countries and their sub-regional organizations in international negotiations on the environment. In other words, the weakness of the delegations of circum-Saharan countries means that they cannot develop effective strategies for negotiation. To help remedy this, the knowledge generated under the GGWSSI will provide useful information to support African representatives involved in international negotiations.

#### **3.4.4 Relevance of the action to the beneficiaries**

Despite extensive efforts, the planning system in the circum-Saharan countries does not really take into account environmental concerns in macroeconomic policies. Indeed, these systems are focused on short-term concerns and to bring financial stability, avoiding taking into account the longer-term environmental risks. The implementation of the GGWSSI operating at each level will be a strategic tool for identifying the vulnerability of ecosystems and populations at local level but also with a sub-regional/regional vision, contributing to development of appropriate adaptation strategies.

The GGWSSI (with TerrAfrica and MENARID) is a real opportunity to meet the demands of various stakeholders in the circum-Saharan region to help develop better policies as well as activities to strengthen adaptation to climate change, reverse land degradation and loss of biodiversity thus reduce rural poverty. It will also strengthen the capacity of countries and sub-regional institutions to participate fully in international negotiations on the definition of priorities and the practical implementation of decisions and commitments.

Participatory actions should be rapidly begun at ground level, with the support of NGO's and technical services after they have been trained in participatory extension. It is vital that land users will perceive their ownership of activities and the process.

#### **3.5 RELEVANT GGWSSI ACTIVITIES (LOCAL, NATIONAL AND REGIONAL)**

The study team advises that the GGWSSI should use the national level framework of the TerrAfrica Initiative (developed using their Country Support Tool – CST), as the initiatives are so closely aligned. Clearly, within the wide-ranging framework of TerrAfrica for Sub-Saharan African the focus of the GGWSSI is on drylands, where certain activities will be most urgent (i.e. assisted natural regeneration of trees, holistic range management and conservation agriculture). The team appreciates the vital importance of the work which TerrAfrica is undertaking in promotion of “programme-based approaches to SLM implementation at country level”. The main way it does this is by supporting partnerships among international, regional, national, district and local/community level stakeholders, with the long term goal of restoring, sustaining and enhancing the productive and protective functions of SSA's land resources by combating the interrelated problems of land degradation, food insecurity and rural poverty. It does this through the implementation of a long term, well funded and multi-level programme with the medium-term objectives of:

- strengthening the enabling institutional, policy, legislative, budgetary and strategic planning environment for SLM within SSA; and



- mainstreaming SLM within country-driven programmes, so as to remove the barriers and bottlenecks to financing, and scaling-up on the ground, successful SLM technologies and approaches.” (FAO, 2007)

The study team recommend that in countries where TerrAfrica is already being implemented, the GGWSSI compliments the international / national level activities with decentralized and ground level activities.

Where TerrAfrica has not worked in a country, the GGWSSI should work at both national level (learning from the successful experiences of TerrAfrica and using the CST, see FAO, 2008) and also at local level.

### **3.5.1 Policy and Legal Issues**

GGWSSI constitutes the main tool complimenting TerrAfrica to implement continental / regional strategic framework (NEPAD/CAADP, NEPAD Environmental Action Plan) in which EC is already involved. The GGWSSI, as a regional integrative initiative, should help to catalyse the EC and EC Member States financial support in arid lands and desert margins, which is critical for long term sustainability, peace and security (the alternative, would be that environmental migrants would be forced to abandon the degrading lands) and move north, towards Europe.

### **3.5.2 Land Tenure**

The initiative should work with the TerrAfrica, the DDC, and others in:

- “Protecting the rights of land under customary tenure;
- Increasing land title registration and linking it to land use planning;
- Promotion of women’s land rights in land registration and customary land tenure systems;
- Promotion of land markets and security of tenure;
- Policy objective: create safety nets to facilitate SLM and assist those negatively affected by land markets” (FAO, 2007).

A particular focus for the GGWSSI should be ensuring the rights of mobile pastoralists, who have seen encroachment on their lands with the expansion of settled agriculture, in places leading to conflicts.

### **3.5.3 Communication Strategies**

The study team is particularly concerned that many initiatives are gathering “knowledge bases” and databases of information on SLM – but that these remain in reports held in offices, on CDs and the internet, thus inaccessible to rural land users – the potential beneficiaries of this knowledge. The GGWSSI should champion ensuring that this information is made available (in a range of forms and languages) to all potential beneficiaries, increasing their ecological awareness, irrespective of their language, level of literacy and access to computers.

Particularly:

- Raising awareness of climate change, options for SLM, the importance of local wild and agro-biodiversity, issues of relevant laws and policies (e.g. on land tenure) with all groups of local people (project beneficiaries) – including young, old, men and women farmers, agropastoralists and especially nomadic / transhumance pastoralists – to enable them to better understand the nature of the issues and options to respond.

[*inter alia* schools (e.g. develop a GGWSSI non pc-based version of [www.scienceacross.org](http://www.scienceacross.org) or materials for after school clubs), adult education, rural radios, newspapers, tv, word of mouth, posters.]

- Valorising local / traditional knowledge.
- Sharing knowledge and evidence of good practices / bright spots;
  - using the enormous volumes of relevant information on SLM currently available on the internet (*inter alia* TerrAfrica knowledge base and WOCAT) to develop materials for dissemination to all age groups in communities [as appropriate in each country / region] via schools (e.g. SLM in school curricula or after school clubs), adult education, newspapers, radio (e.g. rural radio in Niger), tv, drama, eco-buses –depending on local situations (literacy levels etc.);
  - produce information in formats designed to inform policy / decision makers (local / district / national / international);
- Developing advisory services (technical, financial, market, business) for farmers, agropastoralists, pastoralists and small rural businesses, based on partnerships between decentralized government, the private sector and civil society.
- Networking of scientists working on GGWSSI (universities, national and international research institutions), particularly involving young scientists.
- Dissemination of scientific and technical information more widely in Africa and elsewhere (e.g. databases of important information on indigenous trees / natural vegetation held by ICRAF).

#### **3.5.4 Operational / Local Level Activities**

- Work by extensionists, the private sector and NGOs with rural communities using participatory approaches to analyse the needs of rural communities.
- Encouraging local communities to work on participatory development / SLM planning, integrating scientific knowledge with local knowledge, experience and farmer innovation.
- Support for up-scaling of locally-appropriate SLM practices using, for example, the approaches developed by FAO and ILRI of farmer field schools / demonstration “plots” / study visits etc. for conservation / low tillage agriculture, rangeland management / livestock keeping, including agroforestry and silvopastoralism (see Annex 21 and [www.wocat.net](http://www.wocat.net)).
- Development of agri-businesses and agro-processing (*inter alia* tools and equipment making, processing of surplus crops for marketing).
- Catalysing receipt of incentives, including payments for environmental services (PES) and other non-financial rewards.
- Ensuring availability of micro credit to support land users’ investment in SLM.

#### **3.5.5 Valorising SLM**

The actions of the GGWSSI will help land users to adapt their land management practices to increase their resilience to the impacts of climate change.

In addition, the GGWSSI should create an alliance of dryland nations to lobby at the highest levels to ensure that these people who are most affected by climate change yet contributed least can receive some of the benefits of the growing carbon market.

There is a great potential for carbon sequestration in drylands because pasture is the largest anthropogenic land use and because substantial historic carbon losses mean that dryland soils are now far from saturation. Indeed, the IPCC (2007b) identified grassland management as having the second greatest potential for mitigating greenhouse gas emissions while providing an important mitigation effect for the investment dollars. Preventing degradation and rehabilitation of degraded drylands meets the requirements as low cost means to mitigation while adding significant benefits for productivity and pastoralists livelihoods (adaptation). This appears not to be widely know, but the GGWSSI could help (with UNDP, FAO and others) to raise this subject in order that this becomes eligible for Payments for Environmental Services (PES) (see later section on financing).

### **3.5.6 Harmonising across Borders**

Harmonisation of policies and laws across borders is a vital but very long-term goal. This is not considered a high priority for the GGWSSI, as most of the issues are national level. However, the exception is all the issues relating to mobile pastoralists. The initiative should particularly work with the river basin authorities, which have already developed structures for inter-governmental activities.

### **3.5.7 Links with existing associated activities**

A major cause of the reduction in tree cover and resulting degradation of land in the circum-Saharan has been and continues to be harvesting for fuelwood and charcoal. Many of the proposed actions of the GGWSSI aim to increase woody vegetation cover across the countries involved in the initiative (assisted natural regeneration, agroforestry, silvopastoralism). However, these will be in vain unless a significant reduction can be achieved in the local / national dependence on wood / charcoal in most of the countries, towards alternative fuels; via fuel efficient stoves (which can reduce wood use by 80%) towards solar power (solar cookers or electricity generated using photo-voltaic power), biogas (from manure) or electricity from generators fueled by biodiesel from local crops (see Annex 5). [The team found in Niger coal from Nigeria is being imported as an alternative to wood-fuel ..... which clearly is at odds with global efforts to reduce reliance on fossil fuels.]

