Food and Agriculture Organization
of the United Nations

FAO in South Sudan:

Emergency Livelihood Response Programme

A review of 2015 and planning for 2016

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Abbreviations and Acronyms

AAP	Accountability to affected populations
CBAHW	Community-based animal health worker
CFSAM	Crop and Food Security Assessment Mission
CHF	Common Humanitarian Fund
ECF	East Coast fever
ELRP	Emergency Livelihood Response Programme
FAO	Food and Agriculture Organization of the United Nations
FES	Fuel-efficient stove
FFS	Farmer field school
FMD	Foot-and-mouth disease
FSL	Food Security and Livelihoods
FSNMS	Food Security and Nutrition Monitoring System
HCT	Humanitarian Country Team
IDP	Internally displaced person
IPC	Integrated Food Security Phase Classification
ITF	Input trade fair
LoA	Letter of Agreement
LFTWG	Livestock and Fisheries Technical Working Group
M&E	Monitoring and evaluation
NGO	Non-governmental Organization
SAFE	Safe Access to Fuel and Energy
SDD	Solar direct drive
SOP	Standard operating procedure
UN	United Nations
UNHAS	United Nations Humanitarian Air Service
UNICEF	United Nations Children's Fund
WFP	World Food Programme

Emergency Livelihood Response Programme in 2015

Within the framework of the 2015 Emergency Livelihood Response Programme (ELRP), the Food and Agriculture Organization of the United Nations (FAO) planned to deliver livelihood support to 3.2 million vulnerable people and animal health assistance to 6 million livestock. These targets were determined based on information from the Integrated Food Security Phase Classification (IPC) process and field assessments. The ELRP was formulated and implemented in an extremely challenging and dynamic environment using a two-pronged approach within an overall framework of resilience building: responding to urgent humanitarian needs in the most crisis-affected areas, and continuing medium- to long-term interventions where the situation allowed. With timely and generous contributions from resource partners, by October 2015 FAO had reached 2.4 million people with livelihood support and vaccinated and/or treated 5 million animals.

436 237
Livelihood kits

343 007
Families

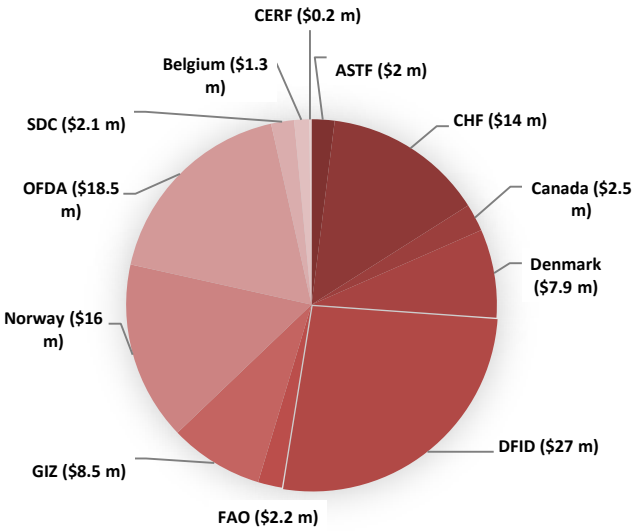
5 million
Animals vaccinated/treated

1 682
Families received food vouchers

138 325
Rapid response kits

19 000
Survival kits

Funds received under the 2014 and 2015 ELRP (Total: USD 102.5 m)



Achievements and lessons

Timely and generous contributions

In 2015, FAO sought USD 89 million under the Humanitarian Response Plan for South Sudan. Critically, early disbursement of funds was requested to ensure sufficient time for the purchase and pre-positioning of livelihood inputs in order to facilitate their timely distribution. Resource partners provided USD 48 million for the 2015 campaign, USD 26 million of which was received in late 2014. As a result, FAO was able to procure and store inputs at the Juba warehouse such as fishing and vegetable kits by late 2014. These were then pre-positioned in four of FAO's field warehouses (Bor, Rumbek, Torit and Wau) by February 2015.

Employing innovative solutions

The main challenges faced in 2015 were the same as those encountered in 2014, including: lack of access due to insecurity and weather conditions; late delivery and poor quality of inputs from suppliers; and poor logistical capacity of partners. In 2015, FAO employed various innovative solutions to overcome these challenges.

→ ***Air operations***

In order to ensure timely distribution of crop seeds in line with the agricultural season and given the limited carrying capacities of the United Nations Humanitarian Air Service (UNHAS) and Logistics Cluster, FAO

contracted and coordinated a separate air operation to deliver livelihood kits to areas inaccessible by road in Greater Upper Nile[1]. Over 1 100 tonnes of livelihood inputs were delivered to 23 locations using 578 flights during the eight-week operation, which began in May 2015. This solution proved **critical to FAO's success** in 2015.

→ Seed distribution and input trade fairs

Through a combination of development and resilience-building approaches, FAO is fostering national seed production and local market economies in South Sudan. Working closely with implementing partners to coordinate seed recollection from farmers in the Equatoria and Bahr el-Ghazal regions, FAO procured 900 tonnes of crop seed, adding USD 1.95 million to farmers' incomes. This amounted to 35 percent of all crop seed procured by FAO in South Sudan in 2015. In Northern Bahr el-Ghazal State, five input trade fairs (ITFs) were organized to link seed vendors and farmers. Beneficiaries received vouchers to purchase crop seeds from local vendors. In total, beneficiaries were able to buy 306 tonnes of crop seed, with a total value of SSP 4.9 million put into the local economy.

→ Rapid response

Owing to renewed fighting in Greater Upper Nile, especially in Unity State, livelihood kit distribution was halted in the area, meaning over 280 000 beneficiaries were not reached. This triggered a rapid response operation, with FAO using a helicopter to distribute vegetable and fishing kits to vulnerable displaced families in conflict-affected areas. Distribution was based on information from ongoing rapid assessments and implementing partner field teams. In total, 138 000 kits were distributed from September to October 2015.

→ Information management

In South Sudan, FAO developed and deployed an enhanced, streamlined information management system, as well as related mobile and Web applications. The system monitors operational processes, providing timely warning about emerging bottlenecks. By standardizing the units of measurement, the system enabled comparison across multiple dimensions, locations and times. To ensure transparency and accountability, all reports were embedded with metadata, including data sources and methodologies, allowing users to understand how calculations were made. This helped to build trust with key actors, resource partners, auditors and other stakeholders, while enhancing confidence in FAO's capacity to make timely and corrective decisions, such as the air transport and rapid response solutions.

Strengthening operational infrastructure

Learning from 2014 operations, FAO expanded its warehouse and logistic capacity in South Sudan in 2015 to ensure efficient, timely and cost-saving input distribution to implementing partners. Permanent distribution hubs were established in Juba, Rumbek, Torit, Wau and field presence increased in Bor and Bentiu with a total storage capacity of 8 147 m^3, as well as Internet connectivity. This facilitated pre-positioning and meant partners could collect inputs closer to distribution sites, saving time and money, and reducing logistical challenges.

Cold chain infrastructure was expanded to strengthen local capacity to store and dispatch veterinary vaccines and medicines. The main storage depot is located at the Ministry of Livestock in Gudele and has a capacity of 140 m^3. An enclosed back-up generator was installed to ensure 24/7 refrigeration. Also, three cold chain hubs were established in Wau, Rumbek and Torit.

Expanding and consolidating implementing partner networks

FAO has contracts with 71 implementing partners in South Sudan – national and international Non-governmental Organizations (NGOs) and government technical services. FAO's programmes are

[1] Greater Upper Nile incorporates Jonglei, Upper Nile and Unity States.

implemented through Letters of Agreement (LoAs) following a rigorous review process with potential partners. The partners are selected based on their technical skills, operational capacity, validation by the Common Humanitarian Fund (CHF), past performance and field presence to ensure quality of implementation. With these partners, FAO can now ensure full coverage at the *payam* (village) level.

In 2015, FAO introduced training workshops for implementing partners to enhance the quality of delivery and provide much-needed capacity building. The training focused on improving their technical and operational capacity, with topics covering: crop, vegetable, fish and livestock production; pest and disease management; information management; project design and implementation; targeting; monitoring and evaluation (M&E); gender mainstreaming; and accountability to affected populations (AAP). Over 300 people attended the trainings and the initiative was highly appreciated.

Continuous communication and information sharing among FAO and its partners improved coordination throughout implementation. Planning meetings, discussions between FAO M&E and partner field teams, and mobile and Web reporting applications provided regular feedback on progress and emerging issues.

Enhancing interagency partnerships

Strategic and analytic work, as well as advocacy, were carried out in close coordination with various stakeholders at multiple levels in-country, such as with the Humanitarian Country Team (HCT), the Food Security and Livelihoods (FSL) Cluster and its technical working groups in Juba and in the field, as well as in ad hoc groups or bilateral meetings. FAO holds monthly meetings with resource partners to keep them up to date on FAO's activities, emerging challenges and plans.

Partner participation and data sharing has increased within the government-led/FAO-supported IPC process[2]: from 50 in 2014 to over 90 participants, including 20 nutritionists, during the September 2015 IPC analysis workshop. This further validates the analysis.

Technical partners on the ground with specific experience and capacity to deliver livestock support and activities are limited. As a result, FAO South Sudan had to expand its direct involvement and set up informal coordination with the International Committee of the Red Cross to ensure a faster and smoother response to an ever-rising number of disease outbreaks. Lately, it has been noted that the coverage and number of implementing partners involved in livestock projects have increased.

FAO also works closely on common issues with other United Nations (UN) agencies, mainly the United Nations Children's Fund (UNICEF) and the World Food Programme (WFP).

