

# Non-Food Items & Emergency Shelter (NFI/ES)

*This tip sheet aims to give specific guidance to the Non-Food Items & Emergency Shelter 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 NFI & Emergency Shelter activities:

### USE ENVIRONMENTALLY FRIENDLY SHELTER MATERIALS

Locally available shelter material is recommended provided that it is not impacting negatively on the local/regional environment.

Environmental damage may be caused, for example, by unsustainable sand and gravel extraction from rivers as well as the felling of trees for construction purposes. Similarly, planning should consider the local implications of mass production of shelter material, specifically considering use of wood.

### ALTERNATIVE TECHNOLOGIES

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

### REPLACE THE USE OF FIRED BRICKS

Replace the use of fired bricks with Soil-Stabilized-Blocks (SSB) or Cement-Stabilized-Blocks (CSB). Fired bricks need 27 trees (1 hectare of forest) to burn 1 clamp of bricks.

Train people in the production of SSBs and support market for a more widespread adoption.

### 3R'S: REDUCE, REUSE, RECYCLE

Reduce packaging material and discourage use of plastic bags to reduce the amount of waste generated by NFI distribution.

Distribute shelter material, such as metal poles that can easily be reused if beneficiaries are relocated or return to their place of origin.

Implement a system for Solid Waste Management and promote composting of bio-degradable material that can be sold or used directly as soil enrichment.

### TRAIN COMMUNITIES

Train communities in the construction of their own houses and/or create new income opportunities.

### SHELTER LOCATION

Shelter location should be in a safe setting with adequate space for the provisioning of latrines, water points, washing areas and so forth.

Allow extra space for, and support to household vegetable gardens to help increase vegetation cover, but also nutrition security. Reuse grey water from hand-washing facilities for extra water needs.

### INCLUDE FUEL EFFICIENT COOKING TECHNIQUES

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

### AWARENESS RAISING

Raise awareness on environmental protection in combination with shelter material and NFI distribution.

## 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

- ✓ **Emergency Shelter and Environment.** For more guidelines, tools and case studies on Agriculture please visit: [http://postconflict.unep.ch/humanitarianaction/02\\_05.html](http://postconflict.unep.ch/humanitarianaction/02_05.html)
- ✓ **ProAct Network.** Environmental Partnerships for Community Resilience: <http://www.proactnetwork.org/proactwebsite/institutionalsupport/iasc-cluster-support/emergency-shelter-cluster>
- ✓ **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.*