

DJA Natural Resource Management Group

Situation analysis

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1. Background

This Situation Analysis of Natural Resource Management (NRM) in Darfur is prepared for the Darfur Joint Assessment Mission during September 2012 in preparation for the consultations in Darfur during September and early October and ahead of the proposed Donor Conference in Qatar on 7-9 December 2012.

The Natural Resource Management Technical Working Group comprises UNEP, UNDP and FAO along with representation from DRA. Inputs have also been received from UN-HABITAT and WFP. UNDP have coordinated work relating to Energy. UNEP have coordinated the TWG. The group has welcomed the correspondence with DRA and line ministries in Darfur and senior Darfuri environmentalists based in Khartoum and liaison with Federal Ministries.

2. Analytical Framework

Livelihoods are changing in Darfur as a result of numerous social, environmental and economic processes that are occurring concurrently. These changes in context are affecting the way that Darfuri communities are managing and using their natural resources. Some transitions are long term and there is a gradual shift – for example the increasing population since the early 1970s has led to more congested land use. Other changes are more rapid, such as the displacement resulting from the current crisis. In both cases communities are responding to these situations by altering the way they manage and implement their livelihoods.

In some instances the changes are most significant in terms of the physical changes in the environment – such as deforestation – these changes in the natural resources themselves represent changes in the assets people have in order to be able to carry out their livelihoods. Other changes in assets that people have available relate for example to the loss of livestock during the conflict, the availability of technology such as tractors, transport infrastructure, availability of credit and so on.

Other changes relate to the means by which livelihoods and natural resources are managed or governed. This is reflected in the shifting interface between government, traditional leadership and community organisations such as Village Development Committees with respect to responsibility for allocation, protection and promotion of natural resources. These issues are equally important in the analysis of natural resource management in Darfur as the resources themselves.

Using this livelihoods based lens enables the balance of interventions on policy and institutional issues (governance) and on practical projects to be achieved. This is particularly important in programming in the context of tension over natural resources. Supporting peace, recovery and development in Darfur needs action on the governance and management of resources in addition to the resources themselves. The projects developed in the Results frame reflect these priorities.

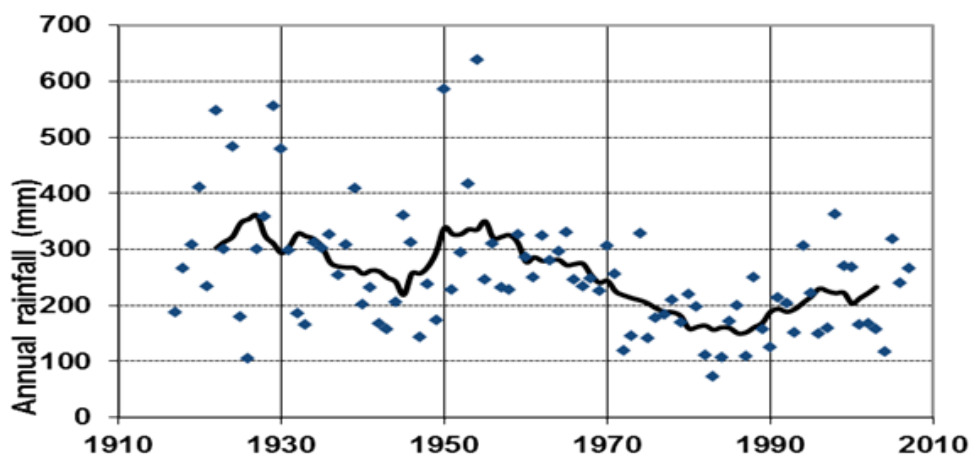
3. Evidence Base and Consultations

This analysis is based on a review of technical literature relating to NRM in Darfur and on consultation with Sudanese and in particular Darfuri environmental professionals. Particular note has been taken of Sudanese planning documents such as the National Adaptation Plan of Action (NAPA) and on records of consultation – such as the El Fasher Climate Consultation and the IWRM vision documents listed below. In addition technical studies by the organisations in the NRM TWG have informed the work. The principle sources are:

