Plan of Action for Southern Sudan

August 2010 – August 2012

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Emergency response and rehabilitation for food and agriculture

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TABLE OF CONTENTS

LIST OF ACRONYMS ii
EXECUTIVE SUMMARY v
INTRODUCTION 1
1. SITUATION ANALYSIS 3
- 1.1 Background 3
- 1.2 Geographic priorities 5
- 1.3 Key challenges 8
- 1.4 Food security scenario in Southern Sudan 15
- 1.5 Future priorities based on the situation analysis 21

2. RESPONSE ANALYSIS: Options and strategy 23
- 2.1 Dwindling agricultural production 24
- 2.2 Reduced food accessibility 30
- 2.3 Food production 33
- 2.4 Cross-cutting activities 38
- 2.5 Cross-cutting themes 40

3. WHY THIS RESPONSE: Mandate, values and framework of FAO in emergencies 45
- 3.1 FAO's mandate 45
- 3.2 Guiding values 45
- 3.3 Guiding framework: a DRM approach 46
- 3.4 Partnerships 48
- 3.5 Targeting 49

4. PROGRAMME OBJECTIVES 51
5. RISK ANALYSIS 57
- 5.1 Risk monitoring 58
- 5.2 Steps proposed within the programme to address these risks 58
- 5.3 Contingency planning 59

6. DONOR RESPONSE 61
7. PROGRAMME MONITORING AND EVALUATION 63
- 7.1 Modalities 63
- 7.2 Lessons learned 64

8. COMMUNICATION, INFORMATION AND REPORTING 65
- 8.1 Communication 65
- 8.2 Reporting 65
- 8.3 Reviews 65

Annex 1: Logical Framework 67
Annex 2: Programme profiles 68
Annex 3: FAO in emergencies 97
Annex 4: Summary of donor contributions to FAO in the Sudan 101
Annex 5: Interlocked strategy matrix for Southern Sudan 103
Annex 6: IPC Reference Table (FAO Food Security Analysis Unit, June 2006) 104
Annex 7: Map of potential dry-spell areas in Southern Sudan in 2009 106
Annex 8: Map of flood hazard areas in Southern Sudan in 2007 107
Annex 9: FSL interventions and sector partners in the five priority states 108
Annex 10: Map of NGOs and UN agencies involved in FSL interventions in Southern Sudan 120
Annex 11: Achievements of FAO in Southern Sudan 121

ACRONYMS AND ABBREVIATIONS

ADR	Alternative dispute resolution
ANLA	Annual Needs and Livelihoods Assessment
CA	Conservation agriculture
CAD	County Agriculture Department
CAHW	Community animal health worker
CBO	Community-based organization
CBPP	Contagious bovine pleuropneumonia
CERF	United Nations Central Emergency Response Fund
CFSAM	Crop and Food Supply Assessment Mission
CHF	Common Humanitarian Fund for Sudan
CLiMIS	Crop and livestock market information system
CMV	Cassava mosaic disease
CPA	Comprehensive Peace Agreement
CSO	Civil society organization
DRM	Disaster risk management
DRR	Disaster risk reduction
ECF	East Coast fever
ECHO	European Commission Humanitarian Aid Department
ERCU	Emergency and Rehabilitation Coordination Unit
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer field school
FSL	Food Security and Livelihoods
FSTS	Food Security Technical Secretariat
GAM	Global acute malnutrition
HPAI	Highly Pathogenic Avian Influenza
IDP	Internally displaced person
IPC	Integrated Food Security and Humanitarian Phase Classification
IPDM	Integrated pest and disease management
ITF	Input trade fair
ITSH	In-country transport, storage and handling
LRA	Lord's Resistance Army
MAF	Federal Ministry of Agriculture and Forestry

ACRONYMS AND ABBREVIATIONS

MARF	Federal Ministry of Animal Resources and Fisheries
MOSS	Minimum Operational Security Standards
MoWRI	Federal Ministry of Water Resources and Irrigation
M&E	Monitoring and evaluation
NFSAP	National Food Security Action Plan
NGO	Non-governmental Organization
NMTPF	National Medium-Term Priority Framework (FAO)
OR	Organizational result
PoA	Plan of Action
RVF	Rift Valley fever
SHHS	Sudan Household Survey
SIFSIA	Sudan Institutional Capacity Programme: Food Security Information for Action
SMoA	State Ministry of Agriculture
SOI	Strategic Objective I (FAO Corporate Strategic Framework)
SPCRP	Sudan Productive Capacity Recovery Programme
SSARTO	Southern Sudan Agricultural Research and Technology Organization
SSCCSE	Southern Sudan Commission for Census, Statistics and Evaluation
SSRRC	Southern Sudan Relief and Rehabilitation Committee
SSSA	Seed system security assessment
TAD	Transboundary animal disease
TCE	Emergency Operations and Rehabilitation Division (FAO)
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDSS	United Nations Department of Safety and Security
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
VaR	Value-at-Risk
WFP	World Food Programme

FAO PLAN OF ACTION FOR SOUTHERN SUDAN

Food insecurity and poverty are widespread across Southern Sudan, linked to decades of civil conflict, the disruption and loss of economic activities, displacement of a significant portion of the population, lack of basic infrastructure and the erosion of livelihood options. Southern Sudan faces one of the worst humanitarian and food-security situations in the world, with at least 1.5 million people relying on external assistance to meet their food needs.

Traditional livelihood systems are rooted in the agriculture sector, employing a mix of livestock and crop production, fishing, wild food collection and trade. With about 80 percent of the population relying on agricultural production to meet their food and income needs, the role of the Food and Agriculture Organization of the United Nations (FAO) – the United Nations agency with the mandate for agriculture and rural development – is critical in strengthening the agriculture sector and contributing to wider peacebuilding efforts.

In this Plan of Action (PoA), the Food and Agriculture Organization of the United Nations (FAO) outlines its emergency and rehabilitation programme for Southern Sudan in 2010–12. It does not include FAO's long-term development programme, but is designed to complement the Organization's ongoing development activities, as well as the interventions of United Nations agencies, Government and other partners which aim to mitigate the effects of recurrent crises while addressing their root causes. The overall purpose of the PoA is to improve preparedness and to make short-term responses in food and agriculture more effective.

The programme relies heavily on a disaster risk management approach to the complex situation in Southern Sudan. This approach focuses on emergency relief, such as replacing lost assets or restoring livelihoods, as well as on early efforts as part of risk reduction that protect and sustain livelihoods. Such interventions can often be more effective than those delayed until people are in crisis. Given the complex and protracted nature of the crisis in Southern Sudan, FAO's relief and recovery programming is enhanced by interventions that not only restore, but also protect and promote livelihoods in food and agriculture.

The proposed priorities in this PoA will help FAO, its counterparts and partners to meet short-term needs in ways that strengthen the resilience of communities and lead to more effective and longer-term recovery.

The three key areas of focus proposed in this PoA are based on an analysis of the current situation and of the main factors triggering food insecurity and assessments identifying and targeting vulnerable groups. These are: (i) improving food production; (ii) improving food accessibility; and (iii) improving agricultural productivity. These priorities have been expanded into fourteen sectoral programmes that detail the activities to be implemented by FAO in Southern Sudan to achieve the expected outcomes and address the specific needs identified in the five priority states of Eastern Equatoria, Jonglei, Northern Bahr el-Ghazal, Upper Nile and Warrap. The total budget for the PoA 2010–12 is USD 67 821 864.

The outputs and programme profiles are summarized below:

Programme profiles	USD
Output 1 – Improved food production	
Project O1.1 – Transferring livelihoods' inputs to vulnerable populations	15 500 000
Project O1.2 – Supporting livelihood diversification and technology transfer	1 957 000
Project O1.3 – Supporting natural resource-based conflict transformation and land tenure security for rural communities	1 468 500
Project O1.4 – Sustainable agricultural climate change adaptation strategies	4 900 500
Output 2 – Improved food accessibility	
Project O2.1 – Supporting community food security through the transfer of livelihood resource	5 555 000
Project O2.2 – Managing of post-harvest losses	6 941 715
Project O2.3 - Stimulating economic growth and food security through market information systems	4 543 000
Output 3 – Improved agricultural productivity	
Project O3.1 – Participatory extension and learning	5 930 320
Project O3.2 – Integrated pest and disease management	2 188 956
Project O3.3 – Supporting community-based seed production and supply	3 604 095
Project O3.4 – Supporting capacity for effective response to animal disease prevention and control	5 775 528
Cross-cutting activity	
Project C1.1 – Streamlining food security coordination and early warning systems	5 241 500
Project C1.2 – Streamlining agricultural statistics to empower rural communities	3 712 500
Project C1.3 – Building capacity for integrated food security, nutrition and livelihoods programming	503 250
Total	**67 821 864**

The PoA signals FAO's adoption of a more programmatic approach in its emergency and rehabilitation activities in Southern Sudan, in line with national food security plans and related strategy and United Nations system programming framework. The document has used a programme cycle management approach to present the situation analysis, planned response and monitoring and evaluation framework.

This PoA is a dynamic programming tool that may need to be adjusted, according to contingency plans, when and as the food security situation evolves in Southern Sudan.


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INTRODUCTION

Through its emergency and rehabilitation programme, the Food and Agriculture Organization of the United Nations (FAO) aims to strengthen the livelihoods and build the resilience of households and communities before disasters. This is achieved through measures to avoid (prevention) or limit (mitigation) the adverse effects of hazards and to provide timely and reliable hazard forecasts and early warning for early action (preparedness).

FAO activities focus on saving lives, restoring livelihoods and property during the emergency response phase, while recovery and rehabilitation interventions are based on the building back better principle: increased resilience to future hazards can be achieved through interventions that facilitate the transition from relief to development over the longer term. FAO defines the systematic approach to lessen the adverse impacts of hazards and possibility of disaster as disaster risk management (DRM).

The humanitarian food security arena – including the concepts and purpose of clusters and related tools – has tended to be shaped by sudden-onset, large-scale shocks. However, given the characteristics that differentiate protracted crises, such as that in Southern Sudan, (conflicts, lack of basic infrastructures, displacements, erosion of livelihood options) from other food-insecure situations and the short-term nature of most assistance, there is a need for greater focus on applying available tools, coordination and conceptual frameworks in a more holistic and integrated manner.

For FAO, this means a stronger focus on enhancing and strengthening community resilience, linking governments and institutions at all levels, and creating more sustainable, diversified livelihoods in food and agriculture. FAO has used this approach in identifying and proposing the three key focus areas of intervention (outputs) outlined in the Plan of Action (PoA).

The DRM conceptual framework incorporates all elements of disaster risk reduction (DRR) – preparedness, prevention and mitigation – and integrates risk reduction with risk management. DRM is a corporate FAO priority, with strong interdisciplinary and cross-cutting dimensions that emphasize the development of partners' capacity in preparing for and responding to emergencies in a way that supports longer-term development.

This PoA is a statement of the intended FAO programme for Southern Sudan in relation to emergency and rehabilitation interventions in 2010–12. It was developed through a three-day planning workshop with the active participation of FAO staff in Juba and field offices, and representatives of partner organizations, including United Nations (UN) agencies, Non-governmental Organizations (NGOs) and Government institutions such as the Southern Sudan Commission for Census, Statistics and Evaluation (SSCCSE), the Southern Sudan Relief and Rehabilitation Committee (SSRRC) and the Ministry of Agriculture and Forestry (MAF). The process involved elaborating strategic objectives to address Southern Sudan's food security challenges. This was achieved by identifying and analysing the underlying causes of food insecurity, and the current situation, and determining targeting and the best course action through an accurate assessment.

This PoA therefore cross-matches FAO's long-term goals, as expressed in the National Medium-Term Priority Framework (NMTPF)[1], and is linked to cluster planning frameworks. It outlines the emergency and rehabilitation programme elements that will contribute to the achievement of the Organization's Strategic Objective I (SOI)[2] and covers all aspect of the DRM cycle.

The programme laid out within this PoA will strategically guide FAO and its partners in the design and implementation of food security- and livelihoods-oriented responses to emergency and rehabilitation needs. It can be considered a 'live' and dynamic document, tailored to the current and likely reality in Southern Sudan in 2010 and consistent with key sectoral and development strategy documents, including the National Food Security Action Plan (NFSAP), the United Nations Development Assistance Framework (UNDAF) and FAO's NMPTF for 2009–12. Therefore, it can be adjusted as the food-security situation evolves, while maintaining the core of activities that will ensure consistency with longer-term development programmes.

The structure of the PoA follows a programme cycle management sequence, progressing from situation analysis to response options analysis, response planning, and monitoring and evaluation.

1 The NMTPF is a FAO's planning and management tool for its assistance to its member countries and outlines how the Organization can best assist a country in meeting its priorities in the areas of food security, agriculture, rural development and natural resource management. The NMTPF describes jointly-agreed, medium-term priorities for collaboration between the Government of Sudan and FAO. The NMPTF is FAO's input into the UN common country programming process (UNDAF).

2 SOI, "improved preparedness for, and effective response to, food and agricultural threats and emergencies", is the strategic objective within FAO's overall corporate strategic framework that refers to emergency and rehabilitation activities.

1. SITUATION ANALYSIS

1.1 Background

Decades of marginalization and long-running conflicts have undermined livelihoods and the provision of basic services in Southern Sudan. As a result, populations in the region have limited economic and educational options and experience high levels of poverty, food insecurity and malnutrition.

On 9 January 2005, the Government of the Sudan and the Sudanese People's Liberation Movement/Army signed the Comprehensive Peace Agreement (CPA), which paved the way for the return of millions of internally displaced persons (IDPs) and refugees to Southern Sudan. The CPA has also provided new opportunities for the exploitation of land and resources to build secure, sustainable livelihoods and contribute to the economic growth of Southern Sudan.

Despite recent promising economic growth, Southern Sudan faces massive challenges in the form of widespread poverty, skewed income distribution and the inadequate delivery of social services, which have slowed the progress of food-security initiatives. Over the last ten years, an estimated 1.7 million people have been food insecure and depend on emergency food assistance, while rates of global acute malnutrition (GAM) remain chronically above emergency thresholds.

Role of agriculture

Agriculture is one of the most important components of Southern Sudan's economy, accounting for about 80 percent of employment (including in agro-industries). The majority of the population depends on the agriculture sector, with traditional livelihood systems involving various combinations of cattle rearing, crop production, fishing, wild food collection and trade, depending on geographic location and livelihood zone.

Key facts[3]

- *80% of households rely on agriculture.*
- *1.25 million farming families.*
- *Each family cultivates an average of 0.91 hectares.*
- *1 million hectares of land is cultivated.*

Traditional production predominantly relies on family labour, hand power, local seeds and soil fertility that is sustained by a system of shifting cultivation, which is usually determined by the community. All smallholder farmers grow a wide range of sorghum landraces with minor crops of maize, bulrush millet, finger millet and root crops, depending on location.

3 FAO/World Food Programme (WFP) Crop and Food Supply Assessment Mission (CFSAM) report, 2008.

In northern parts of Southern Sudan, other crops are also grown, including groundnuts, which contribute significantly to the household food economy and replace sorghum as the main staple in poorer sorghum producing years, when rains begin later than usual. Groundnuts are also a regular staple and cash crop in the higher altitude areas with more sandy soils.

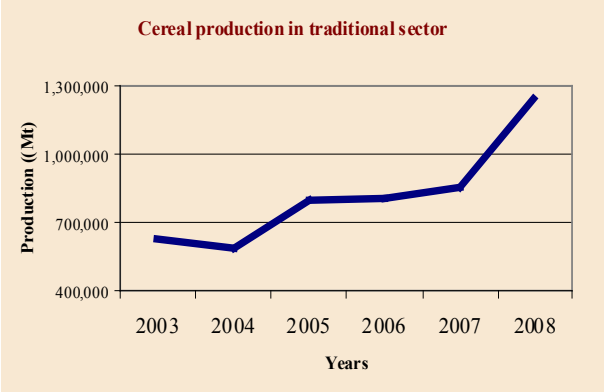
Although sorghum, groundnuts and other crops are also grown in quantity in the south and central areas, cassava is the most important contributor to the local economy, meeting half or more of the carbohydrate nutrition requirements. Minor crops of sweet potatoes, yams, coffee, mangoes and papayas are also grown for home and some localized commercial use.

Cereal cropping, particularly of sorghum, is undertaken over three seasons to spread risks. The varieties are planted as follows:

- short-maturing varieties are planted in May and harvested in August;
- medium-maturing varieties are planted in June and harvested in October/November; and
- long-maturing varieties are planted in May and harvested in November/December.

Crop production, particularly of cereals, plays a critical role in the food security of Southern Sudan's populations. Household food security is determined by access to cereals from either home production or the market.

With an estimated 8 million cattle and 8 million small ruminants (sheep and goats) in Southern Sudan, the contribution of animals to household food economies is considerable. Livestock are an important capital asset and risk management tool for pastoralists and agropastoralists in times of drought. Livestock production is based on a traditional pastoral production system (under which 90 percent of Southern Sudan's animals are reared). Poultry production, under the traditional free-range system, is growing in popularity. Chickens are the main birds raised, although there are also substantial numbers of ducks and pigeons raised, particularly among urban households.



The livestock subsector contributes significantly to meeting the food and income needs of agropastoralists households, directly – through the consumption of meat, milk and other products – and indirectly – by exchanging animals or animal products for cereals or cash, which is used to buy cereals and meet other household needs. The potential of the subsector is constrained by livestock disease outbreaks; low productivity exacerbated by chronic droughts and insecurity; a lack of adequate marketing infrastructure; and poorly organized and informed herders and traders.

Disease is believed to be a key factor in the high losses (over 20 percent) experienced by livestock owners. Poultry production is characterized by high mortality rates due to diseases like Newcastle disease and chicken pox; bacterial diseases such as avian typhoid and parasite loads; inadequate housing and feeding practices; and generally poor management, which reduce productivity.

There is considerable potential for honey and beeswax production in Southern Sudan, estimated at 10 000 tonnes of honey and 5 000 tonnes of beeswax per annum. The production of both has increased, mainly owing to improved beekeeping practices, and honey harvesting and processing methods.

The fisheries subsector is also important, with fish a seasonally important source of food in many parts of the country and throughout the year in the Sudd region. Fish are a key component of household food baskets in most parts of Southern Sudan, particularly in Jonglei, Northern Bahr el-Ghazal, Upper Nile and Warrap states. Fishing also provides households with an important source of income and therefore plays a central role in the food security of fisher families.

Southern Sudan represents about one-third of the total area of the Sudan, but accounts for over 66 percent of fisheries resources. This is largely due to the more than 100 000-hectare Sudd swamps. In general, there is limited fishing pressure on Southern Sudan's waters, with the current catch estimated at 40 000 tonnes per year. Actual fish production across the Sudan is about 60 000 tonnes per year, which is only around 20 percent of its potential productivity. Potential annual yield in Sudd alone is estimated at between 300 000 and 400 000 tonnes[4].

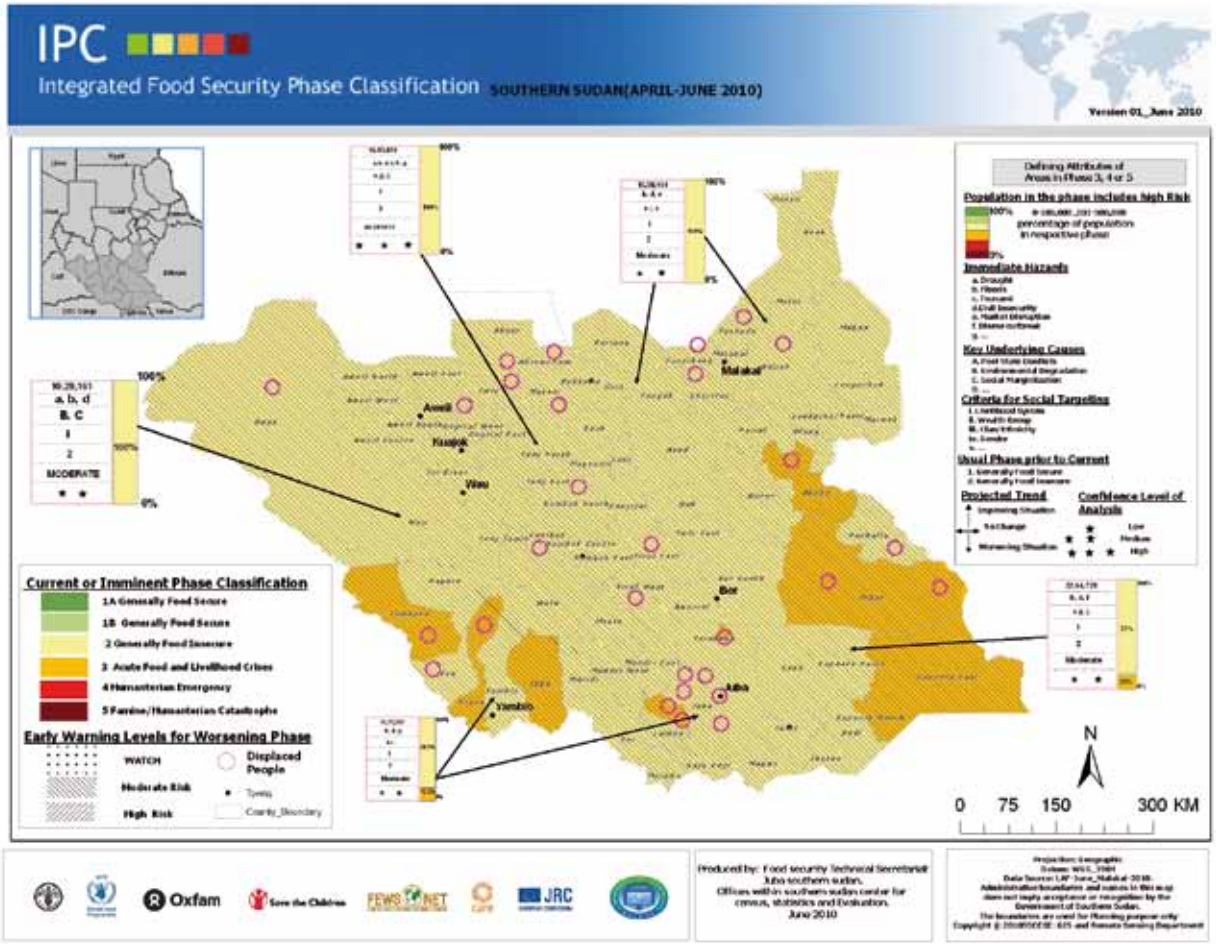
Southern Sudan's vast aquatic and fisheries resources merit higher priority than they have been accorded. The effects of the protracted civil conflict and inadequate institutional framework have severely limited the support that would otherwise have been provided to realize the full potential of the fisheries subsector.

1.2 Geographic priorities

Southern Sudan is administratively divided into ten states, of which five (Eastern Equatoria, Jonglei, Northern Bahr el-Ghazal, Upper Nile and Warrap) have been on the UN humanitarian priority list in the past two years. These states are particularly vulnerable to food insecurity for various reasons, with the most important being insecurity due to protracted conflict, which particularly affects Jonglei, Upper Nile and Warrap. Conflicts lead to population displacement, the disruption of farming, destruction of production assets, and disruption of trade routes and trading activities, all of which affect access to and availability of food.

4 Food security and livelihoods interventions in Southern Sudan, FAO, 2008.

Figure 1 - Food security situation in Southern Sudan up to December 2009



The five states are equally prone to natural disasters, such as drought or floods (see Annexes 7 and 8), which increase the population's vulnerability to food insecurity. In 2009, the late and sporadic start to the rainfall season led to a significant amount of replanting, the almost complete loss of the first crop in areas with bimodal rainfall (Eastern Equatoria), and poor crop yields in other parts of the country (see Figure 1).

Over a million people still live in IDP camps in North Sudan or in refugee camps in neighbouring countries, many of whom are likely to return to Southern Sudan in the post-election period and in the run-up to the referendum in 2011. Eastern Equatoria, Jonglei, Northern Bahr el-Ghazal and Upper Nile are likely to experience a growing influx of returnees, which will compound their already fragile food security situation.

An estimated 1.7 million people in Southern Sudan have been food insecure in the last ten years[5], the majority (up to 40 percent) from Jonglei, Northern Bahr el-Ghazal and Upper Nile states; over 20 percent from Warrap state and over 30 percent from Eastern Equatoria state. Vulnerable groups comprise mainly agropastoral households whose food insecurity increases during the rainy or cultivation season (May to August), IDPs whose livelihood activities are disrupted by conflict or natural shocks, returnees requiring support to resettle/reintegrate into society and recover their food production capacities, and very poor households. Food-insecure households tend to have limited livestock or labour, or both. The following briefly outlines the vulnerability context in the five priority states.

Jonglei: The main livelihood systems in the state are agropastoralism, pastoralism and fishing[6]. Food insecurity is mainly related to conflict over natural resources and cattle raiding, the influx of returnees, floods and drought. Jonglei has remained in the Integrated Food Security and Humanitarian Phase Classification (IPC) Phase 3 (acute food and livelihood crisis) since 2008. Some 39 percent of the population is food insecure and 30 percent severely food insecure[7]. The GAM rate is reported at 21.4 percent[8].

Upper Nile: Livelihoods depend mainly on agriculture, livestock and fishing, with hunting also an important activity[9]. Food insecurity is mainly affected by periods of volatile security linked to migration for water and grazing, delays in rains or flooding, increased food prices, restricted movement and trade activities. Floods and drought have been more frequent in the past decade and negatively affected food production. About 19 percent of the population is severely food insecure with an additional 34 percent moderately food insecure[10]. The GAM rate is reported as 14.2 percent[11]. Upper Nile has fluctuated between IPC Phase 2 (moderately/borderline food insecure) and Phase 3 since 2008.

Northern Bahr el-Ghazal: The main livelihoods are based on livestock, gathering and seasonal labour migration[12]. Food insecurity is linked to the return process, with the state having received over 500 000 returnees in the past five years. The area also witnessed conflict before the signing of the CPA, which led to a breakdown in social cohesion and scattering of the labour force. Successive floods and drought have further reduced food production in the state. About 19 percent of the population is severely food insecure, 43 percent is moderately food insecure and 38 percent is food insecure[13]. The state has a reported GAM rate of 28.9 percent and has fluctuated between IPC Phase 2 and 3 since 2008.

5 Various annual needs assessments.
6 Zone 2, 3, 6 and 7 according to the Southern Sudan livelihood profiles.
7 Southern Sudan Annual Needs and Livelihoods Assessment (ANLA) 2010–11 – Jonglei state report.
8 Mid-year ANLA review, WFP, 2009.
9 Zone 2 and 3 according to the Southern Sudan livelihood profiles.
10 Southern Sudan ANLA, 2010–11 – Upper Nile report.
11 Southern Sudan mid-year Review of the ANLA, August 2009.
12 Zone 1 according to the Southern Sudan livelihood profiles.
13 Southern Sudan ANLA, 2010–11 – Northern Bahr el-Ghazal report.

Eastern Equatoria: The main livelihood activities in the state are agricultural and livestock production, as well as hunting, to a lesser extent[14]. During 2009, an early and prolonged dry spell and resultant poor harvest and limited availability of vegetation and water were the main constraints to food security. Lower production led to increased cereal prices, which heightened vulnerability. Cattle raiding has also disrupted the livelihoods of pastoralists and agropastoralists, increasing their vulnerability and food insecurity. In this state, 30 percent of the population is considered severely food insecure while 42 percent is moderately food insecure[15]. The GAM rate is 8.9 percent. Drought events have recently been more pronounced, pushing the state to IPC Phase 3 since 2008.

Warrap: Livelihoods are predominantly agropastoral, with fishing playing an important role, as do gathering and seasonal labour migration[16]. The humanitarian community considers the state under-served in terms of delivery of basic social services and food security and agricultural livelihoods support in recent years. Household food security is mainly affected by the high level of insecurity and outbreaks of violent conflict, large-scale displacement and disruption of livelihood activities, high cereal prices and the poor distribution of rainfall. Food security and livelihood assessments in the state found 20 percent of the population to be severely food insecure and an additional 27 percent moderately food insecure[17]. The GAM rate is reported at 20.1 percent. A lack of support, inter-ethnic conflict and recurrent droughts have meant the state, or part of it, has regularly been in IPC Phase 3 since 2008.

1.3 Key challenges

Instability and civil conflicts are the main causes of food insecurity, particularly in Southern Sudan. The key challenges for Southern Sudan are many and complex.

Unmet expectations

Five years after the signing of the CPA, there has been considerable progress in establishing functioning institutions, where most were previously absent. About half of the objectives laid out in the CPA have been achieved. However, the real challenge may be that the timeframe is too limited to provide sufficient space for the complex and contradictory processes involved.