FAO and WFP co-lead the FSL Cluster, with the support of an NGO co-chair, providing guidance, support and specialized staff to the more than 70 active partners (national and international NGOs, resource partners and government technical services). Four technical subgroups meet regularly and, by the end of August, more than 45 food security-specific assessments had been conducted and consolidated by the FSL Cluster. The FSL Cluster team supports the whole Humanitarian Programming Cycle, providing sector analysis and reviewing all FSL partners' projects. Their role in the allocation of CHF resources is also essential.

Providing critical and urgent humanitarian assistance

ELRP delivery

FAO's initial pre-positioning plans were mainly based on the IPC analysis conducted in December 2014 (which itself integrated a vast amount of data, assessments and surveys). In 2015, the goal was to distribute livelihood kits to 470 000 households and treat and vaccinate 6 million animals. Following the selection of and negotiations with implementing partners, actual target numbers were further adjusted. The actual number of target households increased to 523 692, of which 65.3 percent were classified as IPC

[2] The IPC is a multi-partner initiative that uses a standardized approach to classifying food insecurity, particularly in crisis situations. Figures are based on technical consensus among involved stakeholders, including governments (www.ipcinfo.org).

Phase 4 (Emergency). Based on field assessments and data from FAO and partner networks, 70 000 households were to receive more than one livelihood kit (crop, vegetable or fish), depending on their location and needs.

Table 1: ELRP 2015 (Output 2) Operational Dashboard (as of 24 October 2015)

Overall progress	Beneficiaries[6]	Households		Livelihood kits		Crop kits[7]		Vegetable kits[8]		Fishing kits[9]	
Processes		*Number*	*%[10]*	*Number*	*%[10]*	*Number*	*%[10]*	*Number*	*%[10]*	*Number*	*%[10]*
Actual target[1]	3 142 152	523 692	–	595 792	–	174 232	–	227 814	–	193 746	–
Procured[2]	3 142 152	523 692	100	595 792	100	174 232	100	227 814	100	193 746	100
Distributed[3]	2 058 042	343 007	65.5	436 237	73.22	177 343	100	154 798	80.59	104 096	53.73
No access[4]	282 252	47 042	8.98	58 200	9.77	19 432	25.32	19 000	20.98	19 768	10.2
Looted[5]	43 800	7 300	1.39	8 850	1.49	1 200	0.69	4 076	1.79	3 574	1.84

Note: Owing to crop seed availability at the time of distribution, more households received incomplete crop kits.

[1] Based on signed LoAs with implementing partners; [2] Based on purchase orders; [3] Based on partner distribution reports; [4] Mainly due to insecurity, items re-distributed to other areas; [5] Partners who reported looted kits from warehouses; [6] Household size = six people; [7] Minimum crop kit comprises two types of crop seeds; [8] Minimum vegetable kit comprises seven types of vegetable seeds; [9] Minimum fishing kit comprises two items; [10] Percentages are calculated against actual livelihood kit numbers

Table 2: Household delivery according to IPC classification

IPC classification	Target (households)	Distributed (households)[1]	% Delivery
Emergency[2,3]	342 004	233 025	62.29
Crisis	166 734	124 012	74.38
Stressed	12 654	5 970	47.18
No data[4]	2 300	0	0.00
Total	**523 692**	**343 007**	**65.60**

[1] Based on current partner reporting as of 24 October 2015; [2] 47 042 households (9 percent) could not be reached due to insecurity; [3] 7 300 households (1.4 percent) could not be reached as implementing partner warehouses were looted; [4] No data to determine IPC classification in Abyei County

By mid-October 2015, FAO had provided livelihood assistance to 343 000 – or 65.5 percent of targeted – households. This reflects information gathered from reports received from partners. The real total is likely higher, however some partners have yet to submit all of their reports (reports from 206 *payams* are pending). A further 10 percent of households could not be reached owing to access constraints linked to insecurity or items having been looted from partners' warehouses.

A major change to the initial distribution plan was the air operation, which was carried out between May and June 2015 in Greater Upper Nile and Unity States (with the exception of Leer, Koch, Mayendit and Guit, where violence caused massive population displacements and forced implementing partners to relocate).

Distributing rapid response and survival kits to conflict-hit populations

Fighting erupted in southern Unity in April/May 2015, forcing local populations to flee to Protection of Civilian camps, neighbouring counties or to the bush and swamps without any assistance. FAO was an active initiator of the "survival kit" operation in collaboration with the International Organization for Migration, UNICEF, the Logistics Cluster and NGOs to provide specifically designed kits (consisting of fishing equipment, collapsible water cans, acquatabs, mosquito nets, kitchen sets and other items) to these populations. More than 19 000 kits have so far been distributed, primarily in Unity State.

In addition, FAO established its own rapid response operation to provide livelihood support in Greater Upper Nile. FAO contracted one Mi-8 helicopter for two months for this purpose, as well as to carry out emergency livestock vaccination and treatment operations in hard-to-reach areas. As a result, FAO has had the flexibility to respond rapidly to livelihood gaps assessed either through Initial Rapid Needs Assessments or through other assessments carried out by partners in the field. The rapid response operation began on 28 August 2015 in Kuernyang (Fangak County, Jonglei State), when 1 400 vegetable kits and 1 400 fishing kits where delivered to internally displaced persons (IDPs) and host communities. By completion of the

operation on 28 October 2015, FAO had delivered more than 110 000 kits in hard-to-reach areas of Unity and Jonglei States.

Accountability to affected populations

In 2015, FAO South Sudan further developed its monitoring tools and capacity, strengthening AAP and resource partners via enhanced M&E systems. These include on-site monitoring during distribution, post-distribution monitoring (for crops, vegetable, fishing and livestock kits) and post-planting assessments. A total of 12 Field Monitors were trained and deployed to all ten states. From January to September 2015, the team conducted on-site monitoring of input distribution by 27 partners, in all states, for a total of 77 810 households – 79 locations in 26 counties. Interviews were carried out with 1 646 randomly selected households drawn from registration lists. The high level of satisfaction confirmed FAO's approach.

Beneficiary satisfaction with livelihood kit distribution:

86% kit timeliness

88% input quantity

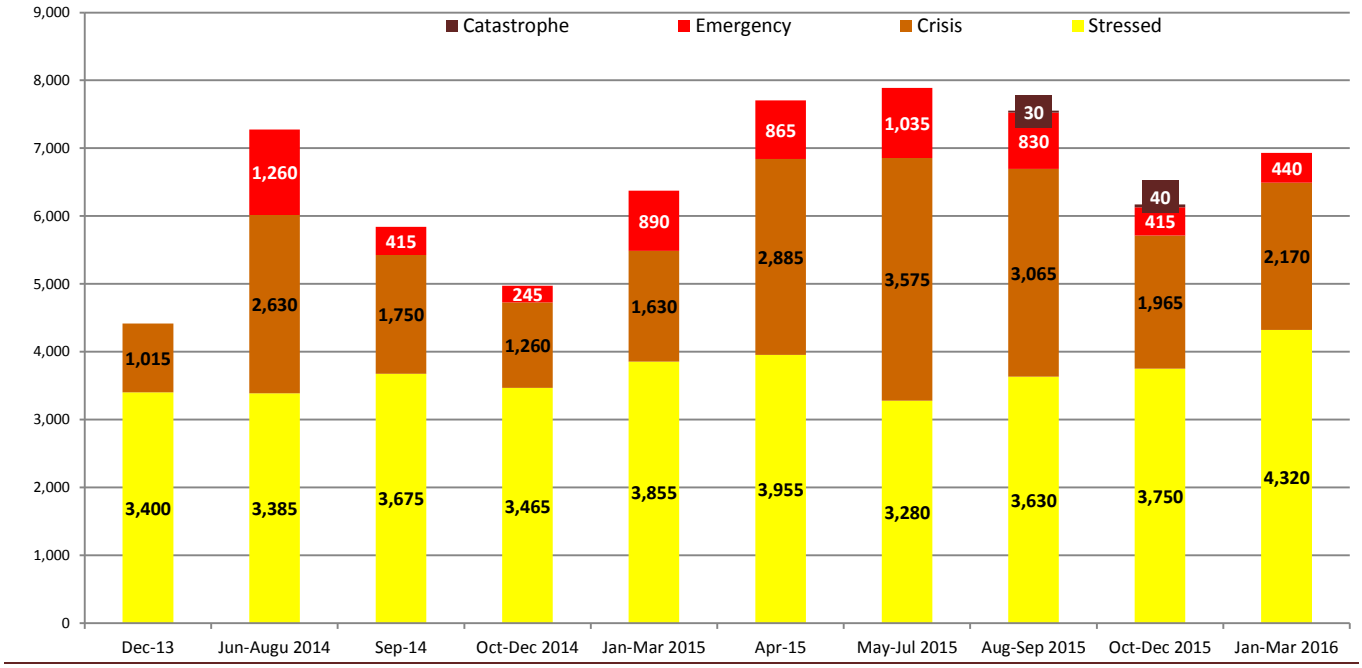
93% kit composition

Emergency Livelihood Response Programme in 2016

Food security context

2015 saw a continued deterioration in food security, particularly in conflict-affected areas of Greater Upper Nile. By September, an estimated 3.9 million people were in IPC Phases 3 (Crisis) and 4 (Emergency) – an 80 percent rise compared with the same time in 2014. Although the August–September period typically marks the start of green harvests and reflects an improving situation from the peak of the lean season, the long-term effects of the conflict coupled with high food prices, erratic rainfall patterns, depleted livelihood options and limited humanitarian access continue to put pressure on households' food security, affecting not only the Greater Upper Nile states, but also extending to traditionally stable states like Northern Bahr el-Ghazal, Lakes, Warrap and the Greater Equatorias. Urban poor populations have also been affected with record high food prices squeezing their purchasing power.

