

# Food Security & Livelihoods (FSL)

*This tip sheet aims to give specific guidance to the Food Security & Livelihoods Sector in Sudan regarding how to better integrate environment in their humanitarian activities.*

## Key environmental issues for humanitarian actors in Sudan

In Sudan natural disasters and conflicts have led to mass-movements of people, which has direct and indirect environmental consequences. Communities and their livelihoods are vulnerable to shocks such as drought or conflict when environmental resources are scarce and/or unevenly distributed. Integrating environmental issues into humanitarian programming is essential to improve outcomes and create multiple benefits. Reducing the pressure on natural resources can support livelihoods through job creation opportunities, nutrition and protection (by reducing lengthy walks for firewood collection), safeguard drinking water quality and quantity and provide shelter building materials. Human impact on the environment in Sudan is most visible in the areas of deforestation/ desertification, over-cultivation and over-grazing, and over-extraction of water.

## Top 8 tips to better integrate environment in Food Security & Livelihoods activities:

### ALTERNATIVE TECHNOLOGIES

Promote alternatives such as Fuel-Efficient Stoves to reduce use of wood, and solar panels for lighting and water pumps. Supporting markets with alternative technologies could help a more widespread adoption.

### FOOD FOR WORK

Conduct environmental activities such as tree planting, camp clean-up and environmental rehabilitation through food/cash for work.

### SOLID WASTE MANAGEMENT

Support SWM schemes, and train communities. Biodegradable material, when properly sorted, can be composted and used directly or sold for soil enrichment. Reduce the use of plastic bags by replacing with cotton bags.

**3R = Reduce, Reuse, Recycle**

### PROMOTE TREE PLANTING PROJECTS

Tree planting and seedling nurseries can support communities with sustainable access to woodfuel, which also contributes to reducing lengthy walks for firewood collection. It can provide an alternative source of income for a women's community group as they can sell fruit such as moringa on local markets. Tree planting is an efficient way to combat desertification.

Support seedling nurseries as part of rehabilitation of degraded communal rangeland.

### FUEL EFFICIENT COOKING TECHNIQUES

Include fuel efficient cooking techniques (e.g. pre-soaking beans, sheltering cooking fires, etc.) in trainings.

Work together with Nutrition and Health Sectors to promote crops with nutritional value and reduced cooking time.

### REPLACE THE USE OF FIRED BRICKS

Train people in the production of Soil-Stabilized-Blocks (SSB) and replace the use of fired bricks with SSBs or Cement-Stabilized-Blocks (CSB). Fired bricks need 27 trees (1 hectare of forest) to burn 1 clamp of bricks.

### AWARENESS RAISING

Include awareness raising on environmental protection, in projects. Train communities on sustainable management of natural resources and alternative farming techniques.

### WORK WITH THE NATIONAL AUTHORITIES

Support or enable National authorities to take the lead, and coordinate with WES on Integrated Water Resource Management (IWRM) on monitoring of water levels.

Work together with authorities such as MoAR to ensure proper disposal of medical waste from live-stock vaccinations and drugs.

## Key facts and figures

### Deforestation and desertification

- ✓ **The loss of forest and vegetation cover**, due to unregulated tree cutting and wood collection but also to humanitarian-aid related activities, especially construction, can lead to soil deterioration, desertification, loss of livelihoods and conflict (as a result of competition over land and resources), especially in the Darfur states. Issues around forest management, household energy, poverty alleviation, livelihoods and conflict mitigation need to be addressed together.

North central states have lost some 70% of their forest cover since independence, and the annual deforestation rate in Sudan is now 2.6%.

### Water resources:

- ✓ **Water outtake.** It is essential to ensure that water outtake does not exceed the replenishment of the water source. Some IDP camps are already facing depletion of groundwater. Groundwater monitoring is essential, and in case the demand for water exceeds available resources there may be a need to cap wells and develop alternative sources.

Wood-fired brick kilns consume over 52,000 trees per year. In contrast, the production of SSBs does not require any wood, and also reduces water consumption by 30-60%

### Other key environmental issues:

- ✓ **Excavation of soil.** The excavation of soil for brick making has a significant environmental impact and is a potential health risk (flooded pits; vector breeding ground). In some places soil excavation around tree roots has destroyed established mango orchards.
- ✓ **Solid waste.** The accumulation of solid waste in towns is a significant health risk. It is also a risk for livestock that might consume plastic bags. Solid waste management should be seen as a priority for implementation.
- ✓ **Medical waste.** Medical waste, including livestock drugs should be disposed of in a safe and secure way, according to international standards. They pose both a direct health risk as well as risk of contamination of soil and water sources.
- ✓ **Pollution.** Handling and disposal of hazardous waste, fuel, oil and other types of chemicals should be done in a safe and secure way. During and after usage of such substances, it is important to avoid contamination of water sources or soil. Example of such waste are used batteries, petroleum products, air and oil filters etc.

In only 18 months (2007 – 2008) groundwater levels in Dereig camp in South Darfur with 25,000 IDPs, dropped 7 meters and then ran dry.

## Integrating environment into humanitarian projects

The **Sphere 2011 Handbook** and **Environment Marker** have additional guidance and references for integrating the environment in each sector of humanitarian action. When assessing environmental issues, understanding the specific context is critical. For Sudan, deforestation/ desertification, and water scarcity are the two main environmental problems, and projects that could potentially affect forests and other land vegetation, and water sources need to eliminate and/or mitigate negative impacts as much as possible. It is also recommended to assess other potential environmental problems relevant in the specific project or region.

## More resources and guidelines

- ✓ **Agriculture and Environment.** For more guidelines, tools and case studies on Agriculture please visit: [http://postconflict.unep.ch/humanitarianaction/02\\_01.html](http://postconflict.unep.ch/humanitarianaction/02_01.html)

- ✓ **Livelihoods and Environment.** For more guidelines, tools and case studies on Agriculture please visit: [http://postconflict.unep.ch/humanitarianaction/02\\_01.html](http://postconflict.unep.ch/humanitarianaction/02_01.html)

- ✓ **UNEP /OCHA Environmental Emergencies Centre.** Supporting preparedness for environmental emergencies. <http://eectentre.org/>

*For further guidance please contact Anna Hjärne ([hjarne@un.org](mailto:hjarne@un.org); 09121 66342) or Julia Ismar ([julia.ismar@unep.org](mailto:julia.ismar@unep.org); 09121 73615) on how to assess a project and develop mitigation measures.*