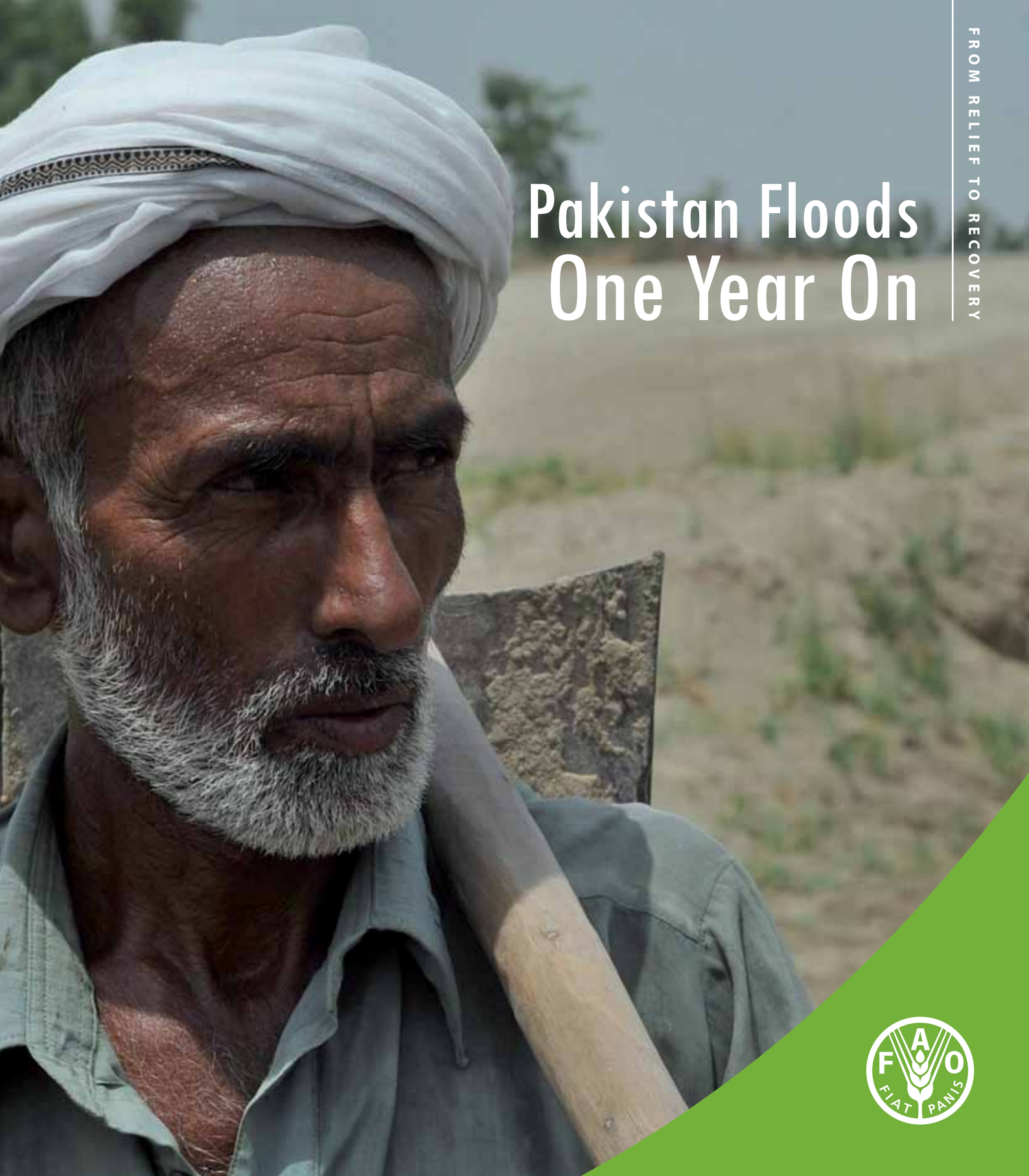