The GGWSSI should collaborate with any existing projects – and where they do not exist, prioritise this.

## **3.6 MONITORING AND EVALUATION**

The subject of how the activities of the GGWSSI will be monitored and evaluated is absent from the various documents produced so-far, although the AU and CEN-SAD (2009) document does include mention that a system will be devised.

Again, this is an area where the GGWSSI can build on existing experience and systems, avoiding the time-consuming and costly process of developing yet another M & E system.

Monitoring will be required at different scales, including initiative-wide, national and local levels.

### **3.6.1 Regional Level**

The African Monitoring of the Environment for Sustainable Development (AMESD) programme, which has been designed to address the need for improved environmental monitoring towards sustainable management of natural resources, seems the most appropriate

organisation with which the initiative should develop a monitoring system. AMESD is to respond to “request from the RECs to assist with coherent regional monitoring of the environment to help inform regional environmental policies and enable regional harmonisation of national policies and practices in environmental monitoring and management” (AMESD, undated).

### **3.6.2 National Level**

Numerous achievements of existing monitoring and evaluation systems will be valuable for the implementation of GGWSSI including:

- AMESD
- The National environmental monitoring mechanism based on local observatories (such as ROSELT Niger) that can provide support to monitor ecological and socio-economic evolution trends allowing analysing the impacts of SLM activities implemented by GGWSSI
- The current LADA project is developing national level monitoring and evaluation.

### **3.6.3 Local Level**

The current LADA project is developing local level monitoring and evaluation (Annex 12).

Community level monitoring and evaluation is increasingly included in local level interventions and the study team advise that it should be considered vital for GGWSSI initiatives as it reinforces local ownership of village / community level activities. There are many good examples of approached using PRAs etc – for example that developed by the Northern Rangeland Trust in Kenya (<http://www.nrt-kenya.org/>), to:

- Evaluate activities and assess their impacts;
- Provide feedback to guide the future activities.

Characteristics of the monitoring programme are:

- Multidisciplinary – combining quantitative ecological monitoring and qualitative participatory monitoring;
- Community-led – the community decides what species and events are a priority to monitor;
- Community-managed – data collection and initial analysis is undertaken locally;
- Technical support – detailed analysis of data will be conducted by technicians from the Northern Rangelands Trust and results provided to project staff and community managers;
- Landscape level monitoring – to complement monitoring at higher level.

Thus the GGWSSI will contribute to monitoring the progress made by the countries to promote sustainable land management, adapt to climate change and conserve/restore biodiversity.

The results obtained by the SLM activities undertaken under the umbrella of the GGWSSI should be included in reports to the different Conference of the Parties (COP) for each MEA, also the trends and progress in the implementation of NAP/CD, SRAP, NAPA and NBSAP.

#### 4. FINANCING THE GGWSSI

Priority Action 2 of the Africa-EU Partnership on Climate Change includes the “Great Green Wall for the Sahara (and Sahel) Initiative” and is outlined in the document produced on the Africa-European Union Strategic Partnership in 2008 (EC, 2008 and Annex 1). The text lists, under the heading finance for the GGWSSI, the following:

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

The GGWSSI is by definition a long term initiative – the benefits of many SLM activities in drylands take decades to reach their full beneficial impacts (e.g. providing environmental conditions remain similar, the SOC content is likely to reach its maximum 5 to 20 years after adoption of beneficial SLM practices (Lal, 2004)). Consequently, it is vital that the funding system developed is both assured for the *long term* and *not dependent on a single institution*. The following analysis reviews some of the possible funding sources within the EU – and also more widely, to ensure long term continuity of support for the GGWSSI.

Annex 1 in the Background Note on the GGWSSI (2008) outlines two phases for the initiative:

Phase 1: Initial phase (2 years) - to prepare the appropriate environment for the implementation of the Great Green Wall Program.

Phase 2: Implementation - “The implementation phase should be spread over a longer period of sub-phases of ten years with provision for mid-term and end of phase reviews of progress on implementation. Every succeeding phase could build on the outcome of the review and develop activities for the next ten years. Overall the completion of the Program could be targeted for 30 years assuming that simultaneous actions would be possible in all countries within the belt. The activities of the phase would include (on-going) research. The activities for this phase will be implemented principally by the countries concerned.”

However, it is clear that the AUC and GGWSSI countries are anxious to begin activities in Phase 1. “*This ambitious program of the Green Wall needs to be implemented as soon as possible. It would request significant investment of financial and human resources and political commitment of the States concerned and is bound to several decades*” (AUC/CEN-SAD, 2009). Furthermore, the sooner activities begin on the ground, the better, from the point of view of poverty reduction and adaptation to climate change. Indeed the study team was asked to identify pilot countries where the national and also local level activities should begin.

The study team suggests that the initiative may begin in pilot / lead countries (see Annex 24) – but that in parallel with “setting up the institutional arrangement for implementation”, at least awareness raising activities should begin in as many of the countries as possible.

## 4.1 REVIEW OF POTENTIAL SOURCES OF FUNDING

### 4.1.1 European Commission

Under the current financing mechanisms of the EC, funding for the GGWSSI could be extremely complex and disjointed. The core issue for financing of the GGWSSI is that it potentially involves over 15 countries to the north and south of the Sahara, thus eligible for funds from different “Directions” (ENPI and EDF respectively). One immediate issue this raises is that under current rules, the EC may not be able to provide funding for example to CEN-SAD, which is the AUC’s preferred coordinating institution.

[EDF = European Development Fund for ACP countries only, ENPI = European Neighbourhood Partnership Instrument for Mediterranean countries]

However, many EC funding mechanisms could support activities of the GGWSSI (see Annex 22.

The study team advises that the EC should consider contributing funding towards the implementation of the GGWSSI at two levels:

- support the regional level;
- support the national level.

At the regional level, the study team advises that the EC should directly fund the AUC in order to implement the coordination unit in the Rural Development Department of CEN-SAD for the initial phase (2009 - 2010). In addition, the EC or MSs should provide technical assistance for capacity building to help the coordination unit to:

- develop and implement the activities at the regional level;
- ensure activities are being implemented at national levels.

At the national level, the GGWSSI must be integrated in the CSIF – SLM of each country and the EC and / or MSs could contribute (where possible through budget support) to reinforce on-going and new SLM activities which will be labelled “GGWSSI”. GGWSSI SLM activities should begin in the proposed pilot countries as they already have sound frameworks (TerrAfrica, CSIF-SLM, success stories, acceptance of the inter-sectoral approach, donor platform...). Simultaneously, awareness raising, training and education in SLM should start in all the other countries.

Even if the actual support is planned for initial phase (2009 – 2010), it is important that a longer-term financial mechanism, with much greater resources, is planned to achieve the restoration of degraded land and provide benefits to local communities over the medium to long term.

The support for the initial phase can be part of the regular EC and MSs funds to support long term investment with different phases that will be built through a coalition (donor platform for the GGWSSI) in which EC and EU MS can play a key role the first five years:

- during Phase I (2009-2010), the support could contribute to fund
  - the regional level:
    - the EC can contribute to funding the AUC – CEN-SAD / GGWSSI coordination unit

- the MS can provide technical assistance for capacity building
- the national level to develop SLM activities, ensuring funds and other benefits reach local levels. Also continue and increase support for SLM via NGOs.
- during Phase II (to 2020), the AUC / AU MSs should demonstrate their commitment to the initiative by funding the regional coordination unit. The EC may support the regional level through providing one or more technical assistant, but should focus support to the national level:
  - at national level, the EC and MSs should identify and include SLM activities in the country strategy framework (where possible to be included in the revised version of the ECD / country strategy that will be prepared by the end of 2009), ensuring funds and other benefits reach local levels. Also continue and increase support for SLM via NGOs.
  - at national level, the EU MSs should reinforce their bilateral cooperation with SLM activities, complementing their diverse activities which support rural development.

Whatever the final duration of the EC / MSs funding mechanism, it is necessary to plan the progressive disengagement of the EC and MSs. This will facilitate the full ownership of the initiative by African regional, sub-regional and national institutions. The countries are already willing to contribute to the financing of the initiative – and as the benefits bear fruit, it is hoped countries will be willing to provide additional support for national activities and the AUC should assume responsibility for funding the coordination unit. The initiative should also benefit from:

- progressive development of alternative sources of funding for AU MSs, e.g. through carbon finance;
- and
- increased appreciation of the benefits (financial, food security and environmental) of SLM among land users.

#### **4.1.2 EU Member States**

Different Member States have different areas of interest relating to the overall initiative. Clearly bearing in mind Lisbon commitment, it is imperative that MSs should contribute. Ideally this should be coordinated, but funds should not be channeled through CEN-SAD – a mechanism should be designed to minimise complexities of multiple accounting and reporting requirements.

The implementation of GGWSSI will be really efficient if it is integrated into national Strategic Investment Frameworks, particularly those developed within the TerrAfrica regional initiative, and used by the donors to ensure complementarity between financing. Great efforts are being made in the countries to create donor platform, with notable successes in Mali, Niger and Ethiopia.

