## 2. RESPONSE ANALYSIS: OPTIONS AND STRATEGY

Since 2002, FAO's emergency interventions in North Sudan have essentially been driven by saving lives and livelihoods (protecting people and livelihood assets during the emergency) and immediate assistance (providing assistance during or immediately after the disaster). FAO's emergency interventions in North Sudan have therefore been dominated by seed distribution and animal health activities for many years, with an important component on institution building being included in recent years. FAO's modes of delivery have mainly involved direct assistance and capacity building for vulnerable households through partnerships with NGOs, support for the generation of food security information, coordination of the FSL Cluster, and more recent efforts to strengthen the Government's delivery of services through capacity development focused at the state level.

With reference to the six main issues outlined in the situation analysis, below is the rationale for the suggested emergency and rehabilitation response programme to this protracted crisis<sup>5</sup>. This analysis goes through the main issues, detailing FAO's response, taking into consideration the values and technical expertise of the Organization, and proposing a PoA for 2010–12 based on lessons learned. The detailed analysis also aims to improve understanding of FAO's emergency and rehabilitation programme, the rationale behind the programme and the pros and cons of the activities planned.

Overall, the 2010–12 emergency and rehabilitation programme will limit direct input transfers to households that have lost a significant part of their productive assets and risk complete destitution if not assisted with basic agricultural inputs. Activities undertaken during the two years of the PoA will seek to link emergency response with recovery/development and sustainably build the capacity of farmers, communities and Government line ministries.

#### Moving away from food aid

While food aid clearly plays an important role in the response to an emergency, in the case of protracted crises, it should form part of a well coordinated and holistic response that focuses on rebuilding communities' and households' livelihoods and food production capacities. Food aid is important when populations have been affected by a disaster and are confined in encampments without access to cultivable land and agricultural inputs to engage in their own food production. This is not, however, the case in the Sudan. Several assessments carried out in Darfur and other parts of North Sudan indicate that IDPs, especially those in Darfur, have access to land for cultivation through seasonal "migration" and land renting in areas where they are based. In the Transitional Areas and Eastern Sudan, access to land is no longer a major issue. Food aid in such a situation destroys community structures, skills and motivations for better livelihoods, while building the capacities of the communities through targeted projects helps them to move towards self-reliance.

<sup>5 &</sup>quot;How situations are characterized is critical because it has significant implications for food security policy and programming. For example, characterizing them as complex emergencies brings to the forefront humanitarian issues and often leads to response led by the international community with an emphasis on emergency food assistance. Characterizing them as fragile states focuses more on developmental aspects of a state's capacity to deliver services to its citizens. (...) the protracted crisis perspective (...) focuses on longer-term issues and multiple causes at play in prolonged emergency situations as well as the options for addressing them." (Beyond relief: Food security in protracted crisis situations, p.3).

With the reduction of general food distribution and shift to targeted food distribution by the World Food Programme (WFP), vulnerable households in North Sudan need support to enable them to boost the production of their own food and increase their access to livelihood opportunities. In addition, there is high demand from community leaders and the Government to promote and provide more support for agriculture rather than relying on food aid.

This PoA therefore outlines a programme that moves away from food aid and promotes and restores the different livelihood strategies that enable communities to reconstruct their livelihoods, and households to produce their own food and meet their livelihoods' requirements.

## 2.1 DWINDLING AGRICULTURAL PRODUCTION

In North Sudan, most farmers lost their seeds and sources of other planting materials during the conflict, which resulted in the destruction of their traditional seed preservation systems. In emergency contexts, farmers mainly use seeds provided by humanitarian agencies, as opposed to normal seeds that are saved at home/on-farm. Over the years, FAO and other FSL actors have been implementing the following seed-related programmes: (i) direct seed distribution; (ii) market-based seed support using seed vouchers and fairs in selected target areas; and (iii) support to farm trials of seed varieties, basic seed multiplication, local community-based seed production, seed cleaning using the Agricultural Research Stations, and group or individual contract seed growers.

The introduction of seed vouchers and fairs by FAO and its partners in some areas in which local seeds are available indicated that the seed interventions of FAO have impacted on the seed business, owing to the recycling and production of improved versions. The seed production and restoration programme that was introduced in South Darfur included the establishment of a seeds laboratory and seed certification at the Nyala Agricultural Research Station, and training of technicians and over 600 contract farmers in seed production. These activities have enabled farmers to restore their traditional seed system, as well as encouraging the seed markets within the state.

For over a decade, FAO has been at the forefront in providing emergency seed aid to IDPs, returnees and other vulnerable community members. To-date in North Sudan, over 300 000 vulnerable households have received emergency seeds and tools, mainly through direct distribution, and support for seed multiplication activities. In addition, FAO has recently focused on re-collecting and channelling locally adapted crop varieties into general seed and tool distributions.

Community-based seed production and supply schemes have been initiated to increase the availability of and access to, and improve the quality and timely delivery of locally produced seeds. This has been done jointly with the State Ministry of Agriculture, the National Seed Corporation, national and international NGOs, CBOs and farmers' groups. The emergency seed interventions, together with other seed security activities (such as community-based production and supply chains), are part of FAO's efforts to ensure seed and food security, as well as restore the livelihoods, of farming households.

#### **Seed inputs**

Seeds are vital to agricultural production because they determine what farmers grow, harvest and save as seed for the next season. Although the provision of high quality seeds facilitates the recovery of agricultural production systems, continued seed assistance can suppress the local economy and undermine indigenous and re-emerging market systems. When seed assistance is not properly applied, there is a danger of undermining local coping mechanisms and demotivating target communities away from recovery and development.

Any intervention has to be conducted with good knowledge of local systems and context to avoid harming local coping mechanisms.

In the context of over six years of emergency seed provision in North Sudan, there is a need to review related activities to improve the effectiveness of resource use and sustainability of seed system interventions. An assessment would justify the need to either continue seed support or move completely away from this and continue diversification efforts (i.e. strengthen local seed systems and support other livelihood interventions). There is, therefore, a need to conduct a seed security assessment.

## Cash crop seeds

The distribution of cash crop seeds, like groundnut, watermelon, tomato and onion, has increased crop diversification and reduced monocropping, which was very common in previous years. In 2009, support enabled farmers to harvest more than three crops from one plot, dramatically increasing their income. For example, one farmer in Srafi village of North Darfur obtained SDG 3 000 from one feddan of watermelon crop, which is a very good amount.