Figure 1: Population trends by IPC phase (2013–2016)



In 2016, food insecurity is expected to continue to affect millions of South Sudanese. Should the peace agreement be fully implemented, many of the over 2.3 million currently displaced by the conflict will begin to return home and require support to resettle and secure their livelihoods. If fighting continues, emergency livelihood support in the form of crop, fish and vegetable kits and animal health assistance will be critical to maintain and enhance food production for the short term.

Across South Sudan, the population identified in IPC Phase 2 (Stressed) has been steady over time – ranging from 3.19 million in (pre-crisis) March 2013 to 3.63 million in the third quarter of 2015 (see Figure 1). Owing to the persistent economic downturn in the country, an increase of up to 4.32 million in the population in IPC Phase 2 is projected for the first quarter of 2016.

These structural levels of food insecurity reflect the fact that the country is not self-sufficient in food production or food security. South Sudan depends heavily on markets and traders to support the flow of goods between states as well as with neighbouring countries. Fishers, farmers and pastoralists rely on functioning markets to barter or sell produce, and purchase commodities and services. Even in times of relative stability, the country is vulnerable to the vagaries of weather patterns, rains, seasonal flooding and dry spells, as well as plant and animal pests and diseases.

Building resilience

Alongside the current conflict, South Sudan faces chronic vulnerabilities which must be tackled through a concerted effort to build resilient livelihoods and a food secure future for its people. This requires a long-term commitment to reducing risks and enhancing national capacities.

Despite the critical role to be played by the agriculture sector in the development and growth of South Sudan's economy, the livelihoods of the majority of the country's rural population continue to be threatened by extreme poverty and food insecurity and are highly vulnerable to human-induced and climatic shocks. Strengthening the resilience of agriculture-based livelihoods is at the heart of FAO's programming in South Sudan, including within the context of humanitarian interventions, such as through building and restoring national veterinary cold chain networks and training government technicians in their maintenance.

South Sudan is highly prone to shocks, from economic downturns and conflict-driven crises to natural hazards such as floods, drought and outbreaks of animal and plant diseases. These shocks exacerbate prevailing food insecurity and undermine agriculture-based livelihoods. In 2015, ongoing conflict has particularly affected the Greater Upper Nile region, depleting food production and availability, while forcing many from their land. In southern Unity, by October 2015, an estimated 30 000 households faced "Catastrophe" (IPC Phase 5) levels of food insecurity. An economic downturn linked to falling oil revenues, trade disruption and rapid inflation of the South Sudanese Pound has pushed food prices up to 150 percent above average, restricting the purchasing power and thus diminishing the food security of an estimated 600 000 urban poor.

Through the ELRP, FAO intends to contribute to improving the absorption and adaptation capacities of households. The distribution of emergency livelihood kits will supplement households' coping mechanisms, while other activities, such as livestock vaccination and treatment, will help to restore and strengthen livelihood assets.

The independent evaluation of FAO's portfolio in South Sudan and FAO South Sudan's internal assessment of the impact of the 2015 ELRP highlighted key priorities for building resilience: improved storage capacity, technical knowledge, basic production capacity, support to marketing and enhanced extension services.

In 2016, FAO's short-term humanitarian assistance interventions, mainly targeting conflict-affected states, will be integrated with longer-term development-oriented interventions across Greater Bahr el-Ghazal and Equatoria regions. These interventions are reflected under FAO South Sudan's Resilience Strategy (under formulation), which covers other dimensions of resilience building such as improved governance, enhanced food security, information systems and risk mitigation. For example, FAO will:

- support increased seed multiplication and seed reserves, thereby helping to strengthen the local seed system and increasing the share of seed procured for emergency assistance from local farmers;

- promote voucher schemes linking local producers and beneficiaries. This will reinforce market linkages between producers and users and thus contribute to the sustainability of the agricultural inputs supply in the areas of intervention. Also, these schemes are expected to build social cohesion among IDP and host community beneficiaries;
- promote improved agricultural practices by disseminating key extension messages and delivering technical training, including testing a combination of farmer field school (FFS) and food for assets approaches with WFP;
- focus on mitigating post-harvest losses through improved handling and storage, as well as providing improved equipment and training for recipients on its use; and
- support improved hygiene along meat and milk value chains, e.g. establishing hygienic slaughter slabs, distributing hygienic containers and providing technical training on hygiene and processing.

The impact assessment also highlighted that FAO and its implementing partners had an insufficient understanding of the new vulnerabilities created by the ongoing crisis within households, such as changing gender-based division of labour and intra-household dynamics and the impact of conflict on pastoralism and transhumance routes. FAO is thus undertaking a number of in-depth studies that will enable a better understanding of these dynamics and translate this information into improved programming for FAO and partners.

Coordination and food security analysis

FAO is a technical agency, and will continue to provide the various stakeholders with information, data and sound and relevant analysis to support programming decisions, if the necessary financial resources are available. FAO will continue to support FSL coordination and enable partners to actively participate and benefit from Cluster support.

FAO's humanitarian objectives for 2016

In 2016, FAO expects to continue its multi-track approach (survival, emergency, development) to resilience building, depending on needs, vulnerability and access. If the fighting subsides and displaced populations are able to return or settle in a durable manner, their livelihood needs will be staggering. In light of this, FAO is supporting contingency planning with its stakeholders and will be fully involved – through the HCT, the Inter-Cluster Working Group and any other relevant fora – in discussions around disarmament, reconstruction, demobilization and reintegration given the key role that agriculture plays in livelihoods and income-generating opportunities in South Sudan.

FAO will contribute to the achievement of the Humanitarian Response Plan objectives and to the objectives of the FSL Cluster response plan. Specifically, FAO plans to:

- support food security and livelihood responses through information, analysis and coordination;
- provide emergency livelihood support to the most vulnerable households;
- support production and availability of food in less-directly affected areas; and
- increase the resilience of vulnerable households and communities across the country.

FAO's 2015 experiences and achievements will feed into the 2016 campaign, with the goal of contributing to improved food production across South Sudan.

Value for money and efficiency will further guide decision-making and planning throughout 2016, ensuring that more beneficiaries are reached with less resources and in a timely manner. In 2015, so far, and with less than the total funding appealed for under the Humanitarian Response Plan, FAO has been able to reach more than 2.4 million people with livelihood kits.

FAO continues to believe that peace will return to South Sudan. However, the current crisis has generated such a situation of vulnerability that humanitarian requirements will persist throughout 2016, and probably into 2017 in the most affected areas, even if the conflict ends. A failure to implement a lasting peace agreement will further increase hunger, destitution, malnutrition, morbidity and mortality.

If an effective and lasting peace prevails, FAO will assess and support return or durable resettlement and later on, transition, reconstruction and a return to development activities. This will take time, work and huge amounts of money and support from resource partners. The agricultural cycles are such that a massive input distribution campaign will need to take place first, in order to generate significant production (main 2016 harvest). If the 2016 spring planting season fails, this will mean a delay of another year.

2016 Targets

435 667 households

62% in Greater Upper Nile

100% of households in IPC 3 & 4

454 481 Livelihood kits

Based on beneficiaries' needs and location

8 million animals vaccinated and treated *(cattle, small ruminants, poultry, dogs)*

Continued rehabilitation of veterinary cold chain (***52*** *solar direct drive [SDD] fridges to 40 counties and* ***50*** *portable SDD fridges)*

Table 3: ELRP 2016 target households and planned livelihood kit distribution

Region/state	Households[1]	Crop kits[2]	Vegetable kits[2]	Fish kits[2]
Greater Bahr el-Ghazal	**101 833**	**42 551**	**34 782**	**25 620**
Lakes	35 333	15 384	13 282	6 667
Northern Bahr el-Ghazal	23 333	10 833	6 000	6 500
Warrap	32 500	12 333	12 000	9 787
Western Bahr el-Ghazal	10 667	4 000	3 500	2 667
Greater Equatoria	**65 167**	**27 849**	**26 940**	**11 197**
Central Equatoria	20 333	6 333	7 820	7 000
Eastern Equatoria	44 833	21 516	19 120	4 197
Western Equatoria	0	0	0	0
Greater Upper Nile	**268 667**	**106 567**	**83 275**	**95 698**
Jonglei	85 667	32 633	26 275	29 398
Unity	91 667	29 601	27 500	34 640
Upper Nile	91 333	44 333	29 500	31 660
Total	**435 667**	**176 968**	**147 997**	**132 516**

[1] Households reflects the total households in IPC Emergency and Crisis (Phases 3 and 4); [2] Livelihood kits are determined according to beneficiary needs and location

FAO will continue its crucial animal disease control and prevention efforts in South Sudan throughout 2016, with a goal of vaccinating 8 million animals against various bacterial and viral diseases and providing treatment to 3.5 million animals, including cattle, small ruminants, dogs and poultry (see Table 4). In addition, efforts to strengthen the community-based animal health worker (CBAHW) network will continue. FAO aims to provide training (new and refresher) to 1 600 CBAHWs and equip them with up to 8 000 treatment kits over the course of 2016.

Table 4: ELRP 2016 target livestock vaccination and treatment

Livestock	Vaccination	Treatment	Total
Cattle	5 000 000	2 000 000	7 000 000
Small ruminants	3 000 000	1 500 000	4 500 000
Poultry	40 000	10 000	50 000
Dogs	4 000	1 000	5 000
Total	**8 044 000**	**3 511 000**	**11 555 000**

Moreover, FAO will continue its support to restoring veterinary cold chain capacities in the country. Following the re-establishment of the central cold chain in Juba, efforts will focus on restoring the cold chain system at the state and county levels. As part of this, FAO is planning to install 52 SDD refrigerators in 40 counties and provide 50 portable SDD refrigerators in the 10 different states.