As noted by Call and Couzens[18], while peace requires the existence of a state, the process of state building can lead to further conflict if driven too quickly. High expectations for tangible benefits of peace, such as greater stability, improved services and enhanced livelihood opportunities, especially among communities that were most affected by the conflict, have remained unmet, which poses a number of risks. State authorities are struggling to stabilize the states with limited

14 Zone 6 and 7 according to the Southern Sudan livelihood profiles.
15 Southern Sudan ANLA, 2010–11 – Eastern Equatoria state report.
16 Zone 1 according to the Southern Sudan livelihood profiles.
17 Southern Sudan ANLA, 2010–11 – Warrap state report.
18 Call, C. and Cousens, E. (2007), "Ending wars and building peace", Working Paper Series: Coping with crisis, New York: International Peace Academy.

funding, almost no infrastructure and insufficient international support. For example, the Sudan Recovery Fund is the only instrument for stabilization activities.

Factors triggering food insecurity

Food and livelihood security in Southern Sudan are predominantly influenced by: (i) insecurity/conflict; (ii) natural hazards; (iii) low production and productivity of the agriculture sector; (iv) inadequate infrastructure; (v) weak food security and livelihoods institutional set up; and (vi) limited services.

Insecurity/conflict

The scarcity of some natural resources – and, in some cases, the unsustainable use of these resources – has increased the likelihood of conflict in Southern Sudan. Competition over access to pasture, water and forests has, at times, turned violent. Tension between farmers and pastoralists over land use and among pastoralists has resulted in violent conflicts. In 2009, attacks and counter-attacks between various ethnic communities in Jonglei state alone led to the deaths of well over 1 200 people[19].

In addition, recurrent attacks by the Lord's Resistance Army (LRA) in Western Equatoria state are an ongoing threat to the lives and human rights of the population. LRA rebels operating in the Central African Republic, the Democratic Republic of the Congo and within Southern Sudan continue to attack civilian populations, resulting in an influx of refugees to Western and Central Equatoria states. The UN estimates that 18 000 refugees from the Central African Republic, and the Democratic Republic of the Congo and 68 000 Southern Sudanese are residing in refugee and IDP camps in Western Equatoria.

IDPs, disrupted trade and increasing food prices *There are currently over 350 000 IDPs in Southern Sudan, who rely on external assistance to meet their food and livelihood needs. In 2009, the number of IDPs was over two-and-a-half times that of 2008. The massive population displacement caused by ethnic conflict and LRA attacks disrupted trade within and between the states, contributing to a rise in food prices.*

(2010 UN and Partners' Work Plan for Sudan and ANLA report, 2009)

Insecurity therefore affects the availability of food, both in terms of production and productivity. More importantly, in a protracted crisis, as is the case in Southern Sudan, insecurity impacts on the accessibility of food.

19 Human Rights Watch.

Natural hazards

Annual rainfall in Southern Sudan usually increases from north to south and from east to west, ranging from less than 500 mm in the semi-arid lands of Eastern Equatoria to a possible 1 800 mm in the green belt. In recent years, the frequency and severity of disasters has increased significantly, particularly those related to hydro-meteorological hazards (droughts and floods). Annexes 7 and 8 show the areas that are prone to drought and flooding, respectively.

In 2007, some 52 219 households (267 506 people) were affected by flooding in all states. Jonglei and Upper Nile were particularly heavily hit, with Jonglei state cut off for several weeks. The floods continued in 2008, albeit on a smaller scale[20]. The 1998 famine in Northern Bahr el-Ghazal[21] was the worst disaster in Southern Sudan's recent history, with an estimated 75 000 to 100 000 lives lost (at its peak in July/August 1998, 50 to 100 people were dying each day).

Like insecurity, these natural hazards have a major effect on food security in the region, affecting production, productivity and the accessibility of food.

Low production and productivity of the agriculture sector

Crop production is a key livelihood activity throughout Southern Sudan. Cultivation is characterized by slash-and-burn rotational practices, and the use of rudimentary tools and traditional planting materials. Production is rainfed and subsistence oriented. Poor production methods limit households to cultivating an average of 2 to 4 feddans and yields are often quite low. Productivity is constrained by a lack of access to adequate and improved inputs, poor farming practices, crop pests and diseases, and limited availability of labour.

The main crop disease is the cassava mosaic virus (CMV) and its East African variant. There is a serious risk of the extremely virulent Ugandan variant spreading to Southern Sudan as cross-border population movements continue. Pest infestations, mainly of striga, are also a cause for concern.

Livestock play an important role in the livelihoods of agropastoralists groups, contributing significantly to household food and income. Large numbers of people migrate seasonally in search of pasture and water for their animals. However, livestock production is restricted by inadequate veterinary extension services to control livestock diseases and improve animal husbandry practices, insecurity in the form of cattle raiding and weak livestock marketing infrastructure. Improving the animal health delivery system would greatly improve the food and livelihoods security of agropastoralists communities. The subsector's full potential is not realized due to disease outbreaks, chronic drought, insecurity, limited infrastructure, and poorly organized and informed herders. Many of these problems arise from a lack of capacity and resources to implement

20 Vulnerability, impact of hazards and disasters in Southern Sudan, Study from agriculture, food security, livelihood, and rural development perspectives, FAO, August 2009.
21 ibid.

policies governing animal production, marketing, trade and veterinary public health, and the absence of reliable data to prioritize sector development interventions (the last official livestock census was conducted in 1976).

Disease is a key factor in the high production losses experienced by the subsector. In 2008, the Sudan was declared free from rinderpest by the World Organisation for Animal Health. However, several other diseases of economic importance remain prevalent and cause significant livestock losses, threaten public health and impede trade. Outbreaks of haemorraghic septicaemia and contagious bovine pleuropneumonia (CBPP) have led to considerable livestock losses, while tick-borne diseases, trypanosomosis, and internal and external parasites have contributed to low productivity and, sometimes, death. The wide spread of animals across Southern Sudan creates challenges for combating these diseases. There is, therefore, a need for a careful cost-benefit analysis of disease control options and a sound implementation strategy for such interventions.

Fishing communities along the Nile River networks face many challenges, including weak or non-existent infrastructure, such as roads, which makes access to markets difficult to sell produce or buy fishing gear. The fisheries subsector experiences considerable losses linked to a lack of processing skills and materials, and limited access to markets. The impacts of protracted conflict and an inadequate institutional framework have severely restricted the support that would otherwise have been provided to realize the subsector's potential. Massive investment in fisheries would contribute significantly to poverty reduction and sustainable growth in the region.

Inadequate infrastructure

Both agricultural input and product markets are undeveloped in Southern Sudan, which has mainly affected producers who rely on livestock sales to purchase cereals. In addition, the inadequate infrastructure has impacted on surplus agricultural production areas and the overall economy. No effective investment in scaling up production can be made without first strengthening markets and marketing opportunities.

The current system for supplying fresh produce to retail markets in urban areas is dominated by imports (in the case of Juba, by supplies from Uganda). Other than these, inter-regional trade flows only really exist for livestock marketing. Efforts are being made to re-establish the former production levels for fruits and vegetables. However, new or improved market centres in key production areas will be required to supply the evolving wholesale system[22].

Stability as a dimension of food security

Stability is another major aspect of food security in Southern Sudan, linked to institutional set-ups and to limited or inadequate services.

22 NFSAP.

Food security and livelihoods institutional setup in Southern Sudan

The food security and livelihoods sector in Southern Sudan is complex and involves numerous stakeholders (including the Government of Southern Sudan, state governments, communities, UN agencies, NGOs and others). The ministries and commissions established by the Government to deal with chronic and transitory food and livelihoods insecurity are still at an early stage and require substantial capacity building. The policies and strategies required to effectively guide food-security programming and interventions are either inadequate or non-existent. Institutional capacity to deal with food security at the state level is even weaker, with mandated Government institutions lacking the human and financial resources to deal with the challenge.

At the national level, MAF and the Ministry of Animal Resources and Fisheries (MARF) are the lead agencies for food-security issues. Recently, the Government has formed a new Ministry of Humanitarian Affairs and Disaster Prevention to deal with natural and human-induced disasters and the associated humanitarian response. A number of other ministries and commissions are also mandated to contribute to food security in Southern Sudan. However, linkages and coordination among the various institutions is still not well defined. The Government still has no effective early warning system that would facilitate a timely response to emergencies.

Limited services

Given the still fragile capacity of the nascent government, service delivery is mainly ensured by international cooperation partners and NGOs.

Health indicators for Southern Sudan are among the worst in the world, despite considerable efforts on the part of many international organizations. Only about a quarter of the population has access to any type of health facility (Sudan Household Health Survey [SHHS], 2006). In 2007, the HIV/AIDS prevalence rate was estimated at 2.6 percent but was noted to be rising. Over 70 percent of women aged between 15 and 24 years had no knowledge of HIV prevention (2010 Work Plan).

More than 50 percent of Southern Sudan's population does not have access to clean drinking water. In addition, access to sanitation facilities is estimated at only 6.4 percent. Wide disparities also exist in water supply and sanitation coverage between urban and rural areas, and between and within the states. Poor access to clean and safe water, sanitation and hygiene practices therefore contributes to high mortality rates and low nutritional status, which are prevalent across Southern Sudan (SHHS, 2006).

Cross-cutting issues affecting food security

Gender

The livelihoods of the most vulnerable community members in Southern Sudan were eroded by the complex emergency situation providing socio-economic and environmental stresses. Decades of civil conflict had a heavy impact on human development, particularly affecting women and children.

Gender statistics reveal gender disparity in all sectors, including education, health and economy (see Table 1). Over 90 percent of women in Southern Sudan cannot read and only 3.5 percent of girls complete primary education (United Nations Office for the Coordination of Humanitarian Affairs [UNOCHA]). In contrast to common demographic patterns around the world, there are more elderly men than women in Southern Sudan, despite the impact of conflict on the male population. This, coupled with a strong adherence to cultural practices, reinforces the continuation of the traditional role of men as household heads and, therefore, decision-makers. Cultural practices favour men in terms of inheritance rights, access to formal and informal employment, and access to, ownership and control over land. It is estimated that 45 to 50 percent of returnees are female-headed, making efforts to address land and property needs of women a key priority in the return and reintegration process.

Table 1 - Selected development indicators for Southern Sudan, 2006[23]

Indicator	Value (Southern Sudan)	Value (national)
Health		
Infant mortality rate (per 1 000 live births)	101	81
Maternal mortality ratio (per 100 000 live births)	2 054	1 107
Skilled attendants at childbirth (%)	10	49.2
Under 5 mortality rate (per 1 000 live births)	134	112
Education and literacy		
Primary school net intake rate (%)	6.9	29.5
Primary school net attendance rate (%)	17.2	53.7
Primary school net attendance rate for girls (%)	15.6	51.7
Gender parity index	0.76	0.93
Primary school completion rate (%)	6	19.4
Female illiteracy rate (%)	92	54

23 Most indicators are derived from the United Nations Children's Fund (UNICEF) and Government-sponsored SHHS, 2007. Female literacy rates are provided by UNOCHA.

Women in Southern Sudan are trapped in a cycle of extreme poverty and household vulnerability. Their traditional role means that they are responsible for providing food for their households, but they do not have control over, nor can they access, the necessary productive resources. While women are the principal producers in the field, they rarely control the output and find it difficult to access the few local market opportunities – their husband or other men in the household often sell the produce and decide how money is spent.

As is the case in many parts of Africa, men in Southern Sudan effectively control land and this is closely linked to their position as household head in both the public and private domains. Control over land provides access to the limited credit opportunities, which are needed to improve food production and farm productivity, and to acquire extension support for improved and effective farming practices. In this context, women, the major contributors to agricultural production, are deprived of much-needed technology and resources to improve cultivation practices and improve the wellbeing of their family.

Despite the availability of natural resource and the fact that women carry out most food production activities and are responsible for household food security, women, particularly in rural areas, are unable to meet that responsibility owing to their limited technical know-how and lack of access to appropriate inputs and tools. These women are in need of significant and urgent assistance.

1.4 Food security scenario in Southern Sudan[24]

A combination of food production deficits, spreading insecurity and population displacement is likely to continue to affect the socio-economic and political landscape of Southern Sudan over the coming two years. A mix of factors (late rainfall, the disruption of trade routes, and rising food prices in 2009) created a massive food deficit, which is particularly affecting five states: Eastern Equatoria, Jonglei, Northern Bahr el-Ghazal, Upper Nile and Warrap. This situation is likely to continue in 2010–12 and will require interventions to increase agricultural production and productivity in order to mitigate famine and accelerate the recovery of the food-security situation.

24 2010 UN & partners' Humanitarian Work Plan.

Food security

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life

World Food Summit, 1996

Economic recovery and growth is affected by the Government's and donors' increased preoccupation with the referendum, which is complicating the delivery of services. Remittances from people in the Sudanese Diaspora to their family members in Southern Sudan could decline, further increasing the vulnerability of these households. Foreign and national investment flows could also slow down, worsening the economic situation. However, global oil prices are likely to stabilize at over USD 50 per barrel and increased determination by the Government to improve governance and reduce corruption will result in improved service delivery to the population.

The return of large numbers of IDPs and refugees for the planned referendum is likely, which could place further pressure on the limited basic services. The states most likely to be affected by an influx of refugees are Eastern Equatoria, Jonglei, Northern Bahr el-Ghazal and Upper Nile.

The Government's capacity to enforce law and order and support peacebuilding efforts remains limited. However, the Government is likely to create a conducive environment, which will enable development partners to provide resources to NGOs and civil society organizations (CSOs) to engage communities in peacebuilding, which will contribute to reduced violence and greater peace in Southern Sudan.

Main findings of various food security and crop assessments in 2009

In August 2009, the federal MAF undertook a Rapid Crop Assessment Mission in Southern Sudan's ten states in order to determine the impact of the poor cropping season (due to erratic and below-normal rainfall levels) on crop production and propose measures to mitigate any negative effects. Prior to the Assessment Mission, a mid-term ANLA was carried out in the five most affected states (Jonglei, Eastern Equatoria, Northern Bahr el-Ghazal, Warrap and Upper Nile) by the UN agencies in collaboration with the SSRRC/Government of Southern Sudan and State Ministries of Agriculture (SMoAs) in July 2009.

Both assessments confirmed that the food-security situation in Southern Sudan was of concern and that an immediate intervention was required to save the lives and livelihoods of the most affected populations. The assessment teams estimated that the area cropped in 2009 was reduced by 20 to 30 percent. Overall production was expected to be 30 to 40 percent less than in the previous year, according to the most likely scenario.

In order to obtain the most up-to-date information on the food security situation, a joint FAO/WFP CFSAM was carried out in November 2009. The main findings were:

- A late and sporadic start to the rainfall season led to a significant amount of replanting, almost complete loss of the first crop in areas with bimodal rainfall, and poor yields in many other parts of the country.
- Net cereal production from the traditional sector in 2009 was estimated at 690 000 tonnes, approximately 35 percent below the 2008 amount of 1.07 million tonnes, but only 6 percent below the average of the previous five years of 733 000 tonnes.
- The relatively poor rains in 2009 heightened competition over access to scarce pastures, leading to further conflict among pastoralists. Cattle in pastoralist areas started moving from high to low ground in search of pasture one to two months earlier than usual.
- The terms-of-trade of grain to livestock was heavily in favour of grain, indicating its relative shortage.

Similarly, the results of the WFP-led ANLA contributed to updating the food security situation and forecasting the required response for 2010.

Progress of the 2009 agricultural season[25]

The available meteorological and Normalized Difference Vegetation Index data confirmed that the rainfall performance between April and July 2009 was very poor in many parts of Southern Sudan, which prevented farmers from planting the short- and medium-maturing sorghum and maize varieties in May and June. The short-maturing sorghum harvest normally helps to bridge the hunger gap in August. However, the poor rainfall from May to July meant the short-maturing variety was not ready for harvest, which extended the hunger gap from three (May to August) to five months (May to October). Some farmers replanted their fields with the expectation that the rains would improve in June/July. However, rainfall remained poor until August, resulting in crop failure and contributed to depleting farmers' seed stocks for the subsequent planting season.

The rainfall from September to December was largely normal to below normal. Above-normal rainfall in the remaining months created a high risk of flooding and crop pests and disease, leading to a further reduction in the expected crop production. However, these risks did not materialize.

The livestock situation improved after the August 2009 rains, as pastures were regenerated in most of Southern Sudan. However, the incidence of diseases such as CBPP, Foot-and-Mouth disease and blackquarter was reported to be increasing. Outbreaks of East Coast fever (ECF) and other tick-borne diseases were reported in areas in which the diseases are not normally prevalent, e.g. in Jonglei state, causing concern about the spread of these from low-density livestock areas of

25 Mid-year ANLA review report, August 2009; Rapid Crop Assessment Report, September 2009 and CFSAM 2009 report.

Equatoria to high-density livestock areas. The geographical expansion of these diseases is linked to issues such as climate change and the uncontrolled movement of cattle between Equatoria and Jonglei, while cattle raiding has exacerbated the spread of ECF to Jonglei and Warrap states.

Increased demand for livestock and poultry products among the growing urban population has led to the importing of cattle, poultry and poultry products from neighbouring countries. Small-scale poultry production is becoming more common in and around major towns, such as Juba, to fill gaps in the supply. However, small-scale producers face challenges related to the availability of chicks, feed and drugs/vaccines, as most of these must be sourced from Uganda or Khartoum, which increases production costs and makes locally-reared poultry more expensive than imported birds.

High cereal and low livestock prices

In 2009, Southern Sudan experienced unprecedented increases in food prices. For example, the price of sorghum rose considerably over the last four to five months. In July, prices were 80 percent higher than the average July price from 2006 to 2008. The main reasons for this increase were: (i) the global food price crisis in 2008; (ii) poor harvests throughout eastern Africa, especially in drought-affected Ethiopia and Kenya, pushing up regional market prices; (iii) newly-introduced taxes on food imports; (iv) food hoarding by traders in anticipation of a poor harvest; and (v) disruptions to commercial trade owing to heightened insecurity.

Livestock prices also decreased sharply as agropastoralist households sold cattle to purchase cereals, which is a key coping measure in Southern Sudan in times of stress. The terms of trade (amount of cereal that can be bought by selling cattle) plummeted for livestock owners. These unfavourable terms-of-trade are forcing thousands of the poorest families out of the food market[26].

Production deficit

The combined impact of poor rainfall, higher cereal and lower livestock prices, and conflict has created a serious food-security crisis in Southern Sudan. Large numbers of people require food and other forms of assistance in order to sustain their livelihoods until the next harvest. Based on the November 2009 CFSAM, cereal production in Southern Sudan was estimated at 690 000 tonnes. Compared with a long-term average cereal production of 800 000 tonnes, there will be a deficit of over 100 000 tonnes in 2010. This gap needs to be filled through food aid, commercial imports and households' own food production.

26 2009 ANLA mid-year review and CFSAM 2009 reports.

Inter- and intra-ethnic conflict

In addition to the poor rains and high food prices, food insecurity in Southern Sudan in 2009 was exacerbated by intensified inter- and intra-ethnic conflict in several states. There are over 350 000 IDPs in Southern Sudan, who rely on external assistance to meet their needs. This includes more than 18 000 refugees who fled from the Democratic Republic of the Congo following LRA attacks. The number of IDPs and refugees in 2009 was over two and a half times that in 2008. Large-scale population displacements as a result of ethnic conflict and LRA attacks have disrupted trade between and within states and contributed to price rises. Communities have been unable to engage in agriculture and fishing activities due to the insecurity, which has led to reduced production in traditionally cereal surplus-producing states such as Central and Western Equatoria.

Undernutrition

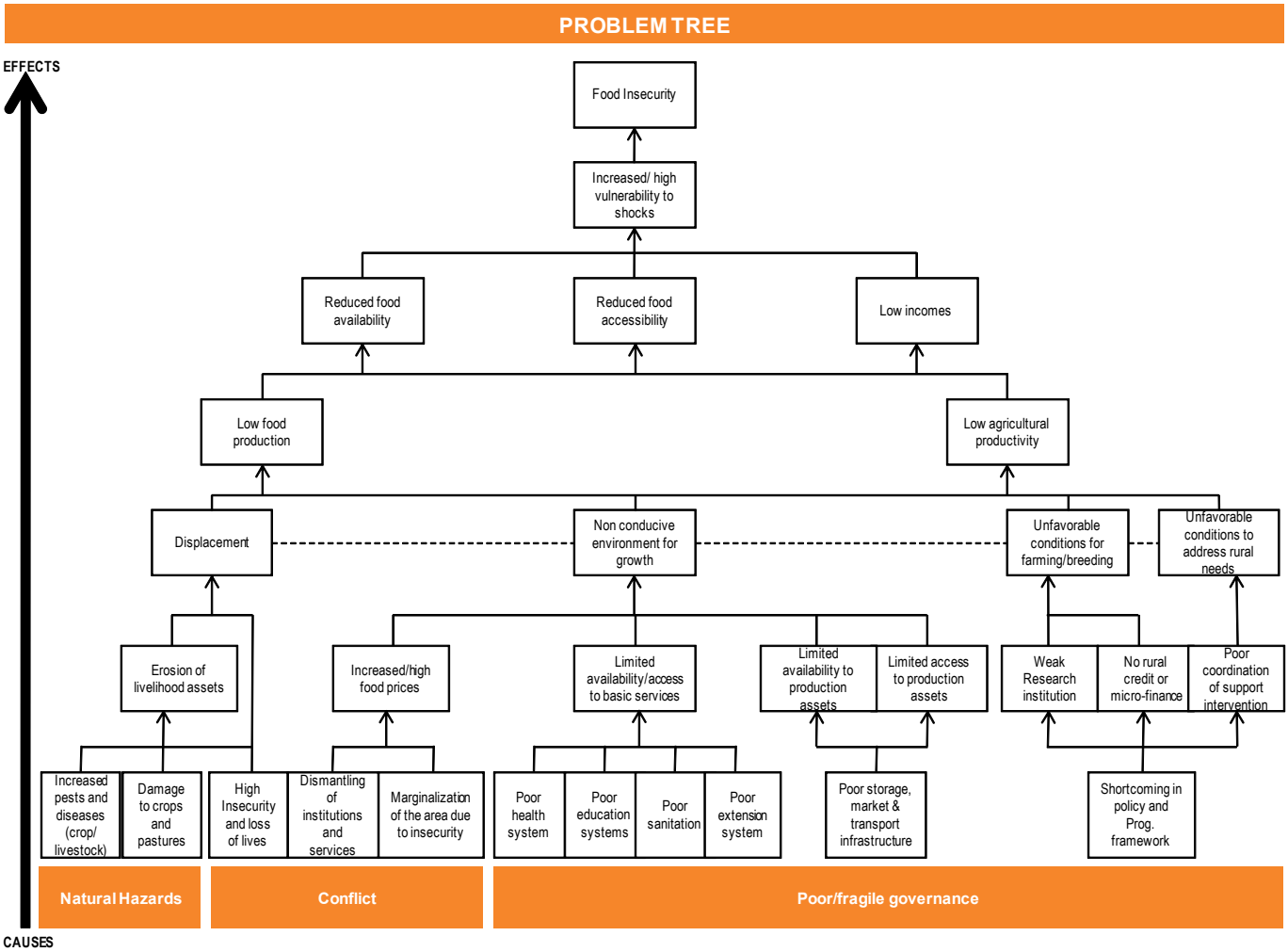
A key outcome of the combination of low productivity and production and constraints to accessing food, experienced throughout Southern Sudan, is high levels of undernutrition. The prevalence of moderately underweight children is estimated at 32.9 percent in Southern Sudan, with the prevalence of underweight children at 42.9 percent and wasting estimated at 14.9 percent. Localized surveys on micronutrient status report night blindness due to Vitamin A deficiency at between 1 and 4.8 percent. Undernutrition not only increases vulnerability to death and disease, it undermines learning capacity and productivity, locking vulnerable households into a cycle of poverty and weakening their livelihoods.

According to the mid-term ANLA, the 2009 shocks compounded an already critical situation of acute malnutrition, which occurs every year in Southern Sudan and contributes to child morbidity and mortality. The ANLA reported the overall GAM rate at 16.9 percent, which is above emergency thresholds. The GAM rate is extremely high because only 5 percent of households use improved sanitation practices and only 50 percent have access to improved sources of drinking water[27].

Key factors contributing to increased malnutrition and micronutrient deficiencies among children are poor intake of nutritionally balanced diets; chronic household food insecurity; infectious diseases; and poor health services and sanitation. The SHHS observed that low community awareness and health care seeking behaviours aggravate a situation characterized by extremely high rates of maternal and child mortality. The food security and livelihoods of the vast majority of rural households are undermined by chronic poverty, constrained agricultural production, limited economic opportunities, prolonged disruption and loss of economic activities, and reduced livestock and fisheries production and productivity. High prices for food commodities have left an estimated 76 percent of resource-limited rural populations at risk of survival and serious food insecurity. Most resource-poor farmers produce food below their subsistence requirements. As such, social, political and economic factors are inextricably linked to vulnerability and undernutrition.

27 Mid-year ANLA report, August 2009.

Figure 2 - Food security-related situation analysis



1.5 Future priorities based on the situation analysis

Figure 2 shows a problem tree analysis derived from the situation analysis and key challenges described in the previous sections, and summarizes the problems associated with food security in Southern Sudan, with a clearly established link between cause and effect. It represents a static picture of food insecurity in Southern Sudan, meaning the underlying causes, have remained the same over for more than five years. The difference from year to year is in the severity of the situation in terms of level of vulnerability of the population to food insecurity as a result of these factors.

The analysis of the food-security situation indicates the annual dynamic of food insecurity. Conflicts and natural hazards (drought) have been the main cause of food insecurity, although weak governance has also contributed to increasing the population's vulnerability to food insecurity.

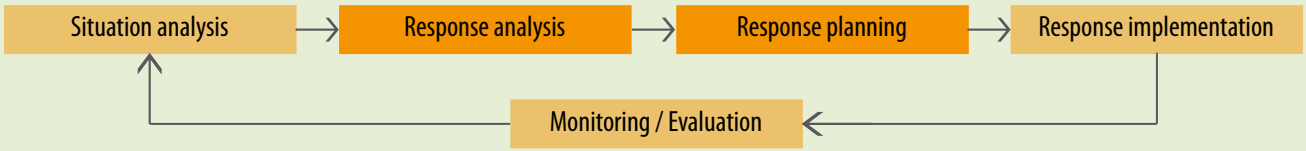
While all ten states of Southern Sudan are affected by food insecurity, the situation is particularly critical in the five identified priority states. In two of these states, food insecurity is caused by a combination of conflict and drought, in another two by drought and in the fifth by weak governance. The factors associated with food insecurity can be seen in all five states, with a variation in the scope and severity of the situation. The type of activities outlined in the response plan vary between the states, depending on the triggers of food insecurity.

Bearing in mind, the food insecurity-triggering factors, the key issues that the FAO emergency and rehabilitation programme needs to address are:

1. dwindling agricultural production;
2. reduced agricultural productivity;
3. problems related to food availability; and
4. the need for more information and coordination to support the agriculture sector.

The next section will examine these areas, and the possibilities for dealing with them, taking into account the implications for planning and the priorities set overall, in order to outline a response analysis for the programme.

Figure 3 - The emergency response protocol for food security



Source: PoA Guidelines, FAO Regional Emergency Office for Africa (REOA)

2. RESPONSE ANALYSIS: OPTIONS AND STRATEGY

Persistent conflict coupled with recurrent climatic events have rendered a significant proportion of Southern Sudan's population food insecure. Addressing this chronic challenge requires long-term engagement and concerted effort on the part of the Government and its partners with an emphasis on agricultural production and productivity.

The Government of Southern Sudan's Food and Agriculture Policy Framework (MAF, 2007) emphasizes the need for long-term engagement, while the Animal Resource Policy and Strategic Plan (MARF, 2006) focuses on addressing chronic developmental challenges facing Southern Sudan, while preparing for emergency situations. Therefore, interventions that aim to address food security should balance emergency response to save lives with longer-term recovery to mitigate food insecurity and ensure sustainable agricultural development. This PoA incorporates short- and medium-term interventions that would ensure increased production and productivity, which will eventually reduce vulnerability to food insecurity.

Since 2001, FAO's interventions in Southern Sudan have sought to save people's lives and livelihoods (by protecting them and their livelihoods during emergencies) and provide immediate assistance (during or immediately after a disaster). FAO's emergency interventions in Southern Sudan have tended to be dominated by seed distribution and animal health activities. The 2010–12 PoA will limit direct input transfers primarily to households that have lost a significant portion of their productive assets and who risk extreme poverty if not provided with the basic inputs required to enable them to resume production.

