



Food and Agriculture
Organization of the United
Nations

Office of Evaluation

An Independent Evaluation of FAO's Response to the July 2010 Floods in Pakistan

Final Report
January 2012

Food and Agriculture Organization of the United Nations

Office of Evaluation (OED)

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Acknowledgements

We would like to express our gratitude for the fantastic welcome and support extended to the evaluation team both in Islamabad, and in the provincial FAO offices. The hospitality and open dialogue with which we were greeted was most appreciated.

Furthermore, we would also like to thank those from outside the FAO inner circle: officials of the Pakistani government, donors, UN agencies, suppliers, implementing partners, and especially the local communities, who took the time to talk and meet, and to share their thoughts, experience, and expertise.



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Acronyms

BNF	Beneficiary
CAP	Consolidated Appeals Process
CBO	Community-based organization
CERF	Central Emergency Response Fund (UN)
CFW	cash for work
DAP	diammonium phosphate
DCO	District Co-ordination Officer
DNA	Disaster and Needs Assessment
DO	District Officer
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EDO	Executive District Officer
ERCU	Emergency Rehabilitation and Coordination Unit
EUFF	European Union Food Facility
GAM	Global Acute Malnutrition
GOP	Government of Pakistan
HH	Households
IA-RTE	Inter-Agency Real Time Evaluation
IDP	Internally Displaced Persons
INGO	International Non-Governmental Organization
IOM	International Organization for Migration
IP	Implementing Partner
KP	Khyber Pakhtunkhwa
LEGS	Livestock Emergency Guidelines and Standards
LOA	Letters of Agreement
MinFAL	Ministry of Food, Agriculture and Livestock
MoU	Memorandum of Understanding
NBNF	Non – beneficiary
NDMA	National Disaster Management Authority
NFI	Non-food item
NGO	Non-Governmental Organization
OFWMD	On Farm Water Management Department
PaRRSA	Provincial Reconstruction, Rehabilitation & Settlement Authority
PDMA	Provincial Disaster Management Authority
PFRRERP	Pakistan Floods Relief and Early Recovery Response Plan
PHRP	Pakistan Humanitarian Response Plan
PIFERP	Pakistan Initial Flood Emergency Response Plan
SEAGA	Socio-Economic and Gender Analysis
SFERA	Special Fund for Emergency and Rehabilitation Activities
SUPARCO	Space and Upper Atmosphere Research Commission
TOR	Terms of Reference
UNCT	United Nations Country Team
UNDMT	United Nations Disaster Management Team
UNDSS	United Nations Department of Safety and Security
USAID	United States Agency for International Development
US\$	United States dollars
WASH	Water, Sanitation and Hygiene for All
WUA	Water User Associations

Executive Summary

ES1. In July 2010, torrential monsoon rains caused devastating flash floods in mountainous northern Pakistan, particularly Khyber Pakhtunkhwa (KP). The ensuing overflow cascaded southward along the Indus River and its tributaries, breaching their banks, creating extensive flooding in the central and southern provinces of Punjab, Balochistan, and Sindh. In total, over 2 million hectares of standing crops, 1 million tonnes of food and seed stocks, and over 1.5 million livestock were lost or destroyed¹. Furthermore, there was extensive damage to infrastructure, agricultural farmland and assets.

ES2. Unlike many natural disasters that happen in a moment, it took over 2 months for the full effects of the mountain rainfall to reach southern Sindh before, after a period of months, slowly dissipating into the Arabian Sea. The waters delivered silt and debris onto agricultural land and into irrigation channels, many of which were broken or damaged. The disaster, the worst to ever hit Pakistan, affected over 20 million people. Many households are as yet to return to their pre floods normality, and some shall be detrimentally affected for years to come.

ES3. The impact of the floods was overwhelming. Although civilian casualties were comparatively low² for a disaster of this intensity, the threat of widespread long term dependency on food aid, and the likelihood of distress selling of the surviving farm animals was extreme, and as such, an immediate response aimed at enabling affected households to plant the winter Rabi³ wheat crop, and also to sustain their animals, was FAO's highest initial priority.

FAO Response

ES4. The overall flood programme goal/objective was “the early recovery of agriculture based livelihoods and food security of vulnerable households” through restoring agriculture and livestock production as soon as possible so as to return the affected communities to their normal daily activities.

ES5. Implementing one of its largest disaster responses ever, FAO provided crop recovery support to over 600,000 households, and livestock support to nearly 300,000 households. A further 1000 damaged irrigation schemes were identified and rehabilitation undertaken using a cash-for-work modality. The total cost of the FAO response in the 12 month period following the floods is estimated at approximately US\$ 100 million.

ES6. Furthermore, FAO has provided agricultural advice to the Pakistani government at both a national and provincial level, particularly in the preparation of a national agricultural sector contingency plan, as well as co-chairing the agriculture cluster (now the agricultural and food security sectoral working group), throughout all the affected provinces and at a national level.

¹ 2010 Flood Damage and needs assessment, World Bank and Asian Development Bank.

² The total number who died during the floods was 1,984.

³ Rabi is the local terminology for crops planted at the beginning of winter, and harvested in Spring (March to May).

- ES7. The response has followed the seasonal calendar in that the initial response focused on the Rabi crop planting season, with further inputs aimed at sunflower, rice, canola and oat cultivation as the seasons progressed. Vegetable seeds were distributed at different moments during the year to encourage families to cultivate kitchen gardens, and as such, to supplement and provide some variety in the household nutritional intake. Animal feed, shelter material and deworming medicines were procured and distributed.
- ES8. Activities were undertaken in all affected provinces (KP, Punjab, Sindh and Balochistan) utilising a network of provincial offices, already set up to operate the EU Food Facility (EUFF) programme, where provincial co-ordinators, and their staff, co-ordinated, supervised and monitored the implementing partners' programme implementation, beneficiary selection, and distribution methodologies, as well as maintained working relations with local government authorities, associated international and local non-governmental organisations, and beneficiary communities.
- ES9. It should be stressed that the response covered a huge geographical area, ranging from mountainous terrain to lowland alluvial plains, where access and security were an inconsistent yet considerable constraint, and where local customs and traditions often made it difficult to reach the beneficiary communities without interference from local land owners and influential leaders. Under such circumstances, and considering that this was one of the largest responses ever undertaken by FAO, the conscientious hard work and effort of all staff concerned should not go unmentioned.

Relevance of response:

- ES10. Given the extensive damage to the agriculture sector, there was clearly a need to reinvigorate household farming and livestock activities. The relevance of the programme design is unquestionable: good quality wheat seeds matched with the necessary fertilizer were clearly appropriate inputs needed to quickly organise the Rabi crop planting. Sunflower seed cultivation was needed to provide a quick cash replacement to lost Rabi crop income (Sindh), kitchen gardens had the potential to provide additional nutritional benefit to the households, and irrigation rehabilitation through cash for work was designed to provide not only a much needed cash injection, but also to increased access to a water supply previously unavailable in some areas. The provision of compound animal feed was also an urgent but time-bound need.
- ES11. Similarly, the support FAO provided to the overall co-ordination of the agriculture recovery response, both as co-chair of the agriculture cluster, and latterly, the agriculture and food security sectoral working group was much needed given the large number of actors intervening in the agriculture sector response.
- ES12. Using its convening role to promote gender mainstreaming through the cluster was appropriate. However, while FAO interventions scored well in a gender marker assessment, the mission found a gender perspective missing in the design of FAO's own interventions and in particular a focus on female livelihood activities such as poultry production in the initial response.

Effectiveness and Impact:

- ES13. Through the timely provision of high quality seeds and fertilizer, together with the improvements to the irrigation system, the FAO response has clearly contributed towards the restoration and revitalization of agriculture and livestock production within the affected communities, however communities still remain, for the most part, at a level of financial security, worse off than their pre flood situation. The animal feed, although late, did have a positive impact on animal health and productivity for the 1-2 months of its duration.
- ES14. The effectiveness of the response was diminished however by ineffective beneficiary targeting. The lack of a strong monitoring system meant FAO struggled to counteract the influence of local landowners who have benefited greatly from the response, either directly, or indirectly through support to tenant farmers.
- ES15. There was a missed opportunity in terms of capacity building of communities, in that the trainings on seed varieties i.e. sunflower or vegetables, or on animal husbandry techniques, were too short, taking place at the same time as the distribution of inputs, and were not well targeted, i.e. men received the training on vegetable seeds, that were targeted for the women.
- ES16. The response has failed to sufficiently integrate gender issues within the response. Few female headed households were identified and supported, and the kitchen garden initiative, although useful in terms of nutritional supplement to the families, has benefited neither gender in particular. There are too few female staff within the FAO structure, both at a senior level, and within the monitoring and programme staff. This reduces access to women and the integration of their insights and feedback.

Efficiency of response:

- ES17. Building on the capacity established under the EUFF programme, the response has also been well supported by FAO Rome, who have shown their commitment through back stopping missions and secondments to the field, as well as a high level of support from administrative units. Seasonal deadlines for the distribution of seeds for the most part have been met, thereby ensuring reasonable returns for the beneficiaries in terms of crop yields and quality.
- ES18. However, there has been insufficient empowerment to frontline staff, either in the provinces, from Islamabad, or in Islamabad, from HQ Rome. Authorisation levels are too low at a provincial and Country Representative levels⁴, and the ERCU cannot even authorize its own payments, needing to refer to the Representative's Office to get them approved. Too many decisions need to be referred to a higher level, and too long is spent acquiring various signatures for authorisation. There are no FAO standard operating procedures to improve the timeliness of decision-making, nor sufficient fast-track options

⁴ The FAOR delegated authority was 100,000 USD. This was raised to US\$ 200,000 during the response, and 500,000 during the deployment of the FAO HQ international procurement officers speeding up the procurement process. Ad hoc re-delegations were also organised when necessary (8 times).

when timing is critical to effectiveness. These factors negatively affect fast, efficient, emergency response operations.

ES19. Bureaucratic and logistical delays have significantly reduced the impact of both the livestock element of the response, as well as the irrigation component. Furthermore, the tardiness of the animal feed had a knock on effect in that it delayed the distribution of the dewormer and shelter elements of the same support package. In these instances we are not talking of weeks of delay, but months.

ES20. FAO has paid vendors in Pakistan slowly, and generally only on completion of the contract. This forces contractors to incorporate higher financing costs, which, of course, FAO is paying for itself. The hidden cost has been estimated at up to \$2million for this response⁵.

ES21. The response has also shown a lack of flexibility and responsiveness. When it was clear that an input or activity would be severely delayed, there was no attempt to realign the project or to reallocate the funding, for example, the animal feed and deworming activities.

Connectedness and Sustainability:

ES22. The good quality seeds, distributed in the response, can be utilised for the next 2-4 years, and as such will have an ongoing positive impact on the livelihoods of the beneficiaries. Moreover, repairs to the irrigation network will provide improved access to water for the project recipients for many years to come, assuming the channels are well maintained.

ES23. Although it is too early to assess, the newly introduced crops such as the sunflower seeds, and in some cases the vegetable seeds, may also provide the targeted communities with a new source of income and nutrition⁶, which they may decide to carry on cultivating, now that they have seen the benefits that can accrue. Similarly, recent poultry distributions may have a long term effect, particularly for female recipients.

ES24. The continuing impact of the above could have been improved, however, had a more participatory, community based approach been undertaken. This should have been a core element of the FAO early recovery activities, with farmer field schools, and interactive learning activities, building the capacities of the communities, both individually, and collectively, providing a more sustainable existence.

ES25. With respect to the integration of the flood response activities with ongoing FAO developmental activities, this also was lacking. Unfortunately, FAO Pakistan had been without a Country Representative until January 2011, and as such has not had strategic leadership or a Country Strategy document against which the recovery projects could align themselves. The mission believes that synergies have also been negatively affected by the geographic separation of the FAO Representation and the Emergency Coordination Unit premises.

⁵ Please refer to section 194 of this report.

⁶ Post harvest reports, recently available, seem to support this assertion.

ES26. There have been improved linkages, however, with local government authorities, both at a provincial, and district level. Interaction with the District Co-ordinating officers (DCOs) regarding Implementing Partner (IP) co-ordination, and the Executive District Officers (EDOs) of Agriculture, District Officers (DOs) Extension, Livestock, and Water Management, regarding programme implementation, have, to varying levels, been successful.

Co-ordination:

ES27. The co-ordination of hundreds of local and international NGOs on a national scale is not an easy task, however, FAO seems to have managed to do this well, particularly as a bridge between the IPs and the government, and especially in those areas where it was possible to roll out the cluster expeditiously.

ES28. FAO, through the cluster/working group has also been active in organising assessments, providing technical guidelines and support. Utilising the existing good rapport with SUPARCO and the data provided by implementing organizations, FAO has produced excellent mapping of both the flood affected areas and the inter-agency response (3W database - who is doing what where) which has contributed to reduced gaps and duplication.

Conclusions:

ES29. In a competitive humanitarian environment it is difficult at times to see exactly what are FAO's comparative advantage, and added value. The unavoidable use of implementing partners in large disasters, plus its relatively high administrative costs, leaves the organisation susceptible to donor preferences for value for money interventions, and as such, future funding difficulties. This response, one of the largest FAO emergency responses ever, will go some way to counteract that, as it is generally considered a success amongst the donor community, based predominantly on the initial achievement of distributing inputs for the Rabi planting season, thus avoiding a massive humanitarian problem.

ES30. This positive reflection is reasonable in that FAO has realised its original programmatic objective of revitalising the agricultural sector in flood affected communities. However, delays on the irrigation and livestock components of the response detract from this success, as does the failure to properly target the most needed beneficiaries, neither proportionally geographically, nor locally, compared to the numbers affected.

ES31. FAO needs to accentuate its comparative advantage in the eyes of the donors, and to promote its mandate to support agricultural development, its technical expertise, its community capacity building capabilities, and its relationship with the government, gained over years of providing agricultural advice, and co-ordinating and liaising with international partners on their behalf.

ES32. An opportunity exists to develop a country program framework that not only prioritises emergency preparedness and response, but also works to tackle the underlying causes of vulnerability to the recurrent hazards of floods, drought, and earthquakes.

ES33. To achieve this, FAO needs to return to the communities, not through implementing partners, but to initiate, themselves, agricultural extension programmes through farmer field schools, participatory community based capacity building initiatives that will provide a sustainable impact in terms of natural resource usage, livestock management, and cropping practices. Furthermore, FAO needs to investigate and increase its own capacity in “modern” methodologies of supporting communities beyond the distribution of agricultural input, i.e. cash and voucher initiatives, low cost credit provision, and value chain development. This will increase both the individual, and the community’s resilience to future disasters, that sadly, in Pakistan, will inevitably occur.

ES34. Furthermore, FAO needs to improve its institutional learning practices, and in particular, needs to strengthen its operating systems, therefore increasing its capacity to adapt, and to respond rapidly to changing needs and future emergency interventions. The centralised approach and lack of empowerment of provincial offices and staff, has caused delays and has not effectively utilised the available potential.

Main recommendations:

1. FAO Pakistan should quickly finalise the Country Programming Framework, ensuring that it includes disaster risk reduction and management as a core strategic pillar, also using the document as a resource mobilisation tool, to leverage funding for agricultural flood recovery, and DRM capacity development, over the medium term. This will also involve the operationalisation of the FAO/WFP/UNDP MoU on recovery in Pakistan. (Action: FAOR, TCE & ERCU-Pak, TCI)

2. In future responses FAO needs to advocate on behalf of the tenant communities in order to maximize the impact of the items distributed, and to reduce the influence of local powerbrokers. This should lead, over time, to a longer term advocacy initiative on land reform.(Action: FAOR, ERCU-Pak, NRC)

3. Both the capacity and structure of FAO Pakistan’s monitoring system, needs to improve drastically, so as to ensure better beneficiary identification, reduced levels of misallocation of distributed items, and better monitoring of the results of interventions. Targeting guidelines require review and improvement. Furthermore, a system of evaluating the impact and efficiency of co-ordination needs to be elaborated and implemented (Action: FAOR, ERCU-Pak and Global FS Cluster Coordinator).

4. A change in organisational culture is required so as to empower in-country staff to respond in a more efficient, and effective manner. This includes, but is not limited to a) formally involving the FAOR in decisions regarding the recruitment of senior emergency and recovery staff (Action: TCE) and considering merging of the two FAO offices at the earliest moment possible, b) opening an “imprest account” for the ERCU so as to facilitate the speedier processing of payment and reducing bureaucratic delays. (Action: CSF), c) developing standard operating procedures, and d) in the context of GoP decentralization, increasing the authority and responsibilities of provincial offices to plan and manage field programme interventions. This may require recruitment of new staff and/ capacity building of existing staff (Action: FAOR & ERCU)

5. Enhance emergency preparedness and institutionalise learning opportunities and activities, in particular, establish formal follow-up procedures on previous evaluations and after-action-reviews, establish a performance appraisal systems for all staff (including NPP and longer term PSA/consultants), and implementing partners and commercial suppliers. This will serve as a pre-qualification assessment for future emergency contracts (Action: FAOR and TCE/ERCU-Pak)

6. Interim or staged payment schedules should be encouraged, particularly within large contracts, thereby reducing the finance costing inherent therein. (Action: FAOR, TCE & ERCU-Pak)

7. To make systematic that which worked effectively but on an ad hoc basis in the Pakistan response. Standard operating procedures and a classification system for categorizing the severity and scale emergencies should be developed/adopted in support of fast-tracking administrative actions. (Action: TCE, CSA/F/H, LEG)

8. With respect to funding, pre-agreements with identified donors (including CERF) need to be established in order to precipitate the establishment of a nationwide cluster system, available for any future large scale disaster responses. The level of SFERA funding should be raised proportionately dependent on the scale of the disaster and the funding commitments made. (Action: TCE HQ and Global Food Security Cluster Coordinator)

9. To improve the integration of gender issues into FAO's programming, more women need to be employed within FAO Pakistan, not only at senior level in the organisational, but also in the programme and monitoring teams, so as to improve access to female members of the community. (Action: FAOR, ERCU-Pak)

10. FAO needs to learn from its cash for work initiative, and develop its internal capacity for future usage of this, and other cash transfer mechanisms, including the use of vouchers and unconditional cash transfers. (Action: TCE HQ)

11. FAO needs to follow up on training of staff and sector partners to better promote the use of good practice guidelines such as SPHERE, LEGS, and SEAGA. (Action TCE HQ and technical units)

12. Targeting of beneficiaries needs to be improved. The recently developed "beneficiary selection and targeting, inter sectoral guidelines for Pakistan" should be evaluated and where advisable adopted. (Action: ERCU Pak)

13. Shift emphasis in supporting flood affected agricultural communities beyond agricultural inputs towards the provision of low cost credit, value chains development, and agricultural extension. For tenant farmers in particular, develop an approach that focuses on the underlying causes of their vulnerability (land rights) and which seeks to diversity their livelihood strategies (FAOR and ERCU Pak)

1 Introduction

1.1 Pakistan Floods

1. Torrential rains in Swat, northern Pakistan, and KP, in the last week of July 2010, resulted in severe unprecedented floods, initially in KP. However, the elevated waters of the Swat, Chitral, and Kabul rivers joined the river Indus, which, when augmented by additional heavy rains in KP, Punjab, Sindh, and Balochistan, caused severe floods throughout the valley of river Indus.