Implementation strategy

FAO South Sudan will continue to implement a two-track approach within a broader framework of resilience building, distributing emergency livelihood kits in Greater Upper Nile and other conflict-impacted areas, while supporting agricultural development activities in the relatively peaceful areas.

Crop kits	In Greater Upper Nile, direct distribution of crop kits, which will contain sorghum (3 kg), maize (5 kg) and cowpea (2 kg) seed In Greater Equatoria and Bahr el-Ghazal, kits will contain sorghum and groundnut seed Malodas will be provided with crop and vegetable kits in Greater Upper Nile and Bahr el-Ghazal, while hoes will be distributed with the kits in Greater Equatoria In Greater Equatoria and Bahr el-Ghazal, ITFs will be organized as a means for farmers to access crop seed
Vegetable kits	100% direct distribution of vegetable kits Kits will contain 20 g packets of amaranth, cabbage, carrot, collards, eggplant, onion, tomato, 30 g packets of watermelon and 50 g packets of okra seed
Fishing kits	100% direct distribution of fishing kits Kits will contain 1 box of 100 hooks, 1 monofilament and 2 spools of twine

In total, FAO plans to procure over 2 800 tonnes of crop and vegetable seeds and provide them to beneficiaries through ITFs and direct distribution: 640 tonnes of sorghum (of which 253 tonnes through ITFs), 640 tonnes of maize, 1 270 tonnes of groundnut (100 percent through ITFs), 256 tonnes of cowpea and 38.3 tonnes of vegetable seeds. In addition, 387 000 tools (66 000 hoes and 321 000 malodas) will be provided, as will 160 000 fishing kits.

Emergency livelihood kits (crop, vegetable and fishing) will be distributed in Greater Upper Nile, targeting 100 percent of households in IPC Phases 3 and 4 (and possibly 5). While in the rest of the country, FAO plans to target 100 percent of the population in IPC Phases 3 and 4 through a more resilience-oriented approach, including the use of ITFs and enhancing local capacity for seed multiplication in order to support local seed production and the local economy. FAO will focus on FFS as a means to promote the adoption of improved agricultural and post-harvest processing practices, as well as access to markets through the Organization's Resilience Strategy.

Local seed is good in South Sudan as confirmed by FAO quality tests. FAO is therefore seeking to reduce potential seed imports and will, where possible, promote ITFs as a means to facilitate farmers' access to seed while promoting local producers. Before seed distributions, FAO will conduct assessments from December 2015 to January 2016 in order to determine local seed availability and plans to conduct a wider seed security assessment before the end of 2016 as part of the Organization's efforts to reduce dependence on free input provision.

Technical messaging in the form of simple leaflets, particularly for vegetable production, and training of implementing partners and FSL Cluster members will be strengthened in 2016. Where feasible, FAO plans

to introduce quality fish processing methods and good handling and conservation practices through on-the-job training and nutrition education.

Shifting from international to local procurement and from emergency distribution to ITFs and resilience-oriented activities in fisheries, vegetable and crop production will help ensure a more sustainable programme.

Depending on the evolution of the situation in South Sudan, FAO will also support returning or resettling communities as much as possible.

FAO's experience in 2015, confirmed by the results of field evaluation and monitoring, has demonstrated the critical role of vegetable and fishing kits – in many cases, they have literally been life-savers for extremely vulnerable populations, as they:

- bring fast relief (short-cycle vegetables and fresh fish that can be consumed, traded or sold);
- are less season-dependent than crops;
- can be used closer to the homestead (this is a critical protection issue as beneficiaries, especially women and children, do not have to walk to distant fields, particularly in times of open hostilities);
- benefit the most vulnerable (women, elderly, widows) who can trade or barter; and
- can be a source of income, especially for women in locations where markets are functioning.

In 2016, FAO plans to continue its rapid response operations whenever needed, providing an estimated 100 000 vegetable and fishing kits to extremely vulnerable households. FAO will manage a small buffer stock that would enable the Organization and its partners to react quickly in the case of newly emerging needs or newly accessible communities.

Implementing partners

The ELRP is delivered through partnerships. Over the last two years, FAO has regularly worked with about 70 implementing partners in South Sudan, with various levels of performance. In 2015, FAO began a series of training sessions on a wide range of topics to enhance the capacity and improve the overall performance of its partners.

FAO is currently conducting a partners' performance review in order to identify weaknesses and address them through capacity development prior to the 2016 campaign. Once again, capacity development will focus on AAP, M&E, gender, understanding vulnerability and targeting, project management and information management, as well as technical training on crops, vegetables, fisheries and livestock production. FAO is also conducting financial audits to ensure the proper use of funds by downstream partners.

FAO believes that it is critical to invest time and effort in building the capacity of NGOs operating in the field, especially national organizations.

Procurement

FAO will procure emergency livelihood kits in both international and national markets. Items such as vegetable seeds, tools, fishing materials and veterinary drugs and vaccines must be purchased abroad, as there are no viable alternatives within the country. Delivery can take up to 15 weeks, therefore advanced procurement actions for the 2016 campaign had already started in August 2015.

Regarding crop seeds, FAO will maximize local procurement. Local seeds are – mostly – of good quality, of varieties known to farmers and minimize the risk of spread of transboundary pests and diseases. Moreover, the lack of a clear national process for seed imports makes international purchase in neighbouring countries challenging and problematic. Based on the 2014 and 2015 experience of local seed recollection, FAO has addressed the problems faced and identified the appropriate mechanisms to recollect local seeds at a good price and in good time. This modality has an additional benefit of helping to directly support the development of the local seed production system in South Sudan.

Direct injection of cash into local communities is also boosting the local economy and enhancing their resilience. However, it is hoped that the local currency distortion will improve to get the best value for money from local procurement.

Logistics

The excellent results obtained (livelihood input delivered in a timely manner and in the most inaccessible areas of the country) using specifically contracted air transportation capacity mean that FAO will likely repeat the experience in 2016. All efforts will be made to limit costs and transport inputs by road when feasible, pre-position and purchase locally, or use the traditional UNHAS and Logistics Cluster support.

In 2014 and 2015, FAO invested significant resources in enhancing its logistic capacity. FAO's logistics and operations personnel were trained by an internationally recognized logistics specialist foundation. In 2016, FAO can also count on the experience gained during the implementation of its air operation.

Information management

In 2016, FAO plans to further enhance the information management system by:

- expanding tracking and reporting to other activities, particularly livestock support, ITFs, voucher schemes and local seed procurement;
- implementing a mobile application for inventory control of all FAO warehouses;
- designing a notification and alert module for enhanced communication;
- harmonizing definitions, procedures and information sharing with stakeholders (FAO headquarters, resource partners, implementing partners, FSL Cluster and national government);
- capacity building of implementing partners on best practices for tracking and reporting;
- applying "open data" principles to external stakeholders with access to non-confidential information; and
- creating a learning and knowledge forum to mine and analyse the information, thus maximizing its utility.

ELRP Logical Framework

Intervention Logic	Indicators	Source of Verification	Assumptions / Risks
Impact Contribute to protecting vulnerable populations affected by the crisis in South Sudan against hunger, malnutrition and destitution	At least 30% graduation from higher to lower IPC phase classification	Regular IPC analysis throughout the year	
Outcome Livelihoods of vulnerable farmers, fishers and pastoralists protected and their food security enhanced	▪ 65% of the targeted households have an acceptable (> 35) food consumption score (baseline – Sept 2015: 44%) ▪ 70% of targeted households cultivating minimum of 2 *feddans*[3] ▪ 10 to 15% decrease in livestock mortality rate (baseline: 25–40% in young, 20–25% in adults) ▪ 25% increase in fish capture (baseline: 300 kg/year/household)	Partners' reports; FAO information management system data; FAO project reports; FAO field monitoring team reports; Food Security and Nutrition Monitoring System (FSNMS)	▪ Government effectively guarantees safety of UN staff operating in government-held areas ▪ Humanitarian access corridors are maintained open and operational ▪ No major natural or human-induced disasters occur to impede timely delivery of inputs ▪ Adequate rainfall occurs ▪ Required resources are available in a timely manner ▪ Commodites are available in sufficient quality and quantity ▪ Juba remains safe (fighting, crime), enabling core staff to perform functions

[3] 1 feddan = 60m x 70m

Output 1: Emergency livelihood support provided to food insecure and displaced households	▪ At least 435 000 households, disaggregated by gender of the household head, are provided with emergency livelihood support ▪ 11 million animals (livestock and dogs) vaccinated and treated ▪ 52 SDD refrigerators installed in 40 counties and 50 portable SDD refrigerators provided in the 10 states ▪ 50% of beneficiaries disaggregated by gender and age received direct instructions on production techniques, including planting, post-harvest handling and/or conservation ▪ 90% of beneficiaries disaggregated by gender and age are satisfied with the emergency livelihood kits (composition, quality, quantity and timeliness)	Partners' reports; FAO information management system data; FAO project reports; feedback from implementing partners and beneficiaries through clear systems; FAO Field Monitors' assessments	▪ Access to targeted areas and communities remains possible ▪ Inputs can be delivered on time ▪ Warehouses safe from looting and destruction ▪ Insecurity does not impede delivery of project activities ▪ Veterinary cold chain operationality is adequately restored ▪ Kits are used appropriately by well-trained beneficiaries ▪ Implementing partners have presence and capacity on the ground, good targeting and are available to beneficiaries
Output 2: Increased production, availability and access to food in less-directly affected areas (Greater Equatoria, Greater Bahr el-Ghazal and selected areas in Greater Upper Nile, where security allows)	▪ At least 70 000 households benefited from voucher/ITF schemes, disaggregated by gender of the household head ▪ 30 000 farmers disaggregated by gender and age received extension messages on production, seed multiplication, post-harvest losses, processing/marketing, safety and handling ▪ 125 000 herders disaggregated by gender and age received extension material and instructions on disease control and/or production techniques	Partners' reports; FAO information management system data; FAO field monitoring team reports; FAO project reports	▪ Partners for voucher system available in targeted areas ▪ FAO staff and partners can access and remain safely in selected target locations long enough to conduct training
Output 3: Food security information, analysis and coordination mechanisms used for evidence-based decision-making	▪ FSL Cluster at the national and state levels is functioning, with dedicated staff, regular meetings, response planning and monitoring system ▪ FAO and partners produce two main IPC analyses (June/July and Nov/Dec) and two IPC updates (April/May and Sep/Oct), and complete data is made available ▪ Government, FAO and WFP conduct joint Crop and Food Security Assessments (CFSAMs) over the production season ▪ FAO able to monitor pastoralist livelihoods through developed and tested assessment tools for monitoring specific livelihoods	Partners' reports; IPC partners' reports; FSNMS; System partners' reports; CFSAM annual report; FAO information management system data; FAO project reports; FAO field monitoring team reports; FSL minutes	▪ Resources available for IPC, crop and food security analysis and FSL support ▪ Access for assessment teams ▪ Cooperation with government technical services continues