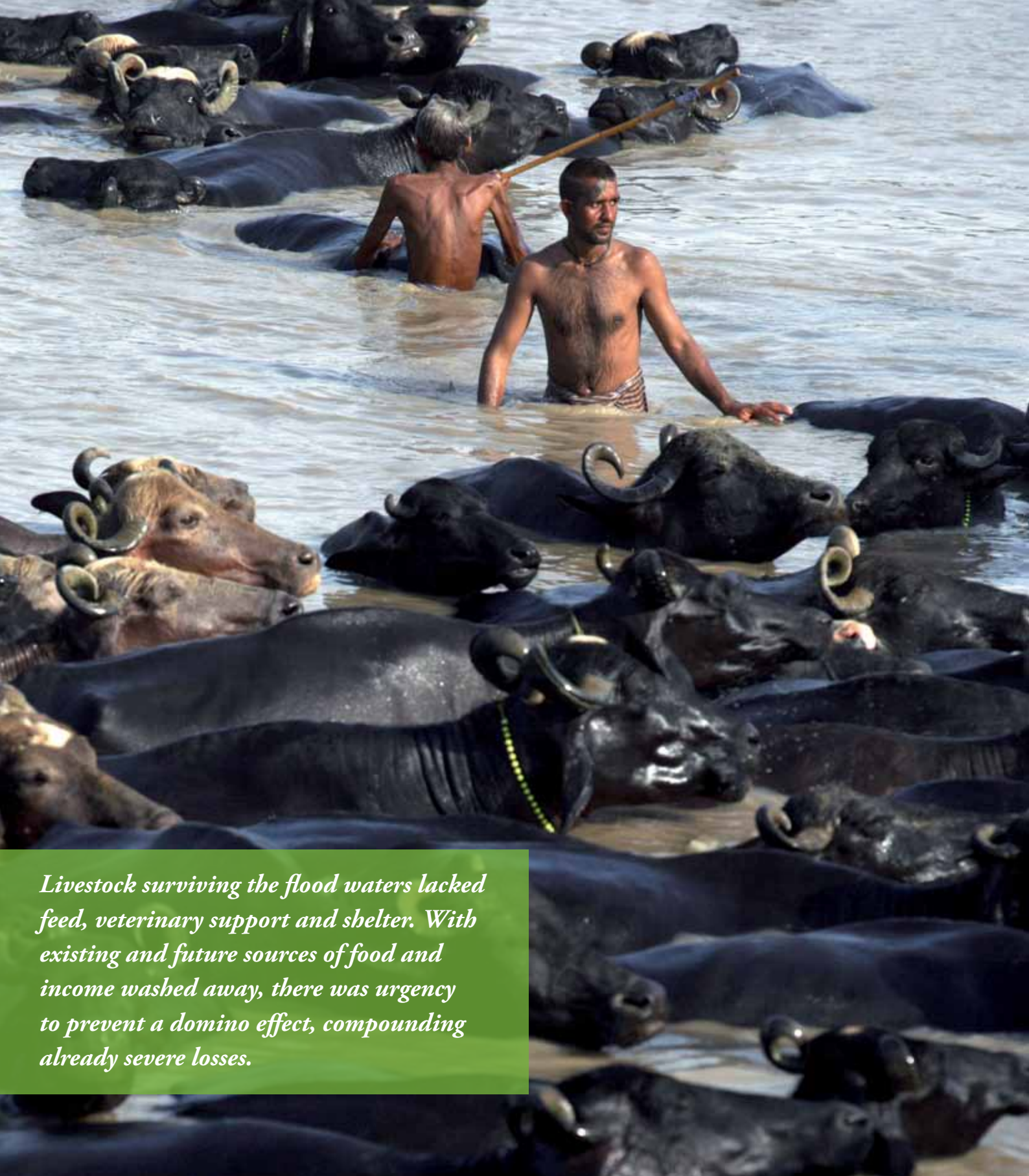