Member States could notably contribute in ways which are not possible for the EC, for example providing long term staff on secondment to support capacity building in the RECs. MSs could also contribute to the GGWSSI through technology transfer, for example of solar and other renewable energy technologies, to reduce pressure on woody resources of the circum-Sahara.

**Table 5** Proposed EC and EU MS Funding of the Initiative

	<b>European Union Commission</b>	<b>EU Member States</b>
<b>Phase I (2009 – 2010)</b>		
Regional level : implementation of the GGWSSI coordination unit	AU support / technical assistant	Technical assistant
National level : implementation of GGWSSI in the countries	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue and increase support for SLM via NGOs	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue and increase support for SLM via NGOs
<b>Phase II A (2010 – 2013)</b>		
Regional level	No more funding / technical assistant	Technical assistant
National level	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue (and increase) support for SLM via NGOs	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue and increase support for SLM via NGOs
<b>Phase II B (2014 – 2020)</b>		
National level	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue support for SLM via NGOs	Provide funding where possible through Budget support ensuring the majority reaches local levels and first beneficiaries (poor land users)  Continue and increase support for SLM via NGOs

#### **4.1.3 African Union**

The AU/CEN-SAD recent document (2009) outlines the following regarding resource mobilisation:

- “In collaboration with the CEN-SAD and NEPAD Secretariats as well as RECs, the AUC will assist trans-boundary and national programmes with resource mobilization. However, this does not make resource mobilization the exclusive purview of these organizations. The national governments will have the principal responsibility for raising financial resources for their respective activities as well as for trans-boundary projects. It is, nevertheless, expected that by presenting this strategic plan to



development partners, the latter will take it into account, when reviewing and approving funding for their interventions, at all levels. It is also expected that development partners will use this strategic plan in developing calls and requests for proposals.”

- Also “participating countries would need to ensure annual budgetary allocations for the implementation of the Initiative, these national resources will need extra budgetary support. Therefore, there would be need for a ‘Dedicated Trust Fund’, to which each could contribute either voluntarily or by assessed contribution.”

If the EU is unable to fund regional level activities (CEN-SAD) (see below), the opportunity exists for the AU to finance the regional level, through the support of CEN-SAD member countries (especially the AU’s existing five major funding countries - Algeria, Egypt, Libya, Nigeria and South Africa). This would further demonstrate the strong commitment of the AU (political and financial) towards the GGWSSI as a real programme of the AU, developed by the AU and sustained by the AU.

#### **4.1.4 Dedicated Trust Fund**

The AU/CEN-SAD (2009) implementation Plan states that it requires “a ‘Dedicated Trust Fund’, to which each (country) could contribute either voluntarily or by assessed contribution. The resources from this Fund, complemented by external development assistance, would ensure the un-interrupted implementation of the programme.”

The development of this fund will demonstrate African ownership of the GGWSSI. It is recommended that this trust fund be managed by the AfDB.

#### **4.1.5 African Development Bank**

The African Development Bank (AfDB) could manage the proposed ‘Dedicated Trust Fund’, using a model similar to that used for the African Water Facility. This is particularly pertinent given the slogan of the UNCCD for the World Day to Combat Desertification (17 June 2009) which is:

*"Conserving land and water = Securing our common future"*

The AfDB has also the possibility to finance feasibility studies and some small projects (up to 1 million US\$) and will undertake studies about the implementation of Soil and Water Management in 2009.

For each country, the AfDB has one strategic programme and it will be necessary to analyse these opportunities of funding for GGWSSI projects if they are related to the strategic objectives.

Another window exists: the *regional public good grant*, which funds regional scale projects (e.g. Lake Chad and the Congo Basin).

#### **4.1.6 Other Development Banks**

CEN-SAD is already in discussions with:

- Banque Islamique de Développement / Islamic Bank of Development (which can fund all countries).

- Banque Arabe de Développement Economique et Agricole ; Arab Bank of Economic and Agricultural Development (based in Khartoum) (which does not fund activities in Arab countries) – this has several financial mechanisms and is especially interested in food security.
- The Kuwait Fund.

#### **4.1.7 Private Sector**

The AUC and CEN-SAD coordination unit should explore public-private partnership for resource mobilization, in parallel with the efforts of TerrAfrica, also opportunities for aspects of the initiative to be financed by private donation / sponsorship. This unique African-led initiative and the focus on dryland ecosystems may mobilize sources of private sector funding which would not be available for TerrAfrica.

#### **4.1.8 Other potential sources of funds**

During the study's mission, we found many people in Government and other institutions who believed that the GGWSSI was being or would be financed by the Clean Development Mechanism (CDM) or alternatively by UN- Reducing Emissions from Deforestation and forest Degradation (REDD) Programme. However, under current rules, this is highly unlikely for the following reasons.

**CDM:** The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in December 1997 by several industrialized countries and some economies in transition, and the agreement came into force in February 2005. The value of transactions within the Clean Development Mechanism (CDM) of the Kyoto Protocol, which involves carbon trading with developing countries, has more than doubled each year between 2005 and 2007. Despite this expansion, Sub-Saharan Africa (SSA) accounts for only 1.4 percent of all registered CDM projects—only 17 out of 1,186 projects (CDM, 2008). The reasons for this include the complexities of eligibility and monitoring for CDM projects.

**REDD:** The UN-REDD Programme, is collaboration between the FAO, UNDP and UNEP, which was launched recently to ensure that Reducing Emissions from Deforestation and forest Degradation becomes an important component of a future agreement on climate change to be agreed under the UNFCCC in December 2009 in Copenhagen, Denmark. The UNFCCC also recognises that the policy has to be 'carbon double plus' – arresting tropical deforestation, while conserving forest biodiversity and channeling substantial revenues to forest-dependent nations. It is aimed at reducing greenhouse gas emissions from forests and boosting livelihoods in tropical nations has approved \$18 million in support of five pilot countries in Africa, Asia and Latin America.

Unfortunately for ecological reasons the countries of the Sahel are unlikely to be eligible to benefit from REDD, particularly as one of the pilot country selection criteria is "emission avoidance potential". Thus, yet again, the international community has identified global climate as a priority and devised a scheme to transfer money north to south, but the REDD is only likely to benefit countries with extensive rainforest (*inter alia* Papua New Guinea and the Democratic Republic of Congo).

**Carbon sequestration in dryland soils:** Scientists and other experts including at UNCCD, FAO and the UNDP' Dryland Development Centre are working towards the goal of scheme (possibly a widening of the CDM) which recognises the huge potential for low cost carbon

storage in drylands (Neely and Bunning, 2008) which could bring enormous economic benefits to the pastoral, agropastoral and rain-fed farmers of the Sahel. Facilitating the participation of the GGWSSI countries in the CDM (and other carbon markets) should be a priority for the initiative as it would encourage the development of innovative ways to sequester carbon and deliver strong local community, environmental, and economic benefits.

#### **4.1.9 Potential sources of funds at local and national levels**

During the consultation's workshop, the participants discussed and proposed various mechanisms to ensure financial support for the activities at the local and national levels taking into account that these should be country-specific. The following were proposed:

For the local level:

- Develop the role of the civil society (organizations) in mobilizing resources;
- Strengthen the role of local communities in SLM;
- Mobilize financial resources from the local development plans and annual budgets of local communities;
- Involve the local-level private sector if possible, *inter alia* by introducing policies that benefit private investment in SLM, especially land tenure;
- Encourage local community involvement in paying for ecosystem services;
- Use revenue from forest management;
- Use revenue from ecotourism;
- Encourage decentralized cooperation;
- Facilitate access to micro-financing;
- Expand micro-financing to include investments in SLM;
- Encourage funding by remittances.

For the national level:

- Encourage national financial institutions to invest in SLM;
- Vote for a national budget for GGWSSI;
- Bring out SLM/GGWSSI as a priority in negotiations with the TFPs (various strategic country support documents, (CSP-NIP, UNDAF, PRSP, CAS...));
- Obtain funding from new sources (CDM, Carbon fund, etc.);
- Promote private sector involvement;
- Establish a GGWSSI fund;
- Create a South-South partnership and investment platform especially for GGWSSI;
- Identify and facilitate access to appropriate U.N. sources and programmes;
- Seek funding from the AU and African sub-regional organizations;
- Use FARA and similar institutions to mobilize financial resources for research related to SLM activities;
- Seek funding from multilateral financial partners (banks, foundations, GEF5, intra-ACP EDF), and other EU instruments.

The development of a South - South Regional Investment Platform was discussed at the study's workshop in Ouagadougou. Discussions particularly highlighted the role of the Global Mechanism in defining and establishing such a platform to support the development of fund mobilization strategies in each country. A study that is currently being made will be analyzed together with the RECs in Tripoli in June 2009, and the results will be reported at a meeting of Ministers of Environment, Water Resources and Agriculture. The study team

advises the EC to be aware of the results of this future step in the African support to the GGWSSI.

Emphasis was also placed on the need to capitalize national donors platforms implementing in the frame of TerrAfrica.