- Sudan NAPA – particularly relating to the Savannah ecosystem represented by the South Darfur analysis. See <http://unfccc.int/resource/docs/napa/sdn01.pdf>
- El Fasher Climate Change Consultation – vision document based on a two day consultation. This document gives the analysis of Darfur facing concurrent processes of change. See <http://climatechange.sudanct.net/>
- Integrated Water Resource Management Consultation, workshops and vision statements. See www.unep.org/sudan
- Darfur International Water Conference. The IWRM component is largely based on the consultations made for this workshop. See www.darfurwaterforpeace.org/
- DJAM 2008 documents and Foundational Activities Matrix
- Papers presented at “Environment and Conflict in Africa: Reflections on Darfur” conference http://www.africa.upeace.org/documents/environment_files.pdf
- UN Work plan and UNDAF practice on environment as a cross cutting theme

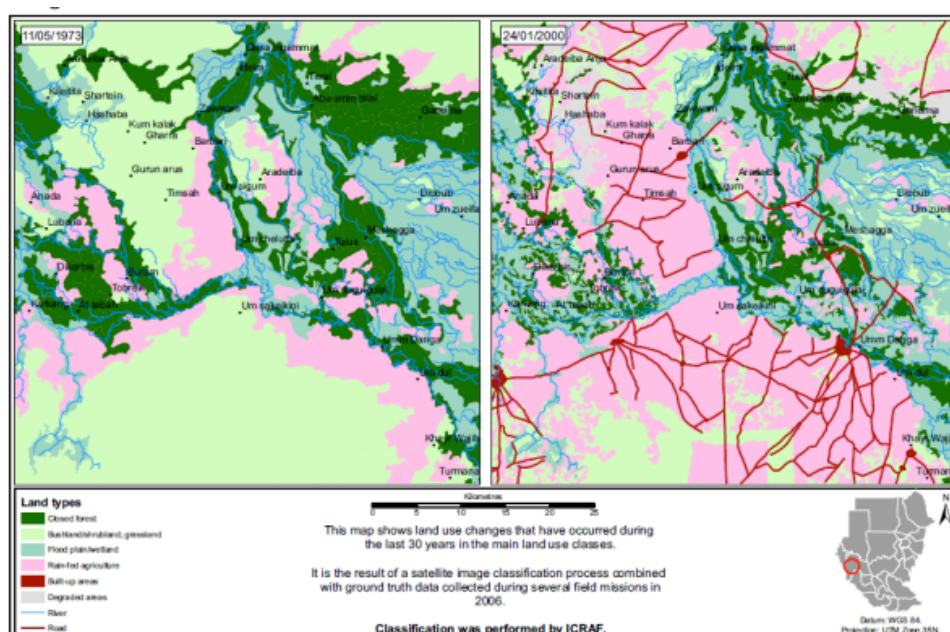
4. Concurrent Processes of Change

The work of the NRM TWG focuses on an environment that is subject to various, concurrent processes of change. The effects of Climate Change have altered environmental conditions and resource availability in Darfur, with direct impacts on the livelihoods of the population. Decreasing rainfall and drought have repeatedly been labelled as a driving factor of the conflict in Darfur. However, careful investigation reveals that the periods of heavy fighting correspond to periods of above-average rainfall, and that there has not been an onward downward trend in rainfall (Tearfund 2007b; UNEP 2008). Rather, droughts and flooding have increased in frequency and intensity. The key issue is the increasing variability and unpredictability of rainfall and the escalating frequency of droughts that present a challenge to traditional livelihoods, rather than a total decrease in precipitation.



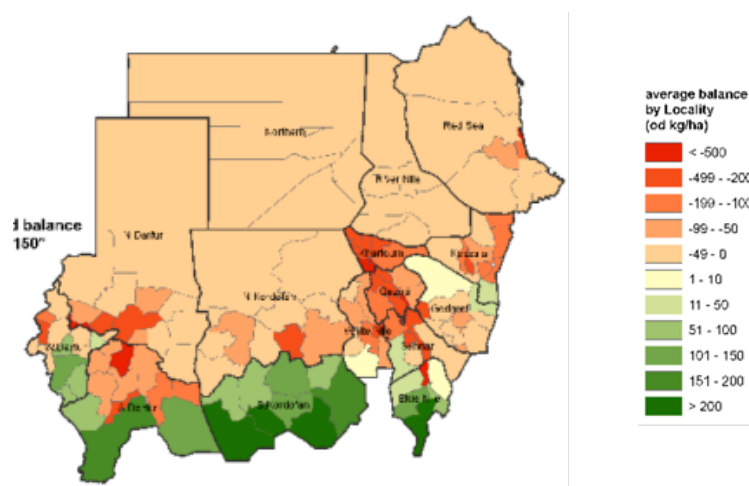
Source: UNEP (2008) The case for drought [preparedness]