#### Seed security

Seed security in North Sudan has been unpredictable due to the impact of protracted civil conflict, inter- and intra-ethnic clashes and the challenge of pests and diseases. There is currently a gap in understanding the specific problems of seed security in North Sudan (i.e. whether the key constraint is the low availability of seeds, lack of access to seeds, or poor seed quality). It is essential for aid agencies and local agriculture offices to understand the key elements of seed security, including their availability, farmers' access to seeds, and quality issues related to viability/purity, adaptability and farmers' varietal preferences. Geographic and agroecological diversity require the selection of seed types and varieties that are suitable to the environment.

The seed security situation in North Sudan is not clearly understood because there have been limited assessments (such as the Catholic Relief Services study in West Darfur state) that have specifically focused on ascertaining the seed-security situation. Therefore, FAO proposes that a Seed System Security Assessment (SSSA) be conducted in 2010–12 to review the formal and informal seed systems on which farmers depend. The SSSA will examine whether seeds of adequate quality are available and accessible to farmers. This approach promotes strategic thinking about the wider vision for relief, recovery and development.

An SSSA goes well beyond a conventional seeds' needs assessment as it explores the constraints communities face and steers response activities to alleviate these problems and often improve systems. The overall objective of the proposed SSSA will be to improve the food security and livelihoods of vulnerable farming households by identifying strategies to address acute and chronic seed insecurity.

#### **Conservation agriculture (CA)**

CA aims to achieve sustainable and profitable agriculture and, therefore, to improve the livelihoods of farmers, through the application of the three CA principles: minimal soil disturbance, permanent soil cover and crop rotations. CA holds tremendous potential for all sizes of farms and agroecological systems, but its adoption is perhaps most urgently required by smallholder farmers, especially those facing acute labour shortages. It combines profitable agricultural production with environmental concerns and sustainability and has been proven to work in a variety of agroecological zones and farming systems. For this reason, FAO is actively involved in promoting CA, which combines the expertise of different technical areas in an integrated manner, and aims to promote its implementation throughout the Sudan as it touches on a number of key issues related to declining agricultural production.

#### FAO's suggested programme

The overall priority in North Sudan is to increase the availability of and access to, and improve the quality of locally produced seeds and planting materials. For current and future programming, FAO will assess and verify seed supply needs through the SSSA. The Organization will undertake training activities to strengthen people's capacity to take informed actions to secure their safety during disasters. It will also bridge the gap between scientific and local knowledge in order to create projects whose impacts can withstand stronger natural hazards, and will introduce methods and technologies that contribute effectively to mitigating the effects of drought/climate change and enable production under harsh and fluctuating environmental conditions.

In Greater Darfur in particular, lessons learned in Southern Sudan will be applied regarding the community-based disaster risk reduction (CBDRR) programme for seed production and supply. FAO will conduct a comprehensive SSSA in 2010–12 to review the functioning of seed systems, and will consider further expansion to the other regions depending on its success. The study will be crucial for redirecting activities planned for 2011-12.

In the Transitional Areas, FAO has been working through the Common Humanitarian Fund (CHF) and the DDR-financed projects, which combine various elements of crop and livestock production, environmental protection and restoration, income generation and capacity building of partners and beneficiaries. The lessons learned during the implementation of the DDR project in Eastern Sudan (Kassala state) are being applied in the implementation of DDR projects in Blue Nile and Southern Kordofan states. In these, community participation (committees) for seed collection and distribution were vital to improve seed distribution mechanisms. This experience will also be continued through Junior Farmer Field and Life Schools (JFFLS) in Southern Kordofan with the United Nations Children's Fund (UNICEF). CA will be promoted through these programmes.

## 2.2 REDUCED LIVESTOCK PRODUCTION AND PRODUCTIVITY

Livestock has the potential to make an important contribution to food security and the social and economic wellbeing of the Sudanese population. It is the backbone of livelihoods in all sub-systems (nomadic, agropastoral and agricultural) and should therefore be a central element in the overall intervention strategy to address the humanitarian and food security situation in the region.

The priorities in North Sudan are: (i) vaccination and treatment of livestock; (ii) training and equipping of CAHWs and consolidation of the community-based animal health system; (iii) establishment of fodder banks and improvement of livestock supplementary feeding, especially during the dry season (animal feed preparation, balanced animal feeding); (iv) construction/rehabilitation of water points along migratory routes; (v) pasture and rangeland rehabilitation (pasture seed broadcasting, enclosure establishment); (vi) support to demarcation/rehabilitation of migratory routes; (vii) rehabilitation and equipping of veterinary clinics; (viii) enhancement of animal disease surveillance systems; (ix) beekeeping; (x) fisheries promotion through training on net-making, boat-making, fish processing; (xi) capacity building of local institutions; and (xii) raising awareness of and promoting the production of poor livestock owners and communities.

#### **Community-based animal health schemes**

Resource-poor livestock keepers can benefit substantially from the projected increase in demand for milk and meat products in the developing world. This opportunity over the past few decades has depended on the health of the animals owned by farmers and pastoralists. Some key groups still require specific support, including moderately poor people who own or manage small numbers of livestock, and displaced people for whom livestock are an important component of their livelihood. Appropriate measures need to be taken as part of a network of income-generating activities, where livestock underpins the livelihoods of poorer people.

A significant portion of animal health knowledge is unused by poor farmers as it resides either in the professionals, to which they have little access, or is not presented in an easily understood format. The current mode of delivering animal health strategies is changing in the developing world, largely due to structural adjustment that has involved some degree of privatization of veterinary services in many developing countries. This has left gaps in the delivery of veterinary services. However, the growth in training programmes for CAHWs, who interact closely with rural livestock keepers, has sought to address this weakness. Owing to these changes in the system for delivering animal health knowledge, key messages are being transferred concurrently to farmers and pastoralists, agro-industries, extension workers, community animal health assistants and veterinary professionals. At the village level, animal health workers may need to be replaced as essential stakeholders in knowledge transfer by community-based organizations (CBOs) (e.g. women's groups), non-state actors (NSAs) (e.g. pastoralist unions) and pharmaceutical retailers, although this requires further debate.