Geographically, it is anticipated that the response will continue to be important in Jonglei and Upper Nile, as well as other states in which asset stripping is strongly linked to displacement. The reasons for this strategy are detailed below. Through its activities, this PoA is adopting a DRM approach, whereby preparedness/mitigation and transition receive more attention than was previously the case. This adjusted strategy is a clear reflection of the current needs, as described in Section 1, as well as the likely scenario in 2010–12, and follows the twin-track approach being applied by FAO for food security.

The twin-track approach

Since 2002, FAO, WFP and the International Fund for Agricultural Development have been advocating a twin-track approach for hunger reduction. "The twin-track approach was designed for conducting both needs analysis and developing responses consistent with a rehabilitation or development perspective. Under track one, examples of response include improving the supply of food to the most vulnerable, reproducing locally improved seeds, enhancing income and other entitlements to food, re-establishing rural institutions, reintegrating refugees and displaced persons, and reviving access to credit and saving mechanisms. Under track two, the critical actions include re-establishing markets, providing food aid, cash transfers and social relief and rehabilitation programmes and contributing to peacebuilding efforts" (Flores, 2007). In practice, the twin-track approach ensures that the multidimensional aspects of food security are properly addressed and that long- and short-term food security problems are brought into the same framework.

This approach embraces the widely accepted World Food Summit (2006) definition that reinforces the multidimensional nature of food security and includes food access, availability, food use and stability. FAO's twin-track approach for fighting hunger combines sustainable agricultural and rural development with targeted programmes for enhancing direct access to food for those most in need.

Table 2 - The twin-track approach and the dimensions of food security

	Availability	Access	Stability
Track one: Rural development/ productivity enhancement	• Enhancing food supply to the most vulnerable. • Improving rural food production, especially of small-scale farmers. • Investing in rural infrastructure. • Investing in rural markets. • Revitalization of the livestock subsector. • Resource rehabilitation and conservation. • Enhancing income and other entitlements to food.	• Re-establishing rural institutions. • Enhancing access to assets. • Ensuring access to land. • Reviving rural financial systems. • Strengthening the labour market. • Mechanisms to ensure safe food. • Social rehabilitation programmes.	• Diversifying agriculture and employment. • Monitoring food security and vulnerability. • Dealing with the structural causes of food insecurity. • Reintegrating refugees and displaced people. • Developing risk analysis and management. • Reviving access to credit system and saving mechanisms.
Track two: Direct and immediate access to food	• Food aid. • Seed/input relief. • Restocking livestock capital. • Enabling market revival.	• Transfers: food/cash-based. • Asset redistribution. • Social relief, rehabilitation programmes. • Nutrition intervention programmes.	• Re-establishing social safety nets. • Monitoring immediate vulnerability and intervention impact. • Peacebuilding efforts.

2.1 Dwindling agricultural production

The decline in agricultural production is a real concern. Production can be improved through a variety of mechanisms: distribution of inputs; support to livelihoods diversification; technology transfer; promoting conservation agriculture (CA); and adapting strategies to climate change.

Direct input distribution

Seed and hand tools are basic inputs for agricultural production in all ten states of Southern Sudan. The FAO emergency and rehabilitation programme has been at the forefront in providing these much needed inputs. Over 250 000 returnees, IDP and vulnerable resident households received seed and tool assistance in 2008 and 2009. Emergency seed assistance contributed 51.6 percent and 53 percent of the total production of the crop types distributed to beneficiary households in 2008 and 2009, respectively. Although the average total production per household fell short of the annual household energy requirement by 4 to 5 months, production from the seeds provided by FAO alone was enough to sustain beneficiary households for more than four months. There is still a need for input distribution, especially in combination with measures that support the diversification of livelihoods.

Livelihoods diversification and technology transfer

Depending on their geographic location, households rely on one or more of the following livelihood activities: cattle rearing, crop production and fishing, with other activities (such as collecting wild food, hunting and trade) providing supplementary sources of food.

Crop production tends to be rainfed and is heavily dependent on climatic conditions, while livestock production is affected by disease outbreaks, drought and insecurity linked to cattle raiding. Fishing, too, is limited by poor access to appropriate fishing gear and high post-harvest losses.

Despite Southern Sudan's abundant water resources, there is still minimal small-scale irrigation during the dry season. Traditional hand irrigation is carried out in riverbeds during the dry season for tobacco and local vegetable crops. Beekeeping exists as an untapped potential activity that could offer families an alternative source of food. However, it is not widely practiced in Southern Sudan. Poultry production also tends to follow traditional practices, with limited productivity and resulting in high levels of imports from neighbouring countries. Prolonged conflict has left many returnees and IDPs with limited or no animals. There is a real need to provide targeted households with alternative livelihood options to increase their access to food.

Support to vegetable production and small-scale irrigation technology

Vegetable production is one of the most successful income-generating activities promoted by FAO in Southern Sudan. The short growing period for most vegetables provides families with a fast source of food and income (especially during lean periods), as well as a cheap source of vitamins (during the dry season).

FAO has been providing treadle pumps in areas along the Nile and Sobat Rivers, which pass through a number of states (Eastern and Central Equatoria, Jonglei and Upper Nile), and areas with high water tables (Northern Bahr el-Ghazal and Warrap) in support of dry-season vegetable production. Women and youth groups have been the main focus of these activities.

Vegetable production has become a stable source of income, particularly for returnees, women and young people. For example, the members of the Pacong Women's Vegetable Group in Rumbek East, which received assistance from FAO through Women for Women, now earn between USD 60 and USD 100 each per month. In Jonglei state, youth groups that received support from FAO and the SMoA have been practicing dry-season vegetable production for a number of years and now earn between USD 4 000 and USD 10 000 from each feddan of land planted, depending on the type of vegetables grown.

Conservation agriculture

CA aims to achieve sustainable and profitable agriculture and, therefore, improve farmers' livelihoods, through the application of three principles: minimal soil disturbance, permanent soil cover, and crop rotations. CA has tremendous

potential for all farm sizes and agro-ecological 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 agro-ecological zones and farming systems. Owing to its potential, FAO is actively promoting CA, which integrates different areas of technical expertise, and aims to facilitate its implementation throughout the Sudan as it impacts on a number of aspects linked to the decline in agricultural production.

In 2009, FAO introduced CA in order to minimize the environmental impact of conventional tillage using the mouldboard plough. Four sets of CA tools have been introduced and promoted: the Magoye ripper, animal-drawn direct planter, subsoiler and jab planter. Although it is still too early to determine the impact of CA at the household level, it has attracted considerable attention from other stakeholders (the Government and NGOs), as well as farmers, as it reduces the amount of labour required while minimizing environmental degradation.

Local organization for local souring of hand tools

In most of Southern Sudan, the majority of farming households use hand-held tools such as the African hoe (jembe) and flat-bladed, long-handled hoe (maloda). Evidence from a number of assessments indicates that 93 percent of farmers use traditional hand tools while the remainder use animal traction for land preparation (CFSAM, 2009). In 2009, approximately 60 percent of the hand tools and 95 percent of the ox-ploughs distributed to at-risk households in Southern Sudan were through the FAO programme. While all the jembe were sourced from outside the country, a significant proportion of malodas were procured through local blacksmiths. External procurement of malodas accounted for about 70 percent of those distributed to beneficiaries in 2008 and 2009. A total of 25 blacksmith organizations were involved in manufacturing malodas. They were initially provided with training and tools by FAO. In 2010, a similar approach will be extended to the production of ox-plough parts to ensure communities have access to ox-plough accessories in their own localities.

Supporting the production of local tools

In some parts of Southern Sudan, the maloda, a local hand tool for cultivation, is very much preferred. FAO has given significant support (inputs and training) to local blacksmiths to fabricate this tool. Local production and supply accounted for about 30 percent of the tools distributed by FAO in 2008 and 2009 which has reduced the need to source malodas outside Southern Sudan, as well as the cost and time to acquire these tools.

Blacksmithing is an income-generating activity that supports the livelihoods, not only of the blacksmith, but also of the farming communities receiving their products and services.

Promotion of animal traction to increase production

Animal traction in Southern Sudan dates back to the early 1970s. FAO is promoting it as the most appropriate technology to expand the area under production. A proportion of households in Southern Sudan have adopted animal traction, particularly

in Lakes and Warrap states. Through animal traction, the area under cultivation per household can be increased by between 4 and 8 feddans (a 100 to 400 percent rise compared with the use of hand tools), resulting in greater food production to meet household food needs and generate income through marketing the surplus. The local seed recollection programme has been targeting surplus production from those who use animal traction for cultivation.

Fisheries: an untapped resource

Fishing activities provide critical livelihoods support to many households along the Nile and Sobat Rivers and the numerous small water bodies (swamps, ponds, dams, streams and lakes) in Southern Sudan. Even the floods bring positive results in the form of abundant fishing. Southern Sudan has the potential to harvest 300 000 tonnes of fish from the Nile and other inland water resources. Currently, only 10 percent of this is fished in the rivers and swamps every year in Southern Sudan.

To support the communities along the main rivers and water bodies, FAO has been providing fishing kits with hooks and twines, ensuring that fishers have an adequate supply of protein as well as income from the sale of their catch. Many of beneficiaries have since abandoned traditional methods of using poisonous roots, fruits, barks, and wild onion for the indiscriminate killing of fish and other aquatic animals. This has had a significant impact on the aquatic environment and has helped fishers exploit aquatic resources in a sustainable manner.

Based on its considerable expertise and experience with fisheries, FAO has promoted the use of wooden, flat-bottom timber canoes instead of dug-out canoes through skills training in boat-making. Dug-out canoes are unstable, unsuited to some environments and waste wood (a tree per canoe), making them environmentally destructive. The promotion and adoption of modern canoes has significantly reduced the cutting down of big trees, particularly palm trees (by 50 percent), and reduced the threat to lives of the unstable dug-out. Training on net-braiding using spools and twines has provided a livelihood opportunity for disadvantaged members of the community, including disabled people and women, making them an integral part of Southern Sudan's small-scale fisheries.

A regular training programme for fishers has led to an increased local supply and availability of fish, which provide a cheap source of protein. Training in fish processing and preservation techniques has greatly reduced post-harvest losses by extending the shelf-life of products and reducing the damage caused by maggots and attacks by dermestid beetles.

Promoting adaptation strategies to climate change

Increased intensity and frequency of storms, drought and flooding, altered hydrological cycles and precipitation variance have implications for future food availability. Climate change and variability are among the most important challenges facing a number of countries in sub-Saharan Africa including Southern Sudan, where 90 percent of agricultural activity depends on rainfed production.

Given the changes in precipitation and hydrology, temperature, length of growing season and frequency of extreme weather events, actions are required to mitigate the impact of climate change on rural communities. Mechanisms such as farmers adapting to different rainfall patterns by changing the type of crop grown or using different harvesting and/or sowing dates will be tested and promoted among farming households.

Land tenure

As is the case elsewhere in sub-Saharan Africa, land tenure and access to natural resources are among the key structural factors contributing to poverty and outbreaks of violent conflict. Land is not just a means of survival or material gain, it has profound religious, cultural, social and political significance for people in Southern Sudan. Land is an extremely sensitive issue and was not addressed in depth during the negotiations that led to the signing of the CPA.

The majority of Southern Sudan's population depends on land and natural resources for its livelihood. Secure access to land for the rural poor is essential to the process of post-conflict recovery and promotion of sustainable rural development and, most importantly, food production at the community level. Improving people's knowledge of their land rights will make these rights real, allowing the right holders to invest in the land and improve their livelihoods. The land rights of the people of Southern Sudan have been guaranteed in the Interim Constitution of Southern Sudan (2005).

Secure land tenure in a post-conflict situation – particularly for poorer and more vulnerable groups – is key to poverty reduction and should be guaranteed through appropriate policies and legislations that protect the land rights of the poor. Women's tenure rights, which are often considered subservient to those of men, require particular attention. In Southern Sudan, as in other developing countries in Africa, women are the main users of land and play a key role in food production. Continued land tenure insecurity, due to prevailing customary norms and practices that discriminate against women, will profoundly affect household and community food security.

Food availaibility

The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports.

FAO Policy Brief on Food Security, 2006

Competition over access to and use of natural resources, particularly water and pasture land, is the main driver of inter- and intra-ethnic conflict. This is exacerbated by the growing population and impact of climate change-related events such as floods and drought, which have reduced the natural resources on which livelihoods depend, thereby intensifying competition over access. This can become violent and lead to the displacement of people from their sources of livelihood and destruction of their livelihood assets, compounding an already fragile food security situation. It is critical that mechanisms for resolving resource-based conflicts be supported to ensure the recovery and development of sustainable livelihoods.

FAO's suggested programme

Overall in Southern Sudan the priority is to increase agricultural production, learning from successful current practices described above and empowering target beneficiaries to apply alternative livelihood activities to increase their access to food. FAO will support the diversification of households' livelihoods through the promotion of technologies to enhance productivity like micro-irrigation for vegetable production, animal traction to expand cultivation, and alternative livelihood activities (such as poultry production and beekeeping) in targeted areas of Southern Sudan. The above will also improve households' resilience to disasters.

FAO will continue to support returnees, young people and women, particularly through vegetable production, which has proven to provide a stable source of income for many families. The distribution of vegetable seeds and hand tools (hoes, machetes, watering cans) to vulnerable households enables them to produce vegetables for their own consumption and for sale in local markets. FAO is promoting vegetable production in backyard gardens and small land areas to increase household food security.

Female-headed households and primary school teachers have been trained in vegetable and fruit production using locally available resources. This continued assistance will enable the beneficiaries to improve the nutritionals status and vitamin-intake of their children, as well as provide their families with a source of income long after project activities have finished. To supplement these interventions, FAO will continue to conduct training activities throughout Southern Sudan on the production, use and maintenance of treadle pumps in order to encourage non-rainfed farming methods and CA techniques.

The immediate objectives of FAO's fisheries interventions are to acquire, distribute and make available fishing equipment to the primarily subsistence-oriented fishing communities. This will increase fish catches for human consumption, re-establish coping mechanisms, raise the amount of income generated, and improve communities' absorption and reintegration of returnees.

FAO uses a two-pronged approach for its fisheries activities:

1. It increases the availability and home consumption of fish proteins by making available essential fishing equipment (hooks, twines and floaters), with the objective of reaching IDPs, returnees and host communities in selected areas of Southern Sudan.
2. It trains beneficiaries in improved fish processing techniques, net-making and boat-building. This aims to train and expose beneficiaries to new techniques and skills in fisheries.

Efforts to adapt to climate change through an integrated approach to land and water management to secure sustainable development and food security will be promoted among rural farming communities in Southern Sudan. The following approaches will be adopted for activities related to land tenure and the resolution of land- and natural resource-based

conflicts: (i) implementing tested methodologies for community land-use planning, natural resource management and stakeholder dialogue on land tenure issues; (ii) carrying out studies on customary land tenure and conflicts in selected conflict-affected areas; (iii) promoting the alternative dispute resolution (ADR) mechanism for land-based conflicts; and (iv) mapping/GIS of water for livestock resource development, traditional range use and management, and institutional capacity development in land administration, policy and law development.

2.2 Reduced food accessibility

Since the signing of the CPA in 2005, the general food-security situation in Southern Sudan has improved. The average yield estimate for traditional cereal production was 24 percent higher in 2008 than in 2007 (CFSAM, 2009). Similar improvements were noted by partners in the production and yield of legumes, oil crops, and roots and tubers. However, these are threatened by poor post-production techniques for processing, handling and storage. While 2008 did see a better performance in cereal production, there was a 20 percent fall attributed to post-harvest losses.

Improved processing and post-harvest handling

Post-harvest losses, in quantity or quality, should be minimized if improved crop performance is to be translated into greater food security. Quantity losses can occur as a result of inconsistent harvest methods, spillage during transportation, or damage by pests causing reductions in weight or volume. Quality losses can occur as a result of poor processing, drying and storage methods. This can lead to changes in colour, smell or taste; contamination by toxins, pathogens, insects or rodent excreta; a reduction in nutritional value; or a loss of viability if the harvest is meant to be used as seed.

FAO has been promoting improved post-harvest and processing technologies. In Magwi county (Eastern Equatoria state), FAO introduced motorized cassava chippers and improved drying methods. This drastically reduced labour requirements, increased output (800 to 1 000 kg of fresh cassava chipped in an hour), and shortened the cassava drying time from 5 to 7 days (with traditional methods) to 1 to 2 days depending on the weather, thereby reducing the time required for women to attend to the cassava during drying. Above all, there has been a significant improvement in the quality (pure white) of the product (cassava chips) compared with the discoloured and often mouldy cassava chips prepared in traditional ways.

Conditional and unconditional livelihood resource transfers

Critical acute food insecurity was forecast for 2009 and beyond owing to the failure of the main season's rains in most areas. Widespread ethnic conflict and LRA attacks in 2009 made a fragile food security situation worse. The cycle of violence and displacement and erratic rainfall are likely to continue in 2010 and beyond. In this scenario, appropriate DRR measures will be required to address critical food gaps and protect the lives and livelihoods of vulnerable communities. FAO's approach will include directing several interventions (distribution of seeds and tools, access to cash-for-work opportunities and training in community-based disaster risk mitigation) to stabilize food availability for the most at-risk households.

Markets

Markets must function effectively in order to achieve food security and economic growth. However, protracted conflict has meant that markets in Southern Sudan have not functioned for decades. A lack of infrastructure, insecurity, absence of an information system, lack of market extension, absence of transport and other factors have resulted in inefficient markets and led to dependence on imports from North Sudan and neighbouring countries. Following the signing of the CPA and relative peace since in Southern Sudan, there have been signs that markets are improving. Despite this, markets remain under-developed and reliance on the import of food and other commodities continues to be a key challenge facing Southern Sudan.

Effective macro, trade and agricultural policies are required to stimulate market development, revitalize local production and gradually reduce dependence on imports. A reliable and timely market information system is of critical importance for producers, traders, consumers and policy-makers to enable them to make informed business and policy decisions. The Sudan Institutional Capacity Programme: Food Security Information for Action (SIFSIA) has recently established a pilot market information system in Southern Sudan, which covers markets in the ten state capitals. Real-time price information for major crops, livestock and fisheries products is being made available online and will soon be available in SMS form. This pilot market information system covers only a limited number of markets and commodities owing to a lack of financial and human resource support to the Government of Southern Sudan and state counterparts.

Therefore, significant investment is needed to increase the technical knowledge of Government counterparts, and scale up and out the system's coverage in order to provide comprehensive information to a wide range of stakeholders. Market information, in addition to facilitating trade and stimulating markets, will enable the Government, donors and other development and humanitarian partners to plan, implement and monitor appropriate policies, strategies and programmes for economic growth.

FAO's suggested programme

For current and future programming, the aim is to tackle the root causes of food insecurity – this means promoting not only productivity growth but also activities that target access issues. FAO's suggested programme aims to include interventions (distribution of seeds and tools, access to cash-for-work opportunities and training in community-based disaster risk mitigation) to increase households' access to inputs and ways to increase income diversification. This will help stabilize access for poor households to the minimum food basket.

The proposed FAO intervention will also focus on minimizing losses arising from poor post-harvest handling. The programme aims to promote appropriate post-harvest techniques (drying, processing and storage) in all ten states of Southern Sudan, and will target extension agents, local artisans (blacksmiths) and farming households. The intervention envisages a wide adoption of improved post-harvest handling techniques and a storage system that will reduce the current level of post-harvest losses (20 percent) to less than 10 percent, thereby further improving food security in Southern Sudan.

A functioning market information system covering major commodities and markets in Southern Sudan is vital to ensure the improved functioning of rural and urban markets, and greater market transparency and efficiency. FAO will support the process of consolidating the collection and analysis of market information in the Government of Southern Sudan and the ten states.

2.3 Food production

Extension services

At present, the Government lacks the capacity or capability to provide extension, research, financial services and marketing support to farmers. Almost all the inputs and limited technical service backstopping that has been available over the last two decades has been associated with the relief effort, including the provision of seeds, tools, animal health services, fishing equipment and training, by international agencies, donors and NGOs. These activities were often provided as a supplement to food distribution interventions. Over the last few years, these organizations have increasingly focused on longer-term development rather than just emergency response. Some progress has been made, particularly in the introduction of properly tested seeds, ox-plough cultivation, improved tools and the piloting of micro-credit approaches and agribusiness initiatives. However, few of these interventions have involved any significant consultation with or participation of the recipients. Experiences and results with agricultural advisory services have been limited to interventions by NGOs and UN agencies such as FAO.

Farming systems in Southern Sudan comprise a mixture of crop and livestock production, fishing and forestry activities. Productivity is very low in the crop and livestock subsectors owing to inappropriate and inefficient farming practices, declining soil fertility, low quality seeds, animal health problems, lack of vaccination services, lack of effective extension services, and the inadequate or lack of involvement of non-state actors. Extension services are so weak that there are virtually no services available at and below the county level. In areas where such services are available, they tend to be top-down and based on "delivery", with farmers seen as passive beneficiaries with no role in decision-making.

With the relative peace in Southern Sudan, the Government is committed to formulating agricultural and livestock extension services that are inclusive and participatory and that promote the empowerment of small-scale farmers to enable them to meet their specific needs based on their own priorities. Farmer Field Schools (FFS) and grassroots services through community animal health workers (CAHWs) have been seen as key mechanisms to promote group-based, inclusive and participatory approaches to address livelihood (crop, livestock, fisheries, forestry) needs based on farmers' needs and priorities and to strengthen grassroots services for these subsectors.

First tested in Indonesia, as Sekolah Lapangan, with FAO's support, the FFS have proven to be an effective means of providing technical support and building farmers' capacity. Farmers generate knowledge that is functional and necessary to improve their production and livelihood potential. It also helps to empower farmers as they are both the users and owners of the knowledge.

Similarly, in Southern Sudan, community-based animal health service provision was developed, applied and championed through the CAHWs network during the conflict. This proved to be a highly effective tool for the eradication of rinderpest in Southern Sudan and provided much-needed animal health services at the community level. However, after the signing

of the CPA and establishment of the Government, donor support to the CAHW system has almost completely disappeared, creating a vacuum between service providers and livestock farmers. Of nearly 4 000 trained CAHWs, only about half are functioning and they urgently need refresher training, basic tools and veterinary kits. Cold chain facilities, which are vital for sustained animal health service provision, have deteriorated, making vaccination programmes difficult.

Seed system security assessment (SSSA)

Seeds are the basic inputs in agricultural production and are a central part of farmers' lives worldwide. In Southern Sudan, farmers normally obtain the seeds they need from various sources such as seed selected from grain; exchanged, bought, borrowed or received as a gift from neighbouring families, friends or in-laws; and from emergency, rehabilitation and development interventions. Farming families are seed secure when they have access to seed (and planting material) of adequate quantity, acceptable quality and in time for planting. Seed security is best framed within the broader context of food and livelihood security. Helping farmers to obtain the planting materials they need will enable them to produce both for their own consumption and for income generation.

Achieving seed security is quite different from attaining food security, despite their obvious links. One can have enough seed to sow a plot but lack sufficient food to eat, for example during the lean period prior to harvest. Conversely, a household can have adequate food but lack access to appropriate seeds for planting. In the latter case, a family may have plenty of grain suitable for food but not as seed or may lack access to the desired varieties. Despite the clear differences between food security and seed security, determinations of the seed-security situation in Southern Sudan have been largely based, implicitly or explicitly, on needs and livelihood assessments or CFSAM (the former led by WFP and the latter by FAO and partners). These have a broader scope of needs for cereal and a very limited scope for seed security or seed systems.

Understanding what happens to seed systems during or after disaster has become markedly more refined in other countries, providing greater insight into seed-security constraints, which are key to agriculture sector recovery and development. Analyses have shown that seed systems need to be analysed to gear appropriate seed-related responses: seed systems, farming systems, markets and livelihood systems. A comprehensive SSSA will therefore offer an opportunity to review the functioning of seed systems in the formal and informal sectors and promote strategic thinking about the relief-recovery-development continuum in order to effectively respond to seed insecurity in Southern Sudan.

Community-based seed production and supply

Emergency seed interventions have been implemented in Southern Sudan for over a decade. FAO's ERCU has been at the forefront in providing much-needed seeds to returnee, IDP and vulnerable resident households. No formal seed production, and therefore no certified seed production, exists in Southern Sudan. Initially, the bulk of emergency seed aid was procured outside Southern Sudan, mainly from Kenya, Uganda and North Sudan.

To minimize reliance on international procurement, FAO initiated a community-based seed production project, which empowered local communities to produce quality seed for their own use and for sale in potential markets. The project built the capacity of both extension agents and farmers in five states of Southern Sudan. Significantly, the quality of some crop seeds and planting materials (groundnut, bean and cassava) produced improved. Laboratory seed tests showed an improved germination of maize (98 to 100 percent), beans (86 to 90 percent) and groundnut (86 to 100 percent), while field monitoring data indicated a reduced incidence (less than 5 percent) of CMV-affected plants in multiplication fields with improved cassava varieties.

For the first 2010 cropping season, seeds produced by local farmers contributed over 400 tonnes of quality seeds of adapted crop varieties to the emergency seed aid (90 tonnes) through seed recollection (350 tonnes) for general distribution or input and seed trade fairs. This significantly contributed to the reduction in seed imports, and partly addressed concerns about adaptability and aspects of seed quality.

Since 2000, FAO has been supporting agricultural production by providing seeds, hand tools and animal traction equipment; fisheries production through distributing fishing gear; and livestock production by supplying vaccines and drugs and supporting the cold chain system throughout Southern Sudan. More than five years ago, most of the inputs distributed by FAO were externally sourced. However, this has begun to change with the proportion of seeds sourced locally reaching 60 percent of all seeds supplied in 2009. FAO works with a number of local organizations to source local seeds and tools for stocks to facilitate the emergency provision of these items to different locations in Southern Sudan.

Cassava as a famine reserve crop

Cassava is a staple food in the greater Equatoria region of Southern Sudan. The population's food security, which depends on this crop, was threatened by the introduction of CMV in the region. FAO supported the multiplication, promotion and adoption of improved, high yielding, disease-resistant varieties of cassava in the region. This has resulted in reduced prevalence and incidence of the disease and restored the food security of communities growing cassava as a staple crop.

Local organization for seed re-collection

The majority of seeds were sourced externally due to the absence of formal seed production systems in Southern Sudan. Over the last five years, FAO has worked closely with various partners to source seeds of locally adapted crop varieties through seed re-collection programmes in which seeds are purchased from local farmers.

In 2009, some 25 organizations were subcontracted to re-collect seeds. Of these, 20 were local and 5 were international organizations. They were subcontracted through Letters of Agreement that detailed the activities to be carried out, including type and quantity of seeds to be re-collected, the re-collection points and the destination of the seeds. These partners worked closely with farmers' organizations, and with an expert or extension agent from the SMoA to identify good seed producers and growers (preferably ones previously provided with good quality seed by FAO). In addition, they organized seed quality testing. The re-collection and bagging of the seeds were done once the quality of the seeds was certified by a competent authority (in this case, SMoA officials). This resulted in the re-collection and redistribution of 350 tonnes of seeds in 2009.

Seed production, re-collection and seed fairs

The community-based seed production and supply initiative broadened the scope of seed/food security and provided an opportunity for: (i) developing the seed sector; (ii) reducing seed imports by 42.7 percent in 2008 and 54.7 percent in 2009; and (iii) ensuring that quality seeds of locally adapted crop varieties were available to populations that needed them. In 2009, some 800 farmers trained in seed production were able to produce 500 tonnes of seeds, of which about 300 tonnes were channelled into the general seed assistance and about 90 tonnes were absorbed into seed fairs in 2010.

The seed and input trade fair (ITF) approach adopted in some states has encouraged seed growers to practice market-oriented seed production, with cash received during these fairs acting as a massive incentive. This has been one of the most appropriate strategies to reach those in need of seed aid, particularly in locations where seeds are available but access for some members of the community (especially IDPs and returnees) is difficult.

Livestock productivity

Southern Sudan has an estimated 8 million head of cattle and the contribution of livestock to pastoral and agropastoral communities cannot be underestimated. Given the significant herds of animals and nomadic lifestyle of pastoral communities, livestock production faces considerable challenges related to disease or socially- and politically-motivated conflict over resources. Livestock owners have limited access to veterinary services and are, therefore, at risk of losing a vital asset or failing to realize the full potential of their animals.

To overcome this, FAO has been training local populations on basic veterinary principles through the CAHW programme. CAHWs are trained and equipped to diagnose, prevent and treat the main livestock diseases in their communities. They also disseminate relevant extension information regarding improving livestock production and husbandry. FAO, through its network of partners, has trained and equipped over 170 CAHWs in the last two years. This has broadened the scope of disease surveillance and provision of animal health services to communities in need of support. Although the prevalence of a number of diseases remains high, there has been significant progress made in reducing morbidity and mortality among animals through control and preventative measures such as vaccination and treatment.