Technical annexes

Agriculture – crop and vegetable production

Background

In South Sudan there are 11 different agro-ecological zones. Crop production is mostly rainfed with minimal small-scale irrigation for vegetable production. In Greater Bahr el-Ghazal and Greater Upper Nile there is a unimodal agricultural pattern, while in Greater Equatoria it is bimodal. The average agricultural land cropped by farmers is about 1 hectare.

In 2016, FAO will aim at improving food availability and access by increasing local agricultural production through access to agricultural inputs (seeds, tools) for vulnerable households.

Seed quality tests performed by FAO have shown that local seed is generally good. As a general indication, FAO will aim at decreasing seed imports as much as possible from neighbouring countries and take all possible measures to decrease seed dependency of final beneficiaries. Farmers mostly get seed from their own stocks, social networks and from local markets. However, access to seed may be a problem for particular sectors of the population, such as IDPs, refugees, returnees. Populations in IPC 3 and 4 have also limited access to seeds. In some areas, seed may be lacking. Lack of seed needs to be assessed, but it is likely that in specific counties of Greater Upper Nile, due to the insecurity since April/May 2015, seed production has been heavily affected. Wherever possible, FAO will promote ITFs as a means to facilitate access to seeds and support local seed producers. Where ITFs will not be possible – either due to lack of seed or lack of security to organize ITFs or lack of functioning markets – FAO will carry out seed distributions. FAO will also consider implementing seed multiplication schemes to address lack of availability of good quality seed and then link these schemes with seed and ITFs. Since in some areas 2016 will be the third year of seed distribution, a seed security assessment will have to be implemented towards the end of 2016.

FAO's ability to support a large number of households with diversified crop and vegetable seeds in time for the 2016 planting season depends on the timely receipt of adequate funds to facilitate the pre-positioning of quality inputs as much as possible by road.

FAO intervention

(i) Provision of appropriate field and vegetable crop kits and "no harm" tools

Given the expected early onset of the 2016 lean season due to reduced harvests and as forecasted by the latest IPC report, emphasis will be placed on rapidly maturing field crops and nutritious vegetables for home consumption. While vegetables, like collards and amaranth, can be ready for consumption in six weeks, field crops require land access and time to yield. Crop seeds will be distributed through ITFs where problems of access to seed can be addressed through vouchers (provided that markets are functional and that there is adequate security) or directly where the basic pre-conditions are not met. In these cases, FAO will always prioritize locally produced seeds over imported ones.

Seed availability assessments will be conducted from December 2015 to January 2016 to determine the amount of locally available seed from seed companies and producers and seed multiplication groups for ITFs and/or local procurement.

2014 feedback from beneficiaries indicated the need to tailor the kits to the different agro-ecological zones in the country. As a result, FAO revised the composition of the kits in 2015, and is awaiting

feedback from the monitoring team before finalizing 2016 in detail. Table 1 indicates the estimated proportion of seed distributed through ITFs versus direct distribution per state.

Table 1: Percentage of seed distributed through ITFs versus direct distribution

State	ITF	Direct distribution
Lakes	60%	40%
Northern Bahr el-Ghazal	100%	
Warrap	100%	
Western Bahr el-Ghazal	100%	
Central Equatoria	100%	
Eastern Equatoria	70%	30%
Western Equatoria[4]		
Jonglei		100%
Unity		100%
Upper Nile		100%

The crop kit will include a minimum of two and maximum of four types of field crop seeds selected from five different species (cereals, pulses or oil, see listing in Table 2). Based on the experience of the past two campaigns, groundnut seed will only be accessed through ITFs and some local procurement as it is generally unavailable on the international market, transportation is bulky and the seed rate requirement is high.

The vegetable kit will be composed of up to seven vegetable varieties (see listing in Table 3). These will be distributed mainly according to farmers' preferences and agro-ecological zones.

Table 2: Listing of seeds for the composition of field crop kits

Crop	Pack size (kg)	Procurement model
Sorghum	3	ITF, local seed companies/farmers or international
Maize	5	ITF, local seed companies/farmers or international
Groundnut	20	ITF, local seed companies/farmers
Cowpea	2	ITF, local seed companies/farmers or international
Sesame	1	ITF, local seed companies/farmers

Table 3: Listing of seeds for the composition of vegetable crop kits

Crop	Pack size (g)	Procurement model
Okra	50	International
Watermelon	30	
Tomato	20	
Onion	20	
Collards	20	
Amaranth	20	
Cabbage	20	
Eggplant	20	
Carrot	20	

With ideal conditions and optimal use, the kits have the potential to provide the cereal needs of one household for twelve months, while a single vegetable kit can provide dietary diversification for the same household for one year, under ideal conditions, with some potential to sell the surplus. "No harm"

[4] As per IPC figures, no emergency livelihood kits are planned to be distributed in Western Equatoria State. However, considering insecurity in the area and resulting population displacements, assessments will be carried out to determine the caseload for emergency livelihood distributions.

farm tools will be provided in accordance with different community preferences, soil types in the different agro-ecological zones and general farming practices. Where possible, this will be supplemented with training on the optimal use of inputs as well as practical nutrition education, including food preparation, to enhance the consumption of the foods.

(ii) Promotion of seeds multiplication and saving

As part of FAO's commitment to enhancing the resilience of vulnerable populations, the programme will contribute to improving the capacity of farmers to produce seed for their own use and for sale. In the more stable Greater Equatoria and Bahr el-Ghazal regions, FAO will work with seed growers to build their capacity to produce and supply quality seed through a combination of formal seed production and multiplication. These seeds will also enhance local seed availability for future recollection and redistribution to vulnerable households within the same localities or other agro-ecologically compatible conflict-affected areas through ITFs. In addition to this, open pollinated varieties have been chosen for the crop kits to ensure that FAO supports and reinforces seed savings by beneficiaries and to reduce cyclical distribution of seeds to the same populations.

(iii) Technical capacity building

In 2015, key extension messages regarding the distributed seeds and tools (good production, storage, seed saving and processing practices) were disseminated during basic training sessions with implementing partners and beneficiaries as part of distribution.

5 000 graphic leaflets (1 000 pamphlets) with basic extension messages were also provided with crop kits in Greater Upper Nile and Bahr el-Ghazal regions. This practice will be continued and further reinforced in 2016 with an emphasis on vegetable production.

Similar to the 2015 campaign, FSL Cluster members and FAO implementing partners will receive technical training on crop and vegetable production. Training will be carried out in Juba and at the state level.

In Greater Equatoria and Bahr el-Ghazal regions, seed distributions will be accompanied by FFS[5], demonstrations and post-harvest processing, aiming to strengthening the resilience of beneficiaries to absorb future shocks. In Greater Upper Nile, a similar approach will be taken wherever the security situation allows.

[5] Carried out through FAO's Resilience Strategy.

Livestock

Background

Livestock is an important social and economic asset in South Sudan. They are primary investment resources which generate food (meat, milk), cash income, fuel, clothing, employment and capital stock. Despite the huge livestock population in the country, conflict and animal diseases continue to undermine livestock production in South Sudan. The current conflict has triggered a combination of factors that have worsened the situation of livestock-dependent populations across the country, leading to food insecurity and loss of assets. These factors include: restricted mobility, inability to access traditional water and pasture resources, lack of access to livestock markets, confinement of livestock to small areas and mixing of livestock from different geographical areas.

In addition, protracted conflict has led to massive displacement of humans together with their livestock, exposing livestock to new diseases that they were previously not exposed to, such as East Coast fever (ECF) and foot-and-mouth disease (FMD) – resulting in the proliferation of disease outbreaks and intensified social tensions between farmers and migrants. In addition, livestock trekking for long distances has aggravated the situation by weakening livestock body conditions, leaving them vulnerable to simple diseases that they would otherwise resist under normal circumstances. This has caused great losses to pastoralists who depend solely on livestock for their livelihood while also adversely affecting terms of trade. The capacity of government and NGOs to monitor, control and respond to these diseases is severely limited, further threatening the livelihood of pastoralist households and about 50 percent of the livestock population.

In 2015, FAO managed to vaccinate and treat more than 5 million livestock and controlled livestock disease outbreaks in priority areas of South Sudan. Most of the activities in the dry season vaccination campaign were carried out by FAO through direct intervention, with some close collaboration among partners (government and NGOs). The emergency livestock response efforts were complemented with the procurement of veterinary cold chain equipment for distribution and re-establishment of national cold chain infrastructure for livestock vaccines, as well as capacity building of CBAHWs to carry out vaccination and treatment activities in remote areas.

In 2016, FAO anticipates performing better vaccination and treatment activities in a well-planned and coordinated way, with particular focus on the most conflict affected areas of South Sudan.