The population of Darfur has grown continuously over the past decades, by now exceeding 7 million people. This trend has led to more congested land use across the region, ultimately feeding into the dynamics of conflict. Population growth has been accompanied by a concentration of people in urban areas and IDP locations. The increased demand for natural resources in these areas, e.g. timber, forage and water, has resulted in severe degradation of land surrounding urban areas, undermining sustainable land use patterns. These changes in land use have been accompanied by changes in land management. One example is the increasing practice of enclosing areas of pasture around villages, which used to provide open grazing for pastoralists. Another is the conversion of peri-urban rangeland areas into agricultural production areas to cater for urban demand. Concurrently, migration patterns of pastoralist communities have become more complex, as they have had to adapt to the changing environment. These migration patterns are now denser and more complex and often run across existing and new farmland. This combination brings with it the risk of renewed conflict. The Um Chelluta region of South Darfur is a striking example of the impact of changing land use. This region was analysed by ICRAF for UNEP's Post Conflict Environmental Assessment (UNEP 2007) with the changes in land use depicted between 1973 and 2003. The analysis showed a considerable increase in agriculture, largely at the expense of rangeland, limiting the access to water sources for pastoralist communities.



Source: UNEP (2007) Post Conflict Environmental Assessment

The increasing demand for forest products (i.e. as building material) is putting additional pressure on the remaining forest areas which are declining – (FNC cite a figure of 2.2% per year nationally). This was borne out by FAO, which examined fuel wood production and population size, indicating that much of Darfur had a fuel wood deficit before 2000 (FAO 2005). Further, there is evidence of groundwater depletion affecting the major cities in Darfur and several IDP camps, leaving the areas more vulnerable to water shortages. Along with the growing demand for and struggle over shared resources, traditional resource management practices have also undergone significant change and many forms of environmental governance have collapsed over the years of conflict. In the absence of sustainable and equitable environmental governance, overexploitation of natural resources has become a serious problem.



Woodfuel Demand and Supply in Sudan following secession of South Sudan.
 Source: *Wisdom Sudan – Preliminary results. Presentation made by R. Dingo at the joint SIFSIA/NFC Workshop, MoAI in Khartoum on March 1st 2012*

As much as environmental factors have fed into the conflict dynamics, the natural resource base has also been heavily impacted by years of conflict. Direct impacts relate to the cutting down of trees and the burning of range areas during the conflict (Tearfund 2007a). More importantly, the loss of traditional rules of natural resource management and restrictions on access both for government (e.g. the FNC) and traditional leadership have created an environment prone to uncontrolled depletion of natural resources. Another effect of the ongoing conflict is the large scale displacement and extensive localised land degradation around IDP camps.

Beyond this, one of the more vigorous drivers of environmental degradation is the uncontrolled urbanisation and the distortion of the economy associated with the conflict, humanitarian response and peace keeping effort. This has caused a considerable boom in construction and brickmaking has been a major driver of deforestation in Darfur during the conflict. (UNEP 2008). Little headway has been made in promoting a wholesale shift to alternative construction technologies in Darfur although numerous successful pilot projects exist. The rationale for early promotion of alternative construction technology is that it would enable a skilled cadre of builders to be developed before return takes place on a wide scale. Once returns have started with traditional methods it would be hard to promote a shift in technology notwithstanding the high level of deforestation that would occur if villages are to be rebuilt using traditional methods.