FAO has also been providing vaccines and veterinary drugs through its partners and MARF. The Organization supports a well-established cold chain network to ensure the viability of drugs and vaccines in about 120 strategic locations across Southern Sudan. The vaccination programme has helped to reduce the risk of disease for 30 percent of Southern Sudan's livestock population.

In addition, FAO has played a central role in ensuring that animal products (meat, milk, blood, etc.) are safe for human consumption. Slaughter slabs have been constructed in major towns, including Torit, Kapoeta, Kyala, Aweil, Kuajok, Gogrial, Akon and others, with support from FAO. Meat inspectors have also been trained and have contributed to a reduced risk of animal diseases spreading among consumers.

Integrated pest and disease management (IPDM)

The prevalence of pests and diseases has significantly limited the attainment of higher yields in all crops, but particularly with vegetables, where losses of up to 100 percent have been reported. As noted in the 2008 CFSAM, the prevalence of pests and diseases is attributed to a lack of crop protection extension services and, therefore, lack of access to information and inputs for pest and disease management among farmers. While the Government has restricted the use of inorganic chemicals, including pesticides, the threat to agriculture from pests and diseases remains high owing to the absence of appropriate strategies and alternatives for pest and disease control.

FAO's suggested programme

FAO plans to establish 1 000 FFS (200 per state) and continue ongoing activities. Training of trainers' sessions will be organized, particularly to engage NGOs and CBOs in the FFS methodology. Refresher training will be conducted for CAHWs and revolving funds set up to support veterinary pharmacies.

Community-based seed production and supply initiatives and ITF approaches will continue to be promoted throughout 2011 and an SSSA will be carried out to strengthen understanding of seed security in Southern Sudan.

FAO will support the Government in consolidating and strengthening existing animal health coordination mechanisms to ensure the most effective outcomes of overall livestock development assistance. Management of the existing cold chain system for vaccine storage will be reinforced through the procurement of fridges, vaccine carriers, cool boxes and moving spare parts for facilities. In addition, appropriate vaccines will be procured and distributed to different locations. FAO will also support the newly-established laboratories in MARF through procuring equipment and reagents. Assistance will also be provided in developing the capacity of laboratory staff through technical and specialized training, and strengthening the surveillance and control of transboundary animal diseases (TADs), including emerging zoonotic diseases such as H5N1 Highly Pathogenic Avian Influenza (HPAI), H1N1 and Rift Valley fever (RVF).

An IPDM strategy will be adopted to coordinate economically and environmentally acceptable methods of pest control with the judicious and minimal use of toxic pesticides. This will involve a range of activities including the careful assessment of local conditions (such as climate, crop characteristics, agricultural practices, soil quality and Government regulations). The goal of this is to maintain the current minimal use of chemicals in crop production, while keeping pests and diseases to an economically manageable level. The safe use of chemicals in some circumstances, such as vegetable production, will be promoted through training farmers and dialogue with MAF on the safe use of toxic chemicals to control pests and diseases of economic importance.

2.4 Cross-cutting activities

FAO will also pay close attention to three cross-cutting issues that affect food security and livelihoods in Southern Sudan.

Early warning systems

The definition of an early warning system depends on the purpose of the system, its institutional structure and role, the scope of activities and the type of information products produced. Many systems focus on agroclimatic and food supply monitoring, while others are developed in the context of DRR/M (International Strategy for Disaster Reduction, 2002). A comprehensive early warning system covers aspects of food security that examine supply, access and nutrition, and after rigorous analysis provides information to warn a country months in advance of a serious impending food-insecurity situation. Such systems seek to help prevent or respond to food insecurity by providing decision-makers with specific information about hazard conditions or declining crop yields, based on the assessment. The establishment of a demand-driven system is critical to the effectiveness and long-term sustainability of an early warning system.

In the 1990s, early warning systems tended to focus on rainfall and vegetation and forecast expected agricultural production. Food security has become much more complex and to provide reliable early warning information based on which decisions can be made, food security analysts need to combine agricultural production maps, data and satellite imagery with local market prices and trade inflows and outflows, and information about local livelihoods in order to determine what can be purchased locally, what can be brought in and what people can afford.

The SIFSIA programme was designed to establish an information system for food security in Southern Sudan. During the inception period, it became clear that the programme design did not allocate resources for the states from which the food security information would be collected. After the mid-term review, there was a strong recommendation that resources be allocated to the states for food security data collection. SIFSIA re-allocated some resources to the states, but this has not been sufficient. The current livelihood information and livelihood zones were developed many years ago and should be reviewed as livelihood sources have changed considerably in the context of relative peace. This is critical for a proper understanding of food insecurity and vulnerability.

Agricultural statistics

With market-related activities being developed, there is an urgent need to build the states' capacity to generate agricultural statistics and realize their full potential. Currently, agricultural statistics in Southern Sudan are generated by the WFP/FAO CFSAM and presented as combined cereals, without disaggregating individual crops. It is known that procuring agricultural produce from rural communities empowers these communities. However, if this is done without clear information on quantities being produced in particular localities, this could push communities into food insecurity as all their production could be purchased and shipped to other regions.

Nutrition

Agriculture and food security interventions have a key role to play in improving nutrition. However, this impact must be fostered by ensuring 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, CSOs 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 and thus the achievement of FAO's SOI.

FAO's suggested programme

There is a need to address cross-cutting issues that take into account national and international policies and issues that affect the public sector, coordination of the Food Security and Livelihoods (FSL) Cluster and countrywide measures that support peace and security.

FAO will build on existing food security information activities, taking into account critical partnerships in data collection and food security analysis, which have been shown to help overcome human resource constraints, improve the quality of analysis and strengthen capacity. In this context, the Government of Southern Sudan will work with development partners, NGOs and universities. Extensive capacity building will be conducted in the five states because the way in which information is collected, analysed and disseminated is critical to its use in decision-making and supporting timely national responses to transitory food and nutrition crises. The early warning system will be part of an expanded food security information

and analysis system and will be enhanced to produce viable, relevant and credible information for use in responding to short-term emergencies, as well as contributing to longer-term development programming.

The programme will build on existing SIFSIA activities, taking into account critical partnerships in data collection for agricultural statistics and analysis, which have been shown to help overcome human resource constraints, improve the quality of analysis and strengthen capacity. In this context, the Government of Southern Sudan will work with development partners, NGOs and universities. Extensive capacity building will be conducted in five states (Western and Central Equatoria, Western and Northern Bahr el-Ghazal and Upper Nile) to standardize agricultural production data collection methodologies. Similar methodologies for data collection, analysis and dissemination are critical for decision-making and stimulating market response. Agricultural statistics data collection will be part of the SIFSIA food security information and analysis system and will assist in empowering communities through credible information systems, which highlight the potential of the indicated states as a source of agricultural produce without jeopardizing the food security of farming communities.

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. This will be done through active participation in relevant policy-making and programming exercises to ensure nutrition is effectively addressed by the FSL Cluster, and training of partners on how to integrate nutrition aspects in their food security and livelihoods work.

2.5 Cross-cutting themes

As well as the issues highlighted in the previous section, a number of themes cut across FAO's planned programme for Southern Sudan, including: (i) continued support to the FSL Cluster; (ii) continued support at the institutional and decision-makers levels; (iii) gender issues; and (iv) a continued effort to support peacebuilding.

Support to the FSL Cluster

The FSL Cluster has been operational in Southern Sudan since 2004. It is co-led by FAO and WFP and has a strategic focus on preparedness and response to food-security emergencies. Coordination of the sector is an overarching strategy ensuring coordinated planning and response, better reporting and partnerships. FAO has been facilitating the coordination process, which has resulted in improved sharing of information, coordinated response to food-security emergencies and better partnerships.

In the current context of food insecurity and extended food gaps, increased grain prices and poor terms of trade, the strategic focus of the Cluster is to provide appropriate humanitarian packages to vulnerable individuals and households in the form of food assistance, agriculture and livelihoods start-up kits, and resource transfers in order to protect and restore their food security. The Cluster also supports preparedness and response to TADs by enhancing the capacity of Government institutions

and community groups to provide agricultural and livelihood support services. Coordination will help build synergy among partners, identify gaps and prevent the overlap and duplication of interventions.

The FSL Cluster continues to play a vital role in improving the livelihoods and food security of vulnerable groups such as returnees, IDPs and poor households throughout Southern Sudan. It also plays an important role in improving access to agricultural inputs, particularly crop seeds and tools to facilitate food production, fishing gear to improve catches, and vegetable seeds for better production, with fishing and vegetable production important alternative livelihood activities for returnees and other at-risk households.

FAO will continue to provide leadership in coordination, which is necessary to determine the available response capacity and requirements; allocate scarce resources where they are needed most; start or further develop new partnership relationships; determine who should be involved in what and when; and increase a sense of commitment to shared goals and greater continuity/cohesiveness.

Support at the institutional and decision-makers level

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. Through the implementation of the SIFSIA, FAO is already involved in strengthening policy and planning initiatives related to food security and market information systems. However, more needs to be done in early warning in order for it to be effective and ensure risk reduction in the agriculture sector. FAO also recognizes that contingency plans at different levels must be complementary and appropriate linkages established for coordination and to support action along clear lines of command.

The Government of Southern Sudan and its development partners are trying to ensure some linkage between FSL stakeholders through the Budget Sector Working Group. Furthermore, FAO and WFP co-chair with the Government the FSL Cluster coordination both at the national and state levels where stakeholders meet and exchange information regarding food security and livelihoods.

The Government recently established the Southern Sudan Food Security Council (FSC) chaired by the President of the Government of Southern Sudan to lead policy issues relating to food security at the highest level. The Government also established the Food Security Technical Secretariat (FSTS) with support from the European Union (EU)-funded SIFSIA programme currently being executed by FAO. Further technical and financial support is required to strengthen the capacity of the various institutions including the ministries/commissions, FSTS and FSC if food security is to be addressed in a meaningful manner. In addition, substantial institutional capacity building is required at the state level to deal with food insecurity effectively. Food security responses by the Government and partners will need to consider the traditional

institutions during the planning and executions of interventions. Therefore, concerted efforts on the part of the Government and its development partners are needed to support community-level institutions if food security interventions are to be effective.

Gender

Although women in Southern Sudan constitute the majority of subsistence farmers and perform most of the agricultural tasks, their access to knowledge and training programmes for effective farming practices and crop production, and linkage to resources and markets is very limited and not formalized as a policy. Current interventions conducted by FAO, such as seed distribution and agricultural training programmes have had success reaching women generally; however, efforts to specifically address gender issues need to be increased.

In addition, owing to cultural and traditional practices and legal restrictions, most women in Southern Sudan have very limited access to and control over land and resources. Farming decisions are made by husbands or male family members. In most cases, the little money gained from the sale of produce is taken by men and does not necessarily trickle down to the benefit of all household members. This threatens the sustainability and productivity of agriculture, as well as household food security.

There exists very limited diversification of household incomes and most women do not have the skills and means to work beyond household-level agricultural production. Owing to limited or no access to collateral security such as land, it is difficult for women to access loans for start up endeavours. Even if such access were available, there are very few women with sufficient education, technical skills, time or mobility to secure enough capital to pursue investment opportunities in micro-enterprise activities, which pose serious challenges to the diversification of livelihood activities.

Given this socio-economic context, understanding how men and women experience and respond to the current situation in Southern Sudan, and assessing their capacity for recovery, is essential to ensure effective emergency relief operations and rehabilitation in the framework of the PoA.

Women continue to be a group to which FAO wishes to give priority, and in order to respond effectively, our progammes will systematically incorporate the use of socio-economic and gender analysis tools to identify the most vulnerable communities. FAO will aim 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.

More rigorous efforts will be made to facilitate the more active involvement of women in the planning and ensure gender disaggregated data is obtained to adequately monitor the impact of activities.

Peacebuilding in the centre of FAO's programming

The signing of the CPA in 2005 brought unprecedented opportunities, as well as challenges, for the people of the Sudan and their international partners for consolidating the peace and improving the national humanitarian and development situation. The CPA provided for a six-year period during which national elections and a referendum on self-determination for Southern Sudan were to be held. The CPA lays the foundation for solidifying the peace and delivering peace dividends. Now, at a crucial juncture of the implementation of the CPA, Southern Sudan faces a range of governance, human security and economic recovery challenges. Particularly in the build up to the referendum, Southern Sudan is experiencing mounting instability and high levels of food insecurity and malnutrition. These continue to hamper the building of a just and prosperous peace for all citizens.

Consolidating peace is also an overarching goal of the UNDAF 2009–12, to which FAO is committed to contribute. Under the UNDAF, it was noted that a "climate of instability and competition, often over scarce natural resources, has been at the core of the challenge to peacebuilding in Sudan. In the PoA, FAO intends to make more explicit its efforts to articulate the Organization's contribution, particularly to support the peace, building national stakeholders' capacities to enable them to resolve disputes over land ownership and use, seasonal routes for livestock, and access to grazing land and water, while simultaneously identifying opportunities for dialogue around development opportunities.

3. WHY THIS RESPONSE: MANDATE, VALUES AND FRAMEWORK OF FAO IN EMERGENCIES

The response analysis was undertaken in the context of FAO's mandate, guiding values and frameworks. It draws on the Organization's future priorities, such as (i) adopting a DRM approach; (ii) responding faster and better to the needs of beneficiaries; (iii) strengthening partnerships and knowledge sharing; and (iv) using the programmatic approach to ensure that cross-cutting issues such as gender and peacebuilding are adequately embedded in all operations.

3.1 FAO's mandate

FAO's vision is that by 2020 we will all be living in *"A world free of hunger and malnutrition where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner".*

This will be achieved through the active pursuit of three **Global Goals**:

- reduction of the absolute number of people suffering from hunger, progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;
- elimination of poverty and the driving forward of economic and social progress for all, with increased food production, enhanced rural development and sustainable livelihoods; and
- sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources, for the benefit of present and future generations.

Full details of FAO's mandate, strategic framework and internal arrangements are provided in Annex 4.

3.2 Guiding values

FAO in emergencies is committed to the key humanitarian principles of humanity, impartiality, independence and neutrality. FAO has identified six guiding principles that underpin the Organization's work in DRM, to:

1. work in a participatory, people-centred, process-oriented way;
2. build on what already exists (e.g. traditional, local knowledge, already available training materials, successfully tested methods and capacities of existing institutions and organizations);
3. ensure complementarity of actions and links with other actors, including government, other UN agencies, donors, projects, NGOs, civil society organizations (CSOs) and the private sector;
4. focus on capacity development of communities and all levels of government and institutions, to support replication processes and scaling up/sideways;
5. focus on gender equality through gender sensitive needs assessments and targeting; and
6. promote 'do no harm' and 'rights-based' approaches.

3.3 Guiding framework: a DRM approach

The international community adopted the Hyogo Framework for Action in 2005, which sets strategic goals and priority areas of action for a ten-year programme "to substantially reduce disaster losses in life and in social, economic and environmental assets of communities and countries". The strategic goals are: (i) the integration of DRR into sustainable development policies and planning; (ii) the development and strengthening of institutions, mechanisms and capacities to build resilience to hazards; and (iii) the systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery plans.

Heightened global focus on the development of national DRR platforms has also grown since the launch of the Hyogo Framework for Action. Many of the defining characteristics of protracted crisis countries such as the Sudan – in terms of conflict, chronic food insecurity, poor agricultural performance, absence of effective institutions and governance – are, however, not considered within this international framework, which focuses on natural disasters only[28]. Moreover, the Sudan is also vulnerable to two or more natural hazards, thus finding ways to incorporate political and economic risk with reducing the risk of recurrent natural disasters must be considered[29]. A focus on risk reduction and risk management can enhance the resilience of vulnerable communities, and develop national and community capacity, whether or not institutions are weak or absent. Proactive support would include livelihoods-based risk, vulnerability and food security assessments, support for better preparedness (such as enhanced early warning and crop forecasting for agricultural producers at the local level), sector-specific emergency response and rehabilitation, promotion of good agricultural practices for DRR, and better integration and coordination between local, sectoral and national risk reduction strategies[30]. The shift between all the phases of this support should be considered dynamic and fluid, and based on interventions focused on saving and sustaining livelihoods[31].

As the UN specialized agency for the food and agriculture sectors, FAO is responsible for assisting its member countries to integrate DRR measures into agriculture and food sector policies and practices, and has a key role to play in protecting and restoring agriculture-based livelihoods in the aftermath of a disaster, and in view of future likely impacts of climate change. Through the programme outlined in this PoA, FAO will make a particular effort to strengthen DRM systems in Southern Sudan and integrate DRR into planning and implementing emergency preparedness, response and recovery activities.

28 The main international framework for DRR is the internationally negotiated Hyogo Framework for Action 2005–2015 (Building the resilience of nations and communities to disasters). There are five priorities: 1) ensure that DRR is a national and a local priority with strong institutional basis for implementation; 2) identify, assess and monitor disaster risks and enhance early warning; 3) use knowledge, innovation and education to build a culture of safety and resilience at all levels; 4) reduce the underlying risk factors; and 5) strengthen disaster preparedness for effective response at all levels.

29 Disaster hotspots that are also post-conflict countries include: Burundi, Chad, Eritrea, Ethiopia, Haiti, Kenya, the Democratic People's Republic of Korea, the Sudan, Tajikistan and Zimbabwe. See Natural disaster hotspots: global risk analysis, World Bank.

30 A significant proportion of FAO's rapid response is related to TAD emergencies, like avian influenza or FMD, and preparedness, prevention and mitigation (early warning/early action) is related to transboundary plant pests, such as locust outbreaks.

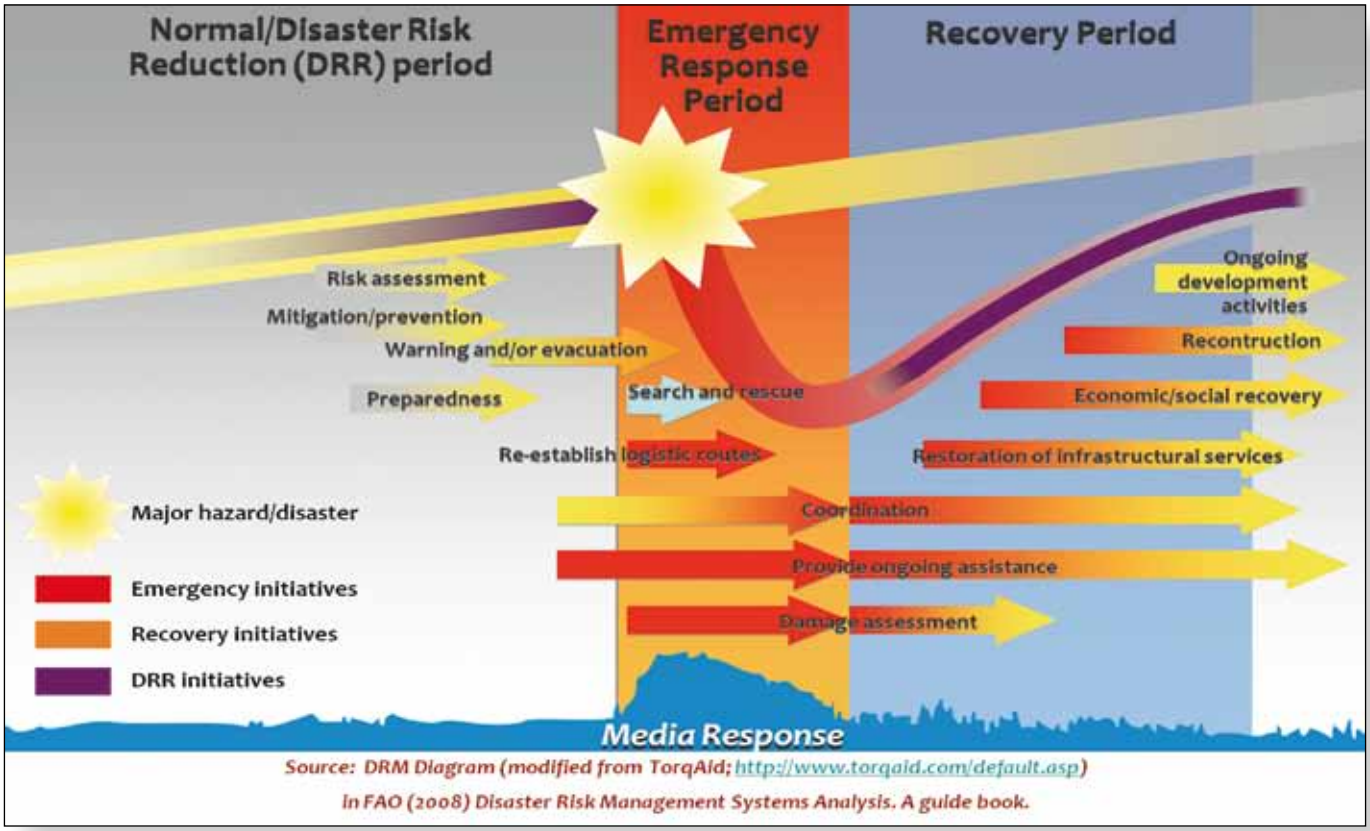
31 See Disaster Risk Management Systems Analysis, FAO (2008). This guide provides a set of tools to assess existing structures and capacities of national, district and local institutions with responsibilities for DRM in order to improve the effectiveness of DRM systems and the integration of DRM concerns into development planning, with particular reference to disaster-prone areas and vulnerable sectors and population groups.

The underlying intent will therefore be to expand the response in a longer and more detailed cycle that focuses on people's livelihood and resilience strategies and on their institutions' capacity to prevent, protect and restore. This means, among other things:

- embedding longer-term livelihoods rehabilitation and development strategies within short-term humanitarian response;
- delivering adequate, timely and non-harmful short-term responses for asset replacement with appropriate targeting when needed; and
- strengthening people's and institutions capacity to engage in DRR policies and activities.

The DRM cycle graph in Figure 4 below visually explains what this involves.

Figure 4 - DRM framework



Source: DRM Diagram (modified from TorqAid; http://www.torqaid.com/default.asp)
In FAO (2008) Disaster Risk Management Systems Analysis. A guide book.

DRM actions in the pre-disaster phase are aimed at strengthening the capacities and resilience of households and communities to protect their lives and livelihoods, through measures to avoid (prevention) or limit (mitigation) adverse

effects of hazards and to provide timely and reliable hazard early warning systems. In the response, communities and relief agencies focus on saving lives and on replacing and restoring damaged or lost property and assets. In the post-disaster phase, the focus is on recovery and rehabilitation. In reality, the shift between these phases is fluid, in particular between the stages in which communities move from rehabilitation to development, integrating aspects of hazard mitigation into their development activities.

DRM for FAO brings together a wide range of technical expertise required to cover all the phases of the DRM cycle. It is a corporate priority with strong interdisciplinary and transversal dimensions that emphasize capacity building of partners and members in preparing for and responding to emergencies in a way that supports long-term development.

3.4 Partnerships

The evolving humanitarian context and working environment require highly effective relationships and extraordinary levels of performance. FAO will continue to build on existing successful partnerships and will concentrate on identifying the main relationships between stakeholders, paying particular attention to the potential for new partnerships in the target locations depending on the need and identified competency of the organization concerned.

FAO has an existing vast network of relationships with partners including the Government, UN agencies, NGOs and CBOs and the private sector.

At the Government of Southern Sudan level, there are partnerships with MAF, MARF, the SSRRC (now the Ministry of Humanitarian Affairs and Disaster Management), the Ministry of Health, the SSCCSE, the Southern Sudan Land Commission and other Government institutions. FAO works closely with WFP and other UN agencies including the International Organization for Migration, the International Labour Organization, the United Nations Development Programme, UNICEF and the Office of the United Nations High Commissioner for Refugees, and will continue to build these relationship through the duration of the PoA.

The four principles of true partnership are: *seeing ourselves as interdependent parts of the whole, connecting to others through communication, programming and coordination, and relating to our world as observer-created.*

At the decentralized levels (state and county), FAO will continue to forge close partnerships with the SMoAs and the State Ministries of Animal Resources and Fisheries, UN agencies, CBOs and farmers.

With the formation of new ministries at the Government of Southern Sudan and state levels in the aftermath of the elections held in April 2010, FAO will forge a new and closer relationship with the Ministry of Humanitarian Affairs and Disaster Management as a key partner in the achievement of key results of the PoA.

A number of the partners will be closely involved in the implementation of the PoA. The focus of the relationships with these partners is on "what can we accomplish together?" Beginning with this PoA, the FAO team in Southern Sudan is seeking to adopt and consolidate the partnership model to ensure continuous interaction with all stakeholders, including those outside the humanitarian context.

FAO will endeavour to meet the needs of these partners and ensure their participation by continuously engaging them in strategic planning, assessments, programme interventions and reviews, and M&E. The relationship between FAO and its partners will go beyond subcontracting to implement activities/services; rather they will be important partners in achieving the outcomes of the PoA.

Partnership with WFP

FAO-Southern Sudan has built a very close working relationship with WFP in the areas of food security assessments, monitoring and coordination. Joint FAO/WFP mid-season and annual food security and livelihoods assessments are carried out, as well as the annual CFSAM, which is conducted every October/November. Furthermore, FAO works with the Vulnerability Analysis and Mapping unit of WFP on joint training to build the capacity of Government partners in Southern Sudan. WFP participates in technical working groups and coordination forums organized and facilitated by FAO and the Government, such as the IPC Working Group, Livelihoods Analysis Forum, Crop Production Sector Working Group, Livestock Sector Working Group and Marketing Working Groups. FAO and WFP co-lead the FSL Cluster.

3.5 Targeting

Targeting for FAO interventions is normally done in a participatory manner with the involvement of other stakeholders such as the Government of Southern Sudan institutions or state ministries, other UN agencies, implementing partners (NGOs/community-based organizations), local leaders and the beneficiaries. Target beneficiaries under the PoA are indicated in Table 3 below.

Table 3 - Target vulnerable population in five priority states

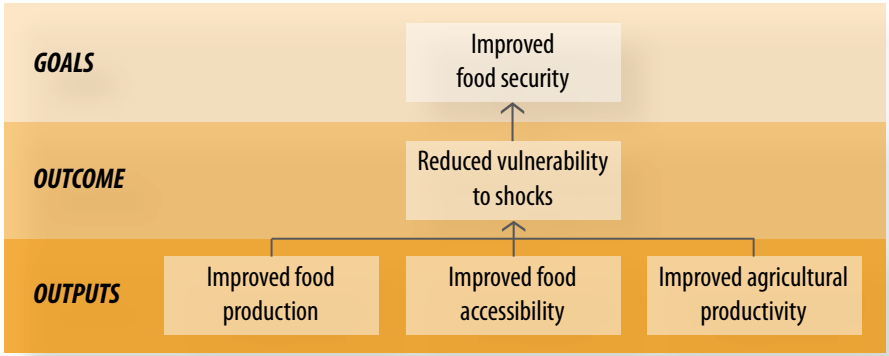
State	Population[32]	GAM (%)	PoA target	Percentage of population
Jonglei	1 358 602	21.4	529 855	39
Northern Bahr el-Ghazal	720 898	28.9[33]	273 941	38
Upper Nile	964 353	14.2	376 098	39
Eastern Equatoria	906 126	8.9	317 144	35
Warrap	972 928	20.1[34]	243 232	25
Total	**4 922 907**		**1 740 270**	**35**

32 SSCCSE: Sudan Population and Housing Census, 2008 (Statistics Yearbook for Southern Sudan 2009).
33 Mid-year ANLA report, 2009: GAM for Aweil East county.
34 Action contre la faim International Network, Southern Sudan, 2008: Nutritional Anthropometric Survey of Children Under Five Years.

4. PROGRAMME OBJECTIVES

The objectives of the PoA emerge from the initial development of the problem tree based on the five main causes of food insecurity (conflict, natural hazards, poor infrastructure, low institutional capacity, and an unclear policy and legislative environment) as explained in the NFSAP for Southern Sudan and building on the likely scenario in the coming one to two years (Section 1). They also reflect FAO's comparative advantage and in-country field capacity.

Figure 5 - Objective hierarchy of the PoA



Goal: Improved food security and livelihoods of the rural population in Southern Sudan.

Outcome: Reduced vulnerability to shocks among rural communities in the targeted priority states.

Outputs: The three programme outputs are designed to have a rapid impact and build on existing and successfully implemented approaches and systems. By achieving these outputs, targeted households will strengthen their resilience and reduce their vulnerability to natural hazards and conflict.