Pakistan Floods One Year On

FROM RELIEF TO RECOVERY



Livestock surviving the flood waters lacked feed, veterinary support and shelter. With existing and future sources of food and income washed away, there was urgency to prevent a domino effect, compounding already severe losses.

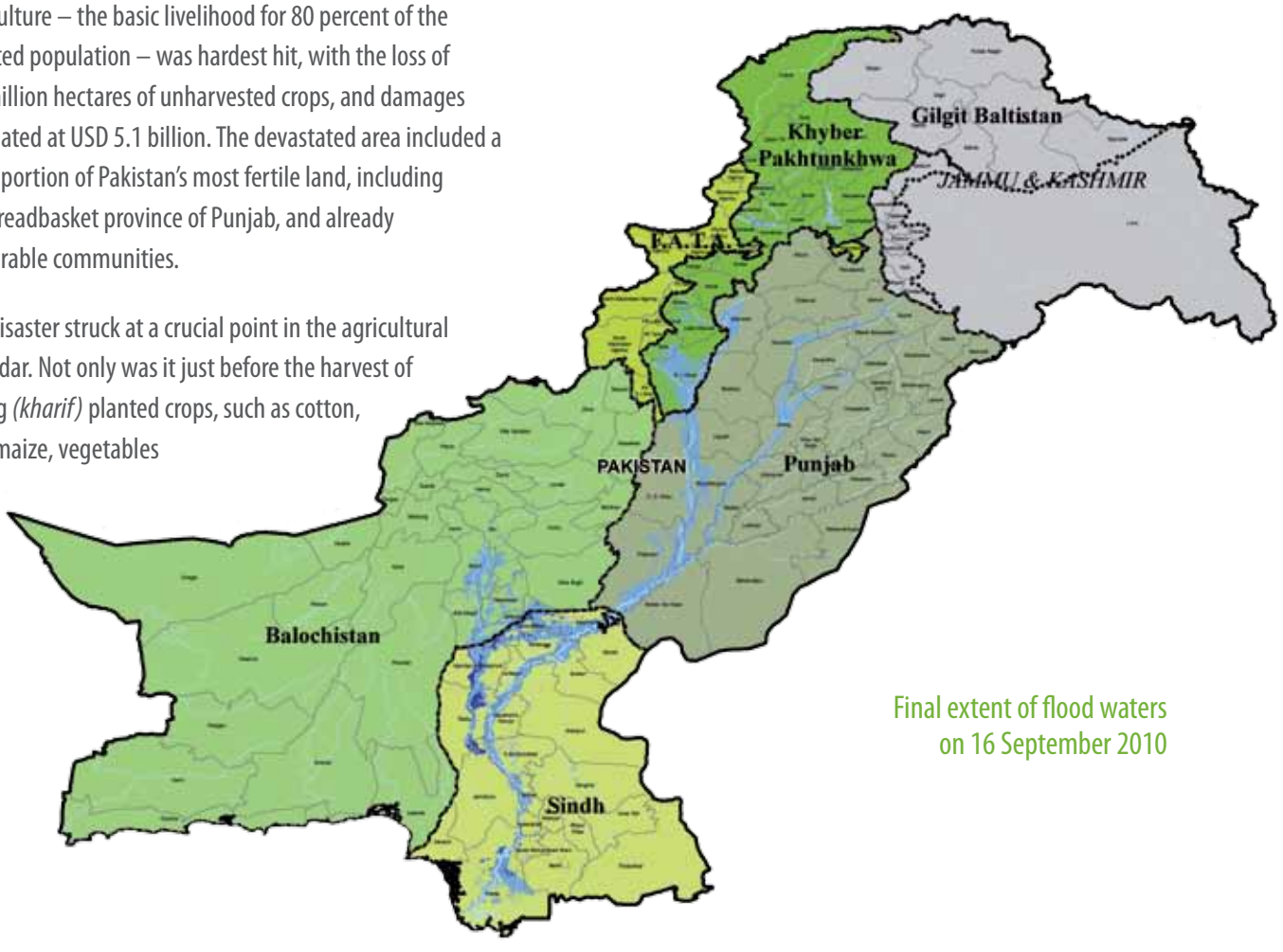
Introduction

The 2010 floods in Pakistan were one of the most devastating natural disasters of our times – described as a slow motion tsunami. Beginning in late July, unexpectedly severe monsoon rains caused flash and riverine floods which combined to affect almost one-fifth of the country's land mass, an area larger than Greece. The humanitarian impact was immense. The disaster affected more than 20 million people, claimed nearly 2 000 lives and destroyed 1.6 million homes and key infrastructure in 78 districts of Khyber Pakhtunkhwa, Gilgit Baltistan, Azad Jammu Kashmir, Balochistan, Punjab and Sindh.

Agriculture – the basic livelihood for 80 percent of the affected population – was hardest hit, with the loss of 2.4 million hectares of unharvested crops, and damages estimated at USD 5.1 billion. The devastated area included a large portion of Pakistan's most fertile land, including the breadbasket province of Punjab, and already vulnerable communities.