2. These floods reached southern Punjab during the first week of August, and then upper Sindh and the eastern districts of Balochistan by the second week of August. The flood waters and heavy rains flooded approximately 58,797 square kilometres⁷, devastating Kharif crops⁸, destroying food and seed stocks in homes, killing small and large ruminants, and a large number of poultry, washing away feed stocks, and spoiling grains and food stocks. Furthermore it destroyed irrigation systems in 78 districts of Balochistan, KP, Punjab and Sindh provinces.

Table 1.1-1 Area of Kharif crops damaged by 2010 July – August floods (area under flash floods by 21 Sep 2010)⁹.

Province	Cotton	Sugarcane	Rice	Other crops	Total
	000s hectares				
Balochistan	2.5	0.0	124.3	20.3	147.0
Khyber PK	0.0	15.4	5.5	41.1	62.1
Punjab	405.3	102.8	235.8	495.8	1239.7
Sindh	190.6	76.4	507.3	137.3	915.2
Total	598.4	194.6	872.9	694.5	2364.0

3. The type of damage differed in the mountainous areas from the plains: in Swat, Dir, Chitral, Kohistan, etc, there was a lot of soil erosion, and many fields near the rivers were washed away. Communal irrigated channels were also severely damaged. In the plains there was a lot of silt and clay deposited in the fields and in the water channels.

4. The water receded quickly from KP due its topography, and farmers were able to plant wheat well in time if machinery, seeds, and other inputs were available. In Punjab, water receded slowly, with 65% of the flood affected agricultural land having dried by November 10th, which could be used for wheat cultivation¹⁰, i.e. about 805.8 thousand hectares out of 1239.7 thousand hectares affected. Eventually virtually all of the water had receded in the Punjab by December 10th.

5. Due to flat nature of the flood affected districts of Sindh and one district (Jafarabad) of Balochistan, the flood water took a longer time to recede, so that on November 10th, about

⁷ Disaster needs assessment; October 2010. World Bank and Asian Development Bank

⁸ Kharif is local word used for crops planted in spring/early summer, and harvested in late summer or autumn.

⁹ Pakistan floods/rain 2010: Rapid crop damage assessment, Series No.1. Joint Publication of FAO and SUPARCO. Issued on September 30, 2010.

¹⁰ Ibid.

60% of the flood affected area of Sindh, and 40% flood affected area of Jafarabad, were still under flood water, meaning that approximately only 100,000 hectares in Sindh, and 38,000 hectares in Jafarabad, were available for wheat planting¹¹

6. Agriculture is the mainstay of economic and social existence in Pakistan, and is dominated by crop production, however, most small farmers practice mixed farming i.e. growing crops and rearing animals. As such the flood had a devastating effect on thousands of households, disturbing their means of livelihood, source of nutrition, and family income.

1.2 *FAO Response*

7. FAO initiated an immediate recovery response estimated at 100 million US\$ for approximately 1 million households for the Rabi and Kharif cropping seasons. The main interventions undertaken by FAO and its' implementing partners included:

- delivering farming inputs (seed and fertilizer) for the Rabi 2010 and Kharif 2011 planting seasons, and restoring basic on-farm irrigation infrastructure.
- providing compound animal feed, deworming medicine and animal shelters.
- coordination of immediate and early recovery agriculture interventions through the cluster system.

Please see the relevant sections of the report for greater detail.

1.3 *Purpose, scope and methodology of the Evaluation*

8. This evaluation is forward-looking: seeking to identify areas for improvement and to draw lessons to enhance the relevance and effectiveness of future FAO assistance during the post floods relief and recovery period in Pakistan.

The main purposes of the evaluation are:

- To improve the relevance, design, implementation, results and impact of FAO support for disaster risk management in Pakistan.
- To provide accountability to the Government of Pakistan and to the donors that have supported FAO's interventions on the performance of FAO in response to the floods.
- To identify the factors affecting the relevance, efficiency, effectiveness, impact and sustainability of FAOs post-floods response.
- To provide evidence and guidance for the preparation of the flood recovery programme as framed within the FAO Pakistan DRM Plan of Action.

9. The evaluation encompasses all activities in support of the flood response irrespective of source of funding during the period August 2010-July 2011. This period includes both the initial acute response phase, and the current recovery phase, as well as FAO emergency preparedness pre-disaster. While a large proportion of FAO's work has focussed on providing household level assistance, other activities such as support for coordination,

¹¹ Ibid.

advocacy, development of guidance and institutional capacity building, as relevant, are considered as part of the overall FAO intervention under evaluation.

Prior to the mission, the evaluation team prepared an evaluation matrix which served as a tool to guide data gathering and interviewing. A separate in-depth study was commissioned over a two month period prior to the main mission with respect to the USAID/OFDA funded cash for work irrigation rehabilitation intervention so as to identify particular lessons learnt and to measure the impact of that intervention (Annex VIII). The evaluation team undertook a review of secondary documentation, dozens of interviews with FAO, Government, donor, UN, private sector and NGO stakeholders in Islamabad and at provincial level (Annex VII for a list of persons met) and undertook a 2 week field mission to all 4 provinces to meet with sub-national stakeholders including community members (focus groups and beneficiary and non-beneficiaries interviews) sampling across individual projects and from beneficiary lists to obtain a clear overview of the results achieved and strengths and weaknesses of flood response interventions. Opportunities were seized to visit markets and observe inter-agency coordination meetings on several occasions. An important source of quantitative data on the impact of interventions was random sample survey data collected by FAO on changes post-intervention (crop, livestock & cash for work) at beneficiary level. At the end of the mission, the team had three days for internal discussion and analysis after which preliminary conclusions and areas of recommendation were presented to both FAO and partner stakeholders in an end of mission debriefing in Islamabad. The full Terms of Reference for the evaluation are attached as Annex 1.

10. Constraints: the broad geographical area of intervention made it difficult to visit all areas of intervention, as did the on-going insecure security situation. The latter also led to shortened days in the field due to the necessity of complying with current security regulations. In Balochistan, due to security conditions, no field visits were possible and the team was only able to interview institutional stakeholders at provincial level. Similarly the recent floods in southern Sindh, the Dengue Fever outbreak in Lahore, and the strict travel arrangements in Karachi meant that, at times, the team was unable to access some key stakeholders who were busy dealing with other, more current, issues.

2 FAO Floods Response 2010/11 - Sectors of Intervention:

2.1 Crops

11. There are three main cropping patterns or cropping cycles in Pakistan which farmers undertake: rice then wheat, cotton then wheat, and maize then wheat production. There are also a large number of other cropping systems involving the major cereals, cotton, sugar cane, pulses, oilseed crops, forage crops, vegetables, and other minor crops, as indicated in the agricultural seasonal calendar in the figure 2.1.1. below:

12. Pakistan has a total geographical area of 79.61 million hectares (ha), out of which 21.21 million ha are cultivated by farmers growing a total of more than 50 major and minor crops. About 83 percent or around 17.56 million ha of cultivated area is irrigated, while crop production on the remaining 3.65 million ha depends mainly upon rainfall, and thus classed as dry land agriculture.

Figure 2.1-1: Seasonal Crop Production Calendar¹²

Region	Cropping pattern	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	Jul
Punjab/Sindh	Cotton – Wheat (Early)		Cotton						Wheat						Cotton	
Punjab/Sindh	Cotton – Wheat (Late)		Cotton						Wheat						Cotton	
Punjab/Sindh	Rice (IR-6) – Wheat			IR-6/Course Varieties					Wheat							IR-6
Punjab	Rice (Basmati)–Wheat			Basmati/Fine Varieties					Wheat							Basmati
Punjab	Kharif Fodder - Wheat		Fodder		Fallow				Wheat							
Punjab	Maize -- Wheat			Maize					Wheat							
Punjab	Rice (IR-6) – Berseem			IR-6/Course Varieties					Berseem							
Peshawar Val	Maize – Wheat			Maize					Wheat							
Peshawar Val	Maize – Berseem			Maize					Berseem							
Peshawar Val	Early M – Bs+Ot or Bs+Br†		Maize						Berseem + Oats or Berseem + Barley							
Rainfed areas	Fallow – Wheat			Fallow					Wheat					Fallow		

† M stand for maize, Bs for berseem, Ot for oats, and Br for barley

	Kharif crops sowing/transplanting,		Kharif crops growth		Kharif crops Harvesting
	Rabi crops sowing		Rabi crops growth		Rabi crops harvesting/cutting

13. The major food crops grown in Pakistan are wheat, rice, and maize. Cotton, sugarcane, and tobacco are important cash crops, while gram and mungbean are the major pulses. Rape seed and mustard, groundnut, and canola are the main edible oilseeds crops. Berseem (Egyptian clover), shaftal (Persian clover), alfalfa, sorghum, and maize are important forage crops.

14. Seed, commercial fertilizers and manures, irrigation water, and pesticides are important inputs that the farmers use for crop production. Depending upon the type of crops

¹² Depending upon where the crops are grown in the different ecological zones, and depending upon varieties, maturity periods, and weather conditions, the sowing, growth, and harvesting/cutting durations / timing may vary slightly. Harvesting is mostly early in Sindh followed by Punjab, Balochistan, KP, and finally late in northern higher elevations.

grown, about 75 to 85 % of farmers use their own farm-produced seed for planting, purchasing the remaining seed from agriculture research institutions, government seed organizations, private seed companies, city and town seed dealers, local markets and fellow farmers.

15. Commercial inorganic fertilizers are important inputs required for obtaining higher crop yields and are purchased from local markets. But, higher prices in recent years, and the poor financial status of the small farmers, usually leads to lower purchases than necessary, and thus, lower than recommended balanced rates for the different crops. About 3.7 million tons of nutrients, mostly nitrogen, are annually applied by farmers. A mixture of household refuse as well as livestock dug, urine, bedding and feed remnants, commonly known as household or farm yard manure, is applied as organic manure to fields for improving the soil's physical properties, fertility and crop productivity. Pesticides for crop protection are also purchased by farmers from local markets.

16. Annual desilting of the main and branch canals takes place once a year during their annual closure in late December or early January, the month of least demand on the water supply.

2.1.1 FAO Interventions

17. In the relief phase, FAO distributed seed and fertilizer inputs for wheat, oats, canola, and lentils to vulnerable small farmers to reinvigorate crop production activities for the 2010-11 Rabi season and to support the food and nutritional requirements of the affected households.

18. In the recovery phase, FAO continued to distribute rice, sunflower, mungbean, and sorghum, for planting in the 2011 Kharif season to poor, flood affected, small crop producers.

19. To improve household nutrition, households were provided seeds of four vegetables (peas, turnip, tomato and spinach) for promoting kitchen gardening in the Rabi 2010-11 season. In the Kharif 2011 season, seeds for a variety of vegetables were distributed along with the rice, sorghum & mungbean packages. Seed for okra, pumpkin, capsicum, sponge gourd, coriander, eggplant, bitter gourd, spinach, and tomato were given to farmers, and basic training was provided on modern crop production technologies.

Table 2.1-1: Number of households supported¹³ with distributions of inputs for crop and vegetable production in the four provinces (Rabi & Kharif combined)

Agricultural Inputs	Balochistan	KP	Punjab	SINDH	Pakistan
Wheat seed, Urea, DAP and Vegetables	56,440	171,300	233,445	18,000	479,185
Oats seed	78,930		15,440	38,600	133,010
Canola seed, Urea, DAP		15000	15000		30000
Lentils, DAP , Vegetables	1000	1000			2000
Rice, Urea, DAP, Vegetables	3150	3,140		42,770	49060
Sorghum, Urea, Mungbean,	185		1850		3700

¹³ Note that in some cases the same household received more than one type of input package.

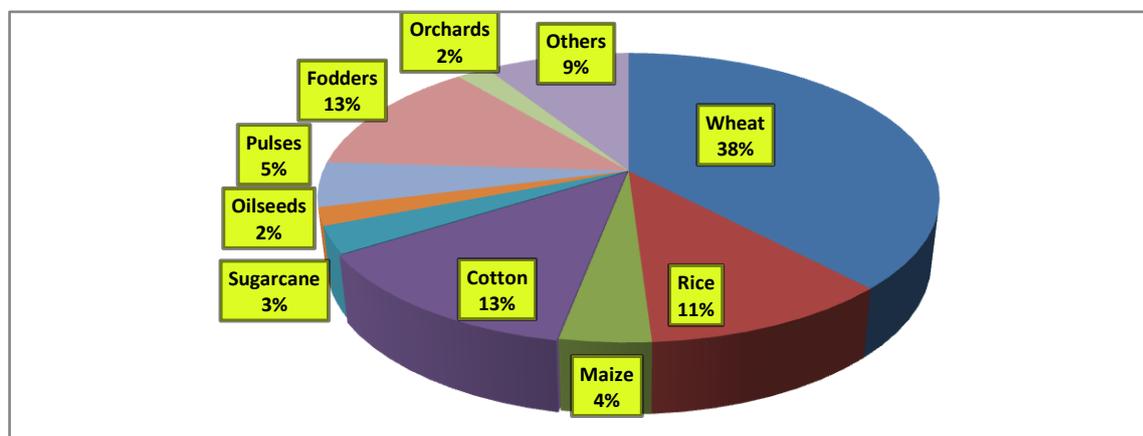
Vegetables					
Sunflower, Urea, and DAP				30,290	30290
Vegetables	18,300				18300
Total HH supported	159,710	190,440	265,735	129,660	745,545

2.1.2 *Relevance*

20. Agriculture is the main livelihood activity in the flood affected area in all four affected provinces. Crops were destroyed, and grains/seeds were washed away, damaged by flood water entering houses, or by collapsed houses. The grains could not be used as food, seed or even for feed purposes.

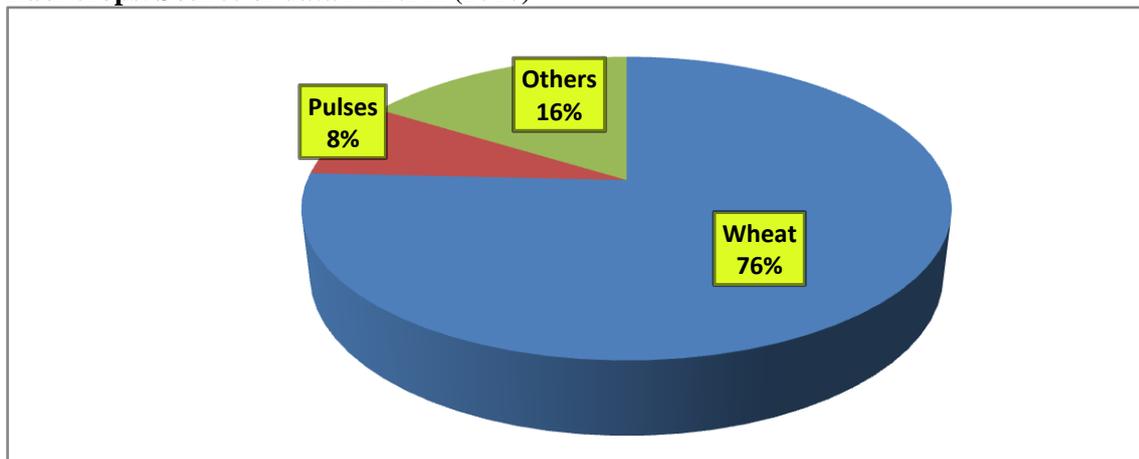
21. Wheat is the most important staple food crop of Pakistan, planted on approximately 38% of all cultivated land (Fig 2.1.2). Notably, wheat is planted on 76% of the Rabi cropped areas. Small farmers, having 1 to 2 ha of land, devote 81 % of Rabi area to wheat and very small farmers, having less than 1 ha land, devote 84% of Rabi area to wheat, indicating that wheat production is very important for small farmers¹⁴.

Figure 2.1-2: Pre flood % of land planted to the different main crops in Pakistan - All crops



¹⁴ Agricultural statistics of Pakistan. Planning Unit, Economic Wing, Ministry of Food and Agriculture, Government of Pakistan, Islamabad. <http://www.minfa.gov.pk/admin/images/publications/AGRICULTURE%20STATISTICS%20OF%20PAKISTAN%202008-09.pdf>

Rabi crops. Source of data MINFA (2010)¹⁵



22. As such, the distribution of inputs for restoration of crop production activities was very much relevant. The wheat seed was clearly needed as most of the farmers had lost wheat seed/grains stored in their houses, the agriculture inputs markets were not fully functioning, and the targeted small landholding, vulnerable farmers, had no money to purchase wheat seed themselves.

23. Application of fertilizer is needed to obtain higher wheat production, and therefore the supply of fertilizer to farmers was also relevant, as the farmers had no money to buy this either. Furthermore good quality fertilizers were also not readily available due to market disruptions and, when available, were too expensive.

24. Rice is also one of the most important crops of Pakistan. The distribution of rice seed and fertilizers by FAO to small vulnerable farmers in the flood affected rice tracts of the country was also relevant as the previous year's crop had been destroyed. The inputs provided were appropriate for the proper growth and development to produce improved yields. The Kharif 2011 crop was needed in terms of the food security of the farmers and as a cash crop to meet family purchases.

25. Similarly, the FAO interventions for lentils, mungbean and vegetables were also relevant as these crops were needed to improve the nutritional intake of the flood affected households. Farmers in some flood affected areas like those in cotton belt and rice tracts did not usually grow vegetables before the floods, however, approximately 70-80% of the beneficiaries interviewed appreciated the vegetable seeds distributed, while others had a neutral point of view.

26. The interventions of FAO for canola, sunflower, oats, and sorghum, were also relevant as they were needed for edible oil production, cash, and forage for livestock feeding. Hysun-33 sunflower seed was distributed, a high yielding hybrid that was appropriate for the introduction of a new crop in some of the districts. A list of the contents of the standard packages and total amounts distributed are included in annex III.

27. FAO implementing partners provided short orientation sessions (1-2 hours) to beneficiary farmers on the use of the inputs provided. Training in modern concepts of crop

¹⁵ Ibid.

production are always very much needed. While the majority of the farmers know about crop husbandry practices for traditional main and minor crops, they are ignorant regarding the importance of the usage of certified seeds, and balanced fertilizers, in order to obtain increased production and improved farm income. The mission found however, that there was no documentation specific to the training activities, related to the input packages, with the exception of the brochure which was designed to convey key messages to beneficiaries on the use of livestock dewormer.

28. In the case of the introduction of sunflower into the cropping pattern in areas where the farmers had missed wheat as the main Rabi crop, the farmers had no knowledge of sunflower production practices, and needed more detailed training on sunflower production technology, maturity indicators, and threshing, as well as drying, usage, and the marketing of the sunflower produce. More importantly they also needed to be informed that they need to buy hybrid seed each season.

29. FAO missed an opportunity to cater for the seed, fertilizers and the plant protection needs of the small cotton growers in the flood affected districts of Punjab and Sindh's cotton belts, as their previous year's cotton crop had been completely destroyed.

30. Maize is third important food crop in Pakistan. In some areas like Chitral, Swat, Kohistan, Shangla, Bunir, Dir, Charsadda, Peshawar, Nowshera, etc. maize is grown on a large scale in summer and is important for food security in some of the mountainous and plains areas in the country. Again, FAO could possibly have supported the maize growers whose crops were totally destroyed.

31. Overall, however, it can be concluded that FAO interventions that revived crop production activities were relevant, and that in the absence of the FAO support, some vulnerable farmers, in parts of the flood affected areas in Balochistan, KP, and Punjab, would have missed the wheat planting for the Rabi 2010-11 season, and as such could have faced acute food shortages, or would have been dependent on humanitarian aid.