#### **4.2 THE AU'S PROPOSED BUDGET**

The Implementation Plan for the GGWSSI (AU/CEN-SAD, 2009) outlines the budget required for Phase 1 (lasting 2 years) (Annex 23). “The budget of the present action plan is evaluated as **2,7 millions of US dollars** and needs to be mobilized with the efforts of all concerned countries to enable the launching of the program as it was requested by the State Instances.”

The study team thinks that the proposed budget seems realistic, although the precise allocation of funds to different activities needs to be re-worked, for example as it seems unnecessary to develop GGWSSI Focal Points – and development of learning materials should be an immediate priority. Although the initiative is long term, it should start small, building on the successes which are present across the region. The study team recognises the limitations in financial absorption capacity of the countries of the initiative and view the relatively modest budget as the AUC's appreciation of this and the need to be realistic, starting the initiative small but with ambitious longer-term plans.

## **5. RISKS AND ASSUMPTIONS**

### **5.1 MASS TREE PLANTING**

The initiative has evolved from that initially envisaged of a mass tree planting exercise in a swath across Africa from Dakar to Djibouti, into a more holistic and realistic set of activities both north and south of the Sahara, Mass tree planting across hectares of land, especially on savanna and rangelands, should be discouraged – apart from planting to supply woodfuel, as it has been scientifically proven that planting a band of trees south of the Sahara on its own will not stop degradation to the south or any “southward movement of the Sahara”. In some countries, tree planting could be a strong component to initiate the process (following the pattern used by the Greenbelt Movement – see Annex 6), to be complemented by more SLM practices. The opportunity should be to used of assessing these first experiments (from Senegal for instance) to better design SLM, learning from actual experiences.

### **5.2 INSUFFICIENT CAPACITY TO COORDINATE**

As the study team underlined in 3.2.1, the insufficient capacity to coordinate at the levels of AUC and CEN-SAD should be mitigated by the reinforcement of the existing staff in both institutions. However, no more information is available on the capacity of CEN-SAD or AUC (financial capacities, accountability, reporting) to coordinate such a huge regional programme.

### **5.3 CENTRALISATION**

The risk is that this initiative, which has been conceived at high political level, will remain “top-down”, which is clearly contrary to all sound development practises. It should be an important pre-condition that funding for countries is devolved to reach the decentralised authorities to enable them to support implementation of activities to benefit rural land users.

### **5.4 DUPLICATION**

The major risk is that many if not all the countries to be involved in the GGWSSI are already involved to some extent in similar projects / programmes (*inter alia* TerrAfrica, LADA, SolArid, MENARID .....). Thus a major risk is that not only is existing staff already over-worked due to previous commitments but that at some levels it may seem the GGWSSI is duplication.

This risk can and must be reduced by ensuring that from the start of the initiative’s work in every country, those working on the GGWSSI convey the fundamental concepts of the initiative and the potential benefits (short and long term) to all, from the Minister of Finance to the land users.

The definition of pilot or “lead” countries raises the risk that other countries will feel omitted from the initiative. It is vital to maintain the high level of not only political but broader national commitment by beginning some activities in all countries swiftly. The study team advises that in all countries technical organisations begin with awareness raising about SLM, renewable energy, climate change and how SLMs can contribute to adaptation (also their economic benefits), - co-ordinated by existing country-level SLM initiatives

### **5.5 HIGH TECH AGRICULTURE**

Several interlocutors requested provision of tractors and fertilisers as part of the GGWSSI. Awareness raising is clearly required in such cases to emphasise the benefits of SLM and opportunities it brings to reduce drudgery of manual labour without reliance on tractors (i.e.

conservation agriculture). Regarding fertilisers, little fertiliser is used in many of the agricultural systems – use of N fixing crops and micro-dosing for other plant nutrients should be encouraged to increase yields – but the environmental implications of use (especially over-use by inexperienced farmers) could negate the benefits of SLMs.

#### **5.6 SHORT TERM FUNDING**

SLM cannot be achieved through sporadic efforts or short term projects. The continuity and effectiveness of the GGWSSI depends on assured medium to long term funding for vital facilitation and learning at all levels. A secured funding stream, starting small – building to embrace all the countries, followed by a gradual reduction in support as the economic and environmental benefits are realised is vital.

#### **5.7 POLITICAL STABILITY**

The regional, national and local level activities of the GGWSSI will not be possible where there is political instability.

#### **5.8 COMMITMENT AND OWNERSHIP BY COUNTRIES**

The GGWSSI is lauded as an African Initiative – the commitment of African countries, given by their Heads of State, must be proven by their financial commitment and contributions.

## **6. NEXT STEPS**

### **6.1 INITIAL PARTNER / PILOT COUNTRIES AND ACTIVITIES**

A list of suggested initial partner / pilot / lead countries is provided in Annex 24 and has been prepared using a set of objective criteria: geographic location, the extent of degraded land, national ability to face desertification alone, existence of a donor platform, existence of Strategic Investment Framework, also capacity and interest in the GGWSSI.

The study team initially suggested 5 “initial partner countries”, which was then widened following discussions with the AUC to a group of nine, namely: Algeria, Burkina Faso, Djibouti, Ethiopia, Mali, Niger, Senegal and Tunisia. However, the consensus among national representatives and others at the study’s Stakeholder Workshop was that the term “initial partner countries” (from the study’s TORs – Annex 2) was “not an appropriate term”. The study team proposes that the Coordination Unit work with the AUC to start the SLM activities in lead countries where governance and strategic framework are well developed and that already experienced successful SLM best / good practices. However, all the GGWSSI countries could be integrated in the process benefiting from capacity building and awareness activities (see 6.2).

As a first step in each lead country, the GGWSSI “key ministry” and others involved in SLM in the country (including NGOs) should organise a visit to senior policy and decision makers into rural areas where SLMs are already being implemented (UN agency, local or international NGO projects), to see for themselves the innovation and SLM activities of farmers and agropastoralists in their own countries.

This should be followed by a design study for each lead country as follows:

#### **6.1.1 GGWSSI National Level Design Study – Terms of Reference**

(These should be applied as the next step for each country wishing to implement GGWSSI.)

The aim of the design study is to precisely define nationally and locally relevant activities, which should be implemented in the 2010-2013 and 2014-2020 Phases.

#### **Tasks to be carried out**

1. A full review / the exhaustive mapping of institutions and of national policies and strategic frameworks (or up-date the TerrAfrica CSIF-SLM where this has been completed);
2. Review of existing and potential sources of short and long term funding;
3. The definition of priority issues / main problems faced according to ecosystems (a spatial diagnosis);
4. Review of existing relevant projects and programmes (using the wide definition of SLM – i.e. encompassing food security, participatory forest management etc)
5. Identification of existing national success stories (“bright spots”) from which lessons can be learnt for scaling-up;
6. The definition of priority geographical areas for the implementation of SLM activities, defined nationally according to priority issues and relevance for improving the livelihoods of local populations;
7. An analysis of capacity building requirements:

- government, decentralised authority, extension, NGO staff and private sector operators to be trained in SLM / CC / LD / BD – including numbers to be trained, an assessment of current awareness / capacities and training needs;
  - awareness raising in SLM, CC, LD and BD for land users – including country-specific strategies to gain maximum benefits from programmes (e.g. rural radios, education materials);
  - feed-back results to GGWSSI co-ordination unit, which should identify existing appropriate materials for use, or if unavailable devise appropriate materials.
8. Plan and run field visits for national decision makers to existing national success stories (“bright spots”)

The design study must define in detail:

- the national level actions required to ensure laws and policies conducive to SLM / NRM;
- the range of locally appropriate SLM / NRM practices (this must be prepared in consultation with local communities, based on local knowledge complimented by new approaches / technologies and science - part of local SLM planning in (*inter alia*);
  - savanna;
  - rangelands (transhumance pastoral lands);
  - woodlands;
  - agro-pastoral zones;
  - oases;
  - peri-urban areas.
- locally appropriate approaches for scaling-up SLM / NRM practices and how these will be implemented (*inter alia* farmer field schools, demonstration sites);
- the requirements (*inter alia* germplasm, tools and equipment, micro-credit, agro-processing, marketing information....)
- the design of the monitoring and evaluation system at national level and also participative community systems (to integrate into region-wide M & E):
  - which indicators should be collected
  - who will be in charge of collecting and processing data
- the range of costs and benefits.

[TerrAfrica have developed a Country Support Tool (CST) (FAO, 2008) to “support to the process of designing an SLM Investment Framework. This CST provides a methodological tool and guidance to SLM country teams. It proposes how a country might engage more programmatically in SLM, how it may identify, prioritize and formulate an SLM investment framework, and how it might bring together other products and tools from the TerrAfrica Platform as well as other relevant tools. This CST is not intended as a prescriptive tool. It presents a checklist and guidance to help ensure that all critical steps are taken into consideration.”

Where TerrAfrica has already begun work, much of the policy level and financial activities (Tasks 1 and 2) may not be required. Where TerrAfrica has not worked, the Country Support Tool should be used to design the GGWSSI at national scale.]