FAO intervention

(i) Strengthening the CBAHW network

Where possible, the CBAHW network will be re-equipped, re-trained and CBAHWs made available to respond to the immediate animal health needs within their communities. Up to 8 000 veterinary kits will be distributed and 1 600 CBAHWs provided with training (refresher and new[6]), benefiting approximately 125 000 livestock-dependent households. Efforts will be made to coordinate and standardize CBAHW training among implementers. Monitoring and supervision methods for vaccination and treatment supervision will also be standardized.

(ii) Vaccination

Livestock disease prevention will continue through ELRP implementation in 2016. Vaccinations and treatment will be carried out by partners through the signing of LoAs. In areas where there are no credible partners, FAO will intervene directly. Target numbers for animal vaccination include: 5 million cattle, 3 million

[6] In locations where CBAHWs have retired or dropped out, selection of new candidates and training will be conducted.

sheep and goats, 40 000 poultry and 4 000 dogs. Up to 7 million doses of various vaccines will be procured in preparation for the campaign, mainly against major diseases such as haemorrhagic septicaemia, contagious bovine pleuropneumonia, contagious caprine pleuropneumonia, *peste des petits ruminants*, sheep and goat pox, blackquarter, anthrax, New Castle disease and rabies (as outlined in Table 4). These diseases are endemic in South Sudan and often result in high mortality rates among livestock herds. Vaccinations will be mostly conducted in areas where livestock are at high risk of being infected from the mentioned diseases.

Communities will be sensitized during community dialogue meetings and through other forms of communication on the importance of treatment and vaccination of livestock against common animal diseases. Extension messages will be developed and disseminated. The activities will be coordinated by FAO and the Ministry of Livestock and Fisheries Industry during Livestock and Fisheries Technical Working Group (LFTWG) and FSL Cluster meetings. FAO's livestock technical team will provide technical backstopping and follow-up during training on treatment and vaccination supervision.

(iii) Treatment

About 3.5 million livestock are targeted for treatment against major livestock diseases (see Table 4). Strategic and seasonal de-worming of livestock will be done to reduce the burden of internal and external parasites and regular tick control practices using acaricides will be implemented.

Table 4: ELRP 2016 target livestock vaccination and treatment

Livestock	Vaccination	Treatment	Total
Cattle	5 000 000	2 000 000	7 000 000
Small ruminants	3 000 000	1 500 000	4 500 000
Poultry	40 000	10 000	50 000
Dogs	4 000	1 000	5 000
Total	**8 044 000**	**3 511 000**	**11 555 000**

(iv) Reduction of public health risks

To mitigate the public health risk posed by improper handling of slaughtered animals and presence of unvaccinated and free-roaming dogs, urgent measures must be taken to support the prevention and control of zoonotic diseases including rabies, anthrax and tuberculosis. FAO will undertake a rabies vaccination campaign in collaboration with the United Nations Mission in South Sudan and work to promote the establishment of hygienic slaughter slabs, including hygienic disposal of slaughter waste, improved skills on meat inspection to meat inspectors, and distribution of hygienic containers and tools to meat sellers and butchers.

(v) Restoration of veterinary cold chain and vaccine management

In order to pre-position and store greater amounts of vaccines to respond more effectively to disease outbreaks, FAO will continue its work on decentralizing the veterinary cold chain infrastructure as well as re-establishing facilities in critical areas through the repair and maintenance of existing facilities and the establishment of new facilities, as well as the training of cold chain technicians and end users.

In 2016, FAO will install 52 SDD[7] refrigerators and freezers at the state and county levels and provide 50 portable SDD refrigerators in the 10 different states. Supply of spare parts, cold boxes and vaccine

[7] The SDD refrigerator and freezers are with solar panels and without batteries. Charge regulators have been identified as a solution to overcome the weak link in maintenance and repair of solar refrigerators with backup battery and charge regulator. This solution provides a reliable cold chain for vitally important livestock vaccines, even in hard-to-reach areas.

carriers, training of end users and cold chain technicians, provision of fuel to the central Gudele and three state veterinary cold chain hubs will also be part of FAO's technical and financial support. The veterinary cold chain hub in Wau will be strengthened by replacing the cooling unit to facilitate rapid access to vaccines throughout Greater Bahr el-Ghazal. Continuous temperature monitoring systems will be introduced at the state and county levels.

(vi) Coordination

FAO will continue to play the leading role in coordination of livestock-related activities through LFTWG meetings to ensure that effective assistance is provided by partners in order to restore affected pastoralists' resilience and increase access to livestock production in a coordinated and effective manner. The LFTWG meets every month to provide updates on the livestock activities carried out by FAO and its partners.

(vii) Livestock disease surveillance, monitoring and reporting

FAO will continue to support the surveillance and reporting of livestock disease outbreaks and other livestock-related calamities as an early warning system for early intervention. In addition, in-depth studies will be carried out to investigate the spread of ECF and FMD in South Sudan.

(viii) Technical specifications

Table 5: Kit composition for CBAHWs

Type of input	Quantity
Oxytetracycline 20% injection – 100 cc vial (2 000 mg/ml)	5
Albendazole 10% drench. Albendazole Suspension – 1 000 ml bottle	2
Ivermectin 1% injection – 50 ml vial	2
Ethidium Bromide – 250 mg injection (100-tab tin)	1
Novidum Chloride – 250 mg injection (100-tab tin)	1
Tylosine tartrate 20% – 100 cc vial (200 mg/ml)	1
Poultry Louse Powder – 500g sachets	1
Pink eye powder	2
Oxytetracycline wound spray – 250 ml can	2
Pour-on pyrethroids (e.g. cypermethrin, deltamethrin, flumethrin, permethrin) – 500 ml can	1
Parvaquone injection – 50 ml vial	1
Parvaquone + Furisimide – 50 ml vial	1
Quarternary ammonium (oil-based wound dressing) – 100 ml can	1
Disposable syringes – 10 ml / 20 ml	20
Reusable plastic syringes – 30 cc slide or luer lock	5
Needles – G 18 x ½	20
Cotton wool	1
Disinfectant	1
Disposable latex gloves – 100-pack	1

Fisheries

Background

South Sudan is replete with numerous bodies of water, including rivers, swamps and wetlands that contain substantial natural fish resources. The Nile provides major wetland and water resources for freshwater fish. The Sudd, inland delta proclaimed Ramsar site, is the largest source of freshwater fish in South Sudan and hosts eight commercially important species (Nile perch, Bagrus, catfish, tilapia, carp, Binny carp, elephant-snout fish and tiger fish). While the actual annual maximum sustainable yield is unknown due to irregular data collection, it is estimated at more than 200 000 tonnes per year[8]. Recent annual fish capture in South Sudan has been estimated at around 143 000 tonnes per year[9], with a rising trend. At this time, more than 80 percent of fishing is done on a subsistence basis.

Fishing can support vulnerable rural households, contributing to their nutritional needs by diversifying the household food basket and bridging food gaps. The contribution of fish protein and micronutrients to the daily diet reaches well over 80 percent for populations living along the rivers and permanent swamps. It is estimated that 1.7 million people depend on fisheries for their livelihoods, food and nutrition security and/or income[10]. The riverine location of many displaced and host communities represent an opportunity to address moderate malnutrition and restore livelihoods through the use of environmentally friendly and suitable fishing kits and related trainings. The distribution of fishing equipment for capture and conservation to fisherfolk and related capacity development is a high priority as a nutritious and cost-effective option to food assistance. This intervention seeks to address some of the constraints associated with fisheries production and poor access to appropriate fishing inputs, as well as the high percentage of post-harvest losses (particularly during the rainy season) by food-insecure households.

Fishing kits can be considered life-saving for those populations that are escaping from violence and fighting. In 2015, FAO distributed fishing kits in hard-to-reach areas in southern and central Unity State, providing means to survive to tens of thousands of households.

While responding to immediate humanitarian needs in crisis-affected areas, FAO is committed to enhancing the resilience of vulnerable populations and sustainable fishery resource use in less-affected areas. This will be achieved by increasing availability of and access to suitable fishing and post-harvest equipment and protein- and micronutrient-rich fish-based food sources through input provision, as well as appropriate training programmes (including nutrition education) in areas endowed with fish.

Access can also be facilitated through voucher systems linking vulnerable consumers to local producer groups. FAO will systematically introduce short modules on practical measures of fish resource protection and sustainable fishing practices, as well as nutrition education with a focus on fish preparation in all training workshops.

FAO intervention

The key objective of the fisheries component of the ELRP is to improve nutrition, food security, livelihoods and income opportunities for the enhanced resilience of vulnerable populations. The situation of IDPs, returnees, host communities and refugees will be eased through the introduction of improved fishing gear

[8] Comprehensive Agricultural Development Master Plan, August 2014
[9] Idem, August 2014
[10] Idem, August 2014

and post-harvest technologies and practices and related trainings (including nutrition education). Major issues currently faced by the fishery sector and FAO areas of intervention are outlined below.

(i) Provision of appropriate fishing gear and capacity building

Many communities and households in South Sudan (including IDPs, returnees, host communities and refugees) currently lack access to basic fisheries inputs. FAO will facilitate access to fishing equipment, such as twine, hooks and monofilaments, through the provision of emergency livelihood fishing kits and related training regarding the use, maintenance, care of fishing gear and their adverse impact on the environment and ecosystem.

FAO promotes fishing gear that is economically efficient and environmentally friendly[11]. All fishing gear procured by FAO is compliant with the existing national legal and regulatory framework, and in line with the FAO Code of Conduct for Responsible Fisheries (Articles 6, 7 and 8) and good practices contained in the Fisheries and Aquaculture Emergency Guidance[12]. The environmental impact of fishing gear will be closely monitored[13] and fisherfolk and extension agents will receive appropriate training on their use.