32. The inputs for other crops especially, rice, sunflower and vegetables were also relevant to the needs of the flood affected households and supported nutritional and cash requirements. The size seed quality and variety of FAO packages were generally appropriate.

2.1.3 Effectiveness of the FAO projects and crop production inputs

33. The overall goal of the FAO response was the resumption of the crop production activities, therefore improving both the financial and food security situation of the targeted communities. The crop production inputs distributed by FAO were effective in the resumption of crop production activities in both the Rabi and the Kharif seasons and farmers did restart crop production activities. However, time and resources will be needed to bring agriculture activities back to the pre-flood levels.

34. The post-harvest survey report confirmed the effectiveness of the FAO interventions, in terms of good germination rates. The team also confirmed the effectiveness of FAO interventions through individual and group discussions with beneficiaries in all four

provinces¹⁶. Discussions with IPs, government line department staff at district, regional and provincial level, and meetings with other stakeholders, provided similar feedback.

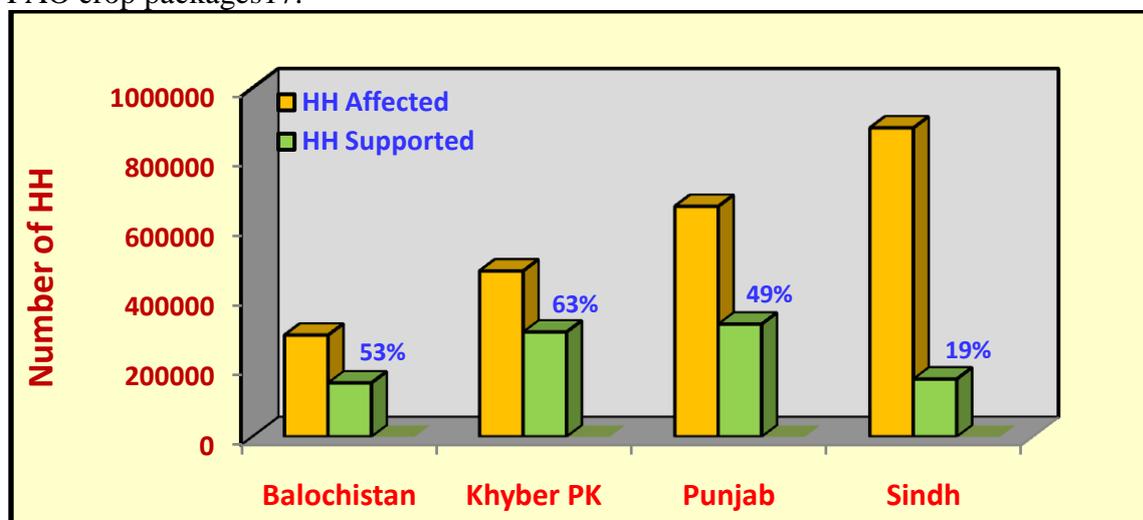
35. Positive crop yields amongst FAO beneficiaries were the results of using high quality seeds (especially certified wheat seed) and proper quantities of fertilizers as well as external factors such as a better wheat growing season associated with having good rainfall for rain fed wheat, mild temperatures during seed filling, an absence of any major diseases (for wheat crop), farmers working hard to restart their living, soil fertility improved by fresh silt, and by the greater availability of water.

36. With respect to capacity building, project documents mention that training will be provided to beneficiaries. However, the mission found that these were too short in duration, and undertaken largely at the point of distribution and are unlikely to result in any real change in knowledge and practice. Furthermore, the provision of training materials seems to have been inconsistent and ineffectively targeted, especially with regard to the need to train women on the cultivation of the vegetable seeds.

37. Also, although the beneficiary response differed by district, they generally appreciated the nutritional benefit of the vegetable seeds distributed. Some beneficiaries complained about the suitability and appropriateness of the types of vegetables and about the varieties, for example, the tomato seed distributed was said by a number of interviewees to produce small tomatoes which rotted easily.

38. The input packages for rice, and sunflower, and all other crops inputs, were also well appreciated even though coverage was low compared with the number of households affected. Flaws in beneficiary targeting, especially in Sindh, and the geographical disparity between affected and supported households indicate that the effectiveness of the response could have been greater, more consistent, and more equitable.

Figure 2.1-3: A comparison by province of households affected to households supported with FAO crop packages¹⁷.



¹⁶ Germination rates were also measured testing laboratories as a part of the quality control of goods purchased.

¹⁷ The numbers for affected households was taken from the World Bank and Asian Development Bank Disaster needs assessment, October 2010. The number of households supported was calculated from project details supplied by FAO, ERCU.

2.1.4 *Impact*

39. Quantitative measurement of impact for the crop packages was possible through post-harvest beneficiary assessments. For example, the wheat seed plus vegetables package: the wheat seed germinated well and with the use of fertilizers produced higher yield, producing 1200 to 1300 kg of wheat from one acre, which was enough to support a family of 7 (5 adults and 2 minors) for 20 to 21 months¹⁸. The average family sold 500 to 600 kg of the wheat produced earning 12500 to 15000 rupees cash income at the government price of rupees 1000 per 40 kg bag. An additional benefit of 7200 to 7800 rupees was obtained from the sale of wheat bhusa (crushed wheat straw from the grain thresher) at the rate of Rs 200 per 50 kg by some farmers, while other used the bhusa for feeding dairy animals to produce nutritious milk for their household.

40. Vegetable seeds were distributed with both wheat and rice packages, though not all seed germinated, nor were all well utilised by all the beneficiaries. The kitchen gardens were mostly managed by the women, with support from the rest of the household, producing fresh nutritious vegetables consumed in the household, or given to friends, neighbours or sold.

41. In the field visits the team found that the impact of vegetable seed was inconsistent, some beneficiaries reported germination problems, which could be due to the time of planting, the soil condition, a lack of knowledge regarding some of the vegetables, as well as growth problems. However, other beneficiaries reported a positive impact.

42. A detailed economic benefit analysis of the wheat package to beneficiaries (BNF) compared to non-beneficiaries (NBNF) is given in annex II. A brief table is reported below (Table 2.1.2). Beneficiaries received the inputs free from FAO. However if we suppose the beneficiary bought the items themselves, then the beneficiary would spend 3550 rupees more than the non-beneficiary on seed and fertilizers. However, in turn they would receive a net benefit worth rupees 10730 in the form of more grain and bhusa. The extra payment for good quality seed and fertilizers would have certainly been a sound economic investment as the farmer would have recuperated his 3550 rupees investment plus 10730 rupees more than the non-beneficiary. The beneficiary would have had a marginal rate of return of 302% on the extra costs incurred.

Table 2.1-2: Economic analysis of the wheat package – a comparison of benefit: beneficiary v. non-beneficiary (USAID project funded packages)

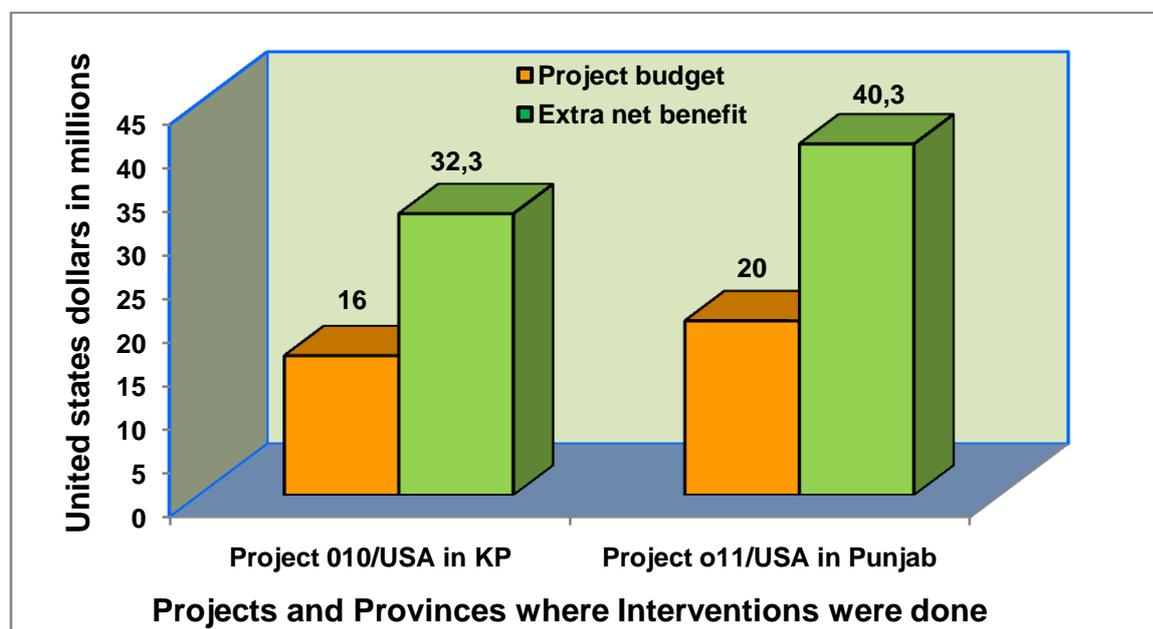
Costs and benefits per acre	BNF	NBNF	Unit
Variable cost per acre			
Total variable costs of wheat seed and fertilizers	5800	2250	Rupees
Extra cost incurred by BNF	3550		Rupees
Grain yield estimates	1380	900	Kg/ha
Straw yield (calculated from grain-straw ratio of 1:1.5)	2070	1350	Kg/ha
Gross benefits per acre per HH from wheat grains and straw	41055	26775	Rupees
Net benefit = gross benefit – variable cost	35255	24525	Rupees

¹⁸ According to the Pakistan Agriculture Research Council per capita wheat requirements (10 kg per capita per month).

Extra benefit or income to BNF = Net Benefit of BNF – NBNF	10730		Rupees
Marginal rate of Return (MRR %) (Extra benefit/extra cost)*100	302.25		Rupees
Net benefit to BNF HH over NBNF ignoring Variable cost of BNF	16530		Rupees

43. From the above analysis, the total impact of the wheat packages for two USAID projects were estimated for the total beneficiary households supported and are presented in Fig 2.1.4. below:

Figure 2.1-4: A comparison of project budget and net benefits to beneficiary households.



44. The estimated total benefits to all the supported 167,300 households in KP from only wheat packages was US\$ 32.3 million for project 010/USA and US\$ 40.3 million to 207,281 households for project 011/USA implemented in Punjab. These benefits are significantly higher than the total project budgetary amounts of the two projects, i.e. 16 and 20 million US\$ respectively. These facts should be highlighted by FAO to attract more funding to support crop producers.

2.1.5 *Efficiency*

45. The inputs cost of wheat seed and fertilizers was approximately US\$ 76/beneficiary household; the output or yield of wheat grain was about 1280kg. The benefit from wheat crop was worth $1280 \times 25 \text{ Rs/kg} = 32000$ rupees, equivalent to US\$ 374, showing a cost-benefit ratio of 1: 4.9 (grains only) or 1: 6.1 (considering both grains + straw)¹⁹.

46. The interventions were more efficient than not providing agricultural support, which would have left a need for government or WFP food distributions at a much greater expense

¹⁹ This is a rough input cost: gross-benefit analysis, based on government support price for wheat, Rs1000 per 40 kg wheat grain. The straw price used in the calculations was estimated as Rs 200 per 50 kg wheat straw - the straw yield was calculated from grain : straw ratio of 1 : 1.5. Exchange rate of Rs. 85 per US\$.

and logistical requirement. Furthermore the psychological benefits of returning the households to self-sufficiency rather than living on hand-outs are immeasurable.

47. Crop production activities are mostly season bound and delays in implementation are usually detrimental to the full achievement of the aims and objectives of the proposed activities, however, with respect to this response, implementation was on time for both Rabi and Kharif crops, although there is always room for improvement. For example, in some districts 70 % of the wheat seed was distributed in the first week of December which indicates that wheat was planted approximately 3 weeks after the last day (15 November) of the optimum sowing period. This meant that in these areas the farmers obtained 300 to 400 kg less yield than they would have obtained from planting wheat between 1 to 15 November, i.e. if FAO had distributed the seed well in time, rather than just in time.

48. FAO and IPs will argue that the fields were still flooded with water at the optimum date of sowing for wheat, however this was certainly not the case in all parts of KP²⁰ and in flood affected districts of Punjab where the flood water from about 65 % of the area had receded by November 10²¹.

49. Another argument for delayed sowing usually stated by those involved in implementation is that wheat following rice in the “rice – wheat” cropping pattern, or following cotton in the “cotton – wheat” cropping pattern, is planted very late in late November and in December. However, for the Rabi season following the floods which destroyed the cotton and rice crops, the fields were rather fallow, and the farmers could have planted wheat earlier and received better yields.

2.1.6 Sustainability of FAO's interventions in the crop sector

50. The crop sector interventions will have a good long term effect on crop production for individual households in terms of their food security. The seeds distributed by FAO were improved self-pollinated varieties (except the sunflower seeds). These purchased seeds can be reused for 3 to 5 years with a little care to clean the crop by uprooting weeds, removing diseased plants, and rouging the off-plants, and to harvest and stack improved varieties separately, thus preventing mechanical mixing with other varieties during threshing, cleaning and storage (all of which should have been taught to the beneficiaries during their training sessions).

51. The beneficiaries of the sunflower seed intervention cannot reuse the seed as it was a hybrid seed and the next year's production will be 15 to 20 % less if the produce from the FAO sunflower seed is used for planting the crop next year. This fact about hybrid seed should have been clearly communicated to them in the training, although feedback from beneficiaries suggests that it was not. Nevertheless, it is hoped that this new crop will be adopted by some of the beneficiaries now they have seen the cash benefits it can produce.

²⁰ It should also be noted that in some parts of KP 1m to 1.5m of alluvial silt remained on the tops of fields (for example in Charsadda and Nowshera districts) which baked into unploughable cakes of mud. Also in parts of hilly/mountainous areas, the top soil has been washed away due to flash floods.

²¹ Pakistan floods/rain 2010: Rapid crop damage assessment, Series No.1. Joint Publication of FAO and SUPARCO. Issued on September 30, 2010

52. The distribution of vegetable seeds will also have some sustainable effect in terms of changed practices as some beneficiaries said they would in future plant some vegetables for domestic use and sale in the local markets.

53. Farmers usually apply only urea fertilizer, however, noting the higher productivity from the use of FAO package containing both urea and DAP, some of the farmers will start using DAP in the coming years for continued higher yields, increased farm productivity, and greater returns. Moreover, phosphorus is immobile in the soil and unlike nitrogen cannot be lost by leaching, thus if not fully used by the crop to which it is applied, it will improve the productivity of the next crop, providing a prolonged benefit for the farmers into the next cropping season.

2.1.7 Relevance and use of FAO's normative materials

54. Technical information and guidelines on crop production and agriculture including materials developed by FAO-Pakistan and FAO-HQ were assessed as appropriate for the Pakistan context. However, the evaluation found that IPs, seed suppliers, extension workers and FAO or IP program managers did not know much about seeds and there was little evidence of use of the FAO publication *Seeds in Emergency: A Technical Handbook*, or of normative material on good practice available from local researchers or international research institutions such as the Consultative Group on International Agriculture Research (CGIAR).

55. It is worth mentioning that FAO produced and/or adapted some technical information like the Kharif guidelines, crop production materials for Rabi crops and Rabi vegetables, crop calendars, lists of the recommended varieties of the different crops, and other publications for use by the staff, the IPs, community organizations and literate farmers. Some IPs had no experience of agriculture related work, and some did not have experienced agriculture staff with the required technical expertise to implement the FAO programs. These partners in particular needed technical information and guidance, however, there is little evidence of this having happened.

2.1.8 Lessons learned & Good Practices

- Late distribution of seed will reduce the intended beneficial effect of the intervention. Ideally seed should be distributed before the planting time or at the beginning of the optimum sowing time.
- Distribution of certified wheat seed was better for proper germination, perfect stand, and near maximum yield, and should be replicated in future interventions.
- The distribution of certified seed in time in KP, and the balanced use of fertilizers, clearly demonstrated higher yield of wheat and a greater return.
- Clear variety recommendations, issued by the department of agriculture/plant breeders exist for the different ecological zones and should always be followed.
- In case of hybrid seed distribution, it is important to clearly explain to farmers that the produced grain should not be used for planting in the next season as this will lead to reduced yield.
- The mission identified as good practice the use of post distribution and post-harvest surveys to document the proper targeting, relevance, quality and appropriateness of the interventions, and their effectiveness, efficiency and impact.

2.1.9 *Missed opportunities*

56. As mentioned earlier, large number of cotton crop producers lost the previous cotton crop: FAO should have provided some inputs in the form of seed, fertilizers and plant protection materials to the poorest cotton growers. Similarly, support for poor subsistent famers at higher elevations where maize is the only crop that can be grown could have been provided.

57. FAO also missed an opportunity to distribute good quality seed for alternative forage crops i.e. berseem²² and oats, shaftal with barley, and berseem with oats and barley grass legume mixtures in September-October, which would have provided nutritive fresh forage from November-December onwards until perhaps April-May. It would have given the beneficiaries forage much earlier than when FAO distributed animal feed. Seeds for supporting grass/vegetable mixed forage production would have been much more economical.

58. Finally, an opportunity for the capacity building of farming communities through agricultural extension work was not fully exploited. A part of which could have been the development of instructional material in English, Urdu and local languages. Although it was done in some districts e.g. the rice package in Shikarpur by the EDO, and the sunflower package in Sindh by the SRSO, much more could have been done.

2.2 *Livestock*

59. The 2010 Flood Damage and Needs Assessment carried out by the World Bank and Asian Development Bank with FAO support estimated that the 2010 flood caused an estimated US\$ 600 million of direct and indirect losses to the livestock sector. This figure is 11% of the total loss to the agricultural sector²³.

60. The highest mortality of ruminant livestock occurred on the plains of Balochistan. Here flood waters rose quickly and there was little high ground for livestock to find refuge upon. Livestock deaths in KP were primarily caused by flash floods. Lower numbers of animals died in Punjab as they had better access to high ground. Despite the floods being slower moving in Sindh, mortality was higher than Punjab, particularly for poultry, as again, elevated ground was lacking. In total, about 1.5 million large and small animals and about 10 million poultry died. Women, who traditionally have an active role in rearing livestock, were particularly hit by livestock losses and subsequent poor productivity. The estimated losses by province are shown in table 2.2.1 below:

²² Berseem is Egyptian clover, and shaftal is Persian clover

²³ 2010 Flood Damage and needs assessment, World Bank and Asian Development Bank

Table 2.2-1: Livestock Losses by Province

Livestock / Fish Ponds	Khyber Pakhtunkhwa	Balochistan	Punjab	Sindh	National figures
Large animals (Cattle, Buffalo, Horse, Donkey, Camel)	72,400	139,600	2300	93,700	315,610
Small animals (Sheep and Goats)	67,800	1,036,700	2500	81,900	1,208,380
Poultry	621,300	635,500	2,012,000	6,895,100	10,279,730
Fish Pond Value (Rupees)	13m	n/a	319m	49m	381m

61. Access to livestock feed and fodder following the flood varied from area to area. In general the situation was worst in areas where the flood water lingered. Initial coping strategies included feeding the remains of standing crops, roadside grass and tree leaves to stock. In accessible areas there are reports of neighbours and philanthropists providing wheat straw, fodder and other assistance. Flood affected households also bought fodder or compound feed, locally known as ‘Wanda’. Wanda is primarily produced in Punjab but is trucked all over the country. Its content varies but it normally consists of cotton and rape seed cake and meal, wheat bran, maize grain and gluten, molasses and salt. Lack of space for animals at shelter camps for displaced households was also a problem in some areas.