5. Analysis and Emerging Prioritisation

Reviewing these processes of change confirms the focus on resources as livelihood assets, also emphasizing the need to (re)build and to adapt the means by which these are managed by the communities. Natural Resource Management has to accommodate and balance environmental, economic and social considerations, and sustainability is a key factor in this endeavour. UNEP is advocating an ecosystems-based approach, with a strong emphasis on community participation. Hence advocating and promoting the use of an Integrated Water Resource Management (IWRM) approach, which takes an ecosystem view to resource use and management and provides for sustainable and equitable use of water resources. Given that maladaptive practices as a response to crisis have been highlighted, adaptation and the development of adaptive capacity are crucial for sustainable and equitable resource governance. In this context, Disaster Risk Reduction (DRR) will become increasingly important.

Central to these priorities is the need to consider natural resources as livelihood assets – forests, rainwater harvesting, soils etc. Understanding resources as livelihood assets allows to link resource governance and management to the current peace building process. Of particular importance are the systems of collective natural resource management. These include community forestry, de-silting and maintenance programmes for hafirs, water allocation systems, among others.

Consequently, this categorisation of activities in the cluster emerges as to allow for mutually reinforcing activities on behalf of different actors:

- A. Issues such as water resource management, soil conservation, combating desertification, and climate change need to be addressed in an integrated way – they cannot be stand-alone activities. In the context of Sudan, water is the integrating factor as water is one of the key factors in which these issues are subject to climate vulnerability. Hence the above issues should be addressed along-side water management.
- B. Forestry is a key activity of the programme as part of the livelihoods supporting focus for sustainability. As highlighted above, the focus should be one of resource management in this context, and the involvement of communities is key in this endeavour. The issue of sustainability should also be emphasized in activities to avoid that resource depletion undermines future economic growth. Ultimately, investments need to address the recovery of forest reserves lost and undermined in the conflict.
- C. Energy is addressed in this TWG due to the importance of biomass energy in Darfur, but it also needs to be taken up in other TWGs in other forms, such as electrification.
- D. Environment is considered as a cross cutting theme, as emphasised by the Environmental Marker (see below).
- E. Disaster Risk Reduction and community processes are important cross cutting activities that are to be considered throughout the cluster.
- F. Capacity building, policy development, training and awareness raising cut across all these activities.

Therefore the following list of activities emerges:

Main Activities		UN lead (and support)
1. Energy	LPG Fuel Efficient Stoves	UNDP (FAO)
2. Forestry	Efficient brick kilns Community forestry Woodlot and energy management Taungur Rehabilitation of reserves	UNEP FAO
3. Integrated catchment management	IWRM and participatory planning Hydrological data management Soil stabilisation and management (terracing, gully control)	UNEP (FAO, UNDP, UNOPS,)
4. Environment as a cross cutting theme	Rainwater harvesting Maintenance of catchment works and rainwater harvesting Dams – see infrastructure	UNEP (ALL)
5. Policy development Capacity building, training, awareness		UNEP (UNDP)

In addition the following issues need to be addressed in conjunction with other TWGs.

1. Basic Social Services: Health impacts of climate change (See NAPA list)
2. Governance and Accountability: See local governance and community empowerment section – CBNRM linkages
5. Returns, Reintegration and Urban Planning – environmental aspects of urban planning
7. Infrastructure development – Infrastructure components of IWRM activities from Darfur International Water Conference

6. Environment as a Cross Cutting Theme

Ultimately, the working group aims to establish the environment as a cross-cutting theme. This will follow the process developed for the humanitarian work plan and the UNDAF. The Environmental Marker was developed as an instrument. Each project is identified as one of 4 categories

- Category A – Major environmental Impact – formal Environmental Impact Assessment needed – e.g. road building projects
- Category B – Medium environmental Impact – use “CAME” mitigation approach – e.g. school building
- Category C – Little or no environmental impact - no action needed e.g. literacy project
- Category D – Environmental benefits – raise awareness for beneficial linkages to be made with other activities

For category B projects the **CAME** approach is as follows:

Contextualise the project – what are the key environmental vulnerabilities in the project area? – eg water use and deforestation are highly significant in Darfur, air pollution is less problematic than in some other environments

Assess the extent of the impact or impacts

Mitigate the impacts, for example design out the large demands – for example timber should not be used in latrine construction – concrete rings should be used instead

Enhance the benefits of the project – if a new technology is being used, then train more people than the minimum needed in use of the new technology