In parallel with the design study, a small-scale start must be made to SLM activities on the ground, which will enhance credibility that the initiative is working both from the ground up and from the top down. The SLMs practices which are high priority include:

- Increasing woody biomass through on-farm and off-farm assisted natural regeneration;
- Tree planting where more appropriate than natural regeneration, e.g. increasing biodiversity (possibly planting indigenous fruit trees (IFTs));
- Range management to increase plant / organic matter cover (reducing extent of bare encrusted soils);
- Increasing livestock off-take and stock diversification;
- Reducing tillage and increasing plant / organic matter cover on croplands;
- Improved soil fertility management (interplanting or rotations with legumes, micro-dosing fertiliser);

also

- Promotion of renewable energy (solar / wind)

Several of the GGWSSI countries, particularly in West Africa, have already designated “key” Ministries, institutions or committees and “entry points” for the green wall initiative. This achievement should be followed closely with ensuring that the GGWSSI becomes a national priority.

## **6.2 INVOLVEMENT OF OTHER GGWSSI COUNTRIES**

The definition of pilot or “lead” countries raises the risk that other countries will feel omitted from the initiative. It is vital to maintain the high level of not only political but broader national commitment by beginning some activities in all countries swiftly. The study team advises that in all countries, and with the co-ordination of the existing country-level SLM initiatives and technical organisations raise awareness about SLM, climate change and how SLMs can contribute to adaptation (also economic benefits) begins.

## **6.3 REGIONAL LEVEL ACTIVITIES**

At regional level, the first action should be the setting-up of the coordination unit. As it has been proposed and accepted as a consensus during the consultation workshop, CEN-SAD should host the GGWSSI coordination unit.

In order to launch the activities in the field in 2010, the following activities should be initiated between June 2009 and January 2010:

- Officially designate CEN-SAD as the host of the GGWSSI coordination unit,
- Put in place the programme coordination:
  - Strengthen the Rural Development and NRM Department to develop the coordination unit, including recruiting staff and supporting this expertise with at least one European technical assistant;
  - Put in place the steering committee;
  - Begin to identify those who should serve on the Technical Committee.
- Obtain official commitment / “buy-in” from GGWSSI countries
- Set-up a GGWSSI website and communication system for national “key” ministry and “entry points” in each participating country;
- Distribute copies of appropriate materials which will help countries initiative SLMs [e.g. WOCAT (2007) and Borrini-Feyerabend, G. et al (2004) ]

- Promote and use the country strategic tool develop by TerrAfrica (FAO, 2008) to develop a programmatic approach and help countries to develop / or reinforce their CSIF-SLM. [The role of CEN-SAD, with the support of TerrAfrica and NEPAD, here is to support the countries to do it and not to do it for them.] ;
- Enhance the scientific and technical knowledge on SLM and CC, including development of a system to disseminate information to national and local levels;
- Set-up contractual mandates with the other principal involved institutions (OSS, CILSS, ECOWAS, UMA, ECCAS, IGAD...), in order to implement specific activities with defined time schedules – perhaps through a Memorandum of Understanding in order to define their roles and responsibilities;
- Begin to identify appropriate monitoring and evaluation systems (for regional scale and advising at national and local levels);
- Begin identification of potential trans-boundary programme – with a detailed design study, for example on pastoral issues, involving *inter alia* countries, local and national NGOs and WISP);
- Develop South - South Regional Investment Platform;
- Develop the regional investment programme;
- Develop accompanying programmes:
  - Formulation and implementation of a regional scientific research program;
  - Conception and implementation/reinforcement of regional training networks (i.e. ANAFE);
  - Conception and implementation of mechanisms for consultations and exchange of views : use the existing knowledge brokering systems (TerrAfrica) and experience sharing platform (SolArid);
  - Development of stakeholder platform, resources mobilization and creation of a dedicated trust fund

**Table 6 Priority GGWSSI Activities and Responsibilities**

<b>Activities</b>	<b>Responsibilities</b>
Designation of CEN-SAD to host the GGWSSI coordination unit	AUC
Recruit staff and make available one EU technical assistant	CEN-SAD + EC
Put in place the steering committee	CEN-SAD GGWSSI coordination Unit + participating countries (each will propose a “key” ministry and this Minister will be on Steering Committee)
Put in place the technical committee	CEN-SAD GGWSSI coordination Unit
Set-up a GGWSSI website and communication system	CEN-SAD GGWSSI coordination Unit + technical assistance
Promote and use the country strategic tool	CEN-SAD GGWSSI coordination Unit, with the support of TerrAfrica and

Activities	Responsibilities
	NEPAD
Enhance the scientific and technical information and knowledge	CEN-SAD GGWSSI coordination Unit + OSS + SAFGRAD + CILSS + ICRAF + FAO + UNEP + UNDP + IUCN... and national Universities / African excellence centres
Set-up contractual mandates	CEN-SAD GGWSSI coordination Unit + AU + AUC
Disseminate the useful information to national / local levels	CEN-SAD GGWSSI coordination Unit
Begin to identify appropriate monitoring and evaluation systems	CEN-SAD GGWSSI coordination Unit + technical partners (including AMESD, Agrhymet and LADA)
Identification and initiation of trans-boundary activities and programmes	CEN-SAD GGWSSI coordination Unit + OSS + CILSS
Develop South - South Regional Investment Platform	CEN-SAD GGWSSI coordination Unit + <i>inter alia</i> TerrAfrica + Global Mechanism
Formulation and implementation of regional scientific research program	CEN-SAD GGWSSI coordination Unit + OSS + CILSS + UNDP...
Conception and implementation/reinforcement of regional training networks	CEN-SAD GGWSSI coordination Unit + ANAFE
Conception and implementation of mechanisms for consultations and exchange of views	CEN-SAD GGWSSI coordination Unit + TerrAfrica + SolArid
Development of stakeholder platform, resources mobilization and creation of a dedicated trust fund	AUC, CEN-SAD GGWSSI coordination Unit + AfDB + Global Mechanism

#### 6.4 CAPACITY BUILDING AND MAINSTREAMING

The capacity building of all stakeholders (rural land users, decentralised authorities, national and regional policy makers) and mainstreaming of SLM in all institutions is essential to promote the enormous potential benefits of SLM as the catalyst for sustainable development, also stronger inter-sectoral consistency at the different levels of intervention.

**At regional level**, if it is agreed that a co-ordination unit is to be set-up, this should be a priority activity in Phase 1. Other capacity building which should begin in Phase 1 should ensure that, for example, the team at CEN-SAD is expanded to cope with its new responsibilities.

**At national level,** the support for staff in public institutions to develop their understanding of SLM and its multiple benefits, also their skills to use all the available socio-economic and environmental information to support improved decision making and development of policies and laws which promote SLM.

**At local level,** capacity building for farmers, agropastoralists and mobile pastoralists in locally appropriate and proven SLMs. This should use farmer-to-farmer learning, farmer field schools, support for farmer innovation etc.

The training of staff in decentralised authorities (e.g. extensionists and civil society organizations (CSOs, NGOs, farmers groups etc.) is also key for promoting the better involvement of these actors on the ground and in decision-making process. [In order to exert a real influence on the development of policies and strategies for managing the environment, civil society organizations should establish mechanisms of representation in the various frameworks for dialogue or negotiation and define independent views.]

The training strategy and capacity building should take into account the multiplicity and diversity of needs expressed at different levels (capabilities for strategic planning and prospective analysis, expertise in planning, implementation and monitoring / evaluation, etc.)

**In country European Delegations,** there is a clear requirement that staff increase their understanding of what constitutes SLM and the multiple benefits of supporting SLM for wider development goals, also peace, food security and stability.

Borrini-Feyerabend, G. et al (2004) (which is available free to non OECD countries) and WOCAT (2007) or comparable information should be widely distributed and used (e.g. by CEN-SAD and the RECs) to develop appropriate training resources.

## 7. CONCLUSIONS

“The poorest developing countries will be hit earliest and hardest by climate change, even though they have contributed little to causing the problem. The international community should support them to adapt to climate change” (Stern, 2007).

Disaster relief, so often what has been provided by African governments, together with their development partners in the face of disasters, is not appropriate to confront climate change. The adaptation strategies proposed for the GGWSSI are vital, including development of more resilient production systems through adapted and diverse species (including but not exclusively trees) and improved soils in crop and rangelands. As “transfers to developing country governments and civil society will be necessary to support adaptation” (Stern, 2007).

The GGWSSI will catalyse efforts to overcome the national level barriers to the mainstreaming of SLM in each country; improving the legal and policy framework for SLM, including promoting an inter-sectoral approach. To be cost effective and efficient, it should work in synergy with existing SLM activities where present in the countries, *inter alia* TerrAfrica, LADA, SolArid, to review, adapt and ensure enactment of laws and policies which promote SLM – and publicise these. This will integrate land management issues in national development strategies, including poverty reduction strategy papers (PRSPs).