See Annex 2 for detailed information on the activity profiles under the three outputs.

Output 1: Improved food production

Improved food production can be achieved through a gain in productivity or an increase in production inputs, including land. Under this output, activities are linked to improving food production capacity, such as increasing the land area cultivated and augmenting access to production inputs, and increasing communities' resilience to shocks.

Project O1.1: Transferring livelihood inputs to vulnerable populations

- Beneficiaries are provided with diversified agricultural production inputs
- Adoption of improved crop varieties is promoted.

Project O1.2: Supporting livelihood diversification and technology transfer

- Training activities on different livelihood options (including vegetable production, irrigation, apiculture, honey processing and poultry production) are organized to increase the adoption of diversified options and related production technologies.
- Micro-grants system established to support access to production inputs.

Project O1.3: Supporting natural resource-based conflict transformation and land tenure security for rural communities

- Community-based DRR intervention are promoted.
- Participatory community land use is supported.
- A mechanism for effective response to land rights claims and access to livelihood resources is promoted.

Project O1.4: Sustainable agricultural climate change adaptation strategies

- The meteorological network will be expanded and it will provide climate-related information for planning of agricultural activities.
- Capacity building activities to support the self-reliance of farmers and climate change adaptation methodologies are organized.
- Conservation agriculture is promoted.

Output 2: Improved food accessibility

A combination of activities that aim to increase sources of income, and improve access to markets has been envisaged, particularly through organized and structured groups, including FFS.

Project O2.1: Supporting community food security through livelihood resource transfer

- Implement cash-for-work activities related to community-level infrastructure .
- Livelihood assets diversification is supported.

Project O2.2: Managing post-harvest losses

- Post-harvest system is strengthened through training, workshops and FFS to increase awareness and use of appropriate post-harvest technologies.

- Improved post-harvest equipment is distributed.
- A post-harvest losses management information is developed.

Project O2.3: Stimulating economic growth and food security through market information systems

- A functional market information system covering major commodities and markets in Southern Sudan is established.
- Functioning of rural and urban markets is improved.
- Provision of timely market information to stakeholders.

Output 3: Improved agricultural productivity

The productivity of livestock, fisheries and crops remains very low in Southern Sudan and their full potential is unrealized. Activities under this output will contribute significantly to achieve gains in productivity.

Project O3.1: Participatory extension and learning

- Support to conventional extension services.
- FFS and Pastoral Field Schools are organized.
- Organization of training for CAHWs and provision of basic toolkits.

Project O3.2: Integrated pest and disease management

- Profiling local knowledge on pest and disease management.
- Training on IPDM practices.
- Demonstration units on IPDM established through FFS.

Project O3.3: Supporting community-based seed production and supply

- Support community seed growers and seed extension agents through FFS and training on seed production techniques and post-harvest management and storage.
- Support seed processing and packaging.
- Assessing seed market demand and supply and create market linkages.
- Organize seed fairs.
- Provision of agriculture inputs.
- Construction of seed stores and drying yards.

Project O3.4: Supporting capacity for effective response to animal disease prevention and control

- Support to the cold chain system and the coordination of animal health activities.
- Strengthen disease surveillance and control.
- Procure and distribute vaccine and veterinary drugs.
- Support new-established laboratories.

Cross-cutting activities

In addition to these outputs, FAO will strengthen its coordination function in order to harmonize food security interventions in Southern Sudan and enhance the quality, coherence and impact of food security and livelihoods interventions. FAO will moreover support the development of early warning systems and agricultural statistics

Cross-cutting project C 1.1: Streamlining food security coordination and early warning systems

- Training of partner institutions.
- Provision of communication equipment and transportation means for data collection in rural areas.
- Updating livelihood zones and food security and vulnerability monitoring.

Cross-cutting project C 1.2: Streamlining agricultural statistics

- Support market price data collection for a crop and livestock market information system.
- Training of partner institutions.

Cross-cutting project C1.3: Building capacity for integrated food security, nutrition and livelihoods programming in Sudan

- Participation in relevant policy-making and programming exercises to ensure food security, nutrition and livelihoods issues are effectively addressed.
- Training of partner institutions.
- Development of nutrition education materials.
- Lessons sharing workshop.

Programme profiles	USD
Output 1 – Improved food production	
Project O1.1 – Transferring livelihoods' inputs to vulnerable populations	15 500 000
Project O1.2 – Supporting livelihood diversification and technology transfer	1 957 000
Project O1.3 – Supporting natural resource-based conflict transformation and land tenure security for rural communities	1 468 500
Project O1.4 – Sustainable agricultural climate change adaptation strategies	4 900 500
Output 2 – Improved food accessibility	
Project O2.1 – Supporting community food security through the transfer of livelihood resource	5 555 000
Project O2.2 – Managing of post-harvest losses	6 941 715
Project O2.3 - Stimulating economic growth and food security through market information systems	4 543 000
Output 3 – Improved agricultural productivity	
Project O3.1 – Participatory extension and learning	5 930 320
Project O3.2 – Integrated pest and disease management	2 188 956
Project O3.3 – Supporting community-based seed production and supply	3 604 095
Project O3.4 – Supporting capacity for effective response to animal disease prevention and control	5 775 528
Cross-cutting activity	
Project C1.1 – Streamlining food security coordination and early warning systems	5 241 500
Project C1.2 – Streamlining agricultural statistics to empower rural communities	3 712 500
Project C1.3 – Building capacity for integrated food security, nutrition and livelihoods programming	503 250
Total	**67 821 864**

5. RISK ANALYSIS

Risk is defined as the effect of uncertainty on objectives (whether positive or negative). Risk management can, therefore, be considered the identification, assessment and prioritization of risks, followed by the coordinated and economical application of resources to minimize, monitor and control the probability and/or impact of events. Table 4 provides a 'what if' risk analysis.

Table 4 - 'What if' risk analysis

Key risks	Impact	Probability	Assumption
Political uncertainties, the lack of full implementation of the CPA	• A lack of full implementation of the CPA would lead to an increased rift in the north-south divide. • A political fallout between the partners to the CPA would lead to an outbreak of geopolitical hostilities.	Over halfway through the post-CPA interim period, about 50 percent of the CPA has been implemented. With elections already conducted in April 2010 and the referendum scheduled for beginning of 2011, increased political tension and posturing does not augur well for the political stability of the region.	Political issues threatening the full implementation of the CPA are resolved by the two parties to the CPA and the post-elections period and referendum lead to overwhelming acceptance of the results.
Worsening of climatic conditions	• Drought • A drought in pastoral areas would increase the risk of livestock morbidity and mortality and resource-based conflicts. • Uneven distribution of rains would mainly affect farmers through yield reduction. • A drought would result in poor fishing and thus food insecurity among fishers. • Floods. • Floods or excessive rains would increase the risk of diseases for humans and livestock. The proliferation of endo- and ecto-parasites would weaken animal production. • Floods or excessive rains would destroy crops and result in food shortages. • Floods or excessive rains would destroy roads and bridges, hindering the movement of people and goods and disrupting access to markets.	The Inter-Governmental Authority on Development Climate Prediction and Applications Centre has not yet released information on the climate outlook for the first quarter of 2010. However, the succession of droughts and floods that have affected Southern Sudan in the past decade mean that there is a high probability that these will occur during the two years covered by the PoA.	Climatic conditions are favourable for farming and livestock-rearing activities.
Animal disease	• Outbreaks of transmissible animal diseases would increase the risk of livestock mortality and morbidity, thereby worsening food security.	There is a high probability of having an outbreak of transmissible animal disease in the region. FAO activities aim to minimize this risk.	Outbreaks will be contained and loss of livelihood assets among the population will be minimal.

Plant disease	• Further diffusion of plant diseases such as cassava mosaic virus or banana bacterial wilt, or pests such as army worm and locusts would reduce crop yields and overall production, contributing to an increase in vulnerability.	Plant diseases are spreading in the region. There is a risk of locust outbreaks in the Horn of Africa. FAO activities aim to minimize this risk.	Outbreaks will be contained and damages to standing crops will be reduced.
Ethnic conflicts	• Increased inter- and intra-ethnic conflicts would: • cause further displacement; • further reduce pastoralist/livestock mobility; • contribute to market disruption; and • reduce access to vulnerable populations by humanitarian workers.	As indicated in Section 1.4, inter-ethnic violence is most likely to spread, fuelled by a combination of factors including the breakdown of traditional authority, shifting of power to youth gangs, the proliferation of weapons and possible interference from external actors.	Peacebuilding initiatives are implemented and result in reduced ethnic violence. The population's access to land and water resources is not affected by insecurity.

5.1 Risk monitoring

Regular risk monitoring provides management with assurance that established controls are functioning properly. While every FAO staff member is concerned with and has a role to play in risk monitoring, it will be the overall responsibility of the FAO Senior Emergency and Rehabilitation Coordinator for Southern Sudan to determine:

- if any risks have changed;
- risk controls being used; and
- the effectiveness of the risk-control actions and techniques.

5.2 Steps proposed within the programme to address these risks

Risk reduction: is used to describe the application of appropriate techniques to reduce the likelihood of an occurrence, its consequences, or both.

A number of activities within the PoA focus on DRR and are meant, in particular, to contribute to mitigating the impact of crop and animal diseases. These include: (i) multiplication of seeds and vegetative material, particularly disease-tolerant cassava; (ii) support to CAHWs and maintenance of the cold chain system and vaccines; (iii) a rainfall monitoring network; and (iv) an early warning system.

In regard to the security risk, FAO contributes to the cost of the United Nations Department of Safety and Security (UNDSS). In Southern Sudan, UNDSS effectively supports the UN agencies, programmes, funds and organizations and their implementing partners in security management. Through its network, UNDSS covers a considerable number of remote areas, spread throughout the ten states of Southern Sudan, and continues providing fixed-wing, dedicated security aircraft,

security officers, and training for staff. FAO Juba operates from an office that is compliant with the Minimum Operational Security Standards (MOSS) and additional investments will be made to ensure that field staff operate in MOSS-compliant office compounds.

Risk sharing: is used to describe the shifting of the burden of risk to another party.

The PoA foresees the establishment of partnership with NGOs, which would contribute to sharing risks, particularly in relation to security.

Risk avoidance: is used to describe an informed decision not to become involved in activities that lead to the possibility of the risk being realized.

In the case that security deteriorates significantly, FAO envisages suspending any activities that would put FAO or implementing partners' staff at risk. UNDSS has the authority to decide to suspend an operation.

5.3 Contingency planning

In the Sudan, contingency planning will be of vital importance in the coming months. Contingency planning is the process, in anticipation of potential crises, of developing strategies, arrangements and procedures to address the humanitarian needs of those adversely affected by crises. The referendum currently scheduled for January 2011 will be a milestone to monitor. In the build up to the referendum the potential for large-scale violence and conflict remains high as divisions along political and ethnic lines in Southern Sudan will likely be exacerbated in the coming months. Continuing insecurity will destabilize the situation and could have regional implications.

Using the current changing humanitarian context as the basis for analysis, a broad range of partners including the Government of Southern Sudan, donors, UN agencies, NGOs and international organizations developed planning scenarios for 2010. With elections already conducted in April 2010 and the referendum scheduled for the beginning of 2011, both key milestones in the implementation of the CPA, it was agreed that the most likely planning scenario suggests the political and security situation will deteriorate, affecting both the capacity of the state to carry out core functions and the capacity of humanitarian organizations to access and assist people in need. The situation will most likely be characterized by a combination of political tension, spreading insecurity, high levels of displacements and an expanding food gap and high food prices. Continued chronic poverty and food insecurity compounded by poor capacity of the Government of Southern Sudan will require a bigger role for FAO in supporting agricultural production to ensure sufficient food is available for the population.

Overstretched and under-resourced, humanitarian organizations are refocusing their efforts on the most important priorities. Despite working under enormous capacity and funding constraints, the humanitarian community has been able to address

many of the most critical needs in 2009 emerging from the deteriorating security and humanitarian context; which was recognized by Sir John Holmes the Undersecretary General for Humanitarian Affairs during his last visit to Southern Sudan in May 2010. In his visit, he acknowledged that insecurity remains a great threat to agriculture and that reports from FAO indicate that Southern Sudan has not produced enough food since the signing of the CPA in 2005, especially in areas affected by ethnic violence and threatened by the LRA.

In accordance with the prevailing situation and most likely scenario, partners in Southern Sudan have agreed to focus on four over-arching priorities including "be prepared for emergencies by ensuring that core pipelines are in place – food, nutrition and vaccination, seeds and tools and non-food items – and that sufficient nutrition capacity is on stand-by".

While FAO-Southern Sudan has been providing support to build the Government's capacity in policy analysis and programming, it doesn't have sufficient human and financial resources to fully meet the daunting challenges facing the Government of Southern Sudan and the state governments in food security institution building and policy making. The level of support being provided to the states is far from adequate. Thus, continuation and scaling up of the support being provided by FAO to both the Government of Southern Sudan and the states is vital for building sustained capacity for food-security policy analysis, decision-making and programme implementation.

Overall, for FAO to be prepared, this will involve continuous liaising with other partners, developing scenarios in order to anticipate the crisis and determining the objectives of FAO in these situations, as well as defining what will be needed to reach those objectives.

At their simplest level, contingency plans answer some basic questions about a potential situation. These include:

- *What could happen?*
- *What would be needed to alleviate the situation?*
- *How would action be taken?*
- *What materials, supplies and staff would be needed?*
- *What preparation is necessary?*
- *How much will it cost?: seeing ourselves as interdependent parts of the whole, connecting to others through communication, programming and coordination, and relating to our world as observer-created.*

6. DONOR RESPONSE

For FAO, having sufficient funds to finance all activities included in the PoA is of vital importance. Full details of the funding history of the FAO emergency programme in Southern Sudan can be found in Annex 4. With the track record of donor funding, FAO confirms its absorption capacity of the total budget requested in this PoA. Donors' efforts have been primarily focused on emergency assessments and needs, as the political situation in the Sudan was not conducive to donors' development support. FAO with this PoA wishes to advocate to donors the need to adopt a wider approach to emergency funding in Southern Sudan, through a twin-track approach, in order to tackle the root causes of the protracted crises.

Table 5 - Funding impacts

Key risks	Impact	Probability	Assumption
Insufficient and/or uneven/ delays in funding	Insufficient funding would slow down the process of transition from relief to rehabilitation and development.	Highly probable: over the past 5 years, the annual FAO portfolio has fluctuated between USD 19.4 million (2009) and USD 27.8 million (2005), with an average of USD 23.4 million per year. This represents needs coverage of 54%[36] and an average funding gap of 46%.	Donor contribution to FAO remains in the same range in 2010 and 2011.
	Uneven funding could undermine efforts to reduce food insecurity. The complex link between preparedness, response, and transition on one hand and food production, productivity and accessibility on the other hand cannot cope with a significant imbalance in the distribution of resources.	Moderately probable.	
	Delays in funding crop-related interventions would compromise crop production. Delaying planting generally increases days to flowering and reduces dry matter production and yield. Experience from dryland farming indicates that a 10-day delay in planting often leads to a minimum 8% decline in corn yield[35].	Low probable for a PoA of 24 months, where it is possible, in theory, to match funding with the crop calendar.	

35 A.Y. Kamara, F. Ekeleme, D. Chikoye and L.O. Omoigui. Planting date and cultivar effects on grain yield in dryland corn production.

36 See also Section 4 for the budget analysis.

7. PROGRAMME MONITORING AND EVALUATION

Some of the key tools for monitoring the implementation of the PoA activities are highlighted in the PoA logical framework (Annex 1). In addition, process monitoring is necessary at the activity level, to ensure that implementation is on-track.

An indispensable tool for FAO is evaluation. This is needed not only because FAO should be accountable to the demands of its local beneficiaries but also to analyse the wider political, social, and economic impact of humanitarian aid on a local society.

7.1 Modalities

Monitoring is a system of continuous assessments that is used to measure the extent to which implementation is going according to plan, as well as the use of resources. It is a continuous feedback system, ongoing throughout the PoA, which feeds into the implementation process and will involve the supervision or periodic review of each activity.

Evaluation is the systematic analysis of operations. It is used to adjust or redefine objectives, reorganize institutional arrangements or redistribute resources to the extent possible. It is intended that a PoA output to outcome review will be undertaken at the end of the first year of the PoA (January to December 2010), with a PoA impact evaluation taking place in early 2012.

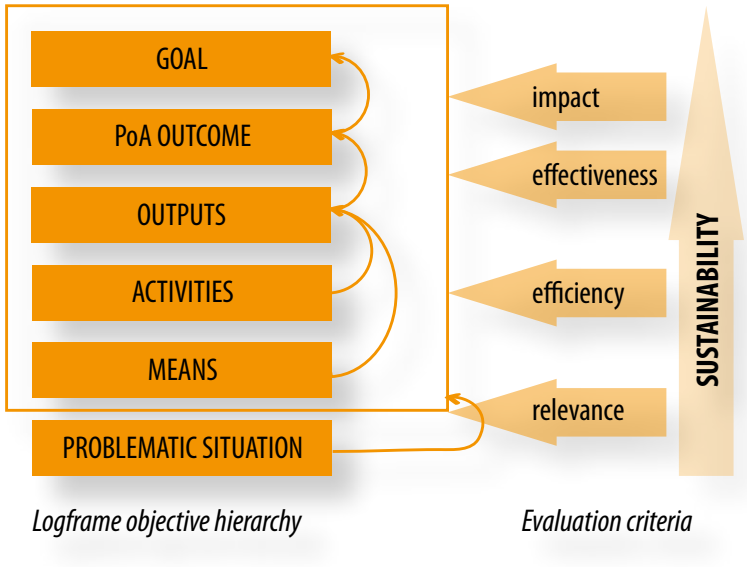
The key criteria for both the review and the impact evaluation will be:

- effectiveness: the extent to which the PoA intervention's outcome was achieved, or is expected to be achieved;
- efficiency: cost-effectiveness in achieving outputs or the ratio of outputs to the inputs to achieve the PoA outcome;
- impact: positive or negative, primary and secondary long-term effects produced by the PoA intervention, directly or indirectly, intended or unintended; and
- relevance: determines the extent to which the PoA addresses prevailing problems in a changing context.
- In addition, the impact evaluation will measure sustainability: the actual and likely continuation of benefits from the PoA interventions after completion[37].

Figure 5 overleaf provides the criteria of sustainability, impact, effectiveness, efficiency and relevance to the vertical hierarchy in the PoA logical framework.

37 Source for M&E criteria is the Development Assistance Committee of the Organisation for Economic Cooperation and Development, 2002.

Figure 6 - Relating monitoring and evaluation criteria to the PoA logical criteria[38]



6.2 Lessons learned

The FAO team in Southern Sudan places considerable importance on documenting experiences and lessons learned, which enables the team to learn from challenges faced and apply new knowledge and experience to other programmes. In particular, it will help the team to review the PoA and choose appropriate strategies for the next PoA.

38 Adapted from the European Commission Aid Delivery Methods, Volume 1, Project Cycle Management Guidelines, March 2004.

8. COMMUNICATION, INFORMATION AND REPORTING

8.1 Communication

Communication contributes significantly to FAO's emergency and rehabilitation work through: (i) helping to define and project a coherent identity for the work in emergencies and rehabilitation consistent with FAO mandate and identity, (ii) improving visibility and raising awareness among key audiences; (iii) building appreciation and buy-in among key stakeholders; (iv) ensuring coordination among humanitarian and development actors in the FSL Cluster, and (v) fostering preparedness, mitigation, response and quick recovery in the context of food-and agriculture-related threats and emergencies through risk and crisis communication.

Within this overall framework, communication during the implementation of this PoA will be strengthened to adequately portray and inform on the vast range of activities being implemented and the expected outcomes foreseen. For example, FAO's contribution to peace-building will be articulated in its future communication strategy, as well as other cross-cutting issues. In addition, communications will play an important role in allowing FAO to share knowledge to achieve its goals and to share and build on lessons learned.

8.2 Reporting

Exact reporting modalities will depend on programme funding and donor requirements. However, progress reports will be prepared on a regular basis and additional reviews undertaken. A progress report, based on this action plan, will be prepared by the FAO emergency and rehabilitation team in Southern Sudan. The report will concisely assess the extent to which the PoA's proposed activities have been funded and carried out, outputs produced and progress towards realizing objectives. It will also present recommendations for any future follow-up action arising from the PoA.

Monitoring of the PoA will also involve periodic reviews of the effectiveness of introducing the PoA. A first selected list of indicators have been developed according to the outcomes expected from the introduction of the Plan. This will be regularly reviewed in order to take into account any lessons learned during the timeframe of the PoA.

8.3 Reviews

Additional reviews may be prepared for funded projects. The organization, terms of reference and precise timing and location of the review will be determined in consultation with the requesting parties.

ANNEX 1: LOGICAL FRAMEWORK

Project description	Indicators	Means of verification	Assumptions
Goal **Improved food security and livelihoods of the rural population**	By the end of 2011: • percentage of people falling under IPC Phase 4 decreased by 20%.	IPC, SIFSIA activities.	
Outcomes **Reduced vulnerability to shocks among rural communities in the targeted priority states**	By the end of 2011: • probability of an individual or household being in a vulnerable state in the future is reduced by 10% (of headcount); and • welfare losses associated with food insecurity reduced by 30% (of assets).	Value-at-Risk (VaR) analysis of vulnerability in a food insecurity context[39], ANLA.	Critical benchmark value for the food security indicators are known and count indicator of vulnerability to food insecurity relative to an appropriate threshold or benchmark is established.
Output 1 **Improved food production**	By the end of 2011: • a minimum of 250 000 households (returnees, demobilized soldiers) have resumed sustainable food production; and • 30 000 households have adopted conservation agriculture techniques.	CFSAM, ANLA.	Security does not deteriorate significantly and the rural population maintains its access to land and pastures. Funding requirements are met up to a sufficient level to achieve the output.
Output 2 **Improved food accessibility**	By the end of 2011: • incomes at household level have increased by 10%; • 10% of targeted households are engaged in rural activities in which they were not previously engaged; and • post-harvest losses are reduced by 20% for targeted households.	CFSAM and ANLA.	Financial and food crisis does not deepen. Funding requirements are met up to a sufficient level to achieve the output.
Output 3 **Improved agricultural productivity**	By the end of 2011: • 20% of farmers in targeted areas have access to improved quality seeds; • crop yields have increased by 5% at least for households targeted by the PoA; and • 30% of pastoral and agropastoral households in the targeted areas have their animals vaccinated and/or treated.	CFSAM and ANLA.	Climatic conditions are conducive to crop and livestock performance. Funding requirements are met up to a sufficient level to achieve the output.

39 In the context of food security, VaR can be defined in terms of the critical threshold level of the nutritional outcome consistent with a small (given) probability of the outcome falling below this level, over a given time period.

Output 1: Improved food production	
Project O1.1	**Transferring livelihoods' inputs to vulnerable populations**
Objectives	To contribute to restoring the livelihoods of at-risk populations, including IDPs, returnees and the most vulnerable households in Southern Sudan.
Beneficiaries	1 500 000 people (250 000 households), comprising vulnerable returnees (15%), IDPs (17%), host and resident populations (68%) in Jonglei, Upper Nile, Northern Bahr el-Ghazal and Eastern Equatoria states; 65% will be women-headed households.
Implementing partners	MoAF, SMoAs, WFP, UNHCR, UNICEF, UNDP, UNMIS/RRR, IOM, WVI, ACF, CRS, PHO, CONCERN, Oxfam GB, VSF-G/B/S, AAH, SOLIDARITES, COOPI, INTERSOS, Tearfund, DRC, CHFI, RI, IRD, NPA, Intermon Oxfam, ACROSS, ACMI, SRC, ADRA, AMURT International, FAR, Mercy Corps, GAA, Caritas Germany, LWF, BRAC, WOTAP, MASRA, CRADA, NHDF, SALF, UNKEA, UNWWA, WS, Mana Sudan, GAP Nile Basin, FYF, YARRDSS, BED, PAPAD, NYCA, RAAH, CTC, MODA, KMFG, NEFT, CDOT, LRDA, CDA, KENDA, AORD, MCDF, KUCDA, APAD, CAD, CDAS, SSPD, SCOPE, INCODE, CDS, SUVAD, SSRDA, DUYCD, LAPFA.
Project duration	24 months.
Funds requested	USD 15 500 000.
Summary	Crop production is a major livelihood activity throughout Southern Sudan. Cultivation is characterized by slash-and-burn rotational practices, and the use of rudimentary tools and traditional planting materials. Production is rainfed and subsistence oriented. Poor production methods limit households to cultivating an average of 2 to 4 *feddans* and yields are often quite low. Poor productivity is due to a number of factors, including lack of access to adequate and improved production inputs, poor farming practices, crop pests and diseases, limited access to seeds and tools, and limited labour. The combined impact of poor rainfall, crop failure and poor yields meant that over 100 000 households faced problems accessing seeds for replanting. Large numbers of the populations will, therefore, need help in 2010 and 2011 to resume production through livelihood input transfers to enable them to produce their own food. Southern Sudan makes up a third of Sudan's territory, but it accounts for 66 percent of fisheries resources in the country. This is largely because of the 100 000-ha Sudd swamps, which have rich aquatic resources. Southern Sudan's waters have very limited fishing pressure. The fish harvest for the Sudan is estimated at 60 000 tonnes per annum, 40 000 tonnes of which are from Southern Sudan. Fishing communities on the Nile River networks face many challenges in their livelihoods, including weak or absent infrastructure, such as roads, which makes access to markets difficult for the sale of produce or purchase of fishing gear. Fishing communities experience considerable losses in their harvests due to a lack of processing skills and materials and limited access to markets.

	A mid-year ANLA review and a Rapid Crop Assessment Mission carried out in July and August 2009 found that food insecurity and conflict were worse in 2009 than in 2008. Large-scale displacement, inter-tribal conflict and LRA attacks, the disruption of trade, and high food prices placed overwhelming pressure on households' coping strategies. Crop failure as a result of poor rainfall during the main rainy season led to critical food gaps in most parts of Southern Sudan. It was estimated that the cropped area was reduced by 20 to 30 percent in 2009 and overall cereal production by 30 to 40 percent.
Expected outcomes	Reduced vulnerability to food insecurity through the provision of food production inputs/fishing gear among the targeted farming households in Southern Sudan.
Expected outputs	• Improved accessibility to inputs among the target communities. • Increased adoption of improved crop varieties. • Improved agricultural production and productivity.
Key activities	1. Provision of agricultural production inputs (crop and vegetable seeds, hand tools and treadle pumps and fishing equipment): (a) participatory identification of targeted beneficiaries; (b) procurement of production inputs; (c) selection of implementing partners and preparation of Letters of Agreement; and (d) distribution of the production inputs. 2. Provision of technical support and facilitation: (a) carrying out tailor-made training activities; (b) targeting criteria; (c) gender mainstreaming; and (d) follow up and reporting on the use of the agriculture inputs. 3. M&E: (a) monitor progress regularly through field visits, partners' progress reports and monthly reports using developed formats; (b) in collaboration with MAF and SIFSIA, conduct pre-harvest assessment to determine crop performance; and (c) conduct post-distribution assessment and use results for improved intervention.

Budget	*Item*	*USD*
	Personnel (international and national)	500 000
	Contracts (with partners)	2 900 000
	Travel	200 000
	Training (of partners, staff and beneficiaries)	190 909
	Expendable equipment	9 620 000
	Non-expendable equipment (vehicles, motorbikes, etc.)	240 000
	Technical support services	140 000
	General operating expenses	300 000
	Support costs (10% of sub-total)	1 409 091
	Total	**15 500 00**

Output 1: Improved food production	
Project O1.2	**Supporting livelihoods' diversification and technology transfer**
Objectives	To ensure target communities have access to production technologies, skills and information that support the creation of other livelihood opportunities.
Beneficiaries	Over 6 000 returnee, IDP, agropastoralist and farming households (60% female-headed) in the five priority areas and other states in Southern Sudan.
Implementing partners	SMoAs, NGOs both international and national, CBOs, and faith-based organizations operating within the targeted five priority states.
Project duration	24 months.
Funds requested	USD 1 957 000.
Summary	The majority of households in Southern Sudan rely on cattle rearing, crop production, fishing, wild food collection and trade for their livelihoods, with various combinations of these activities making up the household economy, depending on geographic location. Crop production is a major livelihood activity across Southern Sudan. Cultivation is characterized by slash-and-burn rotations, use of rudimentary technology and poor quality planting materials, and subsistence farming in a rainfed production system. Yields are often low and households are generally only able to plant 2 to 4 feddans. Livestock (cattle, goats and sheep) play an important role in the livelihoods of agropastoralist groups, making a significant contribution to household food and income. Seasonal migration of livestock for pasture and water characterizes the livelihood system of large numbers of people in Southern Sudan. Major constraints to livestock production include inadequate veterinary extension services to control livestock diseases and improve animal husbandry practices, insecurity in the form of cattle raiding, and poor livestock marketing infrastructure. Improving the animal health delivery system will greatly improve the food and livelihood security of agropastoralist communities. Despite the abundant water resources in Southern Sudan, small-scale irrigation during the dry season is still minimally practiced. Traditional hand irrigation takes place in riverbeds during the dry season for the production of mainly tobacco and local vegetables. Beekeeping exists as an untapped resource that could offer an alternative source of food for families, but is not widely practiced in Southern Sudan. Poultry production still follows traditional practices, with limited productivity, resulting in significant imports from neighbouring countries. Prolonged conflict left many returnees and IDPs with no or limited livestock herds. The project will, therefore, empower the target beneficiaries to employ alternative livelihood activities to increase their access to food. The project focuses on promoting livelihoods diversification and technology transfer in five priority states of Southern Sudan that are prone to hazards and disasters. These include Jonglei, Upper Nile, Northern Bahr el-Ghazal, Warrap and Eastern Equatoria. The project targets over 6 000 farming households of returnees, IDPs and resident agropastoralist and farming communities (60 percent of which will be female-headed).
Expected outcomes	Reduced vulnerability to shocks among the targeted farming households in Southern Sudan.