62. Chronic debts are high amongst poor farmers and the income from distress sales of stock were primarily used to purchase food, and secondarily to buy or repair productive assets and to purchase inputs. Livestock sales following a disaster are normal. The March 2011 Flood recovery assessment carried out by WFP and FAO reported that approximately one in five households sold some stock immediately after the flood. Of these households more than half reported that they sold less than 25% of their livestock whilst 20% sold more than 50% of their stock. Part of the reason farmers like livestock is that they can be quickly converted to capital in times of need. However, after a large disaster the prices can fall dramatically. The reduction in livestock prices immediately after the 2010 flood varied from 30% to over 80% according to accessibility, demand and the volume of distress sales. The duration of the dip in prices varied. The drop was reported to last less than 10 days in some areas of KP but longer in Sindh. On the whole prices quickly recovered, and by September 2011, prices of livestock and livestock products were all significantly higher than pre-flood prices.

2.2.1 FAO Interventions

63. FAO’s livestock sector response consisted of package distributions to approximately 300,000 households. Tables 2.2.2 and 2.2.3 show what livestock items were distributed to households by province, when they were distributed, and their cost.

Table 2.2-2: Summary of Livestock Items Distributed to Households in all Flood Affected Areas.

Item	Quantity per household (HH)	Total HHs assisted with item	Cost to FAO (US\$) of Item
Compound Feed in 60kg bags	60 – 240kg with the vast majority of recipients receiving 120kg (enough to feed 2 adult cattle for 1 month)	290,665	14,010,226
Shelter Materials - plastic rope (30m) and a plastic sheet (4 x 5m)	1 rope + 1 sheet	49,760	288,099
Dewormer, albendazole 2.5mg bolus	10 boluses (will deworm 2 adult cattle or 10 sheep/goats)	224,325	192,246
Fodder - Oat Seeds	8kg enough for up to 0.1Ha (16kg for 0.2 Ha distributed in Balochistan only)	133,570	2,354,197
Poultry restocking – 10 hens, 2 cocks, 50kg feed	1 package of 12 birds plus feed per household	5,274	≈360,000

Table 2.2-3: Distribution of Items by Province and Approximate Distribution Date.

Province	Items in packages	HHs receiving each item	Approx. distribution dates
KP	Compound Feed (CF)	91,300	18,300 HH received 60kg feed in Sept/Oct 2010. Bulk of feed distributed in March/April 2011 (see table 2.2.4). Most dewormer and shelter materials were delivered to IP warehouses in late 2010 but distributed later together with compound feed Feb – April 2011
	Dewormer	73,000	
	Shelter (rope + sheet)	39,000	
	Fodder seed (Oats)	0	
	Poultry	0	
Punjab	Compound Feed	63,440	Started in Feb 11, bulk distributed in March/April 11 (see table 2.2.4)
	Dewormer	15,440	
	Shelter (rope + sheet)	3,000	Most delivered to IPs in late 2010 but distributed together with compound feed as above
	Fodder seed (Oats)	15,440	Fodder, Dec 2010
	Poultry	0	
Balochistan	Compound Feed	84,290	Started in Feb 11, bulk distributed in March/April 11
	Dewormer	84,290	Most delivered to IPs in late 2010 but distributed together with compound

	Shelter (rope + sheet)	4,760	feed as above
	Fodder seed (Oats)	78,930	Fodder, Dec 2010
	Poultry	0	
Sindh	Compound Feed	51,635	Started in Feb 11, bulk distributed in March/April 11
	Dewormer	51,635	Most delivered to IPs in late 2010 but distributed together with compound feed as above
	Shelter (rope + sheet)	3,000	
	Fodder seed (Oats)	38,600	Fodder, Dec 2010
	Poultry	5,274	Poultry from mid Sept 2011

64. Distributions were carried out by 16 IPs. The criteria for beneficiary selection that FAO provided to its IPs were as follows:-

- Being flood affected and rearing livestock.
- Preference will be given to small farmers rearing lactating / pregnant ruminants.
- Preference will be given to livestock-rearing vulnerable households (Landless, female and elderly headed households and persons with disabilities).
- Farmers having limited resources to purchase feed/medicines for their animals.

The compound feed was by far the most costly livestock item distributed. Each 120kg package delivered was worth approximately Rs 3,500 or US\$ 42 to each recipient. By contrast the dewormer supplied to each household was worth less than US\$ 1 and the plastic sheeting approximately US\$ 6.

2.2.2 Relevance

65. The preliminary agricultural damage assessments compiled in September 2010 established the immediate, medium and long term needs of the flood affected farmers. Compound feed rations, vaccines, de-wormers and the provision of transitional livestock shelters were all deemed to be immediate needs. Distribution of poultry was seen as a medium term need. Longer term needs included ruminant restocking, construction and rehabilitation of animal sheds plus the reconstruction of veterinary centres.

66. Using these assessments FAO formulated its emergency response objective (to protect and restore the productivity of the surviving livestock for vulnerable rural households) and planned its activities. The interventions agreed were acceptable to FAO's own capacity and implementation preferences, in that they were technically sound, were uniform, could be purchased at scale and could, it was thought, be distributed quickly by implementing partners. This uniformity and mass distribution also appeared to suit the donors.

67. The bulk of available livestock funds were spent on compound feed procurement and distribution. FAO proposals reasoned that the extra feed, if supplied quickly would reduce distress sales and slaughter thus protecting productive livestock assets. This provided a powerful argument for rapid funding, as the nutrition and income from livestock could potentially save lives as well as livelihoods. The compound feed would restore health and

productivity whilst supporting women within the household. The relevance of the compound food was closely linked to timing. It was most relevant immediately after the flood when people were displaced, were short on funds and livestock feed was in short supply.

68. Albendazole ‘dewormer’ capsules are relatively easy to handle and distribute. Animals suffering a significant worm or liver fluke burden lose body condition and deworming is indicated as needed in those animals. Treating healthy animals does no harm. Unfortunately small farmers in Pakistan do not normally use capsules. They prefer to use liquid dewormers. This unfamiliarity caused difficulties with the uptake of the albendazole and confusion about correct dosage rates.

69. Temporary shelter supplied in the form of sheets and ropes could be used as wind and rain breaks or sun shades depending on location. Animal sheds are needed during the winter in KP for warmth, and shade is important in the more southerly provinces, particularly for cattle and sheep.

70. Pakistan is currently the third largest producer of milk in the world. Shortage of quality livestock feed is a perennial problem across most of Pakistan. The provision of oat and sorghum seeds for forage production with training in their use was therefore relevant. However, like the wheat seed, the relevance, effectiveness and impact was very dependent upon the timeliness of planting.

71. Poultry restocking began in mid-September 2011, as part of an early recovery package funded by SIDA (OSRO PAK 018 SWE). Whilst the evaluation team was unable to visit restocked HHs, this initiative appears to have learnt lessons from the FAO poultry restocking carried out after the 2005 earthquake, when high mortality rates were experienced. Poultry restocking is highly relevant in terms of FAO’s objective mentioned above. If women within vulnerable households are targeted, poultry can improve family nutrition and generate long term income for them. Female respondents to the Detailed Livelihoods Assessment (DLA), carried out in June 2011, frequently rated the loss of poultry business from the flooding as very important, more so than did men.

72. Two areas that FAO did not cover in its emergency response are worth mentioning. The first is livestock vaccination and the other is rehabilitation of aquaculture. The provincial veterinary authorities are tasked with livestock vaccination and whilst chronically short of resources they do manage to vaccinate significant numbers of stock each year against commonly occurring transmissible diseases. This coverage was a key reason why disease outbreaks after the floods were reported to be no more severe than any normal post monsoon period. With hindsight FAO’s decision not to fund livestock vaccination was a good one.

73. Fish ponds and hatcheries were severely damaged by the floods. The estimated value of the fish ponds lost was PR381 million²⁴. There is general agreement that fish ponds are owned by wealthier households who are able to rehabilitate the ponds themselves. Rehabilitation of hatcheries is a public good, and this recovery activity appears to be well supported by other donors and organisations²⁵.

²⁴ 2010 Flood Damage and needs assessment, World Bank and Asian Development Bank

²⁵ An FAO project in this area was proposed but not funded.

2.2.3 *Effectiveness*

74. Whilst the livestock initiatives planned by FAO were relevant, they were mostly ineffective in meeting the stated objective. The principal reason for this was delays in procurement and distribution.

75. The largest and most expensive component of the livestock intervention was the compound feed. FAO managed to distribute its first batch of feed in very good time using CERF and Belgium funding (OSRO/PAK/007/CHA, OSRO/PAK/006/BEL). Just over 1000 tonnes of feed were distributed in September 2010 in three districts of KP. The evaluation team visited villages in Charsadda District that received this distribution, and beneficiaries reported the results to be excellent in terms of improved milk production, health and condition of their stock. Unfortunately, effectiveness was reduced by inclusion errors in beneficiary selection (see sections 2.7 on beneficiary targeting and section 3.4 on monitoring for further details on this issue).

76. The bulk of the compound feed bought (42,072 tonnes), was delivered in March and April 2011 (see table 2.2.4 below):

Table 2.2-4: Delivery of Compound Feed to IPs by Month

Delivery Month	Tonnes of compound feed with added minerals
September 2010	1,098
January (one batch on 31 st January 2011)	1,192
February 2011	6,654
March 2011	18,870
April 2011	14,258

77. The hundreds of thousands of farmers who received compound feed were grateful for the input. The quality of the feed was good. When fed in addition to lush spring pasture the feed increased body condition and augmented milk yields for the 20-30 days it was available. Owners reported milk yields increasing by up to 2 litres per day. This provided valuable nutritional support to the household. FAO reported²⁶ that when sold, the milk provided an additional income of Rs 90 per day or around Rs 3000 for the month the feed was available. However in terms of meeting FAO's and the donor's objectives, overall, the intervention did not protect the surviving livestock nor restore their productivity. Spring growth was relatively abundant by the time feed was delivered and would have adequately protected and restored livestock. The question of whether an alternative intervention could have had a greater, more sustainable impact on livelihoods, is discussed later under efficiency in section

78. The overall effectiveness of the dewormer provided is not known. It was generally fed with the compound feed, so improved health and condition cannot be attributed to the

²⁶ FAO/TCER Beneficiary Assessment. June 2011.

dewormer alone²⁷. A proportion of the animals treated will not have needed deworming. Approximately half of the beneficiaries, particularly the women consulted by the evaluation team, did not give the correct dose of the dewormer to their stock and, more importantly, were unable to say what clinical condition the medicine was for.

79. Although it was delivered in December, the majority of FAO's IPs did not distribute either the dewormer, or where available, the shelter materials, until the compound feed was delivered to them. In many cases the shelter material and dewormer were sitting in the IPs' warehouses for 3-4 months. Whilst the most effective time for shelter distribution would have been immediately after floods, the material would still have been useful for something. The reasons given by the IPs for not distributing shelter materials and dewormers separately included a lack of information from FAO about exactly when the compound feed would arrive ("Its coming very soon"), plus the extra financial, logistical and communication costs of distributing them in advance of the feed.

80. No beneficiary consulted said they had used the shelter materials for livestock shelter. Many had the sheet stored or utilised it as rain protection for wheat straw from the 2011 rabi harvest. Farmers will appreciate and always find a use for a good piece of plastic sheeting. Many beneficiaries complained however about the quality of the plastic rope provided.

81. New varieties of oats, introduced within the last 20 years, provide an effective winter fodder in Pakistan. Oats fill a nutritional gap by providing good stock feed from December to January (the winter months). However to fill this gap the oats need to be planted from Oct. 15 to Nov. 15²⁸. The bulk of the FAO oat seed was delivered to the IPs in late December. This substantially reduced effectiveness. In Punjab and Sindh beneficiaries reported that germination rates and subsequent yields were poor due to the low temperatures around the time of planting.

82. FAO distributed a small amount of Sorghum (26 MT to KP; 13MT to Balochistan; 18Mt to Sindh) in March and April 2011. Sorghum provides a valuable green fodder in summer whilst its hay supports livestock in winter and its grain can be used to feed poultry. It therefore has the capacity to provide a valuable contribution to early recovery.

2.2.4 *Impact*

83. As indicated above, due to delays in delivery and distribution, the direct impact of FAO's livestock emergency intervention was low. Indirect positive benefits occurred however. Many of the beneficiaries had never used quality compound feed before and the distribution served as a good example of what extra feed can do for lactating animals.

84. FAO, however, missed an opportunity to provide quality information to farmers on how to improve milk yield in the longer term, the economics of milk production and to access milk markets. Currently, the yields obtained by feeding unimproved breeds with quality

²⁷ An evaluation (mid Feb 2009 CERF report) carried out after the 2008 Balochistan earthquake, noted that 'most owners could not see any improvement in health of animals from de-wormers'.

²⁸ Dost, M. 2004. Fodder Oats in Pakistan <http://www.fao.org/docrep/008/y5765e/y5765e0a.htm>

compound feeds do not justify the feed costs. An increased income of approximately Rs 6000 (two buffalo producing an extra 2 litres per day for one month) would hardly cover the cost of the feed if it were to be bought through normal channels. FAO managed to get a bulk purchase price of approximately Rs 4000 per 120kg delivered. Smaller purchases will be more expensive and costs would consume any possible profits. This does not mean dairy production is not profitable in Pakistan. There are many examples of small farmers selling milk on a daily basis to cooperatives and companies such as Engro Foods Ltd and Nestlé. However, increased productivity and profitability is dependent upon a combination of inputs ranging from improved breeding, to animal health, nutrition, housing and market access.

2.2.5 *Efficiency*

85. The success of FAO's livestock response depended upon the efficient procurement and delivery of the compound feed. The process therefore deserves more detailed discussion.

86. Compound feed purchases during emergency responses are notoriously difficult to manage. The sanitary quality and adulteration of the product, low capacity to suddenly increase production, transportation damage and ultimately the timeliness of delivery are perennial problems. FAO Pakistan had previous experience of the difficulties of compound feed purchase. For example, after the August 2008 floods in NWFP, FAO had to go back to suppliers after tests showed the initial batches of feed were sub-standard. Conversely, the evaluation of FAO's 2008 Balochistan earthquake response found that feed distributed prevented distress sales and reduced malnutrition of livestock. These previous experiences allowed FAO to quickly formulate a suitable compound feed proposal for the 2010 flood response and obtain a first delivery²⁹ of just over 1000 tonnes before mid Sept. 2010. This was remarkably efficient. The beneficiaries who received the feed reported good impact.

87. As significant funding started to arrive, feed order sizes increased and due to insufficient availability nationally, unreliability of suppliers, and the disqualification of one national supplier who was erroneously³⁰ excluded from the tender, international tendering was undertaken (Oct 31, 2010) with purchase orders issued by CSAP in the last days of 2010. Negotiations on payment and delivery terms continued into January 2011 with deliveries starting later that month. Another delay factor was related to the initial underestimation of the cost of compound animal feed in the response plan and agreements - which resulted in the need to make budget revisions, both with the donors, and with the IPs. Deliveries were made as per table 2.2.4. By the time the bulk of the feed was delivered in March and April 2011, the feed emergency for livestock was largely over.

88. The mission believes that FAO had an opportunity to change direction up to Dec. 31st when the purchase orders were issued. However, this would have been a difficult decision to make as it would again have involved re-negotiation of donor agreements and IP LoAs. Beneficiary lists had already been produced in many areas. In the final analysis, the

²⁹ EC Food Facility and Belgian funding. OSRO/PAK/006/BEL and OSRO/PAK/007/EC

³⁰ Maxim International, in response to the first post flood animal tender, provided 1089 MT of compound animal feed which laboratory testing revealed Oct/Nov/Dec to be of poor quality and potentially toxic. Subsequent testing by an international lab in Dec revealed the national testing to be false – but the damage caused by the delays had already been done.

feed could still have had some impact if it had been delivered before the end of winter (Feb 2011), however this was not to be the case for approximately 80% of the feed supplied. The mission found it interesting that the interviewed FAO procurement officers in Rome believed that they had made a timely procurement which indicates a lack of good communication, which in itself, is an area for concern.

89. Inclusion errors in beneficiary selection also reduced efficiency. Unlike the agriculture package, which stipulated a maximum land holding, there were no maximum stock numbers specified in the criteria for selecting livestock package beneficiaries. The recipients were to be 'small farmers rearing lactating / pregnant ruminants' who were also vulnerable and with few financial resources. These broad criteria allowed, in some areas, selection to be made on a first come first served basis. These inclusion errors were less defensible given that the selection generally occurred after the agriculture package had been distributed in November/December 2010, at a time when the situation was calmer. This longer time frame could also have allowed more time for beneficiary consultation on their needs. None of the beneficiaries interviewed by the evaluation team stated that they had ever been asked about their situation or their needs. Several of FAO's IPs remarked that they would have liked to engage with target beneficiaries on alternative responses but as the livestock package appeared to be fixed there was little incentive to do so.

2.2.6 *Sustainability*

90. There were no elements of sustainability within the compound feed, dewormer and shelter materials package. This was a missed opportunity. Local procurement of feed, fodder seeds, veterinary medicines and shelter materials, possibly through voucher schemes, would have supported local businesses and the local economy. Medium to large businesses are aware of the strong brand loyalty rural communities express and may have been willing to provide goods and services at competitive rates if there was the prospect of future business. Such possibilities were not explored.

91. FAO did raise awareness of voucher scheme possibilities, promoting the exchange of experience on cash transfer modalities in agriculture sector coordination meetings, but it was deemed that insufficient FAO Pakistan experience was on hand to develop actual projects. Considering the eventual delays in livestock input distributions, with hindsight, there probably was time to develop voucher and cash initiatives. For future operations, clear and detailed guidelines should be available to enable this possibility to be further explored.

92. The provision of certified improved forage oat and sorghum seed was only sustainable if a portion of the crop was allowed to go to seed. In most cases, the crop would be consumed by livestock. There was no evidence that FAO advised beneficiaries to save some of the crop for seed.

93. Poultry restocking that started in Sept. 2011 has a strong sustainability element if the birds survive and produce eggs. FAO built on previous experience by providing older hens and cockerels with an initial supply of compound feed.

2.2.7 Relevance and use of FAO's normative material

94. The Livestock Emergency Guidelines and Standards [LEGS] are highly relevant to FAO's post flood response. FAO's Animal Production Service (AGAP) has been a key partner in the development and the roll out of LEGS, and strongly encouraged the LEGS secretariat to convene LEGS trainings in Pakistan after the 2010 flood. Two LEGS trainings were carried out in Pakistan, the first in November 2010 was designed to support humanitarian workers involved in on-going livestock responses. The second, in May 2011, was to train LEGS trainers. FAO Pakistan was aware of the first training but decided staff were too busy to attend. With encouragement from FAO AGAP, two FAO staff did attend the May training. One subsequently left FAO, however the remaining staff member has been using LEGS in the design of the 2011 Sindh flood response.

95. An opportunity was missed to make others aware of LEGS and the technical guidance to be found in LEGS through the agriculture cluster meetings convened in 2010.

2.2.8 Engagement on livestock policy issues related to emergency preparedness and response

96. As mentioned in section 1.2, FAO provided a valuable contribution to the overall coordination of the emergency responses. However, there appeared to be little, if any, engagement with governmental livestock line departments after the initial agricultural assessment was carried out. Provincial and district level livestock departments complained about this lack of bi-lateral contact.