Community animal health services have been promoted by governments and NGOs for over 20 years in developing countries. This is based on the assumption that basic preventive and curative care for animals delivered by CAHWs will improve the health and wealth of poor communities in developing countries. CAHWs are selected by their communities and trained in the prevention or treatment of a limited range of animal health problems. These workers then act as the interface between livestock keepers and official disease surveillance systems. CAHWs can be trained to complete basic monitoring forms and report outbreaks of important diseases to the nearest veterinarian or veterinary assistant. Unlike other types of veterinary worker, CAHWs travel long distances on foot or by rudimentary, but appropriate, forms of transport. Ideally, CAHWs should be supervised by veterinarians or veterinary assistants; as such supervision is central to the licensing and quality control of CAHWs. Key aspects of well-designed CAHW systems are the recognition of indigenous knowledge of animal health and husbandry and providing training that builds on existing knowledge.

#### Traditional healers versus CAHWs

In Eastern Sudan, there has been a significant drop in the number of traditional healers since the training of CAHWs started in 2007. This is attributed to the effectiveness of treatment being provided by CAHWs as well as the growing awareness of their importance among livestock keepers. Herders have increased their herd size and started diversifying the types of animals they raise.

There is need for refresher training in aspects of epidemiology, disease management, and early warning. In addition, the epidemiological and diagnostic laboratory network should be strengthened. Community-based livestock service delivery has potential in the Sudan and is an important way forward for the livestock subsector. Community-based schemes should, therefore, be encouraged and improved.

## A holistic approach to livestock: fodder banks, water points and pasture rehabilitation

While CAHWs are an important resource or developmental asset, their role needs to be more grounded in community needs, which means adopting a holistic approach that moves beyond the original CAHW function. Therefore, the roles of CAHWs should be reconsidered in terms of non-health specific activities such as fodder production, nutrition, market information, and so on, while tapping local knowledge systems. Currently there are huge gaps in productivity and production efficiency that cannot be addressed by health protection and vaccination campaigns alone. A more holistic approach to livestock-related interventions will be adopted. Substantial gains can be obtained by improving feeding and husbandry practices.

## Vaccination and treatment of livestock

FAO and its partners have been facilitating a large number of vaccination campaigns throughout most of North Sudan. These campaigns have focused on protecting livestock from endemic diseases that would otherwise decimate the region's livestock

population. The uncontrolled movement of livestock requires continued vaccination and treatment campaigns, and careful timing and regional planning with neighbouring states and countries. Vaccination campaigns for common endemic diseases should be synchronized with those of neighbouring countries to ensure a wide coverage of livestock.

#### Animal disease surveillance

Transboundary animal diseases (TADs) remain an unparalleled international crisis. Diseases such as Foot-and-Mouth Disease (FMD), *peste des petits ruminants* (PPR) and others are prevalent in North Sudan. The presence of Highly Pathogenic Avian Influenza (HPAI) and Rift Valley fever (RVF) in the Sudan is not expected to diminish significantly in the short term. Recent surveillance reports indicate that the H5N1 strain of HPAI among birds has become endemic in neighbouring countries, heightening the risk of human infection as a result of direct contact with infected poultry and/or wild birds. In addition, the anticipated spread of RVF could be a source of health and socio-economic problems and have a long-term impact on overall food security and livelihoods.

PPR, a transboundary disease reported to cause high losses in sheep and goats in the Sudan, is a virulent disease that continues to spread in pastoral and agropastoral areas of the Sudan. The disease, which is highly contagious and frequently fatal, was last reported in many areas of Kassala, Blue Nile, White Nile, Kordofan and Darfur in 2008/09. It is therefore

exacerbating the already high level of food insecurity in these areas due to the loss of food and income provided by small ruminants. The disease is endemic in the Sudan and its spread negatively impacts on the local and international livestock trade, reducing pastoral incomes further. Despite efforts by the Government and partners, responses to-date have been insufficient and ineffective. Therefore, additional resources must be deployed to increase surveillance, prevention and control measures.

The Government of the Sudan has a limited capacity to detect and respond quickly to livestock disease emergencies. Critically lacking are laboratory capacities and specially trained Government staff who could respond effectively by identifying and verifying TAD outbreaks. Response mechanisms to an outbreak in livestock production systems, i.e. to contain it, prevent the disease from spreading and protect neighbouring producers as well as consumers, are also still limited. The Government is concerned that a further

## **Reduction of livestock diseases**

In North Darfur, there have been reduced outbreaks of livestock diseases in some states. This is believed to be a positive impact indicator of the vaccination activities carried out by FAO and other actors. CAHWs contribution to animal vaccination and treatment has been found to be very significant. CAHWs have acquired considerable veterinary knowledge in dealing with preventive measures and disease control that can be used in their current area of settlement and when they return to their areas of origin. As a result of the vaccination campaign, the general health condition of the targeted donkeys (main asset in accessing social and economical facilities) in IDPs camps improved, which contributed in the saving time and labour of women and children in IDP camps.

spread of RVF could lead to health and socio-economic problems and have a long-term impact on food security, livestock trade, livestock industry and the incomes of the rural poor, who depend on animal production for their livelihoods. In addition, geographic coverage by appropriately trained staff remains thin and recently established monitoring structures still require support through refresher training, and backstopping of their regular activities.

#### Cross-border issues and drawing synergies regionally

Livestock migration in the region does not consider political/administrative dimensions. Therefore, there is a need to facilitate efforts among neighbouring countries to plan together to manage this issue and design interventions that minimize livestock migratory dynamics and reduce friction between different communities. The spread of diseases due to unchecked or uncontrolled movements of livestock requires careful timing and regional planning with neighbouring countries to conduct vaccination campaigns for common endemic diseases.

#### FAO's suggested programme

FAO's livestock-related emergency and rehabilitation programme has focused on activities such as vaccination campaigns, animal treatment for infections and internal and external parasites, training and equipping CAHWs with appropriate kits, restocking herds (especially goats and sheep), providing fishing equipment and training, distributing and installing solar cold chain infrastructure to support livestock vaccination in remote areas, and rehabilitating veterinary health centres. This will continue and the main lessons learned from these programme will be used, including: (i) animal health delivery through training CAHWs is an effective approach but needs to be strengthened; (ii) the establishment of solar cold chain systems in remote areas has remarkably improved access to cold chain vaccines in remote areas, especially during the wet season; and (iii) water scarcity in some pasture-rich areas forced pastoralists to abandon them, meaning interventions related to water harvesting are needed to enable the use of these abundant pasture lands.

FAO's interventions will focus on improving open range land by increasing the carrying capacity of the land, constructing and rehabilitating water points, intensifying vaccination campaigns, and carrying out treatment and disease surveillance. Livestock fodder banks, supplementary feeding and pasture rehabilitation activities will be reinforced and will require resources and technical support. FAO also regards activities related to facilitating livestock marketing and trade as essential for sustaining the benefits of any improvement in livestock production and health.