Expected outputs	• Improved access to food for the target communities. • Increased adoption of production technologies and practices. • Increased awareness of available livelihood options in food production.	

Key activities	• Training on different livelihood options.
	• Promoting the adoption of following production options:
	  • small-scale vegetable production and small-scale irrigation technology transfer;
	  • apiculture and honey processing; and
	  • poultry (meat and egg) production.
	• Establishing micro-grant system to support access to inputs such as irrigation equipment, beekeeping kits, day-old chicks and poultry equipment, goats, etc.
	• Facilitating the formation and organization of farmers' groups and/or associations.
	• Monitoring and evaluation of the planned activities.	

Budget	***Item***	***USD***
	Personnel (international and national)	450 000
	Contracts (with partners)	250 000
	Travel	90 000
	Training (of partners, staff and beneficiaries)	100 000
	Expendable equipment (all agricultural commodities and consumables)	450 000
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	120 000
	Technical support services	100 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, in-country transport, storage and handling [ITSH])	260 000
	Support costs (10% of sub-total)	137 000
	Total	**1 957 000**

Output 1: Improved food production	
Project O1.3	**Supporting natural resource-based conflict transformation and land tenure security for rural communities**
Objectives	Ensure equitable access to land and tenure security for rural communities and develop institutional capacity in resource-based conflict resolution.
Beneficiaries	Rural farming households, returnees and traditional and civil leaders in resource-based conflict-prone areas of Upper Nile, Jonglei and Warrap states and other states with potential for resource-based conflicts.
Implementing partners	Southern Sudan Land Commission, UN agencies, NGOs, local government and CBOs.
Project duration	24 months.
Funds requested	USD 1 468 500.
Summary	As is the case elsewhere in sub-Saharan Africa, land tenure and access to natural resources are among the key structural factors contributing to poverty and the outbreak of violent conflict in Southern Sudan. Land is not just a means of survival or material gain, it has profound religious, cultural, social and political significance. Land is an extremely sensitive issue and was not addressed in depth during the negotiations that led to the signing of the CPA. Instead, the CPA recognized that the land in Southern Sudan is governed by customary practices and the matter was to be comprehensively dealt with in the post-CPA interim period. The majority of the population of Southern Sudan depends on land and natural resources for their livelihoods. Secure access to land by the rural poor is, therefore, essential to the process of post-conflict recovery and promotion of sustainable rural development and, most importantly, food production at the community level. Improving people's knowledge of their land rights will make these rights real, allowing the right holders to invest in the land, thereby improving their livelihoods. The land rights of the people of Southern Sudan have been guaranteed in the Interim Constitution of Southern Sudan (2005). Secure land tenure in a post-conflict situation – particularly for poorer and more vulnerable groups – is key to poverty reduction and should be guaranteed through appropriate policies and legislations that protect the land rights of the poor. Women's tenure rights, which are often considered subservient to those of men, require particular attention. In Southern Sudan, as in other developing countries in Africa, women are the main users of land and play a key role in food production. Continued land tenure insecurity, due to prevailing customary norms and practices, which discriminate against women will profoundly affect household and community food security. Competition over access to and use of natural resources, particularly water and pasture land, is the main driver of inter- and intra-ethnic conflict. This is exacerbated by the growing human and livestock populations and impact of climate change-related events such as floods and drought, which have reduced the natural resources on which livelihoods depend, thereby intensifying competition over access. This can become violent and lead to the displacement of people from their sources of livelihood and destruction of their livelihood assets, compounding an already fragile food security situation. In the past, traditional institutions ensured that access to and use of natural resources was negotiated and clear terms of use

	were agreed between different parties. However, the proliferation of small arms among pastoral communities has undermined the authority of traditional institutions, which has been hijacked by armed gangs of youth, who disregard traditional norms of negotiated access. It is critical that mechanisms for resolving resource-based conflicts be re-established to ensure the recovery and development of sustainable livelihoods. The following approaches will be adopted for activities related to land tenure and the resolution of land- and natural resource-based conflicts: 1. Implementing tested methodologies for community land-use planning, natural resource (pasture and water) management, and stakeholders' dialogue on land tenure issues. 2. Carrying out studies on customary land tenure and conflicts in selected conflict-affected areas. 3. Promoting the ADR mechanism for land-based conflicts. 4. Mapping/GIS of water for livestock resource development, traditional range use and management, and institutional capacity development in land administration, policy and law development.
Expected outcomes	Improved access to land and tenure security for returnee, IDP and other vulnerable households.
Expected outputs	• Mechanisms developed for effective response to land rights claims and access to livelihood resources. • Traditional and civil administrators are well informed and play increased roles in the resolution of local land- and resource-based conflicts.
Key activities	• Conducting participatory community land use and natural resource management planning exercises. • Undertaking natural resource mapping, developing water points for livestock and mechanisms for the management of water and rangeland resources. • Facilitating community dialogue on land tenure arrangements, and access to and use of livelihood resources such as pasture, water, forest products. • Providing training in ADR for resource-based conflict management at the community level. • Building institutional capacity through technical assistance, training, and re-tooling.
Budget	

Item	*USD*
Personnel (international and national)	725 000
Contracts (with partners)	135 000
Travel	70 000
Training (of partners, staff and beneficiaries)	95 000
Expendable equipment (all agricultural commodities and consumables)	85 000
Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	80 000
Technical support services	40 000
General operating expenses (including office rent, maintenance of vehicles, UN contribution, in-country transport, storage and handling, ITSH)	105 000
Support costs (10% of sub-total)	133 500
Total	**1 468 500**

Output 1: Improved food production	
Project O1.4	**Sustainable agricultural climate change adaptation strategies**
Objectives	To promote the adaptation of agricultural production to mitigate the effects of climate change and improve food security.
Beneficiaries	Vulnerable pastoralists, agropastoralists, farmers and fishers in the five target states of Southern Sudan.
Implementing partners	Government of Southern Sudan and SMoAs, NGOs and CBOs.
Project duration	24 months.
Funds requested	USD 4 900 500.
Summary	Agriculture is particularly vulnerable to changes in climatic conditions. The increased intensity and frequency of storms, drought and flooding, altered hydrological cycles and precipitation variance have implications for future food availability. Climate change and variability are among the most important challenges facing less developed countries, including Southern Sudan, because of their heavy reliance on natural resources and rainfed agriculture. In Southern Sudan, 90 percent of agricultural production depends on rainfed production. In sub-Saharan Africa, the areas suitable for agriculture, the length of the growing season, and crop yields, especially along the margins of arid and semi-arid areas, are expected to decrease according to the projections of the UN Intergovernmental Panel on Climate Change. In some African countries, yields from rainfed farming could fall by as much as 50 percent by 2020. Reports indicate that cereal crop yields will decline by up to 5 percent by 2080, including for crops such as sorghum in Sudan, which is a major staple food crop. Farmers, particularly women, interact daily with the environment and are well placed to implement sustainable agricultural practices that can adapt to and mitigate climate change, while benefiting rural and urban populations. Given the changes in precipitation and hydrology, temperature, length of growing season and frequency of extreme weather events, it is essential that mechanisms be put in place to mitigate the impact of climate change and variability in order to assist rural communities in Southern Sudan. For example, during the 2009 agricultural season, poor rainfall led to widespread dry spells throughout Southern Sudan and resulted in a poor harvest. It is important that mechanisms be put in place to adapt to these, such as farmers adapting to different precipitation patterns by changing the type of crop grown or using different harvesting and/or sowing dates. Farm-level analyses have shown that a considerable reduction in the adverse impact of climate change is possible when appropriate adaptation mechanisms are implemented. Efforts to adapt to climate change through an integrated approach to land and water management are urgently needed to secure sustainable development and food security in Southern Sudan. Among the activities to be initiated in Southern Sudan is an improved meteorological network as adaptation practices require extensive and high-quality data and information on climatic conditions, and on the agricultural, environmental and social systems that are affected by the climate, in order to carry out realistic vulnerability assessments.
Expected outcomes	Communities and individuals are better prepared for climatic shocks through a strengthened adaptive capacity.

Expected outputs	• Strengthened capacity of the Government of Southern Sudan, state governments, community-based organizations (CBOs) and NGOs to promote climate change adaptation methodologies. • Vulnerable communities in Southern Sudan implement adaptation methodologies. • The meteorological network is expanded in Southern Sudan and provides climate-related information for planning of agricultural activities. • CA methodologies are practiced by resource-poor and vulnerable farmers.	
Key activities	• Distributing rain gauges to volunteer farmers and training them to use rainfall data to plan sowing, fertilizer application and harvesting. • Implementing activities to build capacity and farmers' self-reliance for sustainable agricultural production for food security. • Expanding the meteorological network in Southern Sudan. • Analysing historical climate data to better understand the onset, cessation and length of growing seasons. • Promoting low-tillage production and maintenance of permanent soil cover to increase soil organic matter and reduce the impacts of flooding, erosion, drought, heavy rains and winds. • Promoting storage of excess rainfall and the use of resource-efficient irrigation methodologies.	
Budget	***Item***	***USD***
	Personnel (international and national)	1 060 000
	Contracts (with partners)	1 540 000
	Travel	180 000
	Training (of partners, staff and beneficiaries)	400 000
	Expendable equipment	150 000
	Non-expendable equipment (vehicles, motorbikes, etc.)	575 000
	Technical support services	200 000
	General operating expenses	350 000
	Support costs (10% of sub-total)	445 500
	Total	**4 900 500**

Output 2: Improved food accessibility	
Project O2.1	**Supporting community food security through the transfer of livelihoods resources**
Objectives	To improve the resilience capacities of vulnerable communities to cope with and respond to food insecurity and livelihood impoverishment.
Beneficiaries	50 000 vulnerable people (about 8 000 households), including women, children, the elderly and people with disabilities.
Implementing partners	NGOs, CSOs, community- and faith-based organizations, local administrations, women's groups, farmers' groups, and youth groups.
Project duration	24 months.
Funds requested	USD 5 555 000.
Summary	Decades of civil conflict and resulting marginalization, the fragile post-conflict economy and weak governance capacity, limited physical and social infrastructure, widespread prevalence of floods, drought, conflict and endemic diseases (human and livestock) have meant that communities' vulnerability to hazards and disasters is high throughout Southern Sudan. Given the weak response capacity and considerable vulnerability, the occurrence of disasters has a devastating impact on communities' livelihoods. The cumulative adverse effects of hazards result in the loss of lives and livelihoods, population displacement, destruction of property, damage to social and physical infrastructure, reduced access to livelihood resources and basic services, increased food insecurity and malnutrition, erosion of community coping mechanisms, and dismantling of communities through displacement in many parts of Southern Sudan. Critical acute food insecurity was forecast for 2009 and beyond owing to the failure of the main season's rains in most areas. Additionally, over 250 000 IDPs were affected by widespread ethnic conflict and LRA attacks. The situation was worsened by the increased price of basic food commodities and lower livestock prices. This requires appropriate DRR measures to address critical food gaps in order to protect the lives and livelihoods of vulnerable communities. The project's approach will include directing several interventions (distribution of seeds and tools, access to cash-for-work opportunities and training in community-based disaster risk mitigation) to increase income diversification and stabilize access for poor households to the minimum food basket. The target beneficiaries are poor returnee, IDP or resident community households in poor wealth groups (i.e. owning no cattle or a few sheep/goats).
Expected outcomes	Increased diversification of income and production and reduced vulnerability to disaster risks.
Expected outputs	• Communities are empowered, capacitated, and organized to effectively respond to and mitigate disaster risks. • Resilience to food insecurity is strengthened through improved access to livelihood resources and income. • Community-based early warning systems are established and strengthened.

Key activities	• Carrying out a participatory disaster risk appraisal and training on disaster preparedness risk mitigation measures. • Supporting livelihood resource transfers through the distribution of production tools and seeds, and livestock for restocking. • Implementing cash-for-work activities by creating employment opportunities through micro-projects for community-level infrastructure development. • Providing technical support to Government of Southern Sudan institutions in DRR policy development and institutional capacity building.	
Budget	***Item***	***USD***
	Personnel (international and national)	1 270 000
	Contracts (with partners)	500 000
	Travel	120 000
	Training (of partners, staff and beneficiaries)	180 000
	Expendable equipment	2 500 000
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	130 000
	Technical support services	100 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	250 000
	Support costs (10% of sub-total)	505 000
	Total	**5 555 000**

Output 2: Improved food accessibility	
Project O2.2	**Managing post-harvest losses**
Objectives	To improve the food security status of rural communities in Southern Sudan through the reduction of post-harvest losses and improvement of household food storage capacities.
Beneficiaries	20 000 households (60 percent headed by women) in five target states of Southern Sudan.
Implementing partners	SMoA/country agriculture departments (CADs), NGOs and CBOs.
Project duration	24 months.
Funds requested	USD 6 941 715.
Summary	The general food security situation has improved in Southern Sudan since the signing of the CPA in 2005. The average yield estimate of traditional cereal production in 2008 was 24 percent higher than that of 2007 (CFSAM, 2009). Similar improvements were noted by development partners in the production and yields of legumes, oil crops, and roots and tubers. However, these improvements are threatened by poor post-production techniques for processing, handling and storage. While a better performance of cereals was recorded in 2008, there was an average 20 percent reduction that was attributed to post-harvest losses for crops. Post-harvest losses, in the form of quantity or quality, should be minimized if the improved crop performance is to be translated into greater food security. Quantity losses can occur as a result of inconsistent harvest methods, spillage during transportation, or damage by pests causing reductions in weight or volume. Quality losses can occur as a result of poor processing, drying and storage methods. This can lead to changes in colour, smell or taste; contamination by toxins, pathogens, insects or rodent excreta; a reduction in nutritional value; or a loss of viability if the harvest is meant to be used as seed. The proposed intervention will, therefore, focus on minimizing losses arising from poor post-harvest handling. The project focuses on promoting appropriate post-harvest techniques (drying, processing and storage) in all ten states of Southern Sudan. It targets extension agents, local artisans (blacksmiths) and over 20 000 farming households (60 percent of which are headed by women) as direct beneficiaries. The intervention envisages a wide adoption of improved post-harvest handling techniques and a storage system that will reduce the current level of post-harvest losses (20 percent) to less than ten percent, thereby further improving food security in Southern Sudan.
Expected outcomes	Improved post-harvest handling technologies and storage systems adopted by farming households in Southern Sudan.
Expected outputs	• The post-harvest extension system is strengthened through the training of at least 300 extension agents (180 from CAD and 120 implementing partners) and 180 local artisans (blacksmiths) in the construction of silos and improved storage structures. • There is increased awareness and use of appropriate post-harvest management technologies (improved dryers, use of organic pesticides) at farm level through training workshops and FFS (340).

	• improved post-harvest equipment (threshers, chippers, graters and mills) is distributed in selected rural communities, combined with training on the operation and maintenance of the equipment.	
Key activities	• Training implementing partners and CAD extension agents and farmers' groups in post-harvest management techniques and improved storage. • Training local artisans (blacksmiths) in the construction of silos and improved storage (silo) structures. • Establishing FFS to train farmers in post-harvest techniques and the construction of silos and improved traditional storage structures. • Developing post-harvest losses management information. • Establishing community-based agroprocessing units based on the production level of a given crop, vegetable and/fruit. • Providing post-harvest equipment and tools to organized farmers' groups and/or associations. • M&E.	
Budget	***Item***	***USD***
	Personnel (international and national)	628 450
	Contracts (with partners)	3 723 000
	Travel	180 000
	Training (of partners, staff and beneficiaries)	200 000
	Expendable equipment (all agricultural commodities and consumables)	819 200
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	380 000
	Technical support services	100 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	280 000
	Support costs (10% of sub-total)	631 065
	Total	**6 941 715**

Output 2: Improved food accessibility	
Project	**Stimulating economic growth and food security through market information systems**
Objectives	To contribute to economic growth and food security through stimulating urban and rural markets in Southern Sudan by establishing a functioning market information system.
Beneficiaries	The rural and urban population in Southern Sudan.
Implementing partners	Government of Southern Sudan and state-level Ministries of Agriculture and Animal Resources, Government of Southern Sudan Ministry of Trade and Industry, SSCCSE, UN agencies, NGOs, and the private sector.
Project duration	24 months.
Funds requested	USD 4 543 000.
Summary	Markets must function effectively in order to achieve food security and economic growth. However, protracted conflict has meant that markets in Southern Sudan have not functioned for decades. A lack of infrastructure, insecurity, absence of an information system, lack of market extension, absence of transport and other factors have resulted in inefficient markets and lead to dependence on imports from North Sudan and other neighbouring countries. Following the signing of the CPA and relative peace since in Southern Sudan, there have been some signs that markets are improving. Despite this, markets remain under-developed and reliance on the import of food and other commodities continues to be a key challenge facing Southern Sudan. Effective macro, trade and agricultural policies are required to stimulate market development, revitalize local production and gradually reduce dependence on imports. A reliable and timely market information system is of critical importance for producers, traders, consumers and policy-makers to enable them to make informed business and policy decisions. The SIFSIA programme has recently established a pilot market information system in Southern Sudan, which covers markets in the ten state capitals. Real-time price information for major crops, livestock and fisheries products is being made available online and will soon be available in SMS form. This pilot market information system covers only a limited number of markets and commodities owing to a lack of financial and human resource support to the Government of Southern Sudan and state counterparts. Therefore, significant investment is needed to increase the technical knowledge of Government counterparts, and to scale up and out the system's coverage in order to provide comprehensive information to a wide range of stakeholders. The market information, in addition to facilitating trade and stimulating markets, will enable the Government, donors and other development and humanitarian partners to plan, implement and monitor appropriate policies, strategies and programmes for economic growth.
Expected outcomes	Effective crop and livestock market information system covering major commodities and markets in the ten states of Southern Sudan is in place.

Expected outputs	• A functioning market information system is in place, covering major commodities and markets in Southern Sudan. • Improved functioning of rural and urban markets, and greater market transparency and efficiency. • Better integration of markets within Southern Sudan and with markets in North Sudan and neighbouring countries. • Improved business decision-making by market participants (producers, traders, consumers, etc.). • Strengthened capacity of the federal and state governments to monitor market developments and plan appropriate polices and market interventions for economic growth and food security.	
Key activities	• Consolidating the collection and analysis of market information by the Government of Southern Sudan and the ten states. • Providing necessary equipment and facilities to the Government of Southern Sudan and state partners (transport, communication, information technology equipment, etc.). • Providing timely market information to stakeholders (producers, consumers, traders, policy-makers, donors, NGO/CBOs, etc.). • Training relevant staff in the Government of Southern Sudan and the ten states on marketing and market information systems. • Producing market analysis reports, policy briefs and bulletins to inform the Government, donors, and NGOs/CBOs about appropriate market development policies and programmes. • Undertaking market analysis for early warning and response planning to mitigate and avert human catastrophes. • Monitoring and reporting.	
Budget	***Item***	***USD***
	Personnel (international and national)	980 000
	Operating cost of market information system (contracts with state partners)	1 200 000
	Travel	250 000
	Training (of partners, staff and beneficiaries)	550 000
	Expendable equipment	150 000
	Non-expendable equipment (computers, vehicles, motorbikes, etc.)	450 000
	Technical support services	100 000
	General operating expenses	450 000
	Support costs (10% of sub-total)	413 000
	Total	**4 543 000**

Output 3: Improved agricultural productivity	
Project O3.1	**Participatory extension and learning**
Objectives	To reduce food poverty by 25 percent compared with current levels, through improved availability of effective, efficient and inclusive rural advisory services.
Beneficiaries	Rural farmers in Northern Bahr el-Ghazal, Upper Nile, Jonglei, Warrap, and Eastern Equatoria states.
Implementing partners	SMoAs, CAD, CBOs and NGOs.
Project duration	24 months.
Funds requested	USD 5 930 320.
Summary	At present, the Government lacks the capacity or capability to provide extension, research, financial services and marketing support to farmers. Almost all the inputs and limited technical backstopping that have been available in the last two decades have been associated with the relief effort, including the provision of seeds, tools, animal health services, fishing equipment and training, by international agencies, donors and NGOs. These were often provided as a supplement to food distribution interventions. Over the last few years, these organizations have increasingly focused on longer-term development rather than just emergency response. Some progress has been made, particularly in the introduction of properly tested seeds, ox-plough cultivation, improved tools and the piloting of micro-credit approaches and agribusiness initiatives. However, few of these have involved any significant consultation with or participation of the recipients. Experiences and results with agricultural advisory services have been limited to interventions by NGOs and UN agencies such as FAO. Farming systems in Southern Sudan comprise a mixture of crop and livestock production, fishing and forestry activities. Productivity is very low in the crop and livestock subsectors owing to inappropriate and inefficient farming practices, declining soil fertility, low quality seeds, animal health problems, lack of vaccination services, lack of effective extension services, and the inadequate or lack of involvement of non-state actors. Extension services are so weak that there are virtually no services available at and below the county level. In areas where such services are available, they tend to be top-down and based on "delivery", with farmers seen as passive beneficiaries with no role in decision-making. With the relative peace in Southern Sudan, the Government is committed to formulating agricultural and livestock extension services that are inclusive and participatory and that promote the empowerment of small-scale farmers to enable them to meet their specific needs based on their own priorities. FFS and grassroots services through CAHWs have been seen as key mechanisms to promote group-based, inclusive and participatory approaches to address livelihood (crop, livestock, fisheries, forestry) needs based on farmers needs and priorities and to strengthen grassroots-level services for these sectors. First tested in Indonesia, as *Sekolah Lapangan*, with FAO's support, the FFS have proven to be an effective means of providing technical support and building farmers' capacity. Farmers generate knowledge that is functional and necessary to improve their production and livelihood potential. It also helps to empower farmers as they are both the users and owners of the knowledge.

	The community-based animal health service provision was developed, applied and championed through the CAHWs network during the conflict. This proved to be a highly effective tool for the eradication of rinderpest in Southern Sudan and provided much-needed animal health services at the community level. However, after the signing of the CPA and establishment of the Government, donor support to the CAHW system has almost completely disappeared, creating a vacuum between service providers and livestock farmers. Of nearly 4 000 trained CAHWs, only about half are functioning and they urgently need refresher training, basic tools and veterinary kits. Cold chain facilities, which are vital for sustained animal health service provision, have deteriorated, making vaccination programmes difficult. If the Government is to successfully optimize community-based animal health services, it must provide support to revive the system.
Expected outcomes	Rural farmers are able to secure effective and productive services through strengthened rural advisory services through FFS and CAHWs.
Expected outputs	• 1 000 FFS (for livestock, crops and fisheries) are set up in five states and reach 25 000 rural households. • Production of key crops has increased by at least 25 percent through the use of quality seeds, efficient farming practices, and access to information and services. • Local farmers are able to identify crop varieties that are tolerant to drought, major pests and diseases. • There is greater access to support services through the engagement and strengthening of key actors in the crop, livestock and fisheries production chains. • Support services are available at the county, boma, and payam levels through the development of expertise (FFS facilitators, master trainers and CAHWs). • The livestock subsector is more productive owing to the treatment (prophylactic and curative) of animals through the upgraded services of 250 CAHWs. • Vaccination programmes and treatment services are locally available through the establishment of cold chain facilities.
Key activities	• Organizing training of trainers' sessions for 50 master trainers on the FFS methodology. • Providing training of trainers courses for at least 1 000 FFS facilitators. • Establishing 1 000 FFS (200 per state). • Engaging and training CBOs and NGOs on the FFS methodology. • Organizing refresher training for 250 CAHWs and providing basic toolkits. • Providing training of trainer courses for 50 CAHW master trainers. • Establishing a revolving fund to support CAHWs and FFS to initiate veterinary pharmacies and establish field schools respectively at the grassroots level. • Organizing cross-learning visits (in-country and regional) to facilitate learning and sharing. • Providing logistical support (motorcycles) to master trainers and (bicycles) FFS facilitators and CAHWs. • Supporting the formation of FFS and CAHWs' associations (voice creation). • Organizing refresher training courses. • Organizing field days and awareness-raising campaigns. • Conducting sharing workshops and seminars. • Documenting lessons learned and dissemination. • Monitoring and follow up.

	Item	USD
Budget	Personnel (international and national)	1 084 000
	Contracts (with partners)	2 400 000
	Travel	227 200
	Training (of partners, staff and beneficiaries)	420 000
	Expendable equipment (all agricultural commodities and consumables)	460 000
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	200 000
	Technical support services	360 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	240 000
	Support costs (10% of sub-total)	539 120
	Total	**5 930 320**

Output 3: Improved agricultural productivity	
Project O3.2	**Integrated pest and disease management**
Objectives	To promote sustainable pest and disease management practices for improved food productivity in Southern Sudan.
Beneficiaries	4 000 households, comprising returnees, IDPs and residents of agrarian and agropastoral communities (60 percent women, 40 percent men).
Implementing partners	SMoAs, CADs, NGOs and CBOs operating in Northern Bahr el-Ghazal, Eastern Equatoria and Warrap states.
Project duration	24 months.
Funds requested	USD 2 188 956.
Summary	Agriculture (including crop, livestock, fisheries and forestry production) is the main livelihood source for over 90 percent of Southern Sudan's population. However, productivity remains low owing to a combination of floods, droughts, insecurity, pest and disease outbreaks, unproductive practices, the use of rudimentary technologies, etc. This has resulted in chronic food insecurity and is reflected in the cereal production deficits (CFSAM, 2008) that have been seen in Northern Bahr el-Ghazal, Warrap, Upper Nile, Jonglei and Eastern Equatoria states. While floods, droughts and insecurity remain outside the control of individual farmers, other constraints, such as pests and diseases, could be easily addressed by farmers at the household and community levels. The prevalence of pests and diseases has significantly limited the achievement of higher yields in all crops and even more so with vegetables, where losses of up to 100 percent have been reported. As noted in the

	2008 CFSAM report, the prevalence of pests and diseases is attributed to a lack of crop protection extension services and, therefore, lack of access to information and inputs for pest and disease management among farmers. While the Government has restricted the use of inorganic chemicals, including pesticides, the threat to agriculture from pests and diseases remain high owing to the absence of appropriate strategies and alternatives for pest and disease control. The project will, therefore, seek to adopt an IPDM strategy, which is an approach to coordinate economically and environmentally acceptable methods of pest control with the judicious and minimal use of toxic pesticides. This will be done through a number of activities, including the careful assessment of local conditions (such as climate, crop characteristics, agricultural practices, soil quality and Government regulations). The goal of this is to maintain the current minimal use of chemicals in crop production, while keeping pests and diseases to an economically-manageable level. The safe use of chemicals in some circumstances, such as vegetable production, will be promoted through training farmers and dialogue with the MAF on the safe use of toxic chemicals to control pests and diseases of economic importance.
Expected outcomes	• IPDM practices are adopted for crop production by targeted farmers. • Information manuals on IPDM are produced. • There is increased awareness and integration of IPDM as a component in agricultural extension services.
Key activities	• Profiling local knowledge on pest and disease management, incorporating scientific knowledge and developing a manual for IPDM practices for Southern Sudan, which will be translated into various local languages and distributed to partners and users. • Training partners including NGOs, CBOs and Government extension agents, and farmers' groups on IPDM practices. • Engaging the MoAF in dialogue on pesticides' policy. • Establishing demonstration units through FFS for training of farmers in IPDM. • M&E of the project activities.