97. FAO has undertaken a positive initiative with respect to disaster preparedness through the development of district level 'Hazard, Livelihood and Vulnerability Baseline and Contingency Plans' along with the national 'Contingency Plan for the Agriculture Sector'. The contingency plan was developed in collaboration with Ministry of Livestock and Dairy Development (MINLDD). The plan puts additional emphasis on possible use of local fodder, vouchers, mapping government veterinary facilities, and the provision of livestock training prior to emergency onset. These are all positive developments and lessons from the 2010 flood.

2.2.9 Lessons Learnt and Good Practice

98. There is a major lesson to be learnt from the livestock response in not underestimating the complexity and preparedness required for the procurement of large amounts of relief items particularly when any major delay in delivery will substantially reduce impact. The importance of determining milestones and cut off dates also needs to be stressed. Information on the impact of such delays to be communicated to all concerned stakeholders.

99. With hindsight, alternatives to the mass distribution of FAO's livestock package were available and probably would have been more effective and efficient in terms of protecting and rebuilding livestock assets. Alternative projects could have been more local, market based and participatory. This could have included support to the government livestock departments and would have implied greater technical support on FAO's part.

100. FAO could have made much greater use of the Livestock Emergency Guidelines and Standards [LEGS] in formulating alternatives with their implementing partners. FAO Rome has been a key partner in developing these guidelines. LEGS puts great emphasis on participation in its four stages, these include: initial assessment, response identification, analysis of technical interventions and options plus monitoring / evaluation. Response identification uses a tool called the ‘Participatory Response Identification Matrix’ that allows all stakeholders to agree on the broad response and then work out the technicalities together. This would have required a much more inter-active relationship between FAO, IPs, NGOs and the government line departments that could have helped move immediate response initiatives to early recovery and development projects.

101. If LEGS had been used in the design of the 2010 flood response the responses would probably have made more use of local markets rather than going for national and international tendering processes, and the mass distribution of uniform packages. In a positive step forward, the livestock response to the 2011 Sindh flooding is building upon LEGS training provided to FAO staff in May 2011.

102. FAO country offices should have at least one senior staff member with a good working knowledge of LEGS. FAO AGAP recently produced guidelines on the use of cash transfers in livestock emergencies. These are to be incorporated into the next edition of LEGS. Familiarity with these guidelines will be beneficial to FAO Pakistan in future emergency responses.

103. Based on good practices, possible alternatives for FAO support to the livestock sector included the following:

i. During the immediate aftermath

- local procurement and distribution of fodders particularly wheat bhusa (crushed wheat straw) from surrounding areas;
- use of vouchers for the procurement of compound feeds from local feed merchants;
- where feed purchase was not possible, it may have been possible for NGOs to purchase animals from beneficiaries forced into distress sales for a fair price, slaughter them locally and distribute the meat to the needy. This is known as slaughter destocking.
- use of vouchers to procure veterinary medicines and services from local suppliers;
- where appropriate, timely provision perhaps using vouchers of fodders seeds, particular Egyptian Clover and Oats with fertilizer and training, to cater for autumn, winter and spring feed needs;
- unconditional cash transfers where markets are functioning.

ii. During recovery :

- community based selection of beneficiaries for poultry flock reconstitution. Goat and cattle restocking might also be considered where appropriate. Livestock fairs for local traders, livestock owners and beneficiaries to exchange and purchase local breeding stock could be considered;
- improved animal health services building on existing government facilities and staff;
- cash for work for reconstruction of livestock shelters and possible construction of safe havens and fodder banks;
- greater provision of fodder seeds such as sorghum through local suppliers with training support;

- support for livestock extension services as part of DRR.

104. Significant inclusion errors in beneficiary selection were found by the evaluation team. Lessons arising from this include the need for more defined selection criteria for livestock owners (ideally worked out with the local communities themselves) and stronger monitoring and support for IPs that resist the influence of rural power brokers.

2.3 *Cash for Work On-Farm Irrigation Rehabilitation*

105. The fast flowing waters ruined thousands of irrigation channels filling them with debris and silt, in many cases physically breaking the side walls making them inoperable. In order to revitalise livelihood activities and to help communities return to self-reliance, the need to restore the irrigation channels was seen as critical.

106. Funded by USAID, and implemented by selected implementing partners, a cash-for-work intervention was undertaken in three provinces with the aim of repairing and desilting approximately 1000 on farm irrigation channels (KP – 400, Punjab – 360, and Balochistan - 250) and restoring and improving water availability for crop production.

107. Households lost both productive and non-productive assets and income in the floods. Existing debt was exacerbated by the need to replace lost and damaged infrastructure and household goods. A cash payment for the irrigation desilting was thus seen as an important way of providing an injection of cash to affected communities and 25,000 targeted households.

2.3.1 *Relevance*

108. The evaluation³¹ found that the programme's dual objectives, i.e. to provide a short term cash injection to the beneficiary communities, together with the longer term objective of improving household agricultural output through improved irrigation channels, were relevant to the needs of the communities.

109. Thousands of irrigation channels had been damaged and laden with silt deposited by the flood waters. This would clearly have had a detrimental effect on farmers' crops access to water and therefore agricultural yields. Agriculture is the mainstay of the affected communities, and the main source of employment and income in these districts. As such, the project was clearly well aligned with the overall FAO objective of restoring agricultural normality.

110. The methodology used, i.e. the involvement of Water Users Associations and NGOs/INGOs as Implementation Partners, in collaboration with On Farm Water Management Department (OFWMD), was also considered appropriate.

³¹ Within the overall evaluation process, a separate qualitative study of the cash for work programme was undertaken during a six week period during the summer of 2011, immediately prior to the arrival of the full evaluation team in September. A team of five consultants was established, consisting of one expatriate anthropologist, an irrigation engineer, two social scientists, and a data collection person. A separate full report will be issued for this evaluation.

111. The provision of cash to affected communities was very much relevant to their needs at a time when other sources of income had been lost and households needed cash to procure food and livelihood assets.

112. The programme design itself assumed a rapid implementation with a one price (with allocated percentages for labour and materials) and one design³² formula, for each irrigation channel. This of course was not always easily applicable. Lengths of channels varied, as did the damage, number of users, and the number of outlets required. This approach could have been changed during the period between its design in October 2010, and its actual implementation in the spring of 2011³³. However, it was left to the actual implementation phase before re-estimates of needs and costs were done and project savings were identified and reallocated.

2.3.2 *Effectiveness*

113. The intervention was originally designed in September 2010 and intended to support Rabi crop production, however, it was not until March 2011 that the physical implementation started, finishing, in June 2011, approximately three months later - too late to achieve its original objective, but still of value to the targeted communities in the long term.

114. The FAO irrigation staff's technical input was very much appreciated by the IPs, whose own lack of experience and expertise created tension with the OFWMD. The quality of rehabilitation work completed varied by site and between partners and did not always meet national OFWM standards.

115. There were also different levels of engagement by the OFWMD in different provinces. The OFWMD in SWAT and Lower Dir, KP, for example, had very little to do the implementation of the CFW project in its district. In Malakand, KP, the OFWMD approved the projects purely because the decision had been made to do so at a provincial level. In the Punjab however, OFWMD were very much engaged, providing valuable technical support. This reflects the historical differences between the regions, and the comparative types and size of the channels.

116. Similar to other interventions mentioned previously, influential powerbrokers have had some influence on the channels selected. However, this seems to be in only a small percentage of cases. Moreover, there have been some instances of undue influence on the selection of CFW recipients as well, but in general this process was considered largely successful.

117. It should be noted that original intentions to target female headed households seem to have disappeared along the way, and that there was no gender component within the

³² Twenty Nakkas (outlets from the channel to the farmer's field) were allocated for every channel, with a fixed price of US\$ 5,000 to restore each water channel.

³³ Initial estimates for KP overestimated the work to be done and under-estimated the materials. Implementing partners returned funds that they were unable to spend on labour. The average cost of desilting a WC in KP was \$2500 not US\$5,000.

implemented project. Only in a few incidences were women employed within the cash for work teams, although admittedly, this is difficult to organise within local cultural practices..

118. While the sizes of the plots of land vary from one farmer to the next along the length of the water channel, all benefitted from the improved irrigation work. The targeting criteria (i.e. farmers with less than 1 hectare of land), was found to be practically impossible, and accordingly has not been fully met.

119. Finally, delays in starting the implementation process have meant that the irrigation work coincided with the Rabi crop harvesting, which meant that in some places local daily labourers, not the recipient beneficiaries, actually received the cash for work. This in itself is not a major issue, as the daily labourers themselves are, of course, equally, if not more vulnerable, however, it does mean that again the target beneficiaries were not always supported as intended.

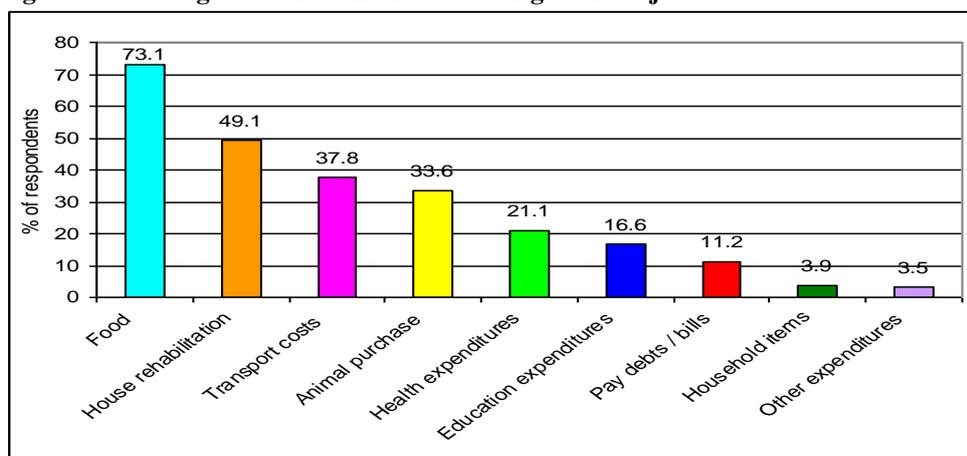
2.3.3 *Impact*

120. Overall, 1,065 channels have been repaired, recovering 114,655 hectares of irrigated land³⁴, the average number of beneficiary households per water channel was 65, with a total of 69,931 households supported³⁵. The total beneficiaries per channel varied depending on the command area of the selected channels, the number of shareholders, and the respective sizes of their land holdings.

121. The command area of the water channels has increased considerably. Some beneficiaries at the tail of the channel claim to have never received such amounts of water before, and as such are expecting higher than ever crop production as a result of this initiative.

122. Beneficiaries were also very grateful for the injection of cash, which although it could have come earlier, had a positive effect both economically, and psychologically.

Figure 2.3-1: Usage of cash from the CFW Irrigation Project³⁶.



³⁴ FAO CFW intervention report, July 2011.

³⁵ Ibid.

³⁶ FAO/TCE Cash for Work Beneficiary Assessment Report. July 2011

123. The long term effect of the water channel repairs is its impact on future crop yields. Now cleared, these channels can be maintained annually by the farmers themselves, giving this project an ongoing impact not as equally apparent in the other FAO interventions.

124. On a positive note, all the watercourses where de-silting has been carried out as earthen improvement, i.e. followed the OFWM National Standards, have qualified for inclusion in the Government scheme to be lined with concrete.

2.3.4 *Efficiency*

125. FAO signed agreements with the donor (USAID/OFDA) in September, however, preparatory work was undertaken over the next 3 months, with time lost in developing and establishing agreement on the cash for work modality and agreements³⁷. This resulted in LoAs with IPs being signed (by TCE HQ³⁸) only from February 2011 onwards. Thus the irrigation desilting work was undertaken several months later than planned.

126. Eventually, however, the tertiary channels to be repaired and the beneficiaries who would do the work were selected. Although FAO signed agreements with both IPs and OFWMD, both stakeholder groups reported to the mission that the roles and responsibilities of each were not very clear at the beginning. A further, co-ordinating and conciliatory role, was necessary for the FAO staff to undertake within this scenario, and as such this was clarified over time. The quickly mobilised WUA's have been very much involved during the project and as a community structure could be used for similar projects in the future.

127. On a practical level, the weekly disbursement of cash was managed reasonably well, with only one NGO insisting on paying by cheque, forcing the project beneficiaries to undertake long trips to the nearest bank so as to receive their funds (approx. 45 kms). This cost the beneficiary both money and time. Whether this practice is acceptable in the future needs to be clarified. There were also some delays in payment, and the calculation methodology of the rate of pay needs to be reviewed. Should pay be based on a daily rate? Or should it be measured by actual work physically done i.e. silt shifted needs to be clarified for future similar interventions.

2.3.5 *Sustainability*

128. The cash provided through the intervention in many cases has been invested in livelihood assets (physical, human) that will provide continuing benefits.

129. The intervention allowed for rehabilitation of earthen irrigation structures – which in practice need to be cleaned every year. However, the results achieved may now enable WUAs to qualify with the government for the transition of these channels to pacca (lined)

³⁷ No precedent existed and TCES had to start the appropriate design from scratch the cash for work interventions, and define the delivery modality and ensure that rules and regulations of the organisation were met.

³⁸ Because of the cash component, total values of the agreement were high and above the authorisation limit (200,000 USD) of the FAO Representative.

WCs. In addition, some of the unspent project funds, such as those funds saved from the costs of de-silting in KPK, will be utilized towards the lining of the WCs by OFWMD.

130. The reactivation or formation of WUAs in these projects has been a positive step towards institutional capacity-building. These local organizations were extremely active during project implementation, but members were unsure of their on-going roles and responsibilities following project completion. In those cases where OFWMD is beginning or intending to line their WCs, it is hoped that WUAs will continue to be active. New and positive linkages between WUAs and OFWMD did emerge during the project implementation in KPK, and it is hoped that these will survive. In summary, however, at this point the sustainability of the WUAs is indefinite.

2.3.6 Lessons Learnt and Good Practice

- Ensure that for future projects, the main stakeholders are gathered together, as early as possible during the project life cycle, to ensure that ownership and understanding of each partner's role can be fully clarified. This then needs to be followed up at all levels of the government structure to ensure that everyone has been informed, and can therefore add their knowledge and experience to the project.
- Future LoAs need to be more precise in their wording as to what exact work needs to be undertaken, and to what standards, and the measurement of payment need to be reviewed.
- LoAs also need to be more realistic in terms of beneficiary selection due to the differing size of landholdings along one watercourse, and more flexible in terms of the number of possible outlets to be provided, and the percentage split of costs to labour and materials.
- Other means of transferring cash, perhaps through mobile phones, needs to be looked into (although Pakistan may not be set up for this just yet).

2.4 Capacity Development

131. Capacity development can be targeted at institutional, organizational or individual levels. FAO Pakistan's capacity development initiatives during the flood response operated at three levels: through the agricultural clusters, in support to its IPs, and as a result of technical training of beneficiaries.

132. Through its leadership of the agriculture cluster and later the sector working group, FAO Pakistan supported the NDMA to develop a national contingency plan for the agriculture sector, and supported PDMAs, and later provincial Agriculture Departments to undertake needs assessments (e.g. DLA and Gap Analysis) and to coordinate the humanitarian response. FAO also produced technical handouts for the cluster, for example the 'Kharif Guidelines' which included advice on crop agriculture, livestock and DRR project implementation. FAO also facilitated technical capacity building, for example, on gender mainstreaming, and encouraged sharing of experiences e.g. presentations on cash transfers.

133. Unfortunately there is little evidence of the impact of this support beyond the outputs themselves. As such it is recommended that FAO develop a system to measure the

impact of co-ordination and capacity building activities so as to enable FAO to advertise this as an area of comparative advantage.

134. Formal capacity building of Implementing Partners appears to have been limited to sessions that focused on explanations of the terms of the LoAs and operational issues such as targeting rather than any in depth discussion of technical aspects of project delivery. Technical guidance on the use of seed packages and livestock packages was provided in the form of written notes, to be used by IP trainers. Cash for work IPs received significant technical support from FAO engineers, and support from OFWM was facilitated through the MoU between FAO and the government line department.

135. The actual training of beneficiaries carried out by IPs was inconsistent. The training, if it happened, tended to occur just before distribution. The quality of the training was dependent upon the trainer and no training of trainer support was provided. If the IP did not have their own technical staff, they tended to hire the relevant Agriculture/Livestock Officer at Tehsil level. Women trainers were rarely available and thus the opportunity to train women suffered as a result.

136. The community trainers were sometimes provided with the technical notes prepared by FAO. A pictorial handout was produced for the livestock feed and dewormer that provided the basic information on feeding and dosage rates. Unfortunately, this was not always distributed with the package. When it was missing, the beneficiaries commonly used incorrect dose rates for the dewormer. There was no similar hand out for the agriculture package which required more complex explanations and instruction. Whilst it is acknowledged that it is extremely difficult to provide training during an emergency, the actual distributions were commonly occurring 3 – 8 months after the flood. This allowed time for training needs assessments, provision of support to the trainers, development of materials and perhaps even consideration of more novel training techniques such as exposure and exchange visits.

2.4.1 Lessons Learned and Good Practice

- A key lesson here is the need to prepare training materials and guidance in advance, in relevant languages, and to not assume the trainers know how to use adult training techniques.
- An approach to training females needs to be specifically developed.
- The agriculture contingency plan does mention the need for training but details are not provided.
- In the future, it will be important to support the capacity of government extension services.
- Recently funded (Belgium and Spain) FAO implemented initiatives for the restoration of agricultural-based livelihoods do include strong training elements.

2.5 Disaster Risk Management

137. Pakistan is prone to natural disasters such as seasonal monsoon flooding, droughts, landslides and earthquakes. In addition to this, on-going conflicts in a number of territories add to the complexity of the situation. It was important therefore for the evaluation to

consider the extent to which a DRM/DRR framework was in place or whether such an approach was developed in the context of the flood response.

138. The UN ISDR definition of disaster risk management is “the systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activity, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards”.

139. In terms of preparedness, it was not possible for the mission to determine to what extent FAO’s development strategy for Pakistan included a focus on disaster risk reduction – due to the fact that there is no Country Programming Framework³⁹ for Pakistan. Many of the FAO staff had experience (from the earthquake and IDP crisis) in large scale emergency response. In a number of districts, FAO has supported, over the last couple of years, data gathering and analysis to prepare Hazard, Livelihood and Vulnerability Assessments (HLVAs). By chance more than by design, FAO had a large scale community inputs programme (EUFF) plus several longer term development programmes covering all of the flood affected provinces when the disaster struck. FAO had established relationships with the Government (MINFAL and also SUPARCO) and with private sector crop input suppliers. Thus the evaluation finds that although FAO did not have a formal preparedness strategy, FAO Pakistan was in fact, in many ways, “ready” for the floods.

140. Due to the rapid onset of the disaster in the north, “early warning” in some areas was only a matter of hours. Nevertheless, the DNA report and the evaluation mission interviews confirmed that there was limited information available at community level and, even when households had advance warning, they were not prepared often delaying action because they believed that the floods were “normal” and because of security concerns related to leaving their homes. FAO was not involved in community level early warning systems but did leverage its’ existing relationship with SUPARCO⁴⁰ to develop flood extent maps and forecasts (including the crop damage needs assessment) that were used by decision makers in the response.