The issue of shifting/upgrading CAHWs to community livestock development workers (CLDW) as discussed in the FAOconducted CAHW workshop in the Sudan in April 2010 has received wide acceptance. A pilot scheme will be initiated during the PoA as FAO regards the CLDW approach as a tool for introducing changes in overall production systems for a more rational and efficient use of livestock resources. Within the FAO Sudan Productive Capacity Recovery Programme – Capacity Building (SPCRP-CB) component, a broad capacity building programme has been designed to facilitate institutional and human capacity in both public and private institutions, with activities related to CAHWs. The entry points for the SPCRP will be: (i) identification and training of active CAHWs to upgrade to CLDWs; (ii) start of social mobilization and awareness raising activities for important diseases and pests identified in cattle camps; (iii) help to the Government in standardizing training curricula; (iv) training state extension and veterinary staff in skills identified in the capacity needs assessment; (v) identifying and linking key livestock chain actors; and (vi) assisting MARF in finalizing the draft livestock extension policy.

With regard to animal health, the emergency and rehabilitation programme aims to carry out a critical evaluation of activities undertaken, learn from the experience and formulate an improved vaccination strategy. In collaboration with the Government, FAO will endeavour to support livestock production and enhance Government preparedness and response to TAD outbreaks. The programme will strengthen the functional capacity of the states to determine evidence of HPAI, RVF, PPR and FMD viral activity, by increasing surveillance, investigation and diagnostic capacity, and will contribute to the implementation of contingency plans that include adequate activities to reduce infection in animals and prevent additional human contamination. Reinforcing the TAD unit that deals with cross-border diseases is required to enable it to play an effective coordination role among neighbouring countries and enable the preparation of one plan for control of such diseases, as well as building an information exchange system that benefits all actors.





#### 2.3 UNFAVOURABLE CLIMATE CHANGE, SCARCE NATURAL RESOURCES AND LAND ISSUES

As livelihood options decrease, many people are resorting to the collection and sale of already scarce natural resources, further fuelling conflict. Some of these strategies are unsustainable as they pose significant risks to the environment, such as brick-making, collection and sale of grass, other non-wood forest products (NWFPs) – like Gum Arabic, medicinal plants, honey and mushrooms – and charcoal. In addition, IDPs and rural farming populations risk their safety when travelling to collect firewood and NWFPs, or to access their farms and grazing areas.

Of particular importance in the Darfur region is the work being carried out with UNEP and the post-conflict environmental interventions under the Darfur Wood and Energy Project. This focuses on issues related to fuel wood, as about 80 percent of the households in Darfur and almost 100 percent of the displaced population depend on charcoal and wood in food preparation. Each household is estimated to consume an average of 12 medium-sized trees per year. Deforestation is so severe in North Darfur that displaced people have resorted to digging for roots. As the displaced gather in camps for safety, the areas surrounding these settlements have become completely depleted of natural resources, forcing women to venture longer distances in search of fuel wood.

The two-year FAO/UNEP project, which ends in 2010, has been assisting displaced and conflict-affected communities to gather and use fuel wood in a manner that is sustainable, by addressing both the demand and supply aspects and establishing the knowledge base and capacity to scale up the solutions developed and tested through the project.

## **Environmental impact**

The impact of environment-related activities is gradual. However, the nurseries rehabilitated have increased seedling production capacity and will meet the seedling requirements of other areas in the coming years to promote tree planting. Environmental education, community forest and community management practices initiated in some areas have stimulated understanding/ knowledge about environmental conservation. The significant number of seedlings planted in 2010 has increased the size of areas covered with trees.

This has been done through the provision of fuel-efficient stoves, development of community forests and carrying out of a comprehensive study to address fuel wood shortages and associated deforestation around major settlements in Darfur.

In the Transitional Areas and Eastern Sudan, FAO has been involved in the implementation of environment-related activities such as the production, distribution and planting of tree seedlings, production and distribution of fuel-efficient stoves, construction/rehabilitation of water points and pastures along migratory routes, and fencing of rehabilitated rangeland to restore and protect the degraded environment. Interventions by FAO and other FSL actors have been significant but have not met the enormous needs, which have been compounded by desertification, drought and the unsustainable use of natural resources, especially forest products, in areas surrounding IDP camps, trading centres and towns. Concerted efforts are needed to sensitize communities and intervene in ways that will promote the sustainable use of natural resources and restoration of the environment.

#### Land tenure

FAO has previously implemented conflict resolution and peacebuilding activities in Eastern Sudan and, partly, in Darfur. These involve policy and legal advocacy for land tenure legislation in the aftermath of national-level peace agreements. At the community level, activities involve promoting dialogue, community farm protection, participatory community resource mapping and recovery planning.

A key lesson that emerged from this work was the importance of strong linkages/collaboration with the local leadership for community mobilization and promotion of community-based dialogue. As a result of the politicization of most public institutions and services, the local leadership remains the most trusted by communities owing to strong ethnic ties with the local community. Although the traditional leadership has been weakened by the militarization of parts of their communities, these structures are instrumental in promoting dialogue among local civilian populations. In Darfur, FAO has been engaging traditional authorities in planning and implementing local initiatives to protect crops and support livestock interventions.

In addition, there is a need for greater community involvement and participatory planning. FAO has drawn lessons from its land tenure activities in Southern Sudan promoting participatory land planning and development in areas of return, where communities are engaged in participatory rural appraisals (PRAs) to identify their problems, and plan and implement appropriate solutions. PRAs are rigorous community participatory exercises, whereby an external multidisciplinary team facilitates community-level problem definition and analysis and action planning to resolve these problems. By employing this technique in targeted areas, the programme enabled diverse communities to jointly analyze their problems and outline solutions.

Overall, the future actions of FAO and the sector need to integrate the "building back better" principle in the design and implementation of activities.

## FAO's suggested programme

In Darfur, efforts will be made to strengthen community-based institutions for participatory peacebuilding, conflict resolution and recovery planning, with the objective of enhancing community-level reconciliation and sharing of natural resources, particularly in Mellit in North Darfur, El Geneina in West Darfur and El Salam in South Darfur. Support will also be provided to continue restoring, rehabilitating and protecting the environment in highly deforested/degraded areas; promote community-level peace initiatives; and the early recovery of agriculture, forestry and livestock services. The aim of FAO's work is to facilitate natural resource rehabilitation by establishing nurseries, enclosures and fodder banks, as well as promoting public awareness of environmental management, providing training and distributing materials for energy-saving cooking and fuel-efficient stoves.