The EC and EU MSs’ support for the GGWSSI should focus particularly on local level activities which encourage more sustainable land management, reversing land degradation and as the vehicle for adaptation to climate change (also conserving wild and agro-biodiversity) using the engine of agriculture, which is widely recognised a “*a fundamental*” and “*uniquely powerful*” “*instrument for sustainable development and poverty reduction*” as it “*contributes to development as an economic activity, as a livelihood, and as a provider of environmental services*” (World Bank, 2007).

The initiative will catalyse wide scaling-up of existing SLM “bright spots”, transforming degrading ecosystems into healthy functioning agroecosystems; increasing food production and food security (at local, national and regional levels); and helping the vulnerable rural people to adapt to the impacts of climate change and potentially also contribute to mitigating climate change. This will include valorisation of local knowledge, encouragement of land user innovation and also vital enhancement of knowledge on SLM approaches / practices and awareness raising about the predicted likely impacts of climate change (short, also medium and long term). The approaches which are advocated should be ones which bring not only long term environmental benefits but also short term economic benefits – encouraging land users to “invest” in the practices. The initiative will bring wider economic benefits, reducing poverty and creating off-farm employment in agro-processing / agri-businesses.

The GGWSSI will thereby implement the continental strategic plans such as NEPAD/CAADP and NEPAD Environmental Plan, which the EC already supports, channel EC investment in the circum-Saharan nations where the EC has worked for many years on the same issues: SLM, rural development, food security, but in an integrative way bringing benefits to land users via the new decentralized authorities. The initiative will also contribute to increasing environmental sustainability within the framework of the international environmental agreements. Most notably the GGWSSI will contribute towards the targets of the UN Convention to Combat Desertification’s 10 year Strategic Plan.

The initiative should also promote wider public awareness of the vital necessity for sustainable land management in the countries of the circum-Saharan, in order to prevent the apocalyptic scenarios of desertification combined with climate change causing civil unrest and catalysing mass migration – which would have serious impacts on Europe, as the northern neighbour of the region.

As detailed in 6, the next steps in the GGWSSI should include, at regional level:

- Officially designating CEN-SAD as the host of the GGWSSI coordination unit;
- Put in place the programme coordination unit, steering committee and technical committee;
- Obtain official commitment (“buy-in”) from GGWSSI countries;
- Set-up a GGWSSI website and communication system for national “key” ministry and “entry points” in each participating country;
- Promote and use the country strategic tool developed by TerrAfrica (FAO, 2008) to develop a programmatic approach and help countries to develop / or reinforce their CSIF-SLM<sup>2</sup>. [The role of CEN-SAD, with the support of TerrAfrica and NEPAD, here is to support the countries to do it and not to do it for them.] ;
- Enhance the scientific and technical knowledge on SLM and CC, including development of a system to disseminate information to national and local levels;
- Identify appropriate monitoring and evaluation systems (for regional scale and advising at national and local levels);
- Develop a South - South Regional Investment Platform;

The next steps of the GGWSSI at national level for “lead countries” should be the implementation of a National Level Design Study, using the TORs in 6.1.1, including:

- A full review / the exhaustive mapping of institutions and of national policies and strategic frameworks (or up-date the TerrAfrica CSIF-SLM where this has been completed);
- Review of existing and potential sources of short and long term funding;
- The definition of priority issues / main problems faced according to ecosystems (a spatial diagnosis);
- Review of existing relevant projects and programmes (using the wide definition of SLM – i.e. encompassing food security, participatory forest management etc)
- Identification of existing national success stories (“bright spots”) from which lessons can be learnt for scaling-up;
- The definition of priority geographical areas for the implementation of SLM activities, defined nationally according to priority issues and relevance for improving the livelihoods of local populations;
- An analysis of capacity building requirements;
- Plan and run field visits for national decision makers to existing national success stories (“bright spots”)

The next steps of the GGWSSI at national level for all countries should include:

- awareness raising in SLM, CC, LD and BD – including country-specific strategies to gain maximum benefits from programmes (e.g. rural radios, education materials);

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<sup>2</sup> This activity will be more consistent than develop other eligibility criteria and questionnaires (see Implementation Action Plan, AU/CEN-SAD 2009)

The GGWSSI is by definition a long term initiative – the benefits of activities in drylands often take decades to demonstrate beneficial impacts. In reality the GGWSSI should not be thought of as being time-bound, but representing the catalyst to a change in how people manage and secure their livelihoods in these drylands, achieved through a variety of different approaches; implementing and changing international and national level agreements, laws and policies, but most importantly the up-scaling of on-the-ground SLM activities which have proved successful in the region.

The failure to act now to catalyse wide-scale adoption of SLM in the circum-Saharan would result in many land users, particularly from south of the Sahara, becoming environmental migrants - potentially transferring problems north.

**To conclude, the main recommendations of the study team can be summarised as follows:**

1. The GGWSSI must up-scale best SLM practices in the circum-Saharan zone at local level (local land users);
2. Where TerrAfrica has worked, the GGWSSI must use the TerrAfrica frame, approach and tools to implement successful SLM activities on the ground, as the GGWSSI should operationalize the TerrAfrica Country Strategic Investment Framework on SLM;
3. Where TerrAfrica is not developed, the GGWSSI must also be included in the national investment framework of the countries prior to implementing activities on the ground;
4. A condition for the sound implementation of the GGWSSI is that all institutions work in their own zones / specialisms, according to their mandates, skills, experiences and fields of excellence.
5. According to the achievements of the circum-Saharan countries, the pilot / lead countries could be Algeria, Burkina Faso, Djibouti, Ethiopia, Mali, Niger, Senegal and Tunisia.
6. The implementation and thus the funding of GGWSSI should be long term (10-20 years);
7. The EC and EU MS should strongly support the process at national level, while also initiating support the regional level:
  - The EC should provide impetus at the regional level for the first two years of the action plan;
  - The EC should provide technical assistance to help the AUC to drive the process (the launch of the activities; making available / disseminating information on sound scientific and technical knowledge; promoting sharing of local knowledge and experiences between countries through workshops, field visits, new materials and a website; reporting at high political level, creation of the dedicated trust fund and the donors' platform);
  - EU MS should preferentially support the country level activities through their own cooperation strategic frameworks (although notably Finland will be more supporting West African at the sub-regional level).
8. The next steps which should be started in 2009 are:
  - At regional level, to implement the regional coordination unit and its activities;
  - At national level, to undertake the GGWSSI Design Study in the pilot / lead country and start exchanging experiences within and between all the countries;

- At both levels, to develop capacity building and raising awareness activities for all stakeholders (rural land users, decentralised authorities, national and regional policy makers) and mainstreaming of SLM in all institutions.



## 8. BIBLIOGRAPHY

- AMESD (undated) African Monitoring of Environment for Sustainable Development (AMESD) Short Overview. AMESD, Addis Ababa, Ethiopia.
- Anyamba, A. and Tucker, C.J. (2005) Analysis of Sahelian vegetation dynamics using NOAA-AVHRR NDVI data from 1981–2003. *Journal of Arid Environments*, 63, 596–614.
- Aronson J. *et al* (1993) Restoration and rehabilitation of degraded ecosystems in arid and semi-arid lands. I. A view from the south. *Restoration Ecology*, 1: 8-17.
- AUC (2006) *The Green Wall for the Sahara Initiative - A Concept Note*. African Union Commission, Addis Ababa, Ethiopia.
- AU / CEN-SAD (2009) *Plan of Action for the Implementation of the Great Green Wall of the Sahara and Sahel Initiative*. Draft for submission to the AU Executive Council Addis Ababa, Ethiopia, February 1 – 3, 2009.
- Berry, L. and Olson, J. (2001) *GEF Land Degradation Linkages Study*, The GEF, USA.
- Borrini-Feyerabend, G. *et al* (2004) *Sharing Power. Learning by doing in co-management of natural resources throughout the world*. IIED and IUCN / CEESP / CMWG, Cenesta, Tehran, Iran.
- Bryan, E. *et al* (2008) *Global Carbon Markets - Are There Opportunities for Sub-Saharan Africa?* IFPRI Discussion Paper 00832. International Food Policy Research Institute.
- Bwalya, M. *et al* (2009) *Sustainable Land Water Management – The CAADP Pillar 1 Framework*. Draft.
- EU (2008) *The African-European Union Strategic Partnership*. General Secretariat of the Council, Brussels, Belgium.
- EU-ACP (2009) *Intra-ACP Cooperation -10th EDF. Strategy Paper and Multiannual Indicative Programme 2008-2013*. European Community – ACP Group of States, Brussels, Belgium.
- CILSS / CRC PREDAS (2006) *Guide de création des marchés ruraux de bois*. Collection : les guides techniques du PREDAS (Programme Régional de promotion des Energies Domestiques et Alternatives au Sahel). 55 p.
- CILSS / IREMLCD (2008) *La lutte contre la désertification dans les microprojets de développement dans le Sahel. Techniques et coûts associés*. 4 p.
- CRC PREDAS (2006) *Wood-energy, poverty alleviation and environment in the Sahel*. PREDAS Publications, CILSS, Ouagadougou, Burkina Faso.
- Dahiru, U.D. (2008) *Desertification and tree planting campaigns in Nigeria*. Available from: <http://desertification.wordpress.com/2008/09/03/desertification-and-tree-planting-campaigns-in-nigeria-ud-dahiru/> (accessed 13/01/09).
- Davies, J. and Nori, M. (2008). *Managing and mitigating climate change through pastoralism*. *Climate Change, Energy Change and Conservation*, Policy Matters 16, October 2008. Available from: [http://www.iucn.org/about/union/commissions/ceesp/ceesp\\_publications/pm/index.cfm](http://www.iucn.org/about/union/commissions/ceesp/ceesp_publications/pm/index.cfm)
- Davis, D.K. (2005) Indigenous knowledge and the desertification debate: problematising expert knowledge in North Africa. *Geoforum* 36, 509–524.
- de Groot, R.S. *et al* (2002) A typology for the classification, description and valuation of ecosystem functions, goods and services *Ecological Economics* 41 393–408.
- Desanker, P.V. (2002) *The Impact of Climate Change of Life in Africa: Climate Change and Vulnerability in Africa*. WorldWide Fund for Nature, Washington DC, USA.
- Desanker, P.V. and Magadza, C. (2001) Africa. In: *Climate Change 2001: Impacts, Adaptation and Vulnerability*, J. J. McCarthy *et al.* (Eds.) Cambridge University Press, 487–531.