(ii) Provision of appropriate knowledge and equipment to reduce post-harvest losses

Fish is a product which decomposes rapidly and, unless preserved or processed, needs to be sold and consumed within a very short time. It is estimated that around 30–40 percent of all fish catches across the country is currently lost due to poor post-harvest handling and processing. In South Sudan, full understanding of the post-harvest sector, including availability of markets, remains a challenge.

As part of the ELRP, FAO will introduce quality fish processing methods as well as good handling and conservation practices, including cold boxes, tarpaulins, drying racks and nets, salting and fuel-efficient and mobile fish smoking ovens[14]. Practical on-the-job training in processing, handling, post-harvest losses and marketing, as well as nutrition education will be given to both fisherfolk, with a focus on women, and subject matter specialists.

This activity will be carried out wherever possible as part of strengthening the resilience of households and communities to future shocks, including areas of Greater Upper Nile, where the security situation allows.

(iii) Technical specifications

The emergency fishing kits are designed to be lightweight and highly portable, allowing them to be delivered by road, water or air and easily carried by beneficiaries moving on foot. In order to ensure beneficiaries are aware of the optimal utilization of the kit contents, FAO will pursue various options as appropriate – providing both rapid training to implementing partners and direct training to beneficiaries.

FAO will also seek cooperation with government extension workers and staff whenever possible, as well as use community radio networks for the dissemination of technical messaging.

[11] Fishing kits that do not have any threat to the sustainability of the natural resource base
[12] See from p.52 – http://www.fao.org/3/a-i3432e.pdf
[13] Periodical assessment and formation of co-management groups
[14] Chorokor smoking oven

Natural resources and the environment

Background

The environmental impact of the current crisis, which has led to the concentration of large numbers of displaced people, returnees and refugees in limited areas, continues to be visible with devastating effects on the environment. While cooking of food is an important process in enhancing nutrient availability from food consumed, fuelwood and charcoal consumption for cooking and basic household needs, particularly for large settlements of refugees and IDPs, contributes to rapid deforestation and environmental degradation, jeopardizing long-term food security in the affected areas.

The need for cooking fuel is particularly pressing in areas hosting large numbers of displaced persons. In these acute emergency contexts, the distribution and use of fuel-efficient stoves (FES) can reduce both the amount of wood extracted from the surrounding environment and the exposure of fuelwood collectors, predominantly women and girls, to protection risks in acutely insecure environments.

While FES can decrease the demand for fuelwood at the household level, solutions that ensure a sustainable and long-term supply of fuel are also needed. Recent assessments have shown the increasing economic importance of traditional charcoal production, which has become a short-term income source for rural populations. However, the traditional mode of charcoal-making is highly inefficient, illustrated by the fact that between 5 and 10 tonnes of wood are needed to produce 1 tonne of charcoal. Agroforestry and reforestation activities that integrate, or are coupled with, alternative livelihoods are needed to mitigate the environmental impact of charcoal production, which is exacerbated by the demand for fuelwood by displaced households from crisis-affected areas. Furthermore, sensitization efforts have to be strengthened and underpinned with concrete measures, such as the promotion of coppicing and pollarding, as well as increasing responsibility and control of communities over communal woodland and forest areas in collaboration with the State Forest Departments in charge of the enforcement of forestry rules and regulations.

FAO interventions

(i) Fuel-efficient stoves

FAO is engaging in partnerships under the Safe Access to Fuel and Energy (SAFE) Initiative[15] to reduce the need for fuelwood and charcoal in the short term, while decreasing the pace of deforestation and soil erosion in the medium to long term. Medium-term strategies are necessary to restore the natural vegetation cover in areas of high concentrations of displaced populations – measures that are important for the environment and for ensuring peaceful co-habitation of displaced people with host communities. FAO is working with partners to accelerate SAFE strategies in areas surrounding displaced communities and integrated agro-silvi-pastoral systems for host communities bringing, for example, fodder and fuelwood closer to concentrations of populations.

FES allow for the preparation of a meal for an average sized household of five to six people with 0.17 m^3 amount of wood as opposed to the 0.41 m^3 used in the traditional three stone fires; the stoves promoted by FAO are durable, low-cost, highly portable and lightweight to allow for mobility.

[15] The Inter-Agency Standing Committee (IASC) established a task force on SAFE in 2007. As part of the task force, FAO together with 24 other humanitarian agencies and NGOs, worked to develop and implement a coordinated multisectoral strategy for cooking fuel in humanitarian settings. Building on this strategy, SAFE interventions typically include some or all of the following activities: provision and/or production of FES and alternative fuels; investments in natural resource management to ensure a sustainable supply of fuel; and promotion of non-woodfuel intensive livelihoods to counter environmental degradation resulting from negative coping strategies. FAO is currently a key member of the SAFE Humanitarian Working Group established after the IASC Task Force was dismantled.

In areas where there is less of an urgent need to provide FES due to fewer protection or environmental concerns, women can be trained in the production of mud stoves or ceramic cook stoves using locally available materials. The locally made stoves have the advantage of being tailor-made for each household. As well as the preferred fuel source, beneficiaries can select the height of the stove, the chimney position, the pot size, among other specifications in order to minimize their discomfort while cooking. In addition to the above-mentioned benefits, under certain conditions, the production and selling of FES can provide women with additional income to assist in meeting household needs.

With particular focus on urban areas such as Juba, the establishment of stove assembly centres will support the local production of fuel-efficient durable stoves for charcoal. This may require the involvement of international as well as locally based stove manufacturers.

(ii) Reforestation and agroforestry

In order to mitigate the effects of the crisis on wood land and forests, FAO is promoting community-based woodlot management as well as a reforestation campaign in areas where there is already evidence of deforestation since the onset of the crisis. While the use of FES contributes to reducing forest degradation in South Sudan, it is important that steps are taken to rehabilitate existing forest areas and provide a sustainable supply of fuelwood and/or alternative and cleaner sources of domestic energy. The establishment of multi-purpose woodlots at the community level, composed of various tree species, can diversify livelihoods by providing fruit, honey production, fuelwood and other forest products for both IDPs and host communities. If properly managed, the establishment of energy woodlots with sustainable extraction of wood for domestic purposes will substantially contribute to protecting the natural resource base on which rural communities in South Sudan crucially depend, lessen the negative impacts of both floods and dry-spells on rural livelihoods and reduce soil erosion. Under mid-term initiatives, along with reforestation efforts, FAO will provide training to concerned communities on tree nursery establishment, silvicultural techniques and sustainable woodlot management.

At the household level, there is potential for promoting integrated food energy systems[16]. The establishment of agroforestry systems at the household level can provide food, fuel, income and environmental services, such as the rehabilitation of degraded lands and sources of income and subsistence after as little as 2.5 years (in the case of guava), that can help build resilient livelihoods and reduce the reliance on negative coping mechanisms including traditional charcoal production.

[16] Integrated food energy systems are agricultural systems that produce both food and energy. They vary widely in shape, size and composition, and are broadly categorized into two types. In the first type, food and biomass for energy are produced on the same land. This is done by cultivating food and energy crops at the same time, as in agroforestry systems, or in sequence through crop rotations. Either system can be combined with livestock production. The second type maximizes the synergies that exist between renewable energy production processes and the processes involved in crop and livestock production. These systems make use of a variety of agro-industrial technologies, such as gasification or anaerobic digestion that recycle or reuse by-products and other residues created at various steps in the production processes.

Gender

FAO recognizes the essential role of women in improving household food and nutrition security, which in South Sudan has become even more accentuated as the number of women-headed households increases as a result of the conflict. For this reason, ELRP interventions will focus as much as possible on women to ensure families, and above all women and children, reap the benefits. The planned activities seek to assist women to manage the consequences of crisis and food insecurity and malnutrition, providing opportunities for income generation, increasing access to nutritious food sources, reducing exposure to gender-based violence, increasing time for maternal and child care, and improving cooking practices.

Protection is mainstreamed throughout the programme, making sure at-risk groups' specific needs are taken into consideration and risks mitigated where and when possible. These groups (who could be constituted of women and girls, but also men and boys, elderly, unaccompanied children, minorities, IDPs or civil servants whose salaries have not been paid for months) are at risk of conflict-related or sexual violence, forced conscription, looting, destitution and general insecurity.

This will be done through the following activities:

- Women are taking an increasing share of the agricultural responsibilities in the current situation, and will thus be the main target group for the voucher schemes and distribution of inputs, particularly crop, vegetable and livestock kits. The distribution of agricultural inputs will reduce their dependence on others for inputs and allow for more consistency in farming.
- Vegetable kits (with vegetable seeds of nutrient-dense and highly productive, short-cycle varieties) provide women and their families access to nutritious food sources and the possibility to generate income with the possibility of selling or trading surplus, while cultivating vegetables close to home. Not having to walk to distant fields is a critical protection issue, particularly in times of open hostilities.
- The emergency livelihood kits distributed through the programme are designed to be lightweight in order to enable women to transport them easily.
- The livestock kits will help reduce incidence of diseases, thus, livestock body condition and to some extent the quality and quantity of milk will improve, securing families with a more reliable source of milk. Since in many livestock-keeping communities milk is considered as belonging to women, they are mostly engaged in the sale of milk and butter, and their incomes are expected to rise, as well as the nutrition of children with the increased consumption of dairy.
- The distribution of FES helps women reduce the risk of sexual and gender-based violence associated with collection of fuelwood and reduces their work burden.
- An FAO field evaluation showed that although women often do not participate in fishing, women-headed households are still able to benefit from fishing kits as owners of the technology.
- During input distribution, FAO and partner staff will ensure compliance with the five key messages on AAP and on prevention of sexual exploitation and abuse. Feedback mechanisms will also be established and channels communicated with beneficiaries.
- During planned training (good agronomic practices, seed saving, fish production and post-harvest handling, animal health and CBAHW) various gender aspects will be taken into consideration (season, venue, time, duration and training methodology) to ensure that women also have the possibility to actively participate in the training sessions.
- Gender and age-disaggregated data on programme coverage and impact will be collected, analysed and routinely reported on, and programme activities monitored for improvements in self-reliance as well as beneficiary satisfaction for both women and men.