In addition, FAO plans to undertake a Wood Fuel Integrated Supply/Demand Overview Mapping (WISDOM) survey in Darfur that combines the georeferenced analysis of both woody biomass supply potential and fuel wood demand with the scope of assessing supply/demand balances and thus supporting wood bio-energy planning at various levels from the local to the

national to the regional. This will be in addition to and through the programme to restore the food security and livelihoods of vulnerable households in the Darfur region, with the inclusion of a strong environmental component.

Other activities will include promoting water harvesting, rain roof catchment and shallow well construction and development. In addition, activities will support rangeland management and improvement practices, working with the nomadic and pastoralist communities, and will involve pasture development, awareness and sensitization of these communities on destocking and diversification of livestock management in the context of climate change, environmental degradation and resource depletion to support the existing livestock population. Community-based animal health interventions will be strengthened. At the same time, FAO will play a significant role in strengthening the capacity of MARF to provide technical and regulatory services to CAHWs to ensure the sustainability of the system.

#### Shallow wells rehabilitation

The shallow wells rehabiliation initiative complemented with treadle pump technology and inputs provision has served as a model to enhance vegetable production by equally protecting vunerable environment of the communites. It has been observed that the adoption of shallow wells rehabilitation using concrete ring methods was high and even replicated in the target areas.

The setting up of an integrated development programme that focuses on wadi (stream/swamp) land is an important step in enhancing household food security. The integrated approach comprises different water harvesting techniques, i.e. construction of multipurpose hafir dams and shallow wells, provision of appropriate technology and water-lifting equipment such as treadle pumps, and providing high-value crops and extension services. At the same time, the intervention should consider raising multipurpose trees – with commercial value and that improve soil fertility – on small farms. This would be a sustainable adaptive strategy to climate change and contribute to enhancing agricultural production and productivity.

More attention will be paid to states that have had limited environment-related interventions, like those in Eastern Sudan and the Transitional Areas. As usual, the projects designed will have a component on environmental protection and restoration, focusing mainly on sensitization, tree planting, training and production of fuel-efficient stoves to reduce the amount of wood used for cooking, and rehabilitation of pasture fields along migratory routes and rangelands.

In June 2010, FAO organized training for FSL partners in Darfur on community-based adaptation to climate change, which was a considerable success. Similar follow-up training activities will be encouraged to ensure wide coverage. FSL Cluster interventions that promote combined mainstreaming of climate change adaptation and DRM initiatives are to be continued. Additionally, the findings of the DRR/DRM study and survey conducted by FAO-Southern Sudan could provide important lessons and guidance for this activity. Extending the experience to Darfur and the rest of North Sudan will add value and make a difference, most importantly, in view of the early recovery programme, with particular focus on environmental rehabilitation and the reconstruction of agriculture-based livelihoods.

## **2.4 ECONOMIC FACTORS**

The 2009 Humanitarian Policy Group report indicated that although livelihoods strategies have considerably diversified since 2004, options remain limited and are insufficient to meet people's basic needs. Livelihoods in North Sudan are based on crop cultivation and livestock rearing/keeping. FAO's programme has focused on promoting livelihoods' diversification and technology transfers in areas that are prone to hazards and disaster risks.

Livestock marketing needs to be considered in the future, as well as the development of an agreed plan between neighbouring countries that ensures smooth and fair marketing practices.

# New skills: cheese-making

A cheese-making initiave in Dafur has provided the participating women with a new set of knowledge and skills, which further enhance their business opportunities by using available milk to make cheese and generate income on a seasonal basis.

## Scaling up good practices on a pilot basis

FAO-North Sudan procures inputs (seeds, tools and equipment) mainly from within the country, with the exception of those that are not produced or manufactured in the Sudan. A good example is the local production of hoes, donkey-/ ox-ploughs and carts by blacksmiths in many parts of North Sudan. FAO has been promoting the local manufacture of donkey-ploughs and hand tools in support of rural farming communities that lost their assets during the conflict. In 2009, 39 090 donkey-ploughs, hand tools (hoes) and hand weeders were manufactured locally. This enabled farmers to use ploughs and hand tools that are specific to and suitable for their farming conditions and practices. With more spare time, local blacksmiths were able to concentrate on improving their skills. Highly skilled blacksmiths have developed stronger and more efficient agricultural tools that further contributed to increased agricultural production.

The local procurement of tools has led to an injection of cash into the local economy through support and promotion of blacksmiths in the states. This has boosted the local economy and enabled blacksmiths to expand their businesses. The artisan groups were also able to manufacture donkey-ploughs and tools for distribution in other Darfur states as their turnover generated a tremendous capacity, which can deliver up to 1 500 units in a two-week period.

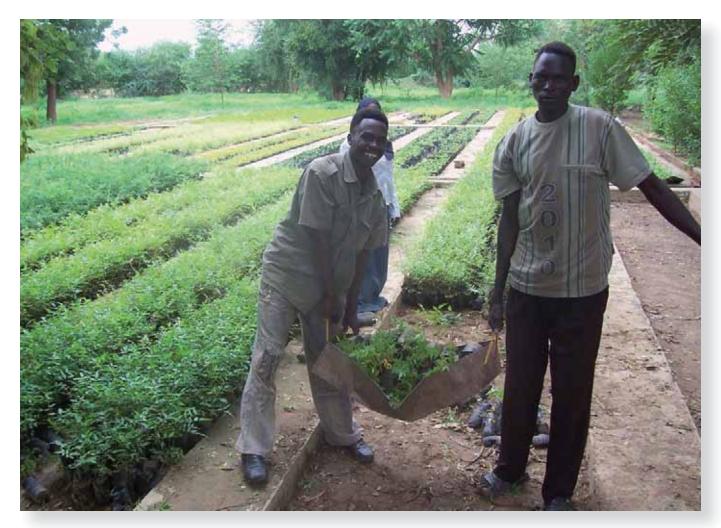
FAO has also empowered local institutions to participate in responding to farmers' demand for seeds. Under this arrangement, FAO allocated three seed cleaning machines to enable local cleaning of seeds and also supported the establishment of a seed laboratory in South Darfur that provides local seed certification services. The support has built the technical capacity of local institutions in seed certification, and encouraged farmers to maximize their products to be able to enter the seeds business, facilitating the local procurement of seeds and injection of cash into the local economy.