Budget

Item	*USD*
Personnel (international and national)	600 000
Contracts (with partners)	500 000
Travel	86 960
Training (of partners, staff and beneficiaries)	90 000
Expendable equipment (all agricultural commodities and consumables)	200 000
Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	125 000
Technical support services	100 000
General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	288 000
Support costs (10% of sub-total)	198 996
Total	**2 188 956**

Output 3: Improved agricultural productivity	
Project O3.3	**Supporting community-based seed production and supply**
Objectives	To increase the availability of and access to quality, locally produced seeds and planting materials.
Beneficiaries	Seed producers, returnees, IDPs and other vulnerable households.
Implementing partners	NGOs, CBOs, MAF/Southern Sudan Agricultural Research and Technology Organization (SSARTO), SMoA/CADs.
Project duration	24 months.
Funds requested	USD 3 604 095.
Summary	Seeds are the basic requirement for agricultural production and are central to farmers' livelihoods worldwide. In Southern Sudan, farmers normally obtain seeds from various sources, such as seed selected from grain; received, exchanged and/or bought from neighbouring families, friends or relatives; and received as emergency assistance or through rehabilitation and development interventions. No formal seed system exists in Southern Sudan. FAO, in collaboration with the Government/MAF and NGOs/CBOs has been trying to overcome this through support to community-based seed production and supply schemes in order to increase the availability of and access to quality, locally adapted and improved crop varieties. Although there has been some success in this (through projects funded by the Governments of France and Japan), there are still a number of challenges to be addressed, including the uncertainty of the seed market, household labour constraints, problems associated with seed drying in the first season, poor access to credit and services, the need for basic/foundation seeds of improved/new crop varieties, weak seed extension services, and the need to upscale FFS. Therefore, the proposed intervention will seek to address some of these issues. In order to build on achievements and narrow the existing gaps in the development of a functional seed production and supply scheme, the project targets 400 community-based seed growers in Southern Sudan. Based on agro-ecological suitability, the project will be implemented in Eastern Equatoria (Magwi county), Central Equatoria (Yei River, Juba Lainya and Morobo counties), Lakes (Rumbek East county), Warrap (Tonj county), Western Bahr el-Ghazal (Wau county) and Western Equatoria (Yambio and Nzara counties). The seed produced from these six states is expected to meet local seed demand at the community level, as well as the needs of returnees and IDPs within and outside of the project areas. Some 800 tonnes of seed are expected to be produced by the end of the project. This should increase access to quality seeds of selected crop varieties among over 200 000 farming families throughout Southern Sudan. This will not only increase seed and food security, but also reduce dependence on seed aid imported from outside Southern Sudan. It will ensure that aid money is injected directly into local economies. Farmers will benefit from the introduction of appropriate seed technologies (improved varieties, agronomic practices, seed processing, storage and marketing), which will augment their income and livelihoods. It is envisaged that the intervention will serve as an entry point for the development of private-sector seed enterprises in Southern Sudan and will trigger the development of the commercial seed sector in the longer term. This community-based seed production project is part of FAO's effort to move from pure emergency/humanitarian interventions towards rehabilitation and development.

Expected outcomes	A quality seed production and supply scheme is established and/or strengthened in six states of Southern Sudan.	
Expected outputs	• Over 400 seed growers are organized and their capacity is strengthened to enable them to produce quality seeds of adopted and improved crop varieties. • Seed extension services are strengthened in all the project locations so that seed growers are able to produce quality seeds of adopted and improved crop varieties. • About 800 tonnes of quality seeds of adapted and improved crop varieties (beans, cassava, cowpea, green grams, maize, sesame and sorghum) are produced and distributed to over 200 000 target beneficiaries (returnees, IDPs and vulnerable residents). • There is improved access to seed marketing channels by the current seed growers in Southern Sudan.	
Key activities	• Training both seed extension agents and progressive seed growers in aspects of seed enterprise development, seed production, processing and marketing. • Establishing FFS for continuous adult learning in seed production techniques, post-harvest handling and storage. • Establishing Seed Quality Boards at the county level. • Providing agricultural inputs (basic seeds, equipment, chemicals and tools). • Supporting basic seed multiplication by SSARTO. • Constructing community-based seed stores and drying yards. • Establishing a revolving seed fund scheme. • Organizing and strengthening of community seed growers' associations/groups. • Supporting mechanized seed processing and packaging. • Re-collecting adopted crop varieties for multiplication as well as for distribution. • Conducting regular field inspections by seed extension agents. • Conducting regular laboratory seed sample analysis. • Assessing seed market demand and supply and creating market linkages. • Stimulating local seed demand through seed fairs. • M&E.	
Budget	***Item***	***USD***
	Personnel (international and national)	628 450
	Contracts (with partners)	1 515 400
	Travel	130 200
	Training (of partners, staff and beneficiaries)	100 000
	Expendable equipment (all agricultural commodities and consumables)	221 600
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	340 800
	Technical support services	100 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	240 000
	Support costs (10% of sub-total)	327 645
	Total	**3 604 095**

Output 3: Improved agricultural productivity	
Project O3.4	**Supporting capacity for effective response to animal disease prevention and control**
Objectives	To improve access to animal health services by communities for increased livestock productivity.
Beneficiaries	50 000 livestock-owning households in areas with disease outbreaks, targeting Jonglei, Eastern Equatoria, Warrap and other areas of animal disease outbreaks in Southern Sudan.
Implementing partners	MoARF, State Departments of Animal Resources and Fisheries, NGOs (Vétérinaires sans frontières agencies, World Vision, ADRA, SNV, NPA, DOT, Vetwork Trust, Farm Africa and COOPI) CBOs and FBOs.
Project duration	24 months.
Funds requested	USD 5 775 528.
Summary	Livestock production plays an important role in the livelihoods and food economy of agropastoralist households. The husbandry system is characterized by seasonal movements in search of water and pastures. Key constraints to livestock production include weak institutions for animal health and production services, and poor access to markets. Improving the animal health delivery system will contribute significantly to increasing livestock production and productivity and, therefore, improving the food and livelihoods security of agropastoralist communities. Southern Sudan was declared free of rinderpest in 2008, mainly as a result of the efforts of a network of CAHWs, who were involved in the rinderpest vaccination campaign and the control and prevention of other diseases. The lessons and experience gained from the rinderpest campaign can be used to improve the animal health service delivery system. A strong coordination and information sharing mechanism was developed among the agencies involved in livestock services delivery. However, this has weakened in the post-CPA period. Although the capacity of MARF has significantly improved since its formation in 2005, considerable effort is required to build its capacity to provide adequate livestock advisory and veterinary services. This project will, therefore, support the relevant Government of Southern Sudan institution in: • planning and coordinating interventions in the livestock sector to enhance the quality, coherence and impact of service delivery to agro- and pastoralist communities; • strengthening the public and private veterinary service delivery system to ensure its accessibility for the majority of livestock keepers in Southern Sudan; and • strengthening monitoring and surveillance mechanisms, and supporting efforts to control transboundary and emerging zoonotic diseases, such as H5N1, HPAI, H1N1 and RVF.
Expected outcomes	Increased livestock production and productivity.
Expected outputs	• Community-based animal health delivery services are re-established and access to animal health services is improved. • A functional cold chain facility is established in five states of Southern Sudan. • There is improved monitoring and surveillance of transboundary and emerging diseases and response to outbreaks. • There is improved coordination of livestock services delivery.

Key activities	1. **Coordinating animal health activities:** FAO will support the Government in consolidating and strengthening the existing animal health coordination mechanism to ensure the most effective outcomes of the overall livestock development assistance. The project activities will focus on training of partners in the use of the Livestock Emergency Guidelines Standards. FAO will support the responsible Government ministry in developing plans, policies and strategies for a sustainable veterinary service delivery system. 2. **Supporting the cold chain system safety net:** The management of the existing cold chain system for vaccine storage will be consolidated and strengthened through the procurement of fridges, vaccine carriers, cool boxes and moving spare parts for the facilities. Cold chain hubs will be established in Wau/Rumbek for Greater Bahr el-Ghazal and in Malakal for Greater Upper Nile, and will support the establishment and maintenance of cold chains in areas with high livestock populations, and train fridge operators. 3. **Vaccine procurement and management:** Appropriate vaccines will be procured and distributed to different locations in the field. 4. **Supplying veterinary drugs:** The project will support the procurement and placement of essential drugs in situations of outbreaks to be accessed by the animal health service delivery agencies and the CAHWs. 5. **Laboratory support:** FAO will support the newly-established laboratories in MoARF in the procurement of equipment and reagents. FAO will also contribute to supporting the development of capacity for the laboratory staff by providing technical and specialized training. 6. **Disease surveillance and control:** This will involve strengthening the surveillance and control of transboundary diseases including emerging zoonotic diseases such as H5N1, HPAI, H1N1 and RVF. 7. **Veterinary public health:** FAO will support the Government and partners in information dissemination on zoonotic diseases such as rabies, anthrax, H5N1, HPAI, tuberculosis and H1N1, and their prevention through community awareness campaigns.

Budget	***Item***	***USD***
	Personnel (international and national)	900 000
	Operating cost of market information system (contracts with state partners)	600 000
	Travel	330 480
	Training (of partners, staff and beneficiaries)	500 000
	Expendable equipment (all agricultural commodities and consumables)	500 000
	Non-expendable equipment (vehicles, motorbikes, computers, printers, other hardware and software)	300 000
	Technical support services	220 000
	General operating expenses (including office rent, maintenance of vehicles, UN contribution, ITSH)	400 000
	Support costs (10% of sub-total)	525 048
	Total	**5 775 528**

Cross-cutting activities	
Project C1.1	**Streamlining food security coordination and the early warning system**
Objectives	To improve food security information collection, analysis and dissemination, and provision of early warning information to decision-makers for timely interventions to save human lives.
Beneficiaries	Vulnerable communities in Southern Sudan.
Implementing partners	Federal and State Ministries of Agriculture and Animal Resources, NGOs, and CBOs.
Project duration	24 months.
Funds requested	USD 5 241 500.
Summary	The definition of an early warning system (EWS) depends on the purpose of the system, its institutional structure and role, the scope of activities, and the type of information products produced. Many systems focus on agroclimatic and food supply monitoring, while others are developed in the context of disaster management and risk reduction (International Strategy for Disaster Reduction, 2002). A comprehensive early warning system covers aspects of food security that examine supply, access and nutrition, and after rigorous analysis provides information to warn a country months in advance of a serious impending food insecurity situation. Such systems seek to help prevent or respond to food insecurity by providing decision-makers with specific information about hazard conditions or dwindling crop yields, based on assessment. The establishment of a demand-driven system is critical to the effectiveness and long-term sustainability of an early warning system. In the 1990s, early warning systems tended to focus on rainfall and vegetation and forecast expected agricultural production. Food security has become much more complex and to provide reliable early warning information based on which decisions can be made, food security analysts need to combine agricultural production maps, data and satellite imagery with local market prices and trade inflows and outflows, and information about local livelihoods in order to determine what can be purchased locally, what can be brought in and what people can afford. The SIFSIA programme was designed to establish an information system for food security in Southern Sudan. During the inception period, it became clear that the programme design did not allocate resources for the states from which the food security information would be collected. After the mid-term review, there was a strong recommendation that resources be allocated to the states for food security data collection. SIFSIA re-allocated some resources to the states, but this has not been sufficient. The current livelihood information and livelihood zones were developed many years ago and should be reviewed as livelihood sources have changed considerably in the context of relative peace. This is critical for a proper understanding of food insecurity and vulnerability. This project will build on existing food security information activities, taking into account critical partnerships in data collection and food security analysis, which have been shown to help overcome human resource constraints, improve the quality of analysis and strengthen capacity. In this context, the Government of Southern Sudan will work with development partners, NGOs and universities. Extensive capacity building will be conducted in the five states because the way in which information is collected analysed and disseminated is critical to its use in decision-making and supporting timely national responses to transitory food and nutrition crises. The early warning system will be part of an expanded food security information and analysis system and will be enhanced to produce viable, relevant and credible information for use in responding to short-term emergencies, as well as contributing to longer-term development programming.

Expected outcomes	An effective early warning system is in place and providing timely food insecurity information, based on which decision-makers take decisions.	
Expected outputs	• Strengthened Government of Southern Sudan and state-level, CBO and NGO capacities in primary data collection information systems. • A strengthened food security coordination platform. • Improved early warning analysis with a full understanding of transitory, chronic and structural food insecurity. • Improved quality of early warning reports that have undergone analytical rigour and with subsequent monitoring and scenario building. • Improved delivery of early warning information for decision-making to avert human catastrophe.	
Key activities	• Strengthening the capacity of the federal and state Ministries of Agriculture to coordinate food security and livelihood interventions. • Training federal and state staff on data collection and analysis. • Providing communication equipment. • Providing transportation means for data collection in rural areas. • Facilitating state- and federal-level FSL Cluster partners' coordination forums. • Promoting cross-cutting issues, such as gender, HIV/AIDS, peace initiatives and environmental conservation. • Conducting and disseminating assessment and case study results. • Updating livelihood zones. • Collecting data on agricultural production and estimation. • Monitoring food security. • Monitoring vulnerability. • Collecting market price data for the crop and livestock market information system (CLiMIS). • Monitoring cross-border trade. • Documenting and disseminating FSL lessons learned and good practices. • M&E.	
Budget	***Item***	***USD***
	Personnel (international and national)	1 505 000
	Contracts (with partners)	1 500 000
	Travel	250 000
	Training (of partners, staff and beneficiaries)	450 000
	Expendable equipment	250 000
	Non-expendable equipment (vehicles, motorbikes, etc.)	400 000
	Technical support services	110 000
	General operating expenses	300 000
	Support costs (10% of sub-total)	476 500
	Total	**5 241 500**

Cross-cutting activities	
Project C1.2	**Streamlining agricultural statistics to empower rural communities**
Objectives	To improve the incomes and food security of rural communities by compiling agricultural production statistics to stimulate agricultural production markets.
Beneficiaries	Resource-poor and vulnerable communities in Southern Sudan.
Implementing partners	Federal and State Ministries of Agriculture and Animal Resources, NGOs, and CBOs.
Project duration	24 months.
Funds requested	USD 3 712 500.
Summary	Southern Sudan has a land mass of about 640 000 km^2 and an estimated population of between 8.5 and 10 million. The population is expected to grow over the next couple of years as a result of natural population increase and the return of refugees and IDPs. Decades of conflict, insecurity and lack of access to basic services have undermined livelihoods, increased poverty levels, reduced economic and educational opportunities and led to high rates of malnutrition. The signing of the CPA led to relative peace and stability and encouraged the return of over 3.5 million refugees and IDPs (according to the UN Sustainable Return Team, 2005). The UN Return, Reintegration and Resettlement Working Group estimated in 2008 that over a million people had returned to areas in Southern Sudan's ten states. The relative peace in Southern Sudan has stimulated various livelihood activities. However, in rural areas, the majority of households continue to depend on subsistence agricultural production for their livelihoods. Most of Southern Sudan's people reside in rural areas and rely on farming for their food and income. A number of donors are currently or are in the process of implementing market-related activities in order to empower resource-poor rural communities. Other activities seek to enhance the Government's capacity to collate and analyse food security information, such as the SIFSIA programme. However, the SIFSIA programme did not allocate resources for the states from which food security information would be received. With market-related activities being developed, there is an urgent need to improve the states' capacity to generate agricultural statistics and realize their full potential. Currently, agricultural statistics in Southern Sudan are generated by the WFP/FAO CFSAM and presented as combined cereals, without disaggregating individual crops. It is known that procuring agricultural produce from rural communities empowers these communities. However, if this is done without clear information on quantities being produced in particular localities; this could push communities into food insecurity as all their production could be purchased and shipped to other regions. The project will build on existing SIFSIA activities on food security, taking into account critical partnerships in data collection for agricultural statistics and analysis, which have been shown to help overcome human resource constraints, improve the quality of analysis and strengthen capacity. In this context, the Government of Southern Sudan will work with development partners, NGOs and universities. Extensive capacity building will be conducted in five states (Western and Central Equatoria, Western and Northern Bahr el-Ghazal and Upper Nile) to standardize agricultural production data collection methodologies. Similar methodologies for data collection, analysis and dissemination arecritical for decision-making and stimulating market response. The agricultural statistics data collection will be part of the SIFSIA food

	security information and analysis system and will assist in empowering communities through credible information systems, which highlight the potential of the indicated states as a source of agricultural produce without jeopardizing the food security of farming communities.	
Expected outcomes	Agricultural statistics are generated and standardized, contributing to increased agricultural production, income and empowerment of rural communities.	
Expected outputs	• Strengthened capacities of federal- and state-level Government institutions, CBOs and NGOs in agricultural data collection and analysis. • Improved generation of agricultural statistics and database for planning and policy development. • Improved food security of rural communities through income generation from their agricultural produce. • Improved delivery of quantitative agricultural production information for decision-making and market stimulation.	
Key activities	• Training federal and state Government staff on data collection and analysis. • Providing communication equipment. • Providing transportation means for data collection in rural areas. • Collecting data on agricultural production and estimation. • Collecting market price data for CLiMIS. • Publishing quantitative estimates of agricultural production of various crops. • Providing agricultural production information to potential buyers. • M&E.	
Budget	***Item***	***USD***
	Personnel (international and national)	960 000
	Contracts (with partners)	960 000
	Travel	180 000
	Training (of partners, staff and beneficiaries)	400 000
	Expendable equipment	150 000
	Non-expendable equipment (vehicles, motorbikes, etc.)	375 000
	Technical support services	100 000
	General operating expenses	250 000
	Support costs (10% of sub-total)	337 500
	Total	**3 712 500**

Cross-cutting activities	
Project C1.3	**Building capacity for integrated food security, nutrition and livelihoods programming**
Objectives	To build the capacity for planning, implementing and evaluating interventions leading to sustainable improvements in food and nutrition security.
Beneficiaries	Ultimate beneficiaries: vulnerable households benefiting from FAO and partner institutions' assistance. Direct beneficiaries: Government institutions and civil society providing food security and livelihoods support to vulnerable populations.
Implementing partners	State ministries, local agricultural offices, national NGOs, local communities; and FAO implementing partners involved in other FAO projects.
Project duration	24 months.
Funds requested	USD 503 250.
Summary	The prevalence of undernutrition in Sudan is among the highest in the world. According to national estimates, 31 percent of children under five are underweight, 14.8 percent are wasted and 32.5 percent are stunted. These estimates mask significant sub-national and seasonal variations. The prevalence of moderate underweight children is estimated at 32.9 percent in Southern Sudan. The prevalence of wasting is estimated at 14.9 percent, while the prevalence of underweight children is estimated at 42.9 percent. Localized surveys on micronutrient status report night blindness due to Vitamin A deficiency from less than 1 to 4.8 percent. Undernutrition not only increases vulnerability to disease and death, it undermines learning capacity and productivity, thereby locking vulnerable households in a cycle of destitution and undermining sustainable livelihoods. Key factors contributing to increasing malnutrition and micronutrient deficiencies among children are poor intake of nutritionally balanced diets; chronic household food insecurity, infectious diseases, poor health services and sanitation situation. The SHHS observed that poor community awareness and poor health care seeking behaviours aggravates a situation characterised by extremely high rates of maternal and child mortality. The food security and livelihood situation for the vast majority of rural households is undermined by chronic poverty; constrained agricultural production; limited economic opportunities; prolonged disruption and loss of economic activities; and reduced livestock and fisheries production and productivity. High prices for food commodities have left an estimated 76 percent of resource-limited rural populations at risk for their survival and food security. The majority of resource-poor farmers are producing food below their subsistence requirements. As such, social, political and economic factors are inextricably connected as a source of vulnerability and undertnutrition among affected populations. A multisectoral response integrating the 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. Agriculture and food security interventions have a key role to play in improving nutrition. However, this impact must be fostered by ensuring 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 and thus to the achievement of FAO's SO I.
Expected outcomes	Improved capacity for planning, implementing and evaluating integrated interventions leading to sustainable improvements in food and nutrition security.
Expected outputs	• Food security, nutrition and livelihoods issues adequately addressed in relevant policies and programmes. • Strengthened collaboration with other sectors working in areas related to food security, nutrition and livelihoods. • Government institutions, CSOs and NGOs trained on how to strengthen their programmes' impact on food and nutrition security. • Nutrition education integrated into agriculture and livelihoods interventions. • Lessons learned on successful food security, nutrition and livelihoods interventions documented and shared at the national and regional levels.
Key activities	• Participation in relevant policy-making and programming exercises to ensure food security, nutrition and livelihoods are effectively addressed (e.g. agriculture sector policies, DRM strategies, etc.). • Participation in relevant coordination mechanisms (e.g. nutrition cluster) and joint programming to promote multi-sectoral interventions at the field level (with health, education, social affairs, women's affairs, etc.). • Training of 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 national and district level, etc.). • Development of nutrition education materials; training on nutrition education; implementation of nutrition education as part of agriculture and livelihoods interventions. • Lesson sharing workshop and preparation of materials to document and disseminate success stories and good practices. • Other relevant activities designed to strengthen the impact of interventions on food and nutrition security as identified during project implementation.
Budget	

Item	*Amount USD*
Personnel (international and national)	300 000
Contracts (with partners)	50 000
Travel	30 000
Training (of partners, staff and beneficiaries)	37 500
Expendable equipment	10 000
Technical support services	20 000
General operating expenses	10 000
Support costs (10% of sub-total)	45 750
Total	**503 250**

ANNEX 3: FAO IN EMERGENCIES

FAO's vision is that by 2020 we will all be living in ***"A world free of hunger and malnutrition where food and agriculture contributes to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner".*** This will be achieved through the active pursuit of three **Global Goals**:

- reduction of the absolute number of people suffering from hunger, progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;
- elimination of poverty and the driving forward of economic and social progress for all, with increased food production, enhanced rural development and sustainable livelihoods; and
- sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources, for the benefit of present and future generations.

The mission: We support countries and partners to prepare for and respond to food and agricultural threats and emergencies.
The people we serve: We help farmers, fishers, foresters, herders and their families to recover from crises.

In order to achieve these and its vision, FAO has defined 11 Strategic and 2 Functional Objectives, which focus on where FAO can best assist its Members to achieve sustainable impacts in addressing the challenges faced in food, agriculture and rural development.

FAO Strategic Framework 2010 – 2019

SO A	Sustainable intensification of crop production
SO B	Increased sustainable livestock production
SO C	Sustainable management and use of fisheries and aquaculture resources
SO D	Improved quality and safety of food at all stages of the food chain
SO E	Sustainable management of forests and trees
SO F	Sustainable management of land, water and genetic resources and improved responses to global environmental challenges affecting food and agriculture
SO G	Enabling environment for markets to improve livelihoods and rural development
SO H	Improved food security and better nutrition
SO I	Improved preparedness for, and effective response to, food and agricultural threats and emergencies
SO K	Gender equity in access to resources, good, services and decision-making in the rural areas
SO L	Increased and more effective public and private investment in agriculture and rural development
FO X	Efficient collaboration with Member States and stakeholders
FO Y	Efficient and effective administration

The 11 Objectives represent a combination of inter-linked sectoral and cross-sectoral impacts that address crops, livestock, fisheries, food safety, forestry, natural resources, enabling environments, food security, gender, emergencies and investment.

Activities included in the PoA under Output 1 (food production), Output 2 (food access), Output 3 (food productivity) and cross-cutting (early warning, coordination, institutional capacity building) mark a clear step towards achieving all aspects of FAO's SOI: ***"Improved preparedness for, and effective response to, food and agricultural threats and emergencies".***

Under this, there are three Organizational Results (ORs):

- OR1: Countries' vulnerability to crisis, threats and emergencies is reduced through better preparedness and integration of risk prevention and mitigation into policies, programmes and interventions;
- OR2: Countries and partners respond more effectively to crises and emergencies with food- and agriculture-related interventions; and
- OR3: Countries and partners have improved transition and linkages between emergency, rehabilitation and development.

This does not mean the other Strategic Objectives are not relevant. On the contrary, the PoA also commits to contributing to the achievement of the other Strategic Objectives, some of which are covered under the programme profiles.

FAO Structure

Emergency Operations and Rehabilitation Division (TCE): TCE is a part of FAO's Technical Cooperation Department and is responsible for implementing emergency and rehabilitation activities related to food and agriculture. The Division has personnel in its headquarters in Rome and in over 50 regional/subregional and country offices worldwide: (sub)regional offices – Asia and the Pacific (Bangkok); Near East (Amman); Latin America and the Caribbean (Panama City and Bogota); Africa (Nairobi, Dakar and Johannesburg) – and operations personnel in FAO Representations, regional and subregional Emergency Centre for Transboundary Animal Diseases Operations units, as well as ERCUs in over 40 countries, including Southern Sudan.

At field level, the ERCU in Southern Sudan, within the FAO Representation, provides information and technical advice to all the organizations engaged in emergency and rehabilitation assistance in the agriculture sector in Southern Sudan, including NGOs, the Government and donors. FAO ERCU's coordination role aims to activate synergies and promote networking among FSL partners and to keep all emergency agricultural and food security stakeholders informed about who is doing what and where. As a result, there are fewer gaps in the delivery of the emergency assistance, less duplication of effort and fewer wasted resources.

Furthermore, the FAO ERCU is a co-lead for the country-level Interagency Standing Committee Cluster on Food Security and Livelihoods. FAO is, therefore, accountable to the Humanitarian Coordinator for ensuring effective and timely assessments and response in the Cluster, and for acting as provider of last resort. In addition, cluster leads have mutual obligations to interact with each other and coordinate to address cross-cutting issues.

Technical divisions: FAO is in the process of moving toward a results-based management framework, whereby the whole Organization works towards common goals and objectives. The Organization's technical divisions/services/units are being restructured around the overall FAO Strategic Framework. The diverse technical units of the Organization will support the implementation of the PoA covering a wide range of subjects as highlighted in the FAO Strategic Framework.

Procurement: As much as possible, FAO prioritizes local procurement of inputs and commodities. In any case, FAO organizes the procurement of inputs following the rules and regulations of the FAO Procurement Service.

As a general rule, procurement actions are undertaken on the basis of competitive tenders with a minimum of three responsive suppliers. Procurement is carried out through Purchase Orders utilized for goods and commodities. Unless otherwise stated in the tender, Purchase Orders are awarded to the lowest bidder meeting the specifications. In emergency situations, delivery terms are considered, together with the quotations, as the prime factor in the selection of the supplier and will be so stated in the tender.

ANNEX 4: SUMMARY OF DONOR CONTRIBUTIONS TO FAO IN THE SUDAN

This section provides information about donor contributions to FAO's activities in the Sudan[40]. Chart 1 provides an overview of funding trends to FAO and highlights, in particular, the stability of the FAO portfolio since 2005 (average of USD 23.4 million per year). It also indicates that the funding gap is relatively high (average of 46 percent).

Table 6 and Charts 2 and 3 provide an analysis of the 2009 budget portfolio and demonstrate that the European Union, either through the European Commission Humanitarian Aid Department (ECHO) or through its Delegation, is by far the biggest donor to FAO in the Sudan at present (63 percent of total contribution). It also demonstrates the importance of UNOCHA as a key channel for Common Humanitarian Fund (CHF) and Central Emergency Response Fund (CERF) financing.

Chart 1 – FAO funding trend

While "direct response" (OR2) was the main component of FAO's portfolio in early 2000, a key direction (reflected in both the 2010 UN and Partners' Work Plan for Sudan and in the 2010–12 PoA) has been taken by FAO starting in 2010 to significantly strengthen the level of preparedness and mitigation capacity of both the Government and communities for natural and human-induced disasters. The main projects classified under "rehabilitation" are the European Union-funded Sudan Productive Capacity Recovery Programme (SPCRP) and the European union-funded SIFSIA.

40 This includes all national programmes, i.e. Abyei, Blue Nile, Darfur, and Eastern states, Khartoum and other Northern states, Southern Kordofan, Southern Sudan.