141. The linkages between the irrigation authorities and the communities through the formation of Water Users Associations (WUA) under CFW irrigation desilting activities could be vital for establishing future flood early warning systems. Pakistan has some of the highest cell phone penetrations in the world (86 percent of men and 40 percent of the women⁴¹), as such, cell phone technology could be effectively used as a medium for emergency information. For this purpose the WUA forum could be highly effective to

³⁹ A Country Programming Framework (CPF) defines the priority areas and results to be achieved by FAO in the medium-term in support of the national agricultural and food security development objectives, as expressed in the national development plans and in line with MDGs and Internationally Agreed Development Goals (IADG). CPFs also act as FAO’s input to the UN Common Country Programming Process (UNDAF). Prior to January 2011, there was a long period for which there was no FAO Representative in Pakistan, and no strategic framework to define FAO’s cooperation with the Government, or other UN agencies, was developed. A CPF was under development during the flood evaluation mission.

⁴⁰ For a number of years, FAO has been working on satellite based crop monitoring systems together with SUPARCO.

⁴¹ Mustafa, D. and D. Wrathall 2011. Indus basin floods of 2010: souring of a Faustian bargain. *Water Alternatives*. 4(1): 72-85.

educate the communities on the importance of early warnings and action that could be implemented to establish them.

142. The evaluation finds that there has been little in the 2010 flood response that has improved vulnerable communities' resilience to further inundations or natural disasters. Although the provision of agricultural inputs has enabled communities to return to agricultural normality, few communities have returned to pre flood levels of financial security and most are still much worse off than previously.

143. To a certain extent this is due to the emphasis of the programme on agricultural inputs. Underlying vulnerabilities remain after the floods. For example in rural areas, asset-based poverty remains strongly correlated with landlessness. About 75% of rural households in Pakistan own no land. Land tenancy agreements (particularly in the Sindh) keep tenant farmer impoverished and, good harvest or bad, at least half of each harvest is handed over to the landlord⁴². As such, any improvements to the irrigation systems, or to the quality of seeds, are equally, if not more, beneficial to the rich landowning classes as they are to the small holding farmers.

144. Also with respect to land, the mission learned that the flood erased land boundaries in many areas and the World Bank report also indicates that the floods have in some cases changed the topography. Important land rights documents have been lost by the households⁴³. Tenancy agreements exist for land that no longer exists. All of these scenarios may result in land related entitlement disputes and increased vulnerability for small holders and tenant farmers.

145. With respect to water, FAO's flood response so far has been limited to desilting of a relatively small number of on-farm water channels. The Mustafa and Wrathal study, however, carried out on the causes of 2010 flood, finds that the Indus Rivers have been highly engineered to divert the maximum amount of available water for irrigation, which mainly benefits the powerful large land owners in Punjab and Sindh. "Of the 144 million acre feet (MAF) of water entering the system, about 106 MAF is withdrawn for irrigation purposes, leaving little water in the system to flush the channels and carry the highest silt loads in the world to be flushed out to the sea. This long term reduction in channel capacity was one of the key reasons for exacerbating the effects of the high floods in 2010".

146. The impact of 2010 floods on natural assets has not yet been fully studied. However, a UNDP early assessment report found that the flood engulfed large tracts of vegetation including natural forests and fruit trees⁴⁴. This is alarming since a vast majority of population in Pakistan depends on wood for energy, forest resources are dwindling⁴⁵ and fruits are important both as food and as a source of cash income are vital for diversification of livelihoods and strengthened resilience to shocks in rural areas.

⁴² In extreme cases, for example in Malakand, the tenant pays most, or even the entire grain production to the land owner, and only keeps the straw. Landless sharecroppers, and farmers with small landholdings, are the poorest and most exploited class in rural areas.

⁴³ Response to Pakistan's Floods: Evaluative and Lessons. World Bank. Islamabad.2010

⁴⁴ UNDP (2010). Rapid assessment of flood impact on the environment in selected affected areas of Pakistan. Pakistan Wetlands Programme. Islamabad

⁴⁵ Rural economy and livelihoods in Pakistan. Asian Development Bank (ADB). Islamabad

147. There are different views expressed in Pakistan about the impact of the floods on soil fertility. Silt deposition in some areas may offer short-term fertility benefits in flood plains areas. However, nutrient leaching or losses from soil erosion may result in reduced yields. A study carried out by International Potash Institute (IPI) indicates that nearly 55,000 acres land has been washed away in both districts of Swat and Shangla⁴⁶. In Upper and Lower Dir districts, nearly 25% of the land under terracing and steep slopes was adversely affected by heavy rainfall, run off, cloud bursts and flash floods. In Punjab and Sind about 80% - 90% of the land along the river courses has been subject to sedimentation⁴⁷.

148. FAO has not engaged in any interventions to rehabilitate natural vegetation (although a forest project concept note⁴⁸ has been developed for Swat) or soil reclamation/protection. In fact, the mission found that WFP was far more active in this area using cash-for-work to support terracing, protection walls and dykes/bunds and to clear out silted irrigation channels.

149. Post relief phase, recovery and risk reduction efforts need to shift emphasis towards programme initiatives which will increase resilience and benefit the individual farmers themselves. Linkages with commercial organisations (value chains) should be encouraged, and specifically the provision of micro credit needs to be established to reduce the farmers' reliance on traditional high rate lenders and landlords. Agricultural extension work, in the form of "Field Farmer Schools", needs to be increased on a national level to improve knowledge, expertise, and traditional practices, and to support community initiatives⁴⁹.

150. Beyond this, communities also need support to diversify to non-farm based income generating activities, i.e. traditional crafts, or skilled labouring. Most of all literacy rates, health promotion, and access to education need to be improved, which although out of FAO's core competencies, could be included as a part of the FAO farming schools.

151. With respect to emergency preparedness for future disasters, FAO developed new partnerships with a large number of NGOs during the flood response, many with positive result but there are instances of non-performance. No efforts have been made so far to formally evaluate IPs. Such assessments, if done, would serve as "prequalification" of IPs in future emergencies.

152. Similarly, with respect to the organisational surge capacity, high quality staff with specific expertise need to be identified, to be called upon when necessary. The current lack of an appraisal system within the HR management structure is contradictory to this need. Again, the selection of staff needs to be a transparent process based on documentary evidence.

⁴⁶ Impact of alluvial deposits on soil fertility during the floods of 2010 in Punjab, Pakistan. International Potash Institute (IPI). Switzerland.

⁴⁷ Ibid.

⁴⁸ The concept note is for forest plantations and involves planting 4000 long gestation saplings. The mission notes that although this carries a longer term environmental benefit, planting long gestation trees does not meet the current needs of communities for household energy and income. Crops like pigeon pea and sesbania can be planted and produce good yield of biomass for fuel, or pulp for the paper industry. Farm forestry, or agro-forestry is another option to cater for the household needs, but this must be based on quick growing trees such as the Poplar and Eucalyptus.

⁴⁹ For effectiveness of the FFS see: Davis K. et al. (2010). Impact of Farmer Field Schools on Agricultural Productivity and Poverty in East Africa. <http://www.ifpri.org/sites/default/files/publications/ifpridp00992.pdf>

153. Finally with respect to administration, the 2010 floods highlight the need for quick decision making at all levels. While ad hoc mechanisms and actions were taken by FAO (see the management section below) the mission believes that emergency preparedness would be enhanced by the establishment of response triggers and standard operating procedures for a number of administrative actions.

2.5.1 Lessons learnt and Good Practices

- Overall, although FAO has not engaged significantly in this area, the mission finds that sustainable land and water management (including land tenure) needs to be an important component of any DRM strategy in Pakistan.
- The investments pre-floods in food security, vulnerability and risk related information and mapping were valuable and relationships with organizations like SUPARCO need to be maintained and further strengthened to enabling decision making on DRR and DRM related issues in Pakistan.

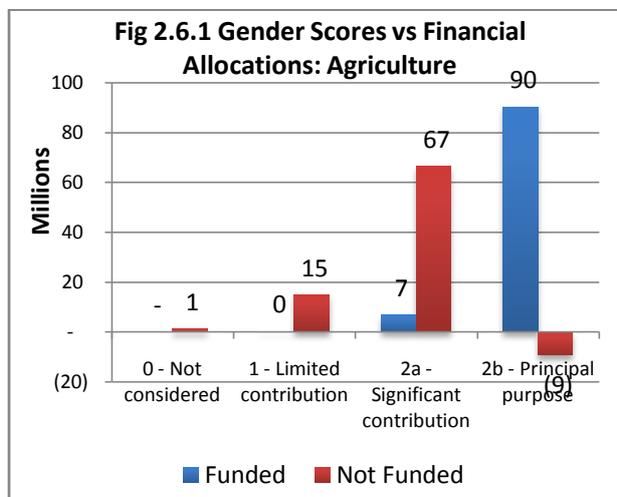
2.6 Gender

154. Localised farming practices vary throughout Pakistan based on tribe, ethnic groups, religious tendencies, and social traditions, but generally all family members work on the farm, with the more physically strenuous work being undertaken by the men. Women mostly work in the fields, weeding and collecting forage for livestock, harvesting crops, and picking cotton. Women also apply manure to crops, pick vegetables, collect fuel, care for livestock at home, and milk the cows, buffaloes and goats. The joint FAO/WFP Flood Recovery Assessment of March 2011 clearly demonstrated that women commonly manage the sale of poultry and have influence on the sale of small ruminants. Men undertake much of the same work, as well as ploughing, digging channels, seed bed preparation, and irrigation. Both men and women work in the field doing jobs of crop production and protection.

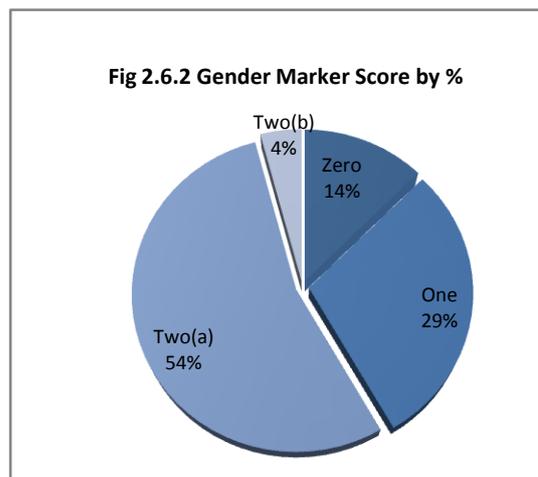
155. While both males and females were negatively affected by the 2010 floods, women faced particular problems in that, in addition to losing crops and livestock, households also lost domestic infrastructure such as sleeping and cooking rooms, latrines and compound walls, which are important for female comfort and security. Household water supply was affected by the floods, again a domain typically managed by females. Livestock, both large and small were lost, which negatively affected related household income which women have significant control over.

156. Initial flood impact assessments in the agriculture sector did not include a gender analysis and hence did not capture the varying needs of the affected population based on gender differentials. This contributed to the lack of any specific gender approach within the design of the agriculture flood response beyond using beneficiary selection criteria that targeted “gender balance”, i.e. giving preference for female headed and other vulnerable households.

157. In the immediate aftermath of the floods, the Pakistan Gender Task Force, led by UNIFEM and UNFPA, took charge of vetting some 488 projects under the Revised Floods Relief and Early Recovery Response Plan taken from projects under the various clusters, including Agriculture (a process that is widely viewed as excessively rushed). The mission found it surprising, in the context of the above, that FAO performance on the gender marker was rated as relatively positive (2a -contributing significantly to gender equality)



Source: Gender Task Force, September 2010



Source: Gender Marking Analysis, Gender Task Force, Mar 2011

158. Irrespective of this, the positive feedback received on the project design in the flood response does not appear to be applicable beyond project documentation stage. While FAO did contribute to a gender needs analysis conducted by UNWOMEN in September 2010, a sector specific gender analysis exercise, a pre-requisite under code 2a schedule (see Annex III⁵⁰), was not conducted until May 2011. Without this exercise, the identification of the varying agricultural and food security needs of men, women and other vulnerable groups was implausible. Similarly, gender disaggregated data was not collected on time for incorporation into the FAO flood response.

159. Although FAO Pakistan has a gender focal point, it is questionable whether FAO had the capacity to collect and verify gender specific data as the composition of field staff was disproportionately male, significantly limiting access to women. Implementing partner staff met by the mission were also strongly male dominated.

160. A useful self-assessment tool for gender mainstreaming is in use by FAO Pakistan. The following tables score FAO-ERCU's program against a basic checklist prepared by FAO that charts gender integration in programming, The result further supports some of the findings on design and staffing above.

⁵⁰ For a schedule of Gender Marking Coding and criteria

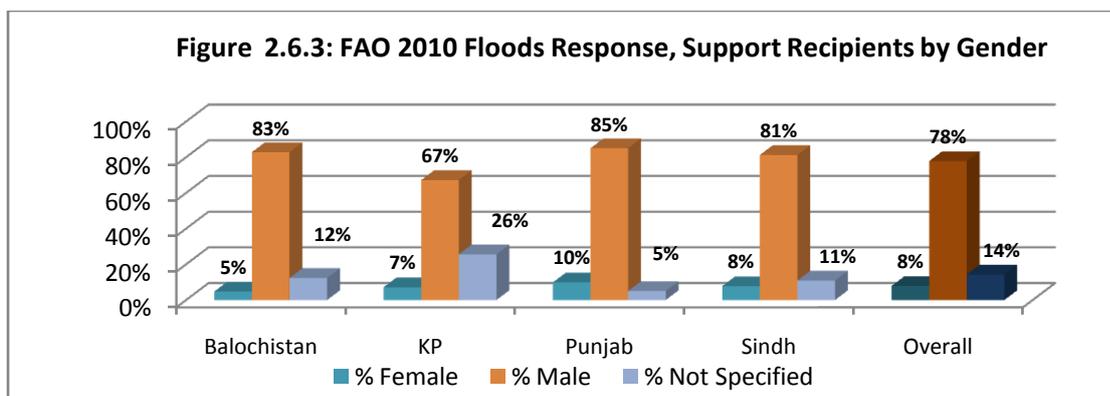
Gender integration in Programming Checklist: FAO-ERCU

Category	True	False
a. Sex disaggregated data are routinely collected	T	
b. Gender analysis is part of programme planning		F
c. Women's organisations are consulted when appropriate		F
d. Our organisation has clear procedures for integrating gender concerns into projects		F
e. Monitoring and evaluation measure participation of and impact on males and females		F
f. Our organisation provides gender training and programme support	T	
g. Our organisation provides follow up to gender training with specific tools and methods for institutionalising the integration of gender throughout the organisation		F
h. There is a balanced representation of women and men in senior management		F
i. There is a balanced representation of men and women at all levels of staffing		F
Count	2	7

If your organisation score contains more false than true statements, a strategy for the integration of gender issues in programming requires serious consideration.

161. In terms of interventions, the provision of kitchen gardening packages was targeted at women in particular. When vegetable gardens are near the homes, or are not too distant, the picking or harvesting of vegetables is mostly done by the women, who then cook them at home, or give the extra vegetables as gifts, as charity, or sell them within the village. In practice, the mission found that male family members actually received the garden packages (and related training) as they were usually provided with the crop input packages. Whether an intervention such as kitchen gardening places a disproportionately higher burden on women's time and labour was not considered.

162. The livestock intervention was partly designed to benefit women who are the primary caretakers of stock, and likely to benefit from them in meeting the short-term nutritional needs of the household (from the increased milk and egg production). As borne out by findings in the field, women did report benefits from the livestock intervention, however, they appeared to have been excluded from a crucial element of the intervention i.e. associated trainings which were given to male members of the household only. Furthermore, women did not get the chance to provide feedback on the support as the beneficiary assessments largely received feedback from male beneficiaries (FAO Livestock Intervention Report 2011). This may have been due to a lack of gender balanced FAO and IP teams that on one part, did not identify the training gaps for women, and secondly did not have the capacity to implement it.



Source: Beneficiary Dataset, FAO-ERCU 2011

163. Owing to the success of the FAO program in providing livelihood support to the flood affected agricultural households, particularly for the Rabi crop, there are a number of indirect channels through which the increased household income levels can be estimated to have led to positive gender outcomes, in part through increased income from high crop yields, the reduction of debts, and the increased nutritive benefits from vegetable and livestock inputs, amongst others. This is based on evidence that increased incomes have a direct correlation with crucial indicators of well-being such as education and health, and indirectly on gender equality⁵¹.

164. However, FAO project proposals lacked gender specific plans, goals and indicators, and data gathering (with the exception of the Detailed Livelihood Assessment) did not result in strong gender analysis. therefore, it is difficult to measure what impact, if any, FAO 2010 flood response had on females and the promotion of gender mainstreaming in the targeted communities.

165. With respect to technical support, FAO Rome TCESP provided resources for a 5 day training workshop on the Socio-Economic and Gender Analysis (SEAGA) in emergencies in April/May 2011. The target group was the Food Security and Agriculture Sector Working Group membership. Twenty five individuals (11 from FAO) participated and an important product of the workshop was an action plan for each province and a concept note for a project to strengthen gender equality focus in the sector. The end of workshop evaluation indicated a high level of satisfaction of participants in the training content, however no follow up on the agreed action plan was apparent to the mission.

2.6.1 Lesson Learned and Good Practice

- Female staffing (FAO and IP) are critical, at both senior management and programme levels, to engage with women in terms of beneficiary consultation at different stages: needs assessment, beneficiary selection, training, distributions and monitoring.
- The integration of a formal gender review of projects within each cluster under the new flood disaster response of 2011 is good practice as is the analysis and consideration of gender roles evident in new projects designed by FAO in 2011.

⁵¹ SEAGA Intermediate Toolkit (FAO, 2001)

- After February 2011, FAO held three trainings on gender awareness, including socio-economic and gender analysis (SEAGA), and the use of gender marker. While these came a bit late in the response, they are important initiatives and good practice dictates that follow-up on the action plan is needed.
- It is important to note the importance of the Gender Analysis exercise in adding value to FAO's role as cluster coordinator and the utility of this tool in identifying gender-specific livelihoods activities that potential donors (such as CIDA, with specific funding pool for gender and livelihoods activities) could be interested in.
- A issue related to the kitchen garden intervention is the process through which the package was delivered to women. Direct delivery i.e. provision of support to women in their own right, as also emphasized in SEAGA, not only increases access of women to potential resources, but could have been an opportunity for bundling trainings on matters ranging from DRR, to livestock care among others.
- Cultural norms were cited as a major reason for not attempting direct targeting of women which, given the geographical spread of the intervention, may not be a valid reason.
- The potential benefits of providing poultry assistance at an early stage, targeted at women, could have been an alternative. The relatively longer term benefits from poultry, as compared to the one-off nature of the vegetable package, could have created a higher impact.
- Given the limited scope and short term nature of the poultry and home gardening based approaches, it is important that FAO consider alternative approaches such as value chains development that provide direct access and open up linkages for women to markets.
- The relevance of the gender marker and its utility as a tool for gender analysis is limited to project design. To evaluate FAO's performance based on the initial ranking can be misleading, which appears to be a misperception on part of FAO program staff as well.