#### **Junior Farmer Field and Life Schools**

Originally developed as an approach to reach orphans and vulnerable children in HIV-affected rural societies, the JFFLS approach is a unique learning methodology with a curriculum that combines agricultural skills with life skills and

entrepreneurship in an experiential and participatory learning approach. This has been effective and successful as it reduces conflict by providing skills, and job and income-generation opportunities to young people.

FAO has worked with UNICEF in the implementation of the JFFLS approach in Southern Kordofan. The initiative targeted demobilized child soldiers in order to empower this particularly vulnerable group, and provide them with the livelihood options and life skills needed for long-term food security, while reducing their vulnerability to destitution and risky coping strategies. The initiative has been very successful and, in 2009, assessments were carried out to replicate this initiative in Blue Nile and Darfur.



## FAO's suggested programme

FAO's focus will continue to be on stabilizing and improving the food security situation of targeted households and supporting the development and diversification of livelihood strategies that are environmentally sustainable. The intent is to help communities withstand the current emergency and develop the capacity to respond to future food and agriculture shocks. Targeted beneficiaries will include IDPs, returnees, vulnerable resident households and demobilized ex-combatants. FAO will continue concentrating interventions in its main areas of operations: North, West and South Darfur states, Southern Kordofan, Abyei and Blue Nile states in the Transitional Areas, Kassala, Gedaref and Red Sea states in Eastern Sudan, and in Khartoum and other northern states.

In Darfur, the objective is to improve the capacity of vulnerable households through diversified income-generating activities that are environmentally friendly and gender sensitive. In the Transitional Areas and Eastern Sudan, the objective of FAO's interventions will be to support households' diverse livelihood coping mechanisms, as well as early recovery and rehabilitation of agricultural systems. In Eastern Sudan in addition, FAO will promote fisheries activities through training on net-making, boat-making, fishing and fish processing.

FAO will replicate the JFFLS approach in other states. The Organization is already implementing parts of the UNDP DRR Programme – Individual reintegration component 2009–2012, which promotes and strengthens the livelihoods of ex-combatants discharged from armed groups in Blue Nile and Southern Kordofan states. The key activities are small/ large ruminant and poultry restocking, fisheries, crop/vegetable production, animal traction and irrigation services for the targeted DDR participants.

## Strenthening livelihood coping strategies

Restocking of small ruminants (lactating goats/sheep) for vulnerable households (mainly women) has helped them to have basic livestock assets to support their families in times of food shortage by selling surplus milk and increasing their income in the long run. Children's access to milk also improved according to some of FAO implementing partners' reports.

In addition, the Sustainable Food Security through Community-Based Livelihood Development Project that is being prepared jointly with the United Nations Industrial Development Organization (UNIDO) will build on past and ongoing UNIDO and FAO efforts and benefit from the physical and social infrastructure that have been created by the International Fund for Agricultural Development (IFAD) Southern Kordofan Rural Development Programme (SKRD), which focuses on aspects of agricultural extension and smallholder services, livestock production and range management, community infrastructure support services and rural financial services. The project will contribute to sustainably increased food security

in Southern Kordofan through community-based livelihood development and the main target group will be young people (aged 15–25 years) that will enable them to make productive contributions to their communities.

## 2.5 INSTITUTION BUILDING

In a protracted crisis, institutional issues have an important role to play at both the community level and the institutional and decision-makers' level. Communities and households are the first line of response to an emergency and many disasters occur on a small scale/regular basis, unnoticed by national authorities and international organizations. Day-to-day work with farming, pastoral, agropastoral and fishing communities needs to focus on technical interventions that provide a good opportunity to embed community-based DRR, such as protective structural measures and household level preparedness aspects by considering both conditional and unconditional livelihood resource transfers

Risk reduction in agriculture requires appropriate sector policy frameworks and institutional mechanisms, sustainable natural resource management practices and the identification, adaptation and dissemination of targeted technical and structural mitigation measures. With the implementation of the Sudan Institutional Capacity Programme: Food Security Information for Action (SIFSIA), FAO is already involved in supporting the strengthening of policy and planning initiatives related to food security and market information management systems. SIFSIA is currently building the capacities of key Sudanese institutions to establish an information-based decision-making system that provides policy and strategic guidance to the rural sector on food security.

Key programme activities to-date include: (i) the overall policy framework for food security has been defined and operational; (ii) the institutional set-up for food security has been established and is functioning to enhance coordination and strengthen vertical and horizontal linkages; (iii) effective policies and programmes have been designed, monitored, evaluated and updated to strengthen smallholders' livelihoods and protect the vulnerable; and (iv) relevant food security information can be easily accessed and used by all relevant stakeholders. More must be done in early warning to be effective and fulfil a risk reduction function in the agriculture sector alerts.

SIFSIA is moving forward with a variety of initiatives and has already delivered the following: the creation of a new national nutrition information system coordination unit within the Nutrition Directorate of the Ministry of Health; introduction of a state-of-the-art market information system within MARF, a new agroclimatology unit has been created in the Sudan Meteorology Authority; and the restructuring of the Strategic Reserve Corporation is an ongoing effort. In addition, the new Household Income and Expenditure Survey is being supported, which will change the traditional work of the Central Bureau of Statistics and MARF.

The SPCRP is contributing to stabilizing peace, enhancing food security and improving rural livelihoods in selected vulnerable states of the Sudan through building human, institutional and physical productive capacities. Specifically, it aims

to build the human, organizational and physical capacity of public and private institutions, and has three sub-components: (i) strengthening key institutions, i.e. local state and non-state actors; (ii) pilot development of key agricultural support services; and (iii) support to programme implementation capacity. In essence, the Programme is building the capacities of state, locality and NSA associations within the agriculture sector (in its widest context) to facilitate the institutions and people of North Sudan to achieve their objectives in production and productivity. In this, FAO adopted a completely participatory approach to identify the real needs and obstacles to meeting these objectives. Recognizing that beneficiaries themselves have a clear understanding of these obstacles, FAO assumes the role of facilitating identification and prioritizing responses.

The Agriculture Revival Plan (ARP) is the key policy and planning initiative affecting northern Sudanese agriculture development over the coming five years. It highlights North Sudan's state-led rural development as a practical example of decentralization. A number of defined ARP Factors of Success stress the importance of building capacity at the village, producer, association and public sector levels. The ARP Executive Committee of the Supreme Agricultural Council has chosen to replicate SPCRP-CB North's needs assessment and capacity building approaches in the other 11 states of North Sudan, two federal ministries and four para-statal organizations. As the states, especially those in Darfur, enter a period of recovery (and agricultural recovery is critical), they will need the skills and approaches to ensure participatory and sustainable development.