Table 6 - 2009 Donor contribution to FAO's work in Southern Sudan

Donor	Contribution (USD)	Organizational Result
CHF	5 100 000	Preparedness & rehabilitation
CERF	799 195	Response
CERF	385 414	Response
France	781 371	Rehabilitation
ECHO	1 404 499	Preparedness, response & rehabilitation
Switzerland	189 277	Rehabilitation
European Union (SIFSIA)[41]	3 019 480	Preparedness & rehabilitation
European Union (SPCRP)[42]	6 644 336	Rehabilitation
Multidonor Trust Fund (Support to Agriculture and Forestry Development Project)	704 894	Rehabilitation
Multidonor Trust Fund (Livestock and Fisheries Development Project)	405 670	Rehabilitation
Total	**19 434 136**	

Chart 2 – 2009 FAO donors

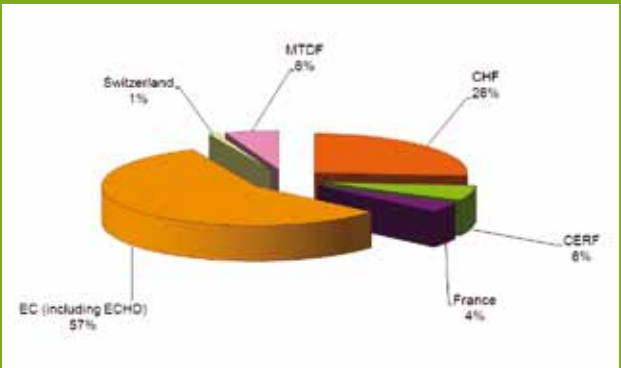


Chart 3 – 2009 portfolio according to FAO OR

41 SIFSIA is a four-year programme with a total budget of USD 12.3 million for Southern Sudan. The contribution mentioned here is the expenditure for 2009 only.

42 SPCRP is a four-year programme with a total budget of USD 27.3 million for Southern Sudan. The contribution mentioned above is the expenditure for 2009 only.

ANNEX 5: INTERLOCKED STRATEGY MATRIX FOR SOUTHERN SUDAN

	NFSAP (SOUTH SUDAN)	UNDAF 2009-2012	NMTPF 2008-2012
GOAL	Address the different FS problems of resource poor HH and vulnerable groups	Supporting peace consolidation and stability in the country	
OUTCOME	Improve/rehabilitate the livelihoods of smallholder farmers and pastoralists	Outcome 1 Peace building	***Cluster 1*** Growth and reduction of poverty
	Ensure the immediate and long-term access of vulnerable groups to food	Outcome 2 Governance and rule of law	***Cluster 2*** Improvement of quality of life and livelihood
	Promote a greater stability of food supply at HH, local and national levels	Outcome 3 Livelihoods and productive sectors	***Cluster 3*** Good governance and accountability
	Address some of the bottlenecks to smallholder agr. and livestock prod.	Outcome 4 Basic services	
	Promote a sustainable management of natural resoures		
	Promote a sound policy and institutional framework for food security		
	Programmes	***Sub-outcomes (03)***	***Results***
	P1 - Recovering and diversfifying rural livelihoods	SO1 - More rural HH employed with increased sust. agri. production/diver.	R1.1 - Support capacity of implementing and monit. of ag. and rural dev. programmes
	P2 - Improving food access, food quality and stability	SO2 - Individuals access to improved income-generating opportunities	R1.2 - Implementation of the National Food Security Action Plan (NFSAP)
	P3 - Strengthening rural services and policy and institutional envir. for FS	SO3 - Transportation and market infrast. improved thus fostering ag. and ind. prod.	R2.1 - Food safety measures
		SO4 - Improve sust. NRM and resilience to national disaster (climate change)	R2.2 - Control of unpredicted outbreaks of pests and diseases
		SO5 - Equitable, compet. and socially responsible private sector in place	R3.1 - Strengthen local government and CBOs for self-reliance

Legend:
To interlink with PoA

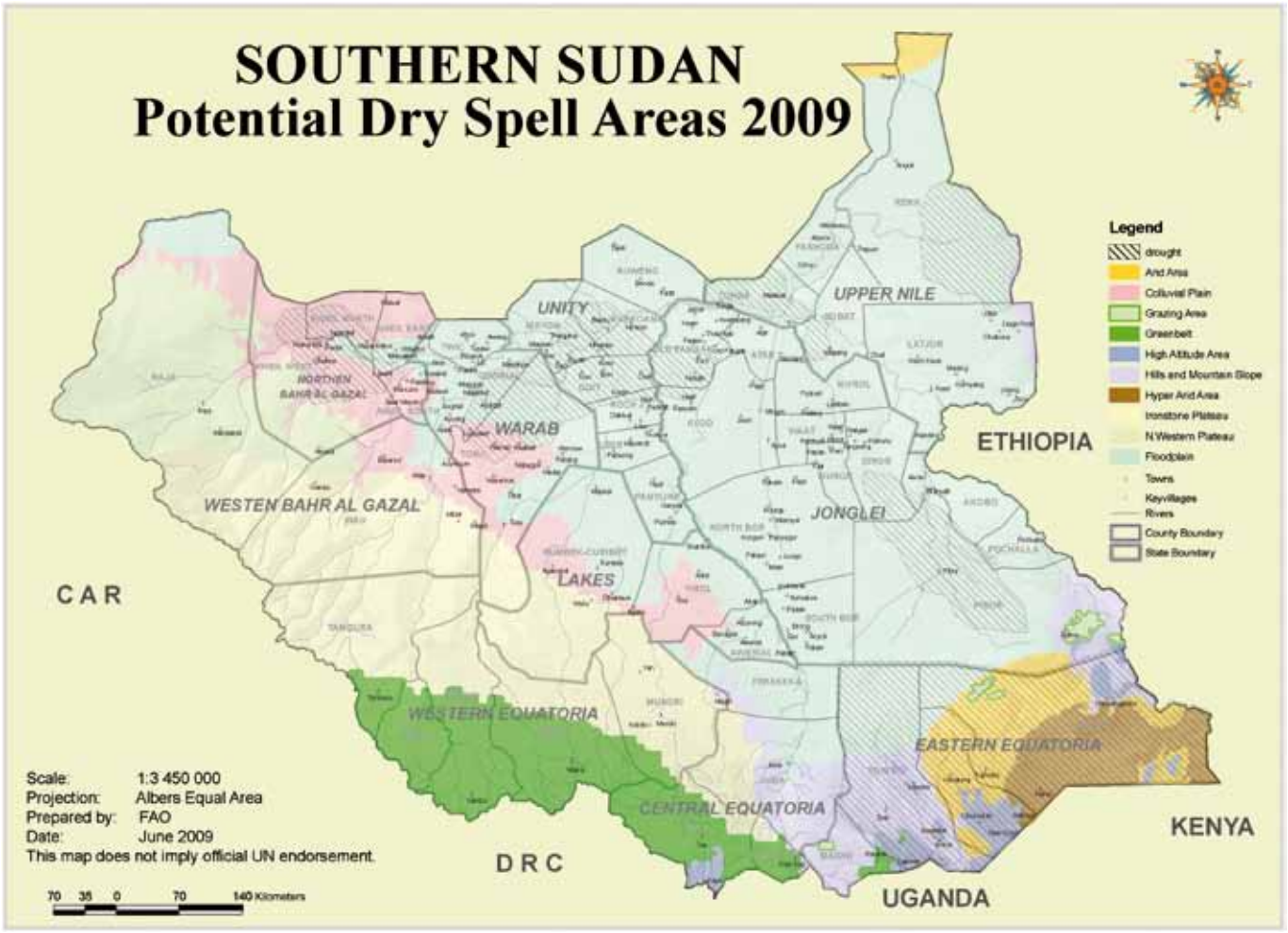
ANNEX 6: IPC REFERENCE TABLE

Integrated Food Security and Humanitarian Phase Cliassification Reference Table

Phase Classification		Key Reference Outcomes *Current or imminent outcomes on lives and livelihoods. Based on convergence of direct and indirect evidence rather than absolute thresholds. Not all indicators must be present for classification..*	Strategic Response Framework *Objectives: (1) mitigate immediate outcomes, (2) support livelihoods, and (3) address underlying causes*
1A	Generally Food Secure	***Crude Mortality Rate*** < 0.5 / 10,000 / day ***Acute Malnutrition*** <3 % (w/h <-2 z-scores) ***Stunting*** <20% (h/age <-2 z-scores) ***Food Access / Availability*** usually adequate (> 2,100 kcal ppp day), stable ***Dietary Diversity*** consistent quality and quantity of diversity ***Water Access / Avail.*** usually adequate (> 15 litres ppp day), stable ***Hazards*** moderate to low probability and vulnerability ***Civil Security*** prevailing and structural peace ***Livelihood Assets*** generally sustainable utilization (of 6 capitals)	Strategic assistance to pockets of food insecure groups Investment in food and economic production systems Enable development of livelihood systems based on principles of sustainability, justice, and equity Prevent emergence of structural hindrances to food security Advocacy
1B	Generally Food Secur		
2	Moderately / Borderline Food Insecure	***Crude Mortality Rate*** <0.5 / 10,000 / day; U5MR<1 / 10,000 / day ***Acute Malnutrition*** >3% but <10 % (w/h <-2 z-score), usual range, stable ***Stunting*** >20% (h/age <-2 z-scores) ***Food Access / Availability*** borderline adequate (2,100 kcal ppp day); unstable ***Dietary Diversity*** chronic dietary diversity deficit ***Water Access / Avail.*** borderline adequate (15 litres ppp day); unstable ***Hazards*** recurrent, with high livelihood vulnerability ***Civil Security*** Unstable; disruptive tension ***Coping*** "insurance strategies" ***Livelihood Assets*** stressed and unsustainable utilization (of 6 capitals) **Structural** Pronounced underlying hindrances to food security	Design & implement strategies to increase stability, resistance and resilience of livelihood systems, thus reducing risk Provision of "safety nets" to high risk groups Interventions for optimal and sustainable use of livelihood assets Create contingency plan Redress structural hindrances to food security Close monitoring of relevant outcome and process indicators Advocacy
3	Acute Food and Livelihood Crisis	***Crude Mortality Rate*** 0.5-1 / 10,000 / day, U5MR 1-2 / 10,000 / dy **Acute Malnutrition** 10-15 % (w/h <-2 z-score), > than usual, increasing ***Disease*** epidemic; increasing ***Food Access / Availability*** lack of entitlement; 2,100 kcal ppp day via asset stripping ***Dietary Diversity*** acute dietary diversity deficit ***Water Access / Avail.*** 7.5-15 litres ppp day, accessed via asset stripping ***Destitution / Displacement*** emerging; diffuse ***Civil Security*** limited spread, low intensity conflict ***Coping*** "crisis strategies"; CSI > than reference; increasing ***Livelihood Assets*** accelerated and critical depletion or loss of access	Support livelihoods and protect vulnerable groups Strategic and complimentary interventions to immediately food access / availability AND support livelihoods Selected provision of complimentary sectoral support (e.g., water, shelter, sanitation, health, etc.) Strategic interventions at community to national levels to create, stabilize, rehabilitate, or protect priority livelihood assets Create or implement contingency plan Close monitoring of relevant outcome and process indicators Use "crisis as opportunity" to redress underlying structural causes Advocacy
4	Humanitarian Emergency	***Crude Mortality Rate*** 1-2 / 10,000 / day, >2x reference rate, increasing; U5MR > 2 / 10,000 / day **Acute Malnutrition** >15 % (w/h <-2 z-score), > than usual, increasing ***Disease*** Pandemic ***Food Access / Availability*** severe entitlement gap; unable to meet 2,100 kcal ppp day ***Dietary Diversity*** Regularly 3 or fewer main food groups consumed ***Water Access / Avail.*** < 7.5 litres ppp day (human usage only) ***Destitution / Displacement*** concentrated; increasing ***Civil Security*** widespread, high intensity conflict ***Coping*** "distress strategies"; CSI significantly > than reference ***Livelihood Assets*** near complete & irreversible depletion or loss of access	Urgent protection of vulnerable groups Urgently food access through complimentary interventions Selected provision of complimentary sectoral support (e.g., water, shelter, sanitation, health, etc.) Protection against complete livelihood asset loss and / or advocacy for access Close monitoring of relevant outcome and process indicators Use "crisis as opportunity" to redress underlying structural causes Advocacy
5	Famine / Humanitarian Catastrophe	***Crude Mortality Rate*** > 2 / 10,000 / day (example: 6,000 / 1,000,000 / 30 days) **Acute Malnutrition** > 30 % (w/h <-2 z-score) ***Disease*** Pandemic ***Food Access / Availability*** extreme entitlement gap; much below 2,100 kcal ppp day ***Water Access / Avail.*** < 4 litres ppp day (human usage only) ***Destitution / Displacement*** large scale, concentrated ***Civil Security*** widespread, high intensity conflict ***Livelihood Assets*** effectively complete loss; collapse	Critically urgent protection of human lives and vulnerable groups Comprehensive assistance with basic needs (e.g. food, water, shelter, sanitation, health, etc.) Immediate policy / legal revisions where necessary Negotiations with varied political-economic interests Use "crisis as opportunity" to redress underlying structural causes Advocacy

Risk of Worsening Phase	Probability / Likelihood	Severity	Reference Process Indicators	Implications for Action
Watch	As yet unclear	Not applicable	Occurrence of, or predicted *Hazard* event stressing livelihoods; with low or uncertain *Vulnerability* ***Process Indicators:*** small negative changes	Close monitoring and analysis Review current Phase interventions
Moderate Risk	Elevated probability / likelihood	Specified by predicted Phase, and indicated by color of diagonal lines on map.	Occurrence of, or predicted *Hazard* event stressing livelihoods; with moderate *Vulnerability* ***Process Indicators:*** large negative changes	Close monitoring and analysis Contingency planning Step-up current Phase interventions Preventative interventions with increased urgency for High Risk populations Advocacy
High Risk	High probability; "more likely than not"		Occurrence of, or strongly predicted major *Hazard* event stressing livelihoods; with high *Vulnerability* and low *Capacity* ***Process Indicators:*** large and compounding negative changes	

ANNEX 7: MAP OF POTENTIAL DRY-SPELL AREAS IN SOUTHERN SUDAN IN 2009



ANNEX 8: MAP OF FLOOD HAZARD AREAS IN SOUTHERN SUDAN IN 2007

ANNEX 9: FSL INTERVENTIONS AND SECTOR PARTNERS IN THE FIVE PRIORITY STATES OF SOUTHERN SUDAN[43]

1.1 Eastern Equatoria

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Kapoeta East	ADEO									●
	CDOT				●	●				
	FAO	●	●			●				
	GRI	●			●					
	LOL					●				
	LRDA	●	●		●					●
	UNICEF									●
	VSF-G					●	●			
	VST					●				
	WFP									●
Kapoeta North	ADEO									●
	CDOT				●	●				
	FAO	●	●			●				
	LOL					●				
	LRDA	●			●					●
	SNV					●				
	UNICEF									●
	VST					●				
	WFP									●
Kapoeta South	ADEO									●
	CDOT				●	●				
	FAO	●	●			●				
	LOL					●				
	LRDA	●			●					●
	SNV				●	●				
	UNICEF									●
	VST					●				
	WFP									●

43 FAO, 2008: Report on food security and livelihoods interventions in Southern Sudan.

1.1 Eastern Equatoria (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Magwi	AAH-I	●	●	●	●	●	●	●		
	ACORD	●	●	●	●	●			●	
	CDOT	●								
	CRS	●		●						
	FAO	●	●			●			●	
	IRC	●	●	●						●
	MASRA	●	●		●			●		
	NCA	●		●					●	
	SFM	●		●	●					
	WfS	●								
Ikotos	CDOT	●								●
	CRS	●								
	FAO	●	●			●				
	LWF	●								
	NCA	●								
Lofan/ Lopa	CDOT	●								
	CRS	●		●						
	FAO	●	●			●				
	LRDA	●								●
	NCA	●								
	SNV					●				
	UNICEF									●
	WFP									●

1.1 Eastern Equatoria (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Torit	AIC									●
	BRAC	●	●			●				
	CDOT	●	●							
	CRS	●								
	EFCS									●
	FAO	●	●			●				
	HODA	●		●						
	LRDA	●								●
	NCA	●								
	SARRA	●	●		●					
	SFL	●		●						
	SHEDP			●	●					
	UNICEF									●
	WFP									●
Budi	ADRA					●				
	CDOT	●	●							
	CDS									
	CRS	●		●						
	FAO	●	●			●				
	LRDA	●								●
	SNV	●	●			●				
	UNICEF									●
	WFP									●

1.2 Jonglei

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Akobo	CRADA	●	●	●	●				●	
	FAO	●	●	●		●			●	
	HI/AL									●
	IMC	●	●			●				
	NHDF	●							●	
	UNYMPDA	●								
	VSF-B					●				
	WFP									●
Khorflus	ACF-USA	●	●						●	
	FAO					●				
	HI/AL									●
	VSF-G					●				
	WFP									●
Ayod	FAO	●	●			●				
	HI/AL									●
	NPA	●								●
	VSF-B					●				
	WFP									●
Duk	CC									●
	DUYCD	●			●				●	
	FAO	●	●			●				
	HI/AL									●
	LWF	●		●					●	
	NPA	●								●
	SUDA	●	●		●				●	
	WFP									●

1.2 Jonglei (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Twic East	FAO	●	●			●				
	HI/AL									●
	LWF	●		●					●	
	NPA	●								●
	SC-S									●
	SUDA	●	●		●				●	
	UNHCR	●								
	VSF-G					●				
	WFP									●
Nyirol	ACORD	●	●	●	●	●			●	
	CCRI	●								
	FAO	●	●			●				
	HI/AL									●
	IMC	●	●			●				
	NPA	●								●
	PACT Sudan									●
	SC-UK									●
	WFP									●
Fangak	ACF-USA	●				●				
	FAO	●	●			●				
	FHI	●	●		●					●
	HI/AL									●
	SALF	●								
	VSF-B					●				
	WFP									●

1.2 Jonglei (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Pibor	ACROSS									●
	CC									●
	COOPI	●				●				
	FAO	●	●			●				
	HI/AL									●
	JAM									●
	Marlin									●
	SPI									●
	UNYMPDA	●								
	VSF-G	●		●						
	WFP									●
Pochalla	CRADA	●	●	●	●				●	
	FAO	●	●	●		●			●	
	HI/AL									●
	WFP									●
	WR	●		●						
Bor	ADRA	●								
	BRAC	●	●			●				
	C&D									●
	CRS	●		●						●
	FAO	●	●	●	●	●			●	
	HI/AL	●	●							
	INTERSOS	●	●						●	●
	KDA	●	●		●					
	LWF	●								
	MSF-B									
	NPA	●								●
	PHO	●	●			●				●
	SUDA	●	●		●				●	

1.2 Jonglei (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Bor (cont.)	UNHCR	●								
	VSF-G					●				
	WFP									●
Wuror	AIC									●
	CC									●
	DUYCD	●			●				●	
	FAO	●	●			●				
	HI/AL									●
	MSF-H									●
	NPA	●								●
	Tearfund									●
	UNICEF									●
	UNWWA	●							●	
	WFP									●

1.3 Northern Bahr el-Ghazal

Aweil East	ACF-F	●	●						●	●
	AMURT	●	●	●						●
	CAD	●	●	●						
	CDAS	●	●		●					
	FAO	●	●	●	●	●			●	
	Ias	●	●		●	●				
	Mercy Corps	●	●							
	CS-S									
	SSRDA									
	UNICEF									●
	VSF-Ch					●				
	WFP									●
	WVI									●

1.3 Northern Bahr el-Ghazal (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Aweil North	CDAS	●	●		●					
	CONCERN	●	●	●		●	●	●	●	
	FAO	●	●	●		●			●	
	UNICEF									●
	VSF-Ch					●				
	WFP									●
Aweil Centre	CARITAS-G	●								
	FAO	●	●			●			●	
	HARD	●	●	●	●			●		
	KUCDA	●	●	●	●					
	SC-UK	●	●						●	●
	SSRDA									
	UNICEF									●
	WFP									●
Aweil South	CARITAS-G	●								
	FAO	●	●	●					●	
	FARM Africa	●								
	KUCDA	●	●	●	●					
	Tearfund	●	●	●					●	●
	UNICEF									●
	WFP									●
	WVI									●
Aweil West	CONCERN	●	●	●		●	●	●	●	
	FAO	●	●	●		●			●	
	UNICEF									●
	WFP									●

1.4 Upper Nile

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Fashoda	FAO	●	●			●			●	
	UNICEF									●
	VSF-G	●	●			●			●	
Bailliet	IRD	●	●			●		●	●	
	NPA	●								
Longuchuk	ACORD	●	●	●	●	●			●	
	ADRA	●								
	CARE	●	●						●	
	FAO	●	●			●			●	
	NPA	●								
	UNICEF									●
	VSF-B					●				
	WFP									●
Maban	FAO	●	●			●			●	
	FAR					●				
	Medanai									●
	Mercy Corps									●
	NPA	●								
	RI	●	●						●	●
	UNICEF									●
	WFP									●
Maiwut	ACORD	●	●	●	●	●			●	
	ADRA	●							●	
	CARE	●	●						●	
	CEAS	●								
	FAO	●	●			●			●	
	NPA	●								
	PRDA/SH	●								
	UNHCR	●								

1.4 Upper Nile (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Maiwut (cont.)	UNICEF									●
	WFP									●
Nasir	ADRA	●								
	CARE	●	●						●	
	FHI	●	●		●					●
	IRD	●	●			●		●	●	
	NCDA	●	●		●					
	Sudan Hope	●								
	UNICEF									●
	UNKEA	●	●		●					
	VSF-B					●				
	WFP									●
Ulang	ACORD	●	●	●	●	●			●	
	ADRA	●								
	CARE	●	●						●	
	FAO	●	●			●			●	
	IRD	●	●			●		●	●	
	UNICEF									●
	WFP									●
	LYU									
Manyo	FAO	●	●			●			●	
	UNICEF									●
	WFP									●
	WVI			●			●			
	YARRDSS	●	●						●	
Renk	FAO	●	●			●			●	
	FAR					●	●			
	Mercy Corps	●								
	UNICEF									●
	WFP									●

1.4 Upper Nile (cont.)

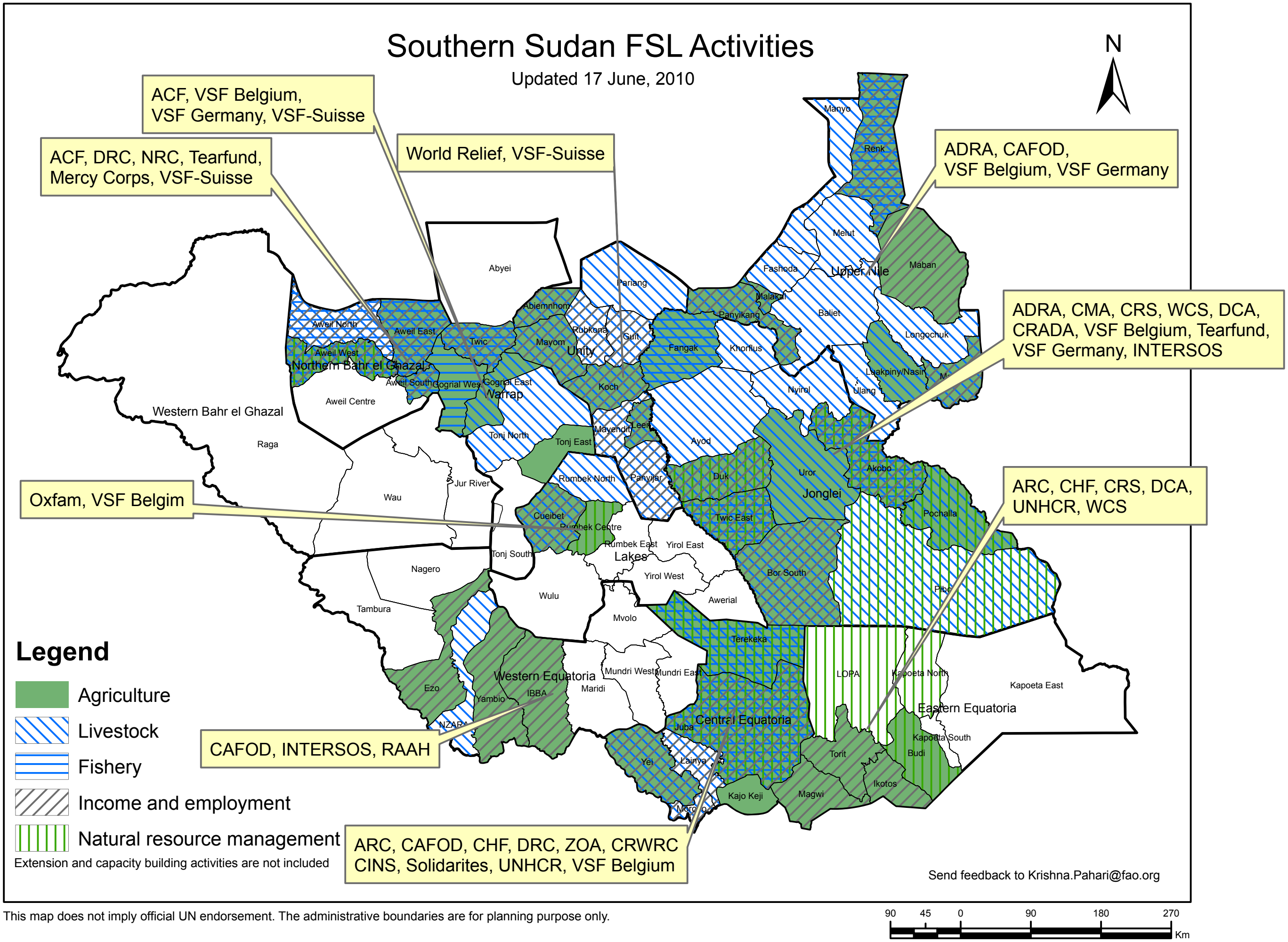
County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Melut	FAR					●				
	Mercy Corps	●								
	UNICEF									●
Malakal	ACF-USA	●	●						●	●
	FAO	●	●			●			●	
	IRD	●	●			●		●	●	
	Mercy Corps	●								
	UNICEF									●
	VSF-G	●	●						●	
	WFP									●
Panyikang	ACF-USA	●	●						●	●
	CEAS	●								
	CMCM	●	●		●					
	FAO	●	●			●			●	
	FHI	●	●		●					●
	NPA	●								
	UNICEF									●
	VSF-G	●				●			●	
	WFP									●
	WVI			●			●			
	YARRDSS	●								

1.5 Warrap

Gogrial East	FAO	●	●			●			●	
	VSF-G					●				
	WFP									●
	WR			●						

1.5 Warrap (cont.)

County	Agency	Crop production and post-harvest handling	Vegetable and fruit production	Animal traction	Environmental protection and natural resource use	Livestock production	Animal re-stocking	Beekeeping	Fisheries	Food aid and nutrition
Gogrial West	ACF-USA	●				●				
	FAO	●	●			●			●	
	FARM Africa	●	●	●	●	●	●			
	NCA									
	WFP									●
	WVI	●	●	●	●					
Tonj East	FAO	●	●			●			●	
	INCODE				●					
	SSPD	●	●							
	VSF-B					●				
	WFP									●
	WVI	●	●	●	●		●			●
Tonj North	FAO	●	●			●			●	
	VSF-B					●			●	
	WFP									●
	WVI	●	●	●	●		●			●
Tonj South	FAO	●	●			●			●	
	MEDIC/LWTL									
	SSPD	●	●							
	VSF-B					●				
	WFP									●
	WVI	●	●	●	●		●			●
Twic	ACF-USA	●	●						●	●
	FAO	●	●			●			●	
	GOAL	●	●						●	●
	Mercy Corps	●	●						●	●
	SUPRAID			●						
	VSF-Ch					●				



This map does not imply official UN endorsement. The administrative boundaries are for planning purpose only.

90 45 0 90 180 270 Km

ANNEX 11: KEY ACHIEVEMENTS OF FAO IN SOUTHERN SUDAN IN 2008/2009

- Seed distribution enabled a quarter of a million families to resume production in 2008/09.
- Community-based seed production and supply provided an opportunity to develop the local seed sector and reduce seed imports by just under 43 percent in 2008 and 55 percent in 2009.
- Through training and input support, blacksmiths have strengthened their capacities and business and are producing traditional and preferred agricultural tools, reducing the need to source them from outside Southern Sudan.
- Training, distribution of vegetable seeds and irrigation support have helped the most vulnerable to improve their food security, incomes and nutrition status, especially during the dry season.
- Support to the multiplication, promotion and adoption of improved, high-yielding and disease-resistant cassava planting materials has reduced the risk of cassava mosaic disease and protected the livelihoods of families that rely on cassava production.
- The introduction of conservation agriculture tools and methods has already reduced the labour required of farmers and will have a long-term beneficial impact on the environment.
- Post-harvest losses have been reduced and value added to food products through training in improved post-harvest processing.
- Fishing communities have received fishing kits and participated in training on fish processing and conservation.
- Through the training of community animal health workers and provision of drugs and vaccines for 3 million animals, pastoralist communities' livelihood activities have been guaranteed.
- Institutional capacity building was supported and information systems for food security developed to improve strategies for public administration in agriculture and rural development.
- Functional institutions for food security policy and planning were established and strengthened.
- Key agricultural support services have been improved, including advisory services, market access and rural business.

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