- DGCID (2008) Acte du colloque « Développement local et gestion des ressources naturelles en zones arides » 35pp. Ministère des Affaires Etrangères et Européennes, DGCID, Paris, France.
- di Castri, F. and Younes, T. (eds.) (1990) Ecosystem function of diversity. *Biol. International Issue (22)*, IUBS, Paris, France.
- EC (2009) [http://ec.europa.eu/europeaid/where/index\\_en.htm](http://ec.europa.eu/europeaid/where/index_en.htm) [accessed 24/03/09]
- El-Beltagy A. (2000) Land degradation: Regional and global. Paper to the Conference on the United Nations and Global Governance in the New Millennium, United Nations University: Tokyo. <http://www.unu.edu/millennium/el-beltagy.pdf> [accessed 24 March 2009].
- Eskonheimo A. 2003. Rehabilitation of Degraded Lands in Sub-Saharan Africa: E-discussion, Wageningen: European Tropical Forest Research Network. <http://www.etfrn.org/etfrn/workshop/degradedlands/themesdrylands22sum.htm> [accessed 24 March 2009].
- FAO (2007) *TerrAfrica – A Vision paper for Sustainable Land Management in Sub-Saharan Africa*. Food and Agriculture Organization of the United Nations, Rome, Italy.
- FAO (2008) *TerrAfrica Country Support Tool*. Food and Agriculture Organization of the United Nations, Rome, Italy.
- Gisladdottir, G. and Stocking, M. (2005) Land degradation control and its global benefits. *Land Degrad. Develop.* 16, 99–112.
- Global Mechanism (2008) Appui à la mobilisation de ressources pour la gestion durable des terres au Mali. Programme Pays, Mécanisme Mondial / Gouvernement de la République du Mali, Janvier 2008.
- Gov of India (2001) *Report of the Task Force on Greening India for Livelihood Security and Sustainable Development*. Planning Commission, Government of India, New Delhi, India.
- Hein, L. and De Ridder, N. (2006) Desertification in the Sahel: a reinterpretation. *Global Change Biology* 12, 1–8.
- Herrmann, S.M., Anyamba, A. and Tucker, C.J. (2005) Recent trends in vegetation dynamics in the African Sahel and their relationship to climate. *Global Environmental Change* 15, 394–404.
- Herrmann, S.M., and Hutchinson, C.F. (2005) The changing contexts of the desertification debate. *Journal of Arid Environments*, 63, 538-555.
- Hobbs, R.J. et al (1995) Function of biodiversity in Mediterranean ecosystems in Australia. In: Davis G.W. & Richardson D.M. (eds), *The Function of Biodiversity in Mediterranean Ecosystems*: 233-284. Springer Verlag.
- Hulme, M. (2001) Climatic perspectives on Sahelian desiccation: 1973–1998. *Global Environmental Change*, 11 (1): 19-29.
- Hutchinson, C.F. et al (2005) Introduction: The "Greening" of the Sahel. *Journal of Arid Environments*, 63, 535-537.
- ICRAF (2008) *Carbon Finance and Rangelands- An Assessment of Potential in Communal Rangelands*. World Agroforestry Centre, Kunming, China.
- IFAD (2006) *Innovation regenerates forests in the Niger*. Available from: <http://www.ifad.org/newsletter/update/2/5.htm> (accessed 13/01/09).
- IFAD (2007) *Ensuring realistic design: learning from experiences in Niger*. Profile N° 48. Available from: [http://www.ifad.org/evaluation/public\\_html/eksyst/doc/profile/pa/ne.htm](http://www.ifad.org/evaluation/public_html/eksyst/doc/profile/pa/ne.htm) (accessed 13/01/09).
- IFAD (2008a) *Improving access to land and tenure security – policy*. International Fund for Agricultural Development, Rome, Italy.
- IFAD (2008b) *Biofuel Expansion: Challenges, Risks and Opportunities for Rural Poor People - How the poor can benefit from this emerging opportunity*. Paper prepared for the

Round Table organized during the Thirty-first session of IFAD's Governing Council, 14 February 2008. IFAD, Rome, Italy. Available from: <http://www.ifad.org/events/jatropa/index.htm> [Accessed 14 May 2009]

IFAD (2009) *Poor rural people can help stop desertification*. Available from: <http://www.ifad.org/media/press/background/2008/7.htm> (Accessed 28 March 2009)

IPCC (2007a) *Climate Change 2007 – Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the IPCC. Available from: <http://www.ipcc.ch/ipccreports/ar4-wg2.htm>

IPCC (2007b) *Climate Change 2007 – Mitigation of Climate Change*. Contribution of Working Group III to the Fourth Assessment Report of the IPCC. Available from: <http://www.ipcc.ch/ipccreports/ar4-wg3.htm>

IUCN (2008) *Energy, Ecosystems and Livelihoods: Understanding linkages in the face of climate change impacts*. Energy, Ecosystems and Livelihood Initiative, Gland, Switzerland. Available from: [http://www.iucn.org/about/work/initiatives/energy\\_welcome/index.cfm?uNewsID=1646](http://www.iucn.org/about/work/initiatives/energy_welcome/index.cfm?uNewsID=1646) {Accessed 11 May 2009}

Johnson, K.H. et al (1996) Biodiversity and the productivity and stability of ecosystems. *TREE*, 11: 372-377.

Kalinganire, A. et al (2008) Improving Rural Livelihoods through Domestication of Indigenous Fruit Trees in the Parklands of the Sahel. In F.K. Akinnifesi et al (eds.) *Indigenous Fruit Trees in the Tropics*, CADI, Oxfordshire, UK.

Lal, R. (2004) Soil Carbon Sequestration Impacts on Global Climate Change and Food Security, *Science* 304 1623-1627. Available from: <http://www.sciencemag.org/cgi/content/abstract/304/5677/1623>

Mazzucato, V. and Niemeijer, D. (2001) *Overestimating land degradation, underestimating farmers in the Sahel*. IIED Drylands programme Issue paper no. 101, 22 p.

Ministère des Affaires étrangères et européennes (2008) *Actes du colloque développement local et gestion des ressources naturelles en zones arides*. Direction Générale de la Coopération Internationale et du Développement, 35 p.

Mortimore, M., and Turner, B.L. (2005) Does the Sahelian smallholder's management of woodland, farm trees, rangeland support the hypothesis of human-induced desertification? *Journal of Arid Environments*, 63, 567–595.

Mouat, D et al (eds.) (2006) *Opportunities for synergy among the environmental Conventions: Results of national and local level workshops*. UNCCD, Bonn, Germany. 52p.

Neely, C. and Bunning, S. (2008a) Review of evidence on dry pastoral systems and climate change: implications and opportunities for mitigation and adaptation. *FAO Working Paper* (in prep.)

Neely, C. and Bunning, S. (2008b) *Dryland Pastoral Systems and Climate Change: Implications and Opportunities for Mitigation and Adaptation*. *FAO Briefing*, Rome, Italy. Available from: [www.fao.org](http://www.fao.org) [Accessed 17/04/09]

NEPAD (2007) *TerrAfrica Annual Report 2007. Promoting Sustainable Land Management in sub-saharan Africa*.

NEPAD (2008). *Briefing note - Update on the development of the CAADP Pillar framework on Sustainable Land and Water Management (Pillar 1)*. December 2008, 4 p.

NEPAD (2009). *The Comprehensive Africa Agriculture Development Programme (CAADP). Sustainable Land Water Management. The CAADP Pillar I Framework. "Tool" for use by countries in mainstreaming and upscaling of sustainable land and water management in Africa's agriculture and rural development agenda*. Draft for comments – not for circulation. January 2009, 67 p.