#### **Nutrition**

Agriculture and food security interventions have a key role to play in improving nutrition. However, this must be fostered by ensuring that programmes are designed to target and meet the nutritional needs of vulnerable households. These households must be given the skills to make the best use possible of the food and income resources they have, and appropriate linkages must be made to relevant interventions in other sectors such as health, education and social protection.

Building the capacity of local stakeholders, including government institutions, civil society and NGOs to design, implement and evaluate integrated interventions that lead to sustainable food and nutrition security is central to linking relief and development and to DRM. A multisectoral response integrating sustainable supply of and access to nutritious and safe foods, with appropriate health and care, is required to protect and promote nutrition in the Sudan.

## FAO's suggested programme

At the community level, FAO will focus on strengthening preparedness and mitigation among communities and households, as well as continuing to implement the SPCRP and SIFSIA. Both programmes are funded by the European Commission (97 percent) and FAO is currently seeking funds to cover the remaining 3 percent of the budgets.

In view of the changing context in the three Darfur states, FAO plans to conduct a detailed study of evolving livelihoods with a view to influencing programming. Together with WFP and UNICEF, FAO plans to undertake a study to fill knowledge gaps regarding the changing livelihoods of different communities in Darfur over the last 5 to 6 years, together with current and

future viable options and opportunities. These are critical to inform policy and guide programming in order to render the ongoing humanitarian response, and any transition to recovery, more appropriate and effective.

FAO will undertake training activities with partner institutions on how to integrate food security, nutrition and livelihoods into their work (e.g. training on food, nutrition and livelihoods concepts and tools, participatory planning workshops at the national and district levels, etc.). In addition, nutrition education materials, training on nutrition education and integration of nutrition education as part of agriculture and livelihoods interventions will be developed, as well as other relevant activities to strengthen the impact of interventions on food and nutrition security as identified during project implementation.

#### **2.6** INTERNATIONAL COMMUNICATION AND COORDINATION

One of the pillars of humanitarian reform is effective coordination. The principle mechanism available for this with the UN agencies and NGOs is through the Inter-Agency Standing Committee cluster system.

#### **The FSL Cluster**

The Sudan as a whole, and North Sudan in particular, has one of the largest emergency humanitarian operations in the world. The complexity and magnitude of the work involved coupled with the specific needs of the different regions and the rapidly changing context requires effective coordination of interventions and a timely response to changes.

In 2007, the Food Aid and the Food Security and Livelihood Sectors were merged to form the FSL Cluster. FAO and WFP have since co-led the FSL Cluster under the UN and Partners' Work Plan structure. Following the joint global cluster mission in June 2009, the Humanitarian Country Team reconfirmed FAO and WFP's co-leadership of the sector. The FSL Cluster encompasses a range of activities, from food distribution to livelihoods productive support, and includes support to the recovery of agricultural activities. In Darfur, the FSL Cluster has developed and maintains strong relationships with many stakeholders, particularly Government line ministries at the federal and state levels, UN agencies, and international and national NGOs. The Cluster encompasses more than 60 organizations or institutions.

The overall FSL Cluster's mission is to: (i) provide leadership in humanitarian food security and livelihood action in order to support, stabilize and improve the food security and livelihoods of households affected by and recovering from protracted conflicts and natural disasters in Darfur – FSL cluster members work to enhance the accountability, predictability and effectiveness of good quality humanitarian food security and livelihood actions in Darfur; (ii) build the capacity of cluster members, national partners, and other organizations involved in the provision of emergency food security and livelihoods support; (iii) advocate for funding in improving cluster coordination and programme development and interventions by FSL Cluster partners; (iv) facilitate effective sharing of information, among FSL Cluster partners, across other sectors, and clusters to improve response and to minimize programmatic gaps; and (v) enhance and strengthen coordination for partnership

with local government, UN/international and national agencies for timely and predictable humanitarian and recovery programmatic gaps.

FAO has been working closely with the Government and other stakeholders in the FSL Cluster to build the capacities of the affected population in order for them to be better prepared and effectively respond to threats and food-security shocks. As co-lead of the FSL Cluster, FAO facilitates the availability of information for partners in areas such as agriculture, livestock, fisheries, forestry/natural resources and food security as a whole. The information is instrumental to enable Government and FSL partners to better anticipate, prepare for and respond to current/future agriculture and livestock emergencies/crises in an effective and efficient manner.

The expulsion of 16 NGOs in March 2009 significantly affected the activities of the Cluster. FAO and other actors have been trying to fill the gaps created, but more needs to be done, especially in the area of capacity building of the remaining partners, mainly national NGOs. There is a need to enhance the capacity of the NGOs and Government in assessments, implementation and monitoring of FSL interventions. There are also other challenges, like inaccessibility to some insecure areas, lack of logistical capacity and financial resources, that have negatively impacted on the Cluster's ability to fill the gaps.

#### Strengthening the response analysis of the FSL Cluster

The link between food security analysis and response in emergencies is often limited and in some case nonexistent. Recent improvements in food security analysis (through initiatives such as WFP's Strengthening Emergency Needs Assessment Capacity project and the IPC tool have not yet been translated into more appropriate and justified responses to food security problems.

In April 2009, a number of international NGOs joined WFP and FAO in Rome to participate in the Re-thinking Food Security Forum. There were three broad recommendations from the forum: (i) the need to bridge the relief-development divide; (ii) the importance of common, integrated approaches to understanding and responding to hunger and vulnerability; and (iii) foundational improvements across the food-security aid system.

In response, FAO outlined an intervention to incorporate more integrated approaches so as to use more appropriate, needs-based responses and programmes that move beyond the standard responses by individual agencies and include coordinated efforts to avert a crisis (prevention and early action) rather than just reacting to it. Existing response analysis tools are currently being mapped by FAO and new ones developed. Response decision-making processes need to be inclusive and should consider all response options.