The disaster struck at a crucial point in the agricultural calendar. Not only was it just before the harvest of spring *(kharif)* planted crops, such as cotton, rice, maize, vegetables and sugar cane, but was also within weeks of the critical winter wheat *(rabi)* planting season. Livestock surviving the flood waters lacked feed, veterinary support and shelter. With existing and future sources of food and income washed away, there was urgency to prevent a domino effect, compounding already severe losses.

Agriculture and livelihoods have been a key pillar in the Pakistan Floods Relief and Early Recovery Response Plan, with linkages to ensure preparedness for future shocks, rehabilitation and development interventions.



Final extent of flood waters on 16 September 2010

The human story

Behind the staggering figures lies a more telling story. The families most affected by the floods are predominantly smallholder tenant farmers and unskilled labourers. They are amongst the most vulnerable groups in Pakistani society. The average family requiring agricultural assistance owns or can access only 5 acres of partially irrigated cropland, has seven to eight mouths to feed and lives below the poverty line. High levels of malnutrition, food insecurity and debt are daily realities.

Farming families lost generations worth of hard-earned assets and savings, including cattle, tools and seeds for planting. Fisherfolk lost their gear and equipment; fish hatcheries and farms were damaged or destroyed.

With the destruction of the 2010 *kharif* crop, farmers missed an essential income source. Prospects for the *rabi* wheat planting season were bleak as losses and flood waters compromised the ability to prepare and plant fields in time. In many cases, farmers' debt doubled or tripled, forcing them to seek further loans to buy inputs for winter planting and meet immediate food needs. Reduced farming activities also decreased the availability of wage labour opportunities.

Livestock are an integral part of the farming system and the main asset of many farmers, providing a crucial source of income, nutrition and draught power, as well as a safety net in times of crisis. The floods washed away standing and stored fodder crops and left surviving animals weakened, more susceptible to disease and without shelter.

The deep impact of the floods on livelihoods forced people to resort to negative coping strategies, severely threatening their asset base, nutritional status and ability to recover. Around 15 percent sold their productive or domestic assets. Some 80 percent relied on sub-optimal food; over 60 percent have been limiting the size of meals; and 60 percent are missing some meals entirely.

Beyond the billions of dollars in damage, the average Pakistani farming family suffered huge personal loss, and faced shrinking opportunities and growing debt.

Rising to the challenge

Nature waits for no one. It was vital to ensure existing heavy losses were not compounded further. Farmers needed quality seeds to plant wheat – the country's largest staple crop – from October to December, as well as inputs to prevent further livestock deaths. On-farm irrigation structures needed cleaning and repair to ensure the survival of future crops. The response required extensive coordination, planning and a sustained effort in a very constrained timeframe.

In this race against time, the Food and Agriculture Organization of the United Nations (FAO) and partners working together in the Agriculture Cluster reached over 10 million people – equivalent to 1.4 million farming families – across Pakistan within six months. This achievement was the result of unprecedented collaboration among humanitarian and governmental partners, strong connections with local communities and rapid support from the donor community. Through these efforts, vital livestock resources were preserved and the wheat planting season was possible, rather than delayed by a year.

Making a difference

Ensuring a wheat harvest

FAO provided quality wheat and vegetable seed packages to nearly 480 000 flood-affected households. Post-harvest surveys in late spring 2011 reveal that these quality local seeds yielded 650 000 tonnes of wheat – enough to feed more than 4 million people for at least six months. In addition, the average family sold almost one-third of their harvest, generating USD 116 of cash income.

The total cost of FAO's *rabi* wheat intervention was around USD 54 million. Buying the same quantity of wheat grain produced by this intervention on the local market would cost approximately USD 190 million.

Moreover, families have been able to save these quality seeds to plant again later this year, and beyond.

Keeping livestock alive, boosting milk production

Over 290 000 families received support for their livestock – another area where women play a crucial role. The feed, fodder crop seeds, de-wormers and temporary animal shelter helped to keep over 1 million animals alive and healthy during the 2010/2011 winter and until green fodder became available. It also makes economic sense – the cost of keeping one animal alive is less than one-tenth of its replacement value. Nine out of ten beneficiaries reported up to 50 percent increase in milk yield – worth an additional PKR 89 (USD 1.05) per day.