2.7 Beneficiary Targeting, Participation and Accountability

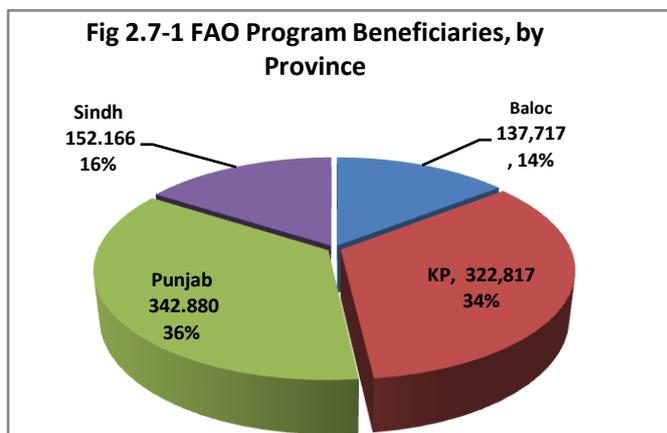
166. One of the key areas of concern highlighted during the evaluation mission was that of beneficiary targeting, participation and FAO's accountability to the same within the 2010 Floods Response program.

2.7.1 Targeting

167. Under the FAO flood response program, the targeting of beneficiaries has been based on the "Preliminary Damage Assessment in the Agriculture Sector for Flood-Affected Areas of Pakistan" conducted by the agriculture cluster in August 2010. Primary data was collected from the Khyber Pakhtunkhwa province alone, as the disaster in other provinces of the country was yet unfolding. No estimates of the number of affected households in each area have been provided in this report. FAO also contributed to the Preliminary Damage and Needs Assessment, PDNA (ADB, GoP, WB 2010) which provided the basis for designing medium to long term rehabilitation interventions. In particular, based on the estimated damage to the agriculture, livestock and fisheries in different provinces, the PDNA clearly outlined three compensation scenarios (low, medium and high). Constrained by the

availability of funds, FAO’s response was a partial adoption of the low compensation scenario (discussed in the following sections).

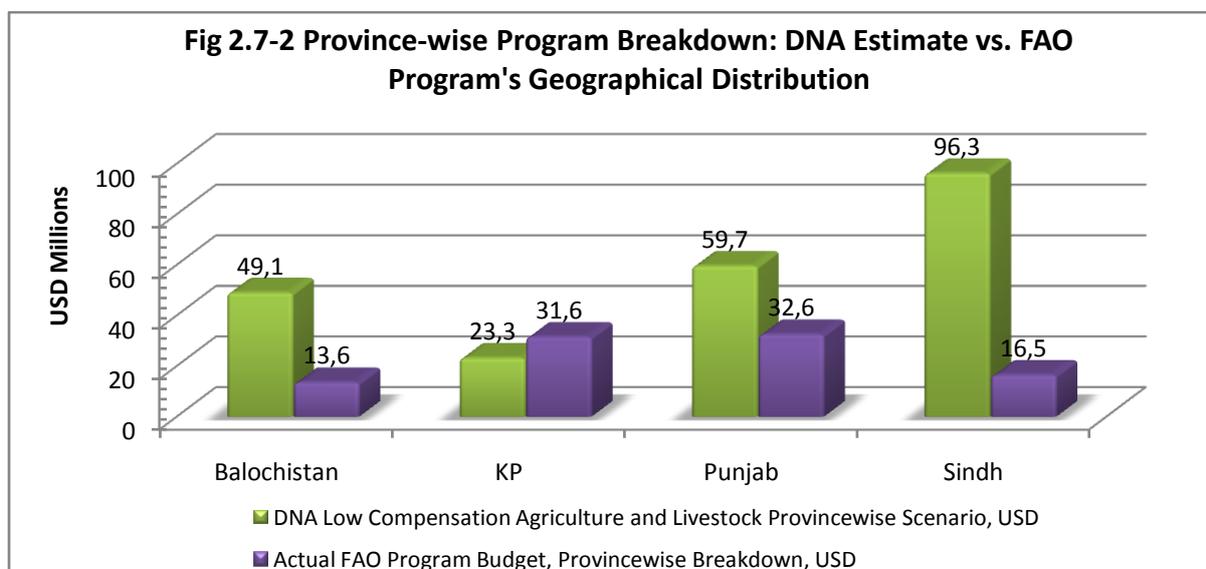
168. All in all, FAO covered 549 of the worst affected Union Councils in approximately 40 districts across the country, providing assistance to over 950,000 households. The following pie chart provides a breakdown of the FAO program beneficiaries on a provincial basis.



Source: Beneficiary Dataset, FAO-ERCU 2011

2.7.1.1 .Geographical Distribution and Prioritization

169. In terms of the geographical distribution of FAO projects, calculated in terms of the number of beneficiaries supported and the value of the input packages, the mission found that the response was not geographically and damage-wise proportional to the needs. The following chart provides a comparison of the DNA estimates vs. the actual FAO program spread.



Source: Beneficiary Dataset, FAO-ERCU 2011

170. FAO covered approximately 28% of the needed US\$49.1 for agricultural and livestock support in Balochistan, 17% of the needed US\$ 96 million in Sindh, and 55% of

the estimated minimum investment requirement in Punjab. However FAO funding for Khyber Pakhtunkhwa exceeded (136%) the estimated US\$ 23 million required for a low cost compensation intervention envisaged in the PDNA.

171. This discrepancy may in part be due to the protracted nature of the disaster in downstream areas which appears to have limited the initial assessment and response. Some areas in Sindh remained inundated until early 2011 meaning Rabi cultivation could not have taken place. In addition, factors such as the relatively higher number of experienced humanitarian organisations working in the Khyber Pakhtunkhwa Province, which were known to donors, and were able to mobilise quickly, may also have contributed to the response being disproportionately higher in Khyber Pakhtunkhwa. In FAO's case, the inflexibility seen in redesigning of delayed projects according to changing priorities may also have contributed to its resistance to any geographical relocation of funds as the priorities changed.

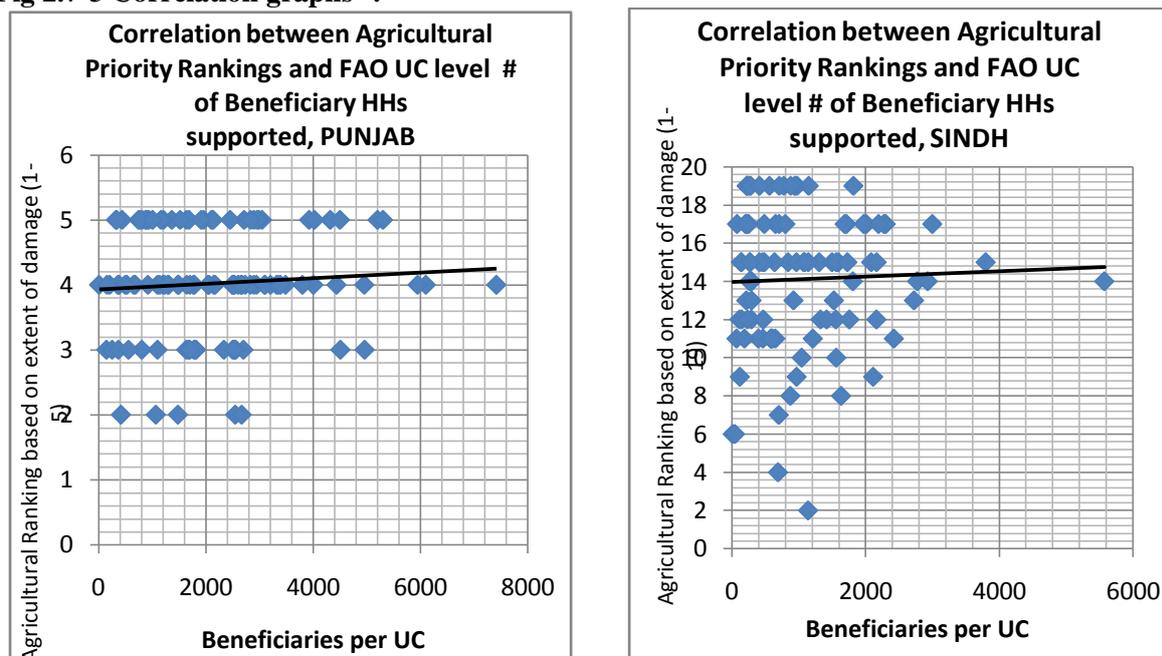
2.7.1.2 Selection Criteria and Prioritisation

172. The selection criteria, as discussed in previous sections on agriculture and livestock inputs, were quite broad (and implemented at the discretion of the IPs). Similarly, there was also an absence of clarity at the field level when it came to provision of the last round of agricultural inputs i.e. the rice package, and whether it could be provided to the same beneficiaries of the sunflower package (discussed in detail under the M&E section). In some cases, individual IPs did show initiative in terms of specifying and clearly defining selection criteria, but this was not mandatory and not commonly observed.

173. When compared with the Union Council humanitarian assistance priorities/UC rankings, developed by the Governments of Sindh and Punjab in collaboration with UNOCHA in early 2011, and taking into account the average number of households affected in the respective UCs, the correlation between the number of FAO beneficiaries selected in any individual UC, and the assistance priority ranking of the UC is low. The correlation coefficients for Punjab and Sindh are 0.07 and 0.03 respectively, where values closer to zero indicate the absence of an association between the priority ranks, and the total number of beneficiaries assisted in a UC, (represented by a flat linear line in the following charts). This analysis is based on an estimate of a minimum of 4,000 affectees per affected UC in Punjab and 3,000 in Sindh.

174. The apparent lack of correlation between the extent of coverage and the damage could be due to a number of reasons: the capacity of the one implementing partner selected per district, the influence of powerbrokers directing aid to non-priority areas, or a lack of systematic beneficiary selection methodologies. Some have argued to the mission that FAO was using its funds to fill gaps i.e. to go to UCs where self-funded NGOs were not covering – which might have meant the less acutely affected UCs. However, particularly for the rabi response, a very large proportion of the total assistance for agriculture interventions was channelled through FAO to IPs. For whatever reason, the lack of correlation is evident, and FAO was unable to provide a complete overview of the sectoral response to substantiate the above hypothesis. In addition, between Rabi and Kharif interventions there was sufficient time for selection of beneficiaries and vetting of lists based on the prioritized UCs, which is not reflected in the final selection by IPs, partly due to the hurried process of finalisation of the lists.

Fig 2.7-3 Correlation graphs⁵²:



2.7.1.3 External Influences in Beneficiary Selection

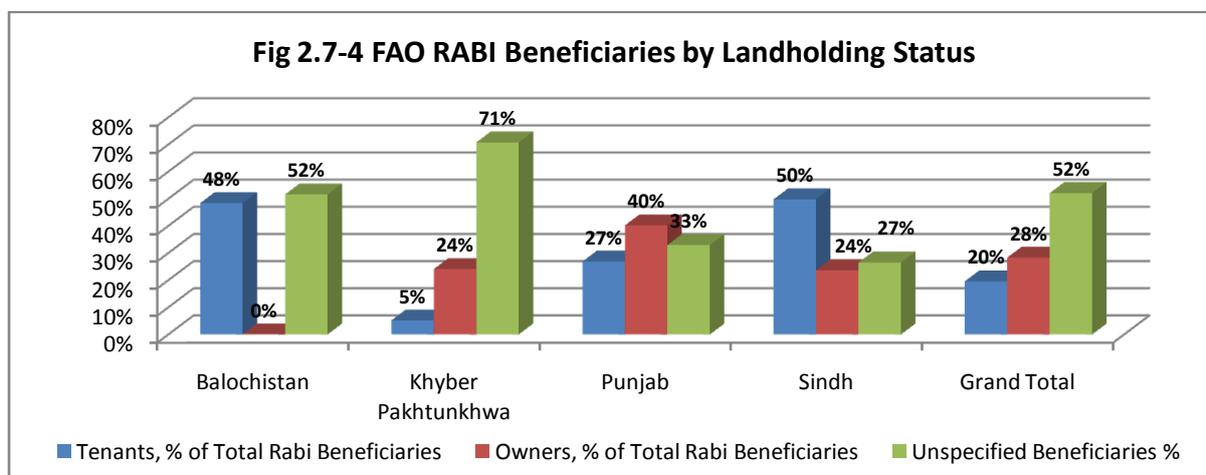
175. The relatively higher degree of variability of coverage of numbers of flood affected per UC in Sindh may be partially explained by the observations from the ground which indicates that village & beneficiary selection was particularly problematic in Sindh. In many areas of Sindh, duplication of inputs was evident on a very large scale. It was noted that political influence directed Kharif input packages to the same beneficiaries, including sharecroppers, on numerous occasions, with cross-intervention duplication (also discussed in the monitoring and evaluation section), in the process becoming a significant subsidy to the large landowners.

176. Similar findings from Khyber Pakhtunkhwa have been reported, where the Rabi distribution was carried out within premises owned by local powerbrokers. In other cases across all provinces, there was considerable input from government officials in the finalisation of beneficiary lists. On the one hand this coordination was needed to reduce duplication and harmonise the response with the government and other partners, while on the other hand, this provided a direct channel for political pressure to be exerted in beneficiary selection. While a degree of influence can be expected in situations such as these, stricter selection criteria can help in resisting the pressure. It should be noted, however, that interviews with other agencies indicated that political influence created a targeting problem in all areas of intervention involving material support.

⁵² Please note each individual dot in Figure 2.8.5, represents an affected Union Council whereas its vertical placement corresponds to the UC ranking (degree of flood severity / damage). The agriculture ranking scale in Punjab ranged between 1 – 5 with 1 being “Average of % Crop Destroyed less than 10%” and 5 being “Average of % Crop Destroyed more than 80%”. In Sindh, the agriculture ranking ranged from 1 – 19 with weighted scores on four criteria including ‘% Crop destroyed’, ‘% change in area normally under irrigation’, ‘Livestock Condition’ and ‘Change in Debt Burden,⁵²’ with low scores corresponding to less damage and higher scores corresponding to higher levels of damage, and change in vulnerability status.

2.7.1.4 Land Tenancy Issues

177. As extracted from the FAO-ERCU database, approximately 20% of the 519,945 Rabi beneficiaries and 63% of the 56,959 Kharif beneficiaries, were reported to be tenant farmers. Numbers of tenant farmers were highest in Sindh and Punjab.



Source: Beneficiary Dataset, FAO-ERCU 2011

178. Sharecroppers were identified as being particularly vulnerable to further debt accumulation in order to provide inputs for the 2010/2011 cropping seasons⁵³. However, what the above effectively means, given that landlords take on average 50% of the tenant farmer production, is that these beneficiary tenant farmers (140,000) shared half of their FAO supported production with landlords. In addition, mission finding indicate that in a number of cases, FAO input provision to the tenants was not perceived as provided by the tenant (it was considered as free), giving landlords an excuse to further reduce tenant farmer crop share to less than the anticipated 50%. These indirect benefits to the landowner served as an incentive for the politically influential to not only divert resources directly, but also to put pressure for support to their own tenants, indirectly subsidising their sharecropping arrangement.

179. FAO program design, while mentioning broad criteria for targeting landless and vulnerable groups, did not take into account the associated political and socio-economic considerations. As the major intervention in Sindh was for the Kharif, the same urgency of the Rabi distribution was not present. The mission believes that more could have been done to mitigate the negative effect of these sharecropping arrangements. Public and private advocacy with large landowners was one option. Alternatively, the design of the intervention could have taken tenancy patterns into account. For example, while comparable information on tenancy status for the 278,029 livestock package beneficiaries was not available, in contrast to the tenant owner crop sharing arrangements, the benefits of the livestock package were observed to go entirely to those households that receive it.

⁵³ Socio-economical baseline data of the flood affected provinces of Pakistan, and the flood effects at household level. FAO October 2010

2.7.2 *Beneficiary Participation and accountability*

180. Once the geographical areas were selected based on the initial assessments of beneficiary needs, it is evident that FAO's role was limited to defining criteria for beneficiary selection to be stated in the letters of agreement signed with the implementing partners. Once the beneficiaries were selected by the IPs, the beneficiaries' participation was restricted to providing information in post distribution and harvest surveys. Beneficiary feedback was neither systematically received nor utilised in design adjustments, whereas it could have been, particularly for the interventions that were delayed, such as livestock feed. USAID, on the other hand, established a hotline⁵⁴ for the flood response and received large numbers of calls from beneficiary communities each day. According to persons interviewed, there were few complaints specifically about FAO interventions – and FAO staff responded quickly and effectively to those that were reported to them.

181. At the implementation stage, beneficiary selection and involvement, for the most part was left to the discretion of implementing partners. No specific requirement was made of the implementing partners to involve beneficiaries at any stage of implementation or in the monitoring of the distribution.

2.7.3 *Lessons learnt*

- In so far as targeting is concerned, FAO coverage was uneven and lacked a formulaic approach, better targeting criteria and a more participatory approach with a built-in feedback system could have lessened the problem and helped adjust program design as priorities shifted.
- The absence of detailed specific criteria, imposed upon the IPs, particularly with regards to the vulnerable groups such as women and landless, resulted in the reduced impact of the FAO intervention, and a greater diversion of intended aid to the non-targeted. FAO should consider adapting recently developed “Beneficiary Selection and Targeting: Inter-Sectoral Guidelines for Pakistan”⁵⁵ to the agriculture sector, taking onto account regional variations, and embed the specific criteria within the LOAs signed with IPs.
- FAO should more systematically analyse the indirect beneficiaries of their interventions and take them into account in the design. In this case, FAO's role should have been broader than being limited to monitoring of distribution, and ensuring delivery of inputs to the sharecroppers. An advocacy role could have contributed to ensuring that the minimum entitlement of normal crop shares was realised by the sharecroppers. In addition, given the extent of the damage and the incentive for larger landowners to cooperate, this was perhaps a missed opportunity for the introduction of, or at the very least, advocacy of fairer crop sharing arrangements.

⁵⁴ With respect to all USAID funded flood interventions in all sectors.

⁵⁵ Beneficiary Selection and Targeting: Inter-Sectoral Guidelines for Pakistan, July 2011, Agriculture Cluster, FAO Pakistan.

3 Programme Management

182. The flood response in Pakistan has been managed by a team recruited by the Emergency Operations and Rehabilitation Division (TCE/HQ) and based in the Emergency Rehabilitation and Coordination Unit (ERCU) office in central Islamabad⁵⁶. The FAO Representation is located outside of the city. The Representative position in Pakistan had been vacant for several years and, at the time of the floods, the ERCU Coordinator, in addition to managing a very large emergency programme, was doubling as the acting FAO Representative. No strategic plan is in place either to guide FAO Cooperation in Pakistan or to frame FAO's emergency response work in the country.

183. The ERCU team is a self-contained management unit insofar as key administrative, logistic, finance and programme staffing is concerned. While nominally they report to the FAO Representative, in practice much of the decision-making takes place between the ERCU and TCE/HQ⁵⁷. In discussions with ERCU management, the mission found that some management processes were not well formalised. Although there appear to be regular meetings, and some specific tracking tools were developed by administration to monitor in particular procurement actions, some of the project management tools that one would expect to see in use in such a complex response were not visible to the mission⁵⁸. Staff commented to the evaluation team that there was an important gap in terms of corporate emergency standard operating procedures (SOPs) that could facilitate coordination of complex work processes and clearly allocate responsibilities⁵⁹.

184. Having said that, what was clearly appreciated by the mission and noted on a number of occasions by those interviewed, FAO staff both in Pakistan and in HQ worked tirelessly to push the system to the maximum to ensure delivery of the programme – of special note is the dedication of national staff who worked extensive hours in the immediate aftermath of the floods during a time of fasting and then national celebration (Eid) when most people were home with their families.