- Nicholson, S. (2005) On the question of the "recovery" of the rains in the West African Sahel. *Journal of Arid Environments*, 63, 615-641
- Olsson, L. et al (2005) A recent greening of the Sahel—trends, patterns and potential causes. *Journal of Arid Environments* 63, 556–566.
- OSS (2003) La synergie des conventions de Rio. Analyse de la situation et axes prioritaires d'intervention. Sahara and Sahel Observatory Working paper (18 pp), Tunis, Tunisia.
- OSS (2004) *Long Term Ecological Monitoring Observatories Network ROSELT/OSS*. A Common Device for the Monitoring of Desertification in circum – Saharan Africa. Achievements and retrospective overview. 50 p. Sahara and Sahel Observatory, Tunis, Tunisia.
- OSS (2006) *The monitoring and evaluation of National Action Programme to Combat Desertification*. 136 p. Sahara and Sahel Observatory, Tunis, Tunisia.
- OSS (2008) *Conceptual note: ROSELT/OSS*. 2 p. Sahara and Sahel Observatory, Tunis, Tunisia.
- OSS (2008) *The Great Green Wall of the Sahara and the Sahel Initiative*. Introductory Note 3, Sahara and Sahel Observatory, Tunis, Tunisia.
- OSS (2009). Indicateurs écologiques, désertification et biodiversité des écosystèmes circum-Sahariens dans ROSELT/OSS. Note introductive n°4 (52 pp). Sahara and Sahel Observatory Tunis, Tunisia.
- Pagiola S. 1999. The global environmental benefits of land degradation control on agricultural land. Global Overlays Program. *World Bank Environment Paper 16*. The World Bank: Washington, DC.
- Pimm, S.L. (1991) *The Balance of Nature*. University of Chicago Press, Chicago, USA.
- Rasmussen, K. et al (2001) Desertification in reverse? Observations from northern Burkina Faso. *Global Environmental Change* 11, 271–282.
- Reij, C.P. (2008) Linking adaptation to climate change, poverty reduction and sustainable development in drylands. How to move from research to action in the post-Bali era? IIED, VU University Amsterdam and other partners.
- Reij, C. et al (2005) Changing land management practices and vegetation on the Central Plateau of Burkina Faso (1968–2002). *Journal of Arid Environments* 63, 642–659.
- Reij, C. and Steeds, D. (2003) *Success stories in Africa's Drylands : Supporting Advocates and Answering Sceptics*. [A paper commissioned by the Global Mechanism of the Convention to Combat Desertification]. Centre for International Cooperation, Vrije Universiteit Amsterdam. Available from: <http://www.etfrn.org/etfrn/workshop/degradedlands/documents/reij.doc> (Accessed 07/01/09).
- Reij, C. and Waters-Bayer, A. (2001) *Farmer Innovation in Africa*. Earthscan Publication, London. UK.
- Reij, C. and Thiombiano, T. (2003) Développement Rural et Environnement au Burkina Faso: La réhabilitation de la capacité productive des terroirs sur la partie nord du Plateau Central entre 1980 et 2001. Rapport de synthèse, GTZ/PATECORE, Burkina Faso, 82 pp.
- Reij, C.P. and Smaling, E.M.A. (2008) Analyzing successes in agriculture and land management in Sub-Saharan Africa: Is macro-level gloom obscuring positive micro-level change? *Land Use Policy* 25, 410–420.
- Reijntjes, C.B. et al (1992) *Farming for the future*. MacMillan Press Ltd., London.
- Reuters (2008) NIGERIA: Dead baby trees by the millions as reforestation fails. Available from: <http://www.alertnet.org/thenews/newsdesk/IRIN/1c5fad9461f3781fb7068ef0a904387c.htm> (Accessed 13/01/09).



Sankaran M. *et al* (2005) Determinants of woody cover in African savannas. *Nature*, 438, 846-849.

Savory, A. and Butterfield, J. (1999) *Holistic Management: A new framework for decision making*. Island Press, Washington D.C., USA

Sghaïer M. & M. Fétoui (2006) Le statut foncier des terres : un facteur déterminant des évolutions socio-environnementales. In « *Entre désertification et développement*. La Jeffara tunisienne », IRD, IRA, Editions Cères, Tunis : 137 – 146

Steinfeld *et al* (2006) *Livestock's Long Shadow: Environmental Issues and options*. LEAD (Livestock and Environment Development Initiative) and FAO, Rome, Italy. Available from: <ftp://ftp.fao.org/docrep/fao/010/a0701e/a0701e.pdf> (Accessed 07/01/09)

Sghaïer M. and M. Fétoui (2006). Le statut foncier des terres : un facteur déterminant des évolutions socio-environnementales. In « *Entre désertification et développement*. La Jeffara tunisienne », IRD, IRA, Editions Cères, Tunis : 137 – 146.

Stern, N. (2007) *The Economics of Climate Change: The Stern Review*. Cambridge University Press, UK.

Tappan, G., and McGahuey, M. (2007). Tracking environmental dynamics and agricultural intensification in southern Mali. *Agricultural Systems*, 94, 38-51

Teklehaimanot, Z. (2008) The Role of Indigenous Fruit Trees in Sustainable Dryland Agriculture in Eastern Africa. In F.K. Akinnifesi *et al* (eds.) *Indigenous Fruit Trees in the Tropics*, CADI, Oxfordshire, UK.

Thornton, P.K. *et al* (2006) *Mapping Climate Vulnerability and Poverty in Africa*. International Livestock Research Institute (ILRI), Nairobi, Kenya.

Toulmin, C. (2007) Climate solutions need a local touch. BBC News Point of View. Available from: <http://news.bbc.co.uk/1/hi/sci/tech/7018440.stm> (Accessed 07/01/09)

Toure, M. (2009). Review of the Partnership between TerrAfrica and UNCCD Secretariat. To further explore tangible opportunities and options to reinforce synergies in implementation of the UNCCD and TerrAfrica agendas. 36p. UNCCD and TerrAfrica.

UICN, B.R.A.O. (2003). Renforcer la durabilité sociale des actions de lutte contre la désertification. Un manuel pour la réflexion. Gland, Suisse: UICN, 156 p.

UNCCD (2006) Implementing the United Nations Convention to Combat Desertification in Africa. Ten African experiences. 41p. UNCCD.

UNCCD (2007) *Ten-year strategic plan and framework to enhance the implementation of the UNCCD (2008–2018)*. Revised draft prepared for IIWG 3 by Unisféra and IECN, 6 April 2007 : 8 p.

UNEP (2009) *Action Plan of the Environment Initiative of NEPAD*. Available from: <http://www.unep.org/dec/onlinemanual/Compliance/InternationalCooperation/RegionalActionPlans/Resource/tabid/713/Default.aspx> (Accessed 28 March 2009)

UNDP (2006a) *Land Rights Reform and Governance in Africa - How to make it work in the 21st Century?* UNDP Drylands Development Centre, Nairobi, Kenya.

UNDP (2006b) *Decentralized Governance of Natural Resources*. UNDP Drylands Development Centre, Nairobi, Kenya.

UNDP (2007a) *The Global Drylands Imperative: Implementing the Millennium Development Goals in the Drylands of the World*. Drylands Development Centre, United Nations Development Programme, Nairobi, Kenya.

UNDP (2007b) *Mother Earth: Women and sustainable land management*. Environment and Energy Group, Bureau for Development Policy, United Nations Development Programme, New York, USA. Available from: <http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6444>

- UNDP (2008) Generic Guidelines for Mainstreaming Drylands Issues into National Development Frameworks. First Edition. Drylands Development Centre, United Nations Development Programme, Nairobi, Kenya.
- USAID (2006) Etude de la Régénération Naturelle Assistée dans la Région de Zinder (Niger). International Resources Group, USAID, Washington, USA.
- Warren, A. (2005). The policy implications of Sahelian change. *Journal of Arid Environments*, 63, 660–670.
- Washington, R. (2008) Climate Profiling Sub-Saharan Africa under Current and Future Conditions Making Development Climate Resilient: A Strategy for Sub-Saharan Africa: Part 1. (in prep.)
- Williams, M.A.J, Balling Jr. R.R. (1995) *Desertification and Climatic Change*. Edward Arnold, London.
- WOCAT (2007) *Where the land is greener – case studies and analysis of soil and water conservation initiatives worldwide*. Eds H. Liniger and W. Critchley. CTA, Wageningen, The Netherlands.
- Woodfine, A.C. and Sperling, F. (2008) Climate change and SLM: aligned efforts for Sub-Saharan Africa. *Proceedings of the 13<sup>th</sup> International WOCAT Workshop and Steering Meeting*, Centre for Development and Environment, University of Berne, Berne, Switzerland.
- Woodfine, A.C. (2009) *The Potential of Sustainable Land Management Practices for Climate Change Mitigation and Adaptation in Sub-Saharan Africa*. Technical Report for TerrAfrica (in press).
- World Bank (2007) *Agriculture for Development*. World Development Report 2008. Washington DC, USA.
- WRI (2005) *Millennium Ecosystem Assessment (MA)*. Ecosystem and Human Well-being: Desertification Synthesis. World Resources Institute, Washington DC, USA.