Bridging the food gap

Kitchen vegetable gardens managed by women yield nutrient-rich, fresh food. An average of 500 kg of vegetables were produced from each vegetable kit FAO provided – two-thirds being consumed by the household. This bridged the gap before the wheat harvest in late spring. Surplus production sold on the local market generated on average USD 52 per family, used to meet other basic needs. These types of interventions help give control of food production and purchasing power to women, ensuring their active participation and enriching the nutritional value of the family diet.

Repairing irrigation

Farming families are benefiting from cleaned and repaired on-farm irrigation channels through over 1 000 cash-for-work schemes. This was indispensable for the *rabi* wheat crop, as well as crops planted in the spring, particularly rice. These schemes were vital – 92 percent of farmers reached in the response have irrigated land.

Kharif – a second chance

FAO distributed spring crop packages, including rice, maize, canola and sunflowers, benefiting over half a million people. These activities focused especially on Sindh, where late flood water recession impeded planting in *rabi* 2010. This is expected to produce 0.95 tonnes of rice and 0.73 tonnes of maize per family in autumn 2011, with both crops covering an average family's needs for five months.

Total quantity of inputs delivered to over 900 000 households for *rabi* 2010 and *kharif* 2011 planting seasons

Agricultural inputs	Quantity delivered
Wheat seed	25 959 MT
Vegetable seed	254 MT
Canola seed	45 MT
Oat seed	1 750 MT
Lentil seed	8 MT
Sunflower seed	61 MT
Sorghum seed	18 MT
Mung bean seed	5 MT
Rice seed	1 541 MT
Maize seed	1 541 MT
Urea fertilizer	32 915 MT
DAP fertilizer	29 547 MT
Animal feed	42 072 MT
Animal shelter supplies	49 760 sets
De-wormer	3 676 040 tablets

Maximizing efforts

Partnerships

In August 2010, FAO led the agriculture component of the World Bank and Asian Development Bank led Damage and Needs Assessment exercise. The direct and indirect losses to agriculture amounted to USD 5.1 billion.

FAO is working with the Pakistan Space and Upper Atmosphere Research Commission to generate timely information and reliable data on 2011 flood risks and potential crop damage, to assist policy-makers, and inform contingency planning and preparedness.

In collaboration with the other Rome-based agencies – the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) – FAO helps to ensure a solid and coordinated approach to food security and agriculture. The recently created FAO/WFP co-led Global Food Security Cluster supports this work.

Coordination

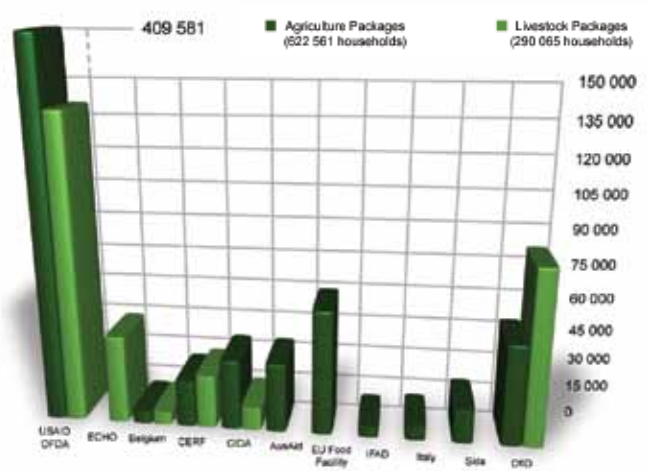
From the onset of the floods, more than 200 organizations – local, national and international – joined efforts through the Agriculture Cluster to respond to immediate and critical challenges. Operating from five coordination hubs across the country, Cluster partners met regularly to prioritize areas of response, map needs and identify the most vulnerable.

Donors

The outreach and success of FAO's flood response programme depended on donors. They delivered fast and generous support. USD 92 million was committed in time for FAO to assist over 900 000 households – more than 7 million men, women and children – in four priority areas:

- winter planting (wheat, vegetables) and spring planting (maize, rice, vegetables);
- livestock support (temporary shelter kits, de-wormers, feed, fodder seeds);
- irrigation repair (cash-for-work to clear and restore on-farm watercourses); and
- sectoral coordination.