In the context of a food security emergency, situation analysis involves determining what has happened, to whom, where, when, why and what (in general terms) might be done to rectify the situation. On its own, this is not sufficient to prescribe appropriate and feasible responses, yet there is often a leap between this kind of situation analysis and actual intervention

planning. Until very recently, the solution to the existence of an acute food security problem was usually seen as a commodity transfer. With the development of new tools, some aspects of this missing link are now starting to be addressed. However, many of the tools developed so far have tended to focus on one aspect – the choice between food aid and cash – without looking at the various other response options and or at the broader DRR aspects. Most tools are in the early testing stages and have yet to be rolled out and incorporated into the programme or project cycle of agencies undertaking food security interventions.

In Darfur, as in many other emergency contexts, concerns have been raised about the link between food security analysis and response, despite the existence of the IPC and food security information systems. It is becoming increasingly clear that while humanitarian efforts remain important and need continued attention, CBDRR and emergency preparedness programmes are critical for addressing the protracted and complex nature of the Darfur crisis. Only by combining short- and longer-term responses to the ongoing emergency situation can lasting progress be made. FAO is currently implementing a European Commission Humanitarian Aid Department (ECHO)-funded project, entitled "Enhancing technical coordination and backstopping of the FSL sector in restoring and sustaining household food security of vulnerable conflict-affected populations in the Greater Darfur", which is enhancing technical coordination and backstopping of response activities within the FSL Cluster. FAO plans to continue this work and strengthen activities in the areas of Vulnerability Assessment and Mapping (VAM), and training in different aspects of food security and assessments. The involvement of key stakeholders is very important, especially of the Government counterparts.

During 2010, FAO has been developing a Response Analysis Framework (RAF) for food security emergencies in two pilot countries: Indonesia and Somalia. In Somalia, this has been done in close collaboration with UNOCHA, IPC stakeholders and clusters (the Agriculture and Livelihoods Cluster; the Nutrition Cluster and the Food Cluster). Through the Somalia pilot, critical lessons have been learned about how to develop and apply a RAF linked to the IPC in a complex and protracted crisis situation in support of cluster leads and agencies.

#### FAO's suggested programme

Given the magnitude and complexity of interventions, there is need to strengthen coordination and improve support to partners to effectively meet the needs of the affected population. This will contribute significantly to improving planning, targeting and avoiding overlaps through a better partnership among all actors, ensuring the efficient use of limited resources. Within response, the role of the FSL Cluster will be a main component of future work.

FAO's emergency and rehabilitation programme will provide coordination support at two levels:

• at the country level, and in line with emerging international good practice, that requires strengthening the capacity of the Cluster to operate effectively; and

 at the international level, by working in close collaboration with key partners to provide predictable, systematic and comprehensive support to the Cluster country teams on coordination-related issues, as well as policy discussion on global cluster issues.

In 2010, FAO has already planned training for NGOs, Government counterparts and UN agencies, which will include mainstreaming environmental aspects into FSL programming and climate change threats. The aim is to understand key development risks posed by climate change and the necessary actions to be taken by FSL Cluster. In addition, the training aims to help people understand methodological tools and technical solutions and methods for analysing context and assessing the environmental impact of FSL programmes.

Work will be done with regard to early warning systems and strengthening the activities being carried out under SIFSIA. The project will strongly base predictability on various indicators that will be provided through various sources including the WFP Food Security Management System, the Famine Early Warning Systems Network, agrometeorology data, and specific studies such as the foreseen livelihood study initiated by ECHO.

With regard to the RAF, FAO's emergency and rehabilitation programme will apply the lessons learned from the Somalia experience to the Darfur context, making adjustments and changes as required. The RAF consists of six analytical stages supported by a number of decision-making and consensus-building tools. Part of the work in both Somalia and Indonesia involves developing RAF training materials that will be adapted to the Darfur context. It is expected that the proposed RAF project in Darfur will expand after 2011 to cover other parts of Sudan, as part of a progressive roll-out.

#### **Cross-cutting issues**

FAO will also take into consideration a number of cross-cutting issues, as detailed below.

#### Peacebuilding

FAO's role in peacebuilding has to-date been given limited attention. Many of the activities implemented by the Organization tackle the root causes of conflict. However, a more strategic approach to these will be implemented with this PoA. This will build on the lessons learned from the Darfur Community Peace Stability Fund project, whose overall impact will be the creation of an enabling environment that will contribute towards the restoration and preservation of peace for recovery and rehabilitation of communities in Darfur. Furthermore, a project on peacebuilding and conflict resolution that has been funded through the relevant Millennium Development Goal will be implemented in Southern Kordofan and other borderline states in Southern Sudan. This will also provide some lessons. In particular, participation and participatory processes are to be prioritized to promote dialogue and stronger partnerships with local groups. More effort will also be made to articulate FAO's contribution to peacebuilding.

#### Gender

In North Sudan, the livelihoods of the most vulnerable affected communities were eroded as a result of a complex emergency context, as well as prevailing socio-economic and environmental stresses. Women, in particular have suffered as they play a vital role in household food security and agriculture. Women's social and economic advancement is critical to food security and the reduction of poverty, whereby women demonstrate their potential as agents of change. Through a strict participatory and gender sensitive approach the Plan will ensure the participation of women. For this PoA, an understanding of how men and women experience and respond to the current situation in North Sudan, and assessment of their capacity for recovery, is essential to ensure effective emergency relief operations and rehabilitation.

FAO will continue to give priority to the needs of women and our progammes will systematically incorporate the use of socio-economic and gender analysis tools to identify the most vulnerable communities. They will seek to be more systematic in the inclusion of women in food security- and agriculture-related activities, especially at the inception of new activities and programmes. In addition and following the Sudan country evaluation, particular attention will be paid to developing a gender strategy for the programme. This will focus on seeking more active involvement of women in the planning stages and in ensuring gender disaggregated data is obtained in order to adequately monitor the impact of activities.

#### HIV/AIDS

The prevalence of HIV/AIDS in the Sudan is slightly below that of many other countries in the region. While available data on HIV prevalence is limited for the Sudan, it is generally accepted that the country is in the early stages of a generalized HIV/AIDS epidemic. The overall prevalence rate is about 1.4 percent (UNICEF, 2007) – probably higher in Southern Sudan and some pockets of North Sudan<sup>6</sup>. In order to maintain this low rate of infection, beneficiaries of interventions implemented under the PoA will be sensitized about HIV/AIDS, its dangers and effects on agriculture and food security as a whole. Lessons learned from Kassala state during a pilot intervention carried out by FAO for HIV/AIDS-affected households will be used.

<sup>6</sup> P. Claycomb, "Sudan: Keeping HIV/AIDS in check", UNICEF Sudan, 14 December 2005.