Information management

Background

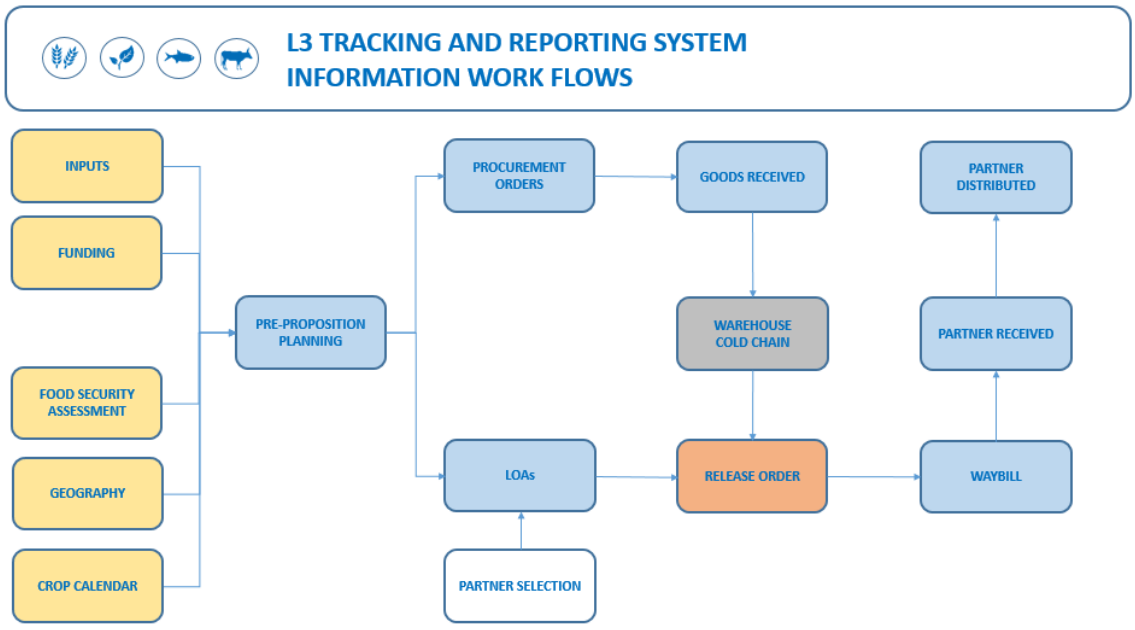
In April 2014, there was an inadequate reporting system for tracking the delivery of Level 3 commodities (livelihood kits, FES, animal treatment kits, livestock vaccinations). FAO South Sudan seconded an Information Manager from FAO's regional office in Nairobi to assess the ELRP's capacity and systems to provide accurate delivery reports to stakeholders, such as the FSL Cluster, resource partners and FAO headquarters. It was the recommendation of the Information Manager and agreed by stakeholders that delivery reports were based on dispatch to implementing partners as preliminary figures and the final delivery numbers to beneficiaries would come from final partner reports.

System development

For 2015, a new tracking and reporting information system (MAGIC) was developed to handle complex programme implementation in South Sudan. The system design was based on user requirements, namely: timely reporting, detailed tracking of commodities, internal audit compliancy and accessibility. To meet these requirements, MAGIC's overall development principles were:

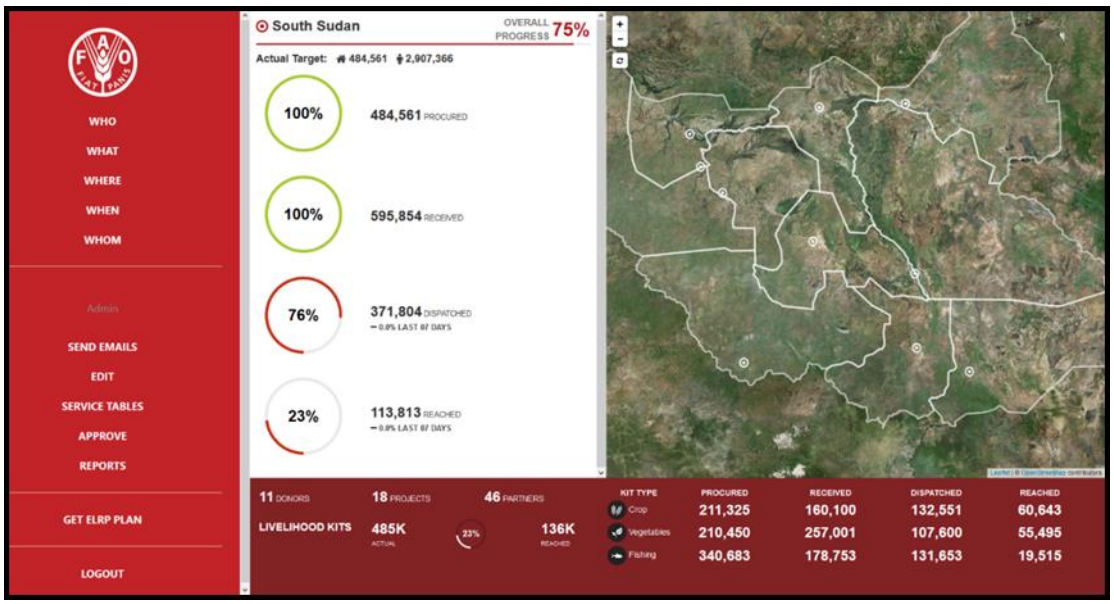
- minimal change management of existing information work flows;
- interoperability with existing systems;
- quality assurance through standard operating procedures (SOPs) and validation rules; and
- accountability with defined roles and responsibilities.

The information work flow provided the system's blueprint for establishing process relationships, creating SOPs and building the database structure. This facilitates the tracking of commodity inputs (widgets), such as a 5 kg bag of maize or a 20 g packet of okra seed or a spool of twine from the ELRP planning stage to final delivery to beneficiaries. This allowed the system to measure the progress across the five operational processes (planning, procurement, receiving, dispatch, distribution). The widget is tagged with a 5W (who, what, where, when, whom) metadata as it moves through the operational processes. This provides detailed progress monitoring and reporting by a 5W dimension.



The crucial factor in the effective running of the system is the timely input of complete, harmonized data of each operational process. Traditional data capture of paper forms is and has been the major issue for untimely and inadequate tracking and reporting. To address this, mobile and Web applications were created for the warehouse and implementing partners to capture data. The warehouse application provides accurate inventory stock records, while the implementing partners' applications provide real-time beneficiary distribution figures. The main development feature is the logic built into the application, which gives validated data output at time of capture, thus eliminating the need for data cleaning.

The data is centrally stored and maintained in a robust relational database that handles a high load of connections between multiple data entries located on the cloud. A password-protected Web user interface controls the access to the progress reporting dashboard, system administration and content management.



System implementation

In 2015, system implementation comprised:

- establishment of harmonized relational databases across the five operational processes;
- finalization of SOPs for information flows;
- construction of system administration, content management modules; and
- development of mobile and Web applications for capturing implementing partner distribution.

The warehouse mobile application was developed but not implemented as it was finalized at the busiest time in receiving and dispatching orders, and too high of a risk to change procedures.

The Web site was functional but not made accessible because real-time, accurate reporting was not possible owing to late data capture of the receiving and dispatching operational processes. A parallel database was therefore maintained that provided progress snapshots and stakeholder reports.

Impact

The system had significant impact on the ELRP operation in 2015 compared to the previous year. The major operational benefits were:

- reported 60 percent of actual beneficiary distribution figures compared to using proxy data of warehouse dispatched data in 2014;
- allowed the L3 Emergency Response Manager to alter the distribution plan from road to fixed-wing and helicopter transportation with evidence-based information;
- provided the mechanism to document losses between processes;
- reported timely and detailed progress, building FAO headquarters and resource partner confidence of ELRP implementation;
- improved the internal audit assessment on operations compared to 2013; and
- initiated culture change towards the importance of information management for transparency and accountability.

Lessons learned

Through the system development and implementation process, many lessons have been learned, including the following highlights:

- information management is a necessary mechanism for monitoring accountability;
- timely and harmonized information provides a platform for sound decision-making;
- accessible information provides transparency and confidence – at all levels – in programme delivery; and
- implementing systemic changes on information management requires procedural changes in place ahead of individual practice.

Next steps

In 2016, FAO plans to further enhance the information management system by:

- expanding tracking and reporting to other activities, particularly livestock support, ITFs, voucher schemes and local seed procurement;
- implementing a mobile application for inventory control of all FAO warehouses;
- designing a notification and alert module for enhanced communication;
- harmonizing definitions, procedures and information sharing with stakeholders (FAO headquarters, resource partners, implementing partners, FSL Cluster and national government);
- capacity building of implementing partners on best practices for tracking and reporting;
- applying “open data” principles to external stakeholders with access to non-confidential information; and
- creating a learning and knowledge forum to mine and analyse the information, thus maximizing its utility.

ELRP 2016 estimated resource requirements

Budget item	Cost (USD)
Personal (staff, consultants, travel)	5 500 000
Contracts (transport, frontline services)	16 400 000
Emergency livelihood inputs	15 000 000
Logistics and general operating expenses	3 000 000
Administrative costs and technical support	6 000 000
Total	**45 900 000**