Households provided with FAO agriculture and livestock packages per donor



Australian Government AusAID · THE BELGIAN DEVELOPMENT COOPERATION .be · Canadian International Development Agency · Agence canadienne de développement international · COOPERAZIONE ITALIANA · IFAD · Sida · UKaid · USAID

Building on experience, supporting Government

FAO has been providing technical assistance to the Government of the Islamic Republic of Pakistan since 1951, in close cooperation with national authorities and Government ministries. In recent years, FAO's emergency programme has grown in size and scope. FAO builds on experiences gained, ongoing partnerships and lessons learned in responding to the 2005 and 2008 earthquakes, floods in 2007 and 2008, the impact of volatile food prices and the internally displaced person crisis of 2009.

These humanitarian interventions supported the Government's efforts to enable affected communities to rapidly restore their agriculture-based livelihoods and increase their resilience. In addition to the distribution of quality inputs and livestock support, FAO has supported the improvement of irrigation, watershed management, training and livelihoods rehabilitation. Increasing emphasis is being placed on building the capacity of national actors and institutions, and ensuring strong linkages with long-term development processes.

When the 2010 floods struck Pakistan, FAO was working with farmers and local authorities to combat volatile food prices in 17 districts across the country through a USD 34 million project funded by the European Union Food Facility. This field presence, and local experience, meant FAO could respond quickly in the first few weeks, as well as host non-governmental organizations (NGOs) and United Nations (UN) agencies in its offices Sindh and Punjab.

From February 2011, FAO co-chairs the Agriculture and Food Security Sectoral Working Group with WFP and the Ministry of Food and Agriculture to coordinate early recovery activities. As part of the Early Recovery Framework, FAO has helped prepare the following studies and strategies:

- **Agriculture Early Recovery Strategy (February 2011);**
- **Gap Analysis – between the emergency relief and early recovery phases (March 2011);**
- **Strategic Early Recovery Action Plan – for the agriculture sector (April 2011);**
- **Agriculture Early Recovery Programme for the Severely Flood-Affected Areas, 2011 to 2013 (April 2011);**
- **Agricultural Guidelines for the 2010/2011 Rabi and 2011 Kharif Cropping Seasons (December 2010 and April 2011); and**
- **Contingency Plan – for the agriculture sector (May 2011).**

1 065 on-farm irrigation channels cleaned and repaired through USAID/OFDA support.

Looking ahead...

Preparedness

Contingency planning: working with Government and sectoral partners for a coordinated and coherent response to future shocks, based on various scenarios. Hazard, Livelihood and Vulnerability baseline and contingency plans have been developed by FAO – involving stakeholders at community and *tehsil* (council) levels – for ten districts, and are planned for 15 more. These assist district government, UN and NGO partners and civil society in responding to the next natural disaster.

Detailed Livelihoods Assessment: being finalized in 28 flood-affected districts to support the National Disaster Management Authority and provincial governments, inform early recovery programming and provide a robust baseline to gauge the impact of future shocks.

Modelling and mapping: working with national agencies and UN partners on forecasting future floods' impacts, using satellite imagery, computer modelling and telemetry.

Restoring 'normalcy'

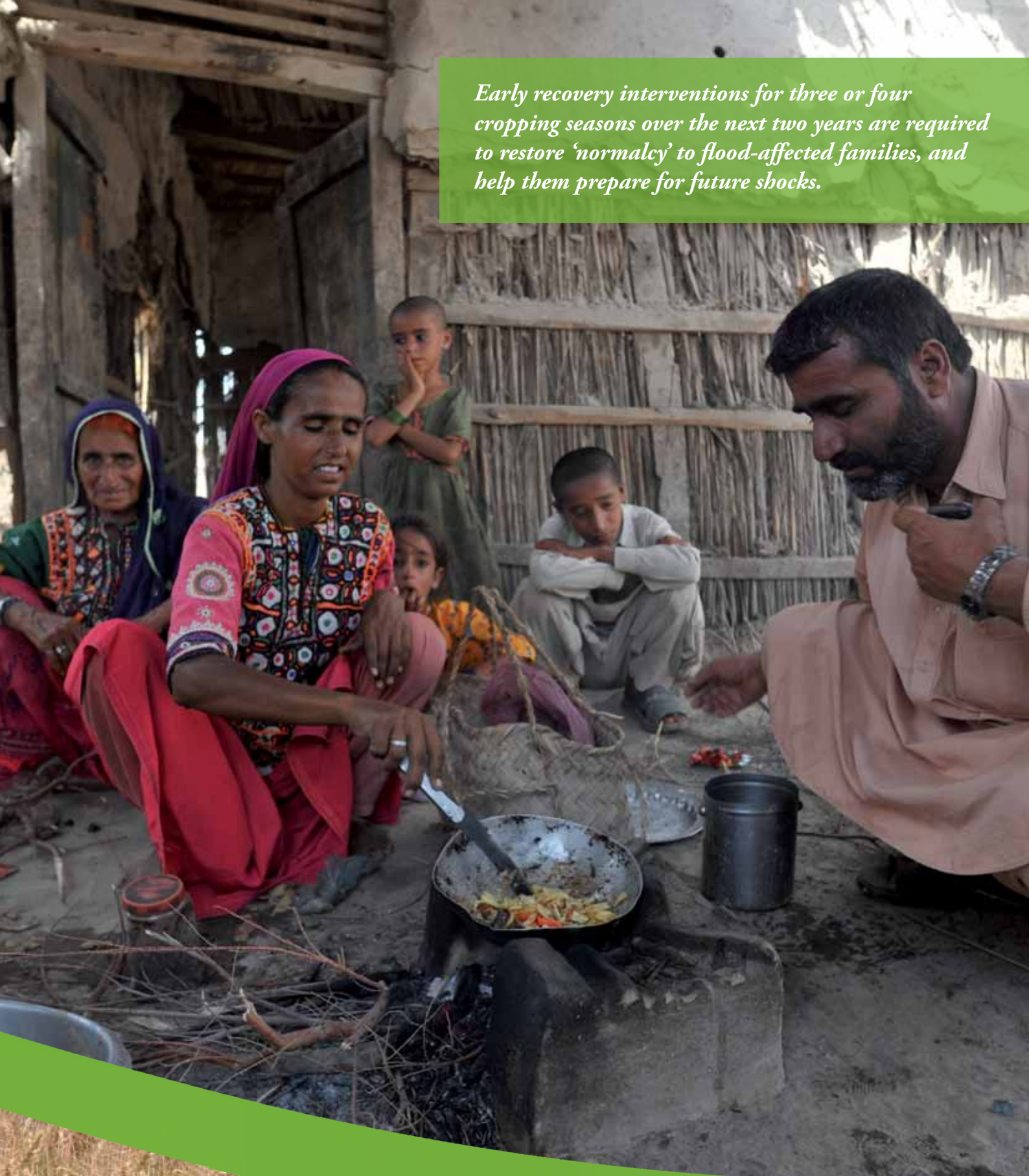
Early recovery interventions for three or four cropping seasons over the next two years are required to restore 'normalcy' to flood-affected families, and help them prepare for future shocks. FAO's early recovery programme, to reach 430 000 agricultural households in 14 flood-affected districts, requires a USD 96 million investment.

A coherent and comprehensive early recovery approach provides a strong foundation for long-term rehabilitation and development, and more resilient and sustainable agriculture.

Working together, we have already helped over 1.4 million families to produce food again. We must do more.

Quality seeds provided by FAO yielded twice as much as those generally used by farmers.

FAO is planning work with the United Nations Educational, Scientific and Cultural Organization on an Integrated Flood Analysis System to generate a flood hazard exposure map in near real-time for all districts in Pakistan. FAO will focus on forecasting riverbank erosion and agricultural impacts, as well as developing scenarios for climate change. A critical component is to contribute to Disaster Risk Management and sustainable livelihood development planning at community level, including identification of pastoral populations at risk from flash flooding.



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Contact:

Luigi Damiani
Senior Emergency and Rehabilitation Coordinator
House #3, Street 58, F - 7/4
Islamabad - 44000 Pakistan
Tel.: +92 (0) 51 2655882 / +92 (0) 346 8544 155
Email: Luigi.Damiani@fao.org

Daniele Donati
Chief - Emergency Operations Service
Emergency Operations and Rehabilitation Division
Viale delle Terme di Caracalla, Rome 00153, Italy
Tel.: +39 06 570 53032
Email: Daniele.Donati@fao.org

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Information sources:
GIEWS Food Price Data and Analysis Tool - FAO (2011);
Post Harvest and Post Distribution Surveys - FAO (2011); and
Pakistan Floods 2010: Preliminary Damage and Needs Assessment - ADB, WB and Government of Pakistan (2010).