3.1 Procurement and Resource mobilisation

3.1.1 Resource Mobilization

185. Following the floods which started the last week of July, FAO began immediately mobilising resources, primarily through advocacy within the UN system for the inclusion of agriculture funding within the appeal. FAO/TCE provided a very small fund (US\$ 50,000) in August from its own SFERA pooled fund, which was primarily used to provide some initial surge capacity in the first two months. The first funding for household level interventions

⁵⁶ The ERCU country office is in central Islamabad while the FAO Representation is located on the outskirts of the city.

⁵⁷ As an example, at the time of the mission, the incumbent ERCU Coordinator was about to retire and recruitment for his successor was underway. The FAOR had not been consulted on the job description for the position nor was he involved in the selection process for the new coordinator.

⁵⁸ Workplans (tasks, responsibilities and deadlines) for individual projects were not, for example, in use.

⁵⁹ One staff member commented that “everyone is interfering in everyone else’s department”.

was agreed in August (CERF⁶⁰ and SFERA/Belgium). In addition a time critical negotiation with the European Commission during the third week of August allowed FAO to redirect US\$ 3.5 million of existing EU Food Facility funds towards 55,000 flood affected households.

186. An initial constraint in resource mobilization was OCHA's resistance to having agriculture related activities included in the August 2010 flash appeal⁶¹. In addition, the National Disaster Management Authority (NDMA) originally wanted to focus the appeal on purely lifesaving interventions⁶². There was no FAO Representative at that time in Pakistan, and the Senior Emergency Coordinator who was acting FAOR took annual leave in August. The mission believes that lack of senior level representation during this critical period resulted in delayed funding⁶³, although TCE efforts to strengthen operational capacity and to fill this gap were laudable.

187. The majority of new donor funding agreements were signed in September and October⁶⁴ but funds transfers were not always prompt (figure 3.1.1) and the second SFERA funding (US\$ 200,000 in Oct 2010) was not adequate to kick start approved programme activities. In addition to the SFERA grants, TCE also provided US\$ 3.87 million in SFERA advances against the signed agreements which to some extent allowed FAO to start the implementation of programme activities before donor funds transfers were received. Overall, during the first six months after the floods, FAO mobilised approximately 100 million US\$ largely in support of the Rabi season recovery.

188. Interviews indicated that overall FAO had a positive relationship with resource partners. They felt that FAO responded well to queries and followed up on complaints received. However, these partners also expressed dissatisfaction that in some cases (in particular with respect to implementation timelines for certain activities), FAO did not keep them adequately informed.

⁶⁰ FAO received 1.8 million US\$ from CERF in August and September i.e. approximately 4% of the total awarded funds from the UN Flood Appeal.

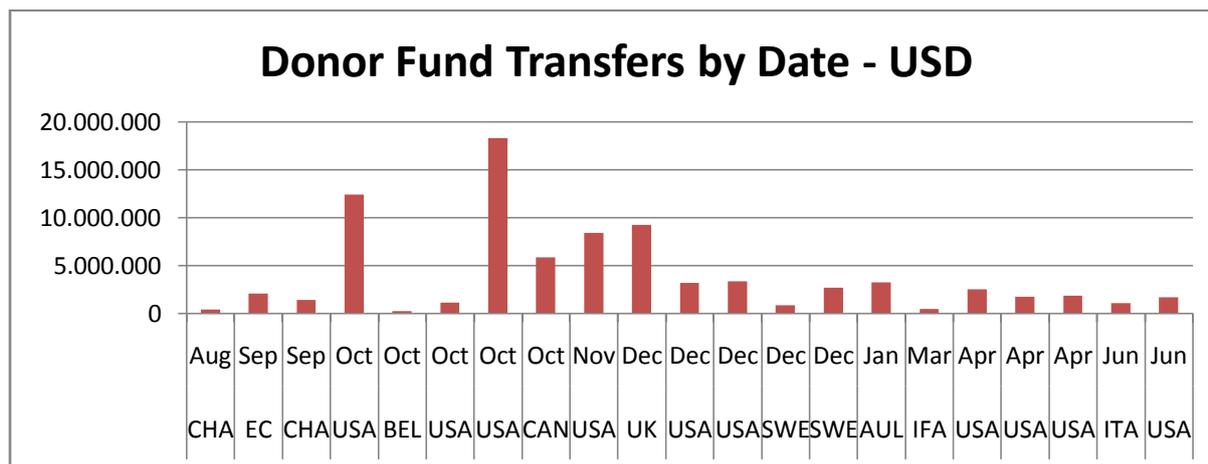
⁶¹ Pakistan Initial Floods Emergency Response Plan (PIFERP) appealed for \$459 million to respond to the immediate relief needs of the flood-affected people. The subsequent (revised) appeal (PRERRP, US\$1.9 billion) was formulated in September and included agriculture, but was slow to be approved/endorsed by the Government.

⁶² Note that a government lesson learned from the flood response is that early and substantial financial support to achieve the agriculture targets by the Provincial Governments indicates that agriculture and livelihoods is an important priority in the overall humanitarian response. *Early Recovery of Agriculture for Population and Areas Affected by the 2010 Floods*. NDMA, March 2011.

⁶³ In contrast, the mission notes that FAO was successful in having agriculture included in the 2011 flash appeal for the flood response in southern Pakistan. This is attributed to the in-country presence of an FAOR and high level advocacy at global level – as well as the fact that as of 2011 a global food security cluster has been established which includes both food aid and livelihood support response options.

⁶⁴ Major donors to the flood response include US (US\$62 mil), UK (US\$11 mil), EC & Canada (US\$6 mil each), Sweden, Belgium, Australia, Spain, OCHA/CERF, IFAD and Italy.

Figure 3.1-1 Transfer of donor funds

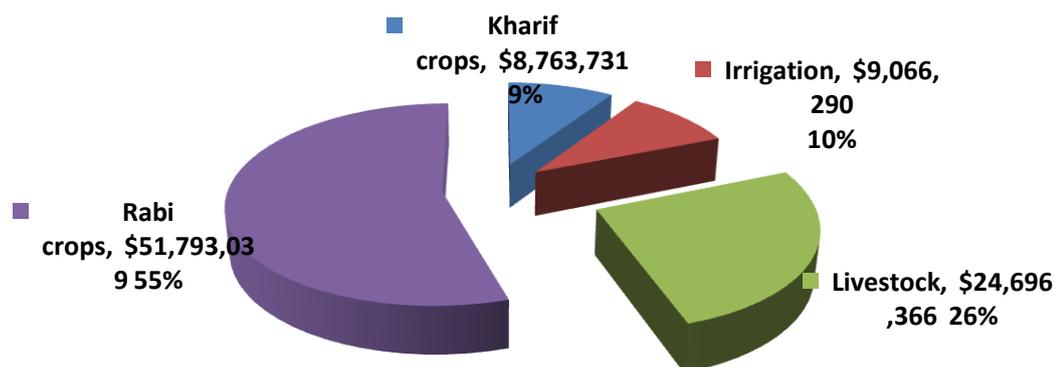


189. Several months after the floods began (Nov 2010), Volvo Pakistan came to FAO with a proposal that involved providing a funding-in-kind for the flood response: namely, the provision of free equipment and operators to support the clearance of irrigation channels. This activity would have been complementary to the desilting of on-farm irrigation channels that FAO was already planning for (USA CFW projects). While FAO Pakistan was initially enthusiastic, at headquarters level the Memorandum of Understanding remained unapproved for more than four months, while the organisation struggled to assess whether there was any potential conflict of interest with FAO’s Principles and Guidelines for Cooperation with the private sector, and while legal services examined FAO liability. By the time HQ approved the MoU, the window for the irrigation clearing had passed and Volvo Pakistan had withdrawn its offer. The mission estimates that, excluding the cost of the time and effort of a number of people in Pakistan and in HQ who worked on this agreement, the value of the forgone funding in kind is approximately US\$ 160,000. (Please see Annex V for the Volvo Case Study).

190. During the first 8 months of 2011, only two relatively small projects had been developed for the Kharif season, and two medium sized recovery projects (totalling US\$ 5 million) were formulated. While enormous resources were mobilised in the first months after the floods, the mission found that FAO has not managed to develop significant new areas of intervention or funding for 2011. This appears to be due to both a lack commitment to develop a clear forward looking strategy, as well as a lack of nationally lead framework⁶⁵ for a medium term recovery and reconstruction plan.

⁶⁵ The NDMA drafted an Early Recovery Framework for the Agriculture Sector which was never formally endorsed by the GoP.

Fig 3.1-2 Intervention-wise breakdown of FAO program budget, weighted by package cost and number of beneficiaries



Source: Beneficiary Dataset, FAO-ERCU and FAO Field Programme Management Information System (FPMIS), 2011

3.1.2 Procurement:

191. Once funds had been secured and transferred to FAO, the procurement of goods and services began. Approximately 100 purchase orders were processed over the first 9 months for a total of US\$ 46 million in commodities. A clear challenge was procuring very large quantities of certified wheat seed and compound animal feed.

192. Another operational hurdle was to identify implementing partners who could support the delivery of these commodities. FAO principally worked through non-government organizations (33) in the flood response. An initial public call for expressions of interest⁶⁶ was published in national newspapers and circulated at cluster meetings. Organisation's applications were then rated based on operational capacity criteria as well as experience. Eighty Letters of Agreement (LoAs) totalling US\$ 12 million were signed with these implementing partners (IPs) for the implementation of the main three flood interventions (crop and livestock inputs and irrigation de-silting).

193. FAO procured and delivered commodities to IP warehouses, and IPs were responsible for the selection of communities and beneficiaries according to set criteria, post distribution verification and the training of beneficiaries. The average cost for IP support was approximately US\$ 5/beneficiary/package delivered (not including the inputs themselves).

194. The early approved reallocation of EC Food Facility funds allowed FAO to quickly sign agreements with IPs in the first 8 weeks after the floods began. Other partnership agreements were signed later which allowed only a small time window between the formalisation of the agreement and the start of distributions. As discussed later, in some cases this had ramifications for the quality of the beneficiary targeting.

⁶⁶ The EOI was with respect to a pre-determined set of packages (crop, livestock, irrigation).

195. The processing of commodity orders and the delivery of seed, fertilizer, animal feed and other inputs took time. The graph in Annex 5 summarises the delivery times and quantities for the crop and livestock packages. As with IP agreements, the first orders of wheat for the flood response were funded from the EU Food Facility – a 27 month programme which had established suppliers, distribution channels and a staffing structure to support a rapid response after the floods⁶⁷. Inputs procured under the CERF and US Government funding also were delivered within two months after the floods began.

196. The evaluation mission had an opportunity to interview some of the vendors that FAO dealt with during the flood response. As indicated in the graph in Annex 5, some of the purchase orders (POs) were very large and involved delivery of inputs over a period of time. Vendors complained that FAO only paid once the last delivery within the PO was made and they indicated that, because of this, they had to include additional financing charges in their tenders to FAO. The mission estimates that the financial charges that could have been avoided if the contractor could have been paid in instalments, for procurement under major contracts (worth US\$ 40 million), could be as much as US\$ 2 million. Contractors interviewed had included financing costs in their process at a financial rate of approximately 5%.

197. As discussed in earlier sections, overall, the timing of the seed and fertilizer inputs was good. This is a reflection of the commitment of the FAO staff, and the hard work that put in during these early months of the response. With respect to the delivery of livestock inputs, procurement and delivery records reveal that FAO faced significant problems in sourcing and purchasing large quantities of quality compound animal feed.

198. In recognition of the damage that had been done to irrigation systems by the floods, FAO decided to implement a large scale de-silting intervention involving NGO partners, working under 20 LoAs, for a total of over US\$ 6 million, for the clearing 1,000 on-farm water channels⁶⁸ through cash-for-work (CFW). Agreements were signed by FAO with MinFAL On Farm Water Management (US\$ 150,000) for the provision of technical supervision and final clearance of the completed work. The cost of desiltation was initially estimated at US\$ 5-6,000 per water channel cleared, with the majority of funds going towards daily labour payments⁶⁹

Table 3.1-1: Summary - Cost per beneficiary for different interventions

Package	Cost/Beneficiary for Inputs (US\$)	Cost/Beneficiary including Inputs and Distribution and Management Costs
Rabi crop package	76	92
Livestock package	59 (range 25-105) ⁷⁰	85
Kharif crop package	76	154

⁶⁷ The EUFF is a longer term programme in support of reducing high food prices globally. In Pakistan the EU agreed to allow FAO to redirect the balance on the programme budget towards flood affected households in the same geographic areas under which the longer term programme had been operating.

⁶⁸ This represents 8% of the estimated 13,000 on farm water courses that were damaged by the floods. NDMA Gap Analysis. March 2011.

⁶⁹ All CFW Irrigation rehabilitation work was undertaken using US Government funding within which it was stipulated that no more than 10% of the budget could go towards materials.

⁷⁰ Depending on the size of package distributed.

199. It is apparent from the calculations above that, apart from the positive impact of the Rabi crop on restoring livelihoods of the affected population, the wheat package was the most efficient in terms of cost per beneficiary and the ratio of disbursement cost and input package price. The cost per beneficiary for the irrigation desilting activities is more difficult to calculate since there were two beneficiary groups: those who participated in the cash-for-work; and those who benefited from the improved water flow from the desilted irrigation channels. The average cost per water course desilted was US\$ 6750. On each water course an average of 25 people participated in the CFW desiltation, working 25 to 50 days at 350 rupees per day for a total average cash transfer per beneficiary of approximately US\$ 100 to \$200.

200. In the event, the cost of desilting varied significantly from region to region with less labour being required in parts of KP where channels had been damaged, rather than silted. This resulted in an under expenditure on CFW in some areas, which FAO renegotiated with USAID/OFDA to allow for additional repair work.

201. According to project workplans, FAO originally planned to undertake desilting in time for the Rabi season i.e. December 2010-June 2011 in Punjab, and from October 2010-April 2011 in KP and Balochistan. In practice the ideal timing for undertaking the desilting work was probably during the first quarter of the year when irrigations systems are normally closed for such activities.

202. During the autumn of 2010, TCE fielded two consultant missions to Pakistan for the purpose of setting up the CFW intervention. FAO has limited experience in implementing cash transfer interventions, and it took considerable time to develop the approach⁷¹, finalise the LoA template, and to get signed documents through the FAO HQ system. In addition, the overarching initial priority of the flood response programme team was on signing LoAs and securing procurement to ensure that seeds and fertilizers went out to affected communities for the Rabi planting season. As a result, CFW activities were delayed, with LoAs being signed in late February/early March, and most desilting taking place in April/May/June 2011⁷². The improved irrigation thus benefited the Kharif season rather than the Rabi season production.

203. Assistance through cash for work was the only direct monetary transfer made by FAO in response to the floods. Other options such as unconditional transfers and vouchers were used by other agencies who responded to the floods. The evaluation mission examined whether FAO could have delivered more assistance through such interventions. In fact, several months prior to the floods, FAO had had a workshop on voucher systems in emergencies led by a FAO consultant with experience from Ethiopia. However, during the planning stages of the flood response it was deemed too risky to try vouchers given the lack of FAO Pakistan experience in this delivery channel. The evaluation mission concurs with this decision with respect to the delivery of the Rabi assistance, particularly in light of the significant inflation in prices that was seen after the floods. A question arises now, in the recovery phase, as to whether the direct distribution of inputs remains as appropriate.

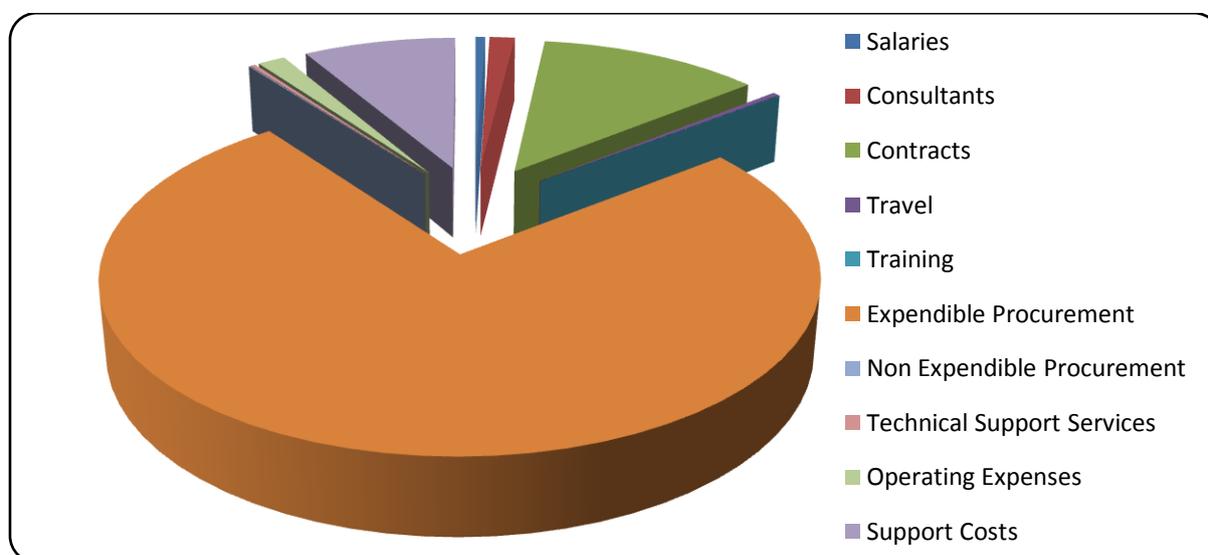
⁷¹ Establishing the roles and responsibilities of FAO, OFWM, IPs, Water Users Associations. Agreeing on payment modalities, etc.

⁷² Some delays were experienced initially in transferring fund installments (from FAO HQ) to IPs which was subsequently addressed by reaching agreement with FAO HQ that the FAO Pakistan office would effect the bank transfers locally.

204. In terms of overall flood response expenditure, the majority of funds were expended on the inputs that were distributed, through IPs, under contracts, directly to communities. Of the US\$ 80 million that was spent, the graph below indicates the breakdown across major budget categories. An important facilitating factor that enabled faster decision making with respect to financial expenditure and commitments was the increased delegated authority given to the FAOR. The pre-flood delegated authority for an FAOR in Pakistan was US\$ 100,000 for LoAs and procurement. From August 2010 onwards, the FAOR delegated authority for LoAs was increased to US\$ 200,000 and ad hoc delegations were given for specific procurement actions which rose to over US\$ 500,000 during the deployment of the FAO HQ international procurement officers.

205. On the other hand, a constraining factor identified early in the response, which has not been addressed to this day, is the need for the Emergency Relief and Coordination Unit at country level to have an imprest account, to allow for more expeditious processing of day to day transactions⁷³ which had grown from 500/transactions per month pre-floods, to approximately 2,500/month in the immediate response period.

Figure 3.1-3: Total Expenditure (US\$ 80 million) Aug2010-June 2011 by Category



3.2 *Human Resource management*

206. In the four years preceding the floods, the FAO programme in Pakistan stood at approximately US\$ 10 million of programming expenditure per year and emergency staffing just prior to the floods amounted to 63 staff (largely assigned to the EU Food Facility project).

⁷³ FAO current practice is that all transactions must be approved by the FAO Representation. While it is true that for the first 6 months of the response the ERCU Coordinator was acting FAOR and he could sign off on emergency transactions himself, in practice financial transactions had to be processed through two offices (ERCU and FAO Representation) which were not co-located.

207. When the floods began, TCE management developed a human resource surge plan that involved the deployment of HQ officers to the field, the reassignment of existing (EU Food Facility) staff to the flood response, and recruitment of a large number of new staff.

208. Between August and December 2010, over 500 days of operational and technical support were provided by FAO headquarters staff, the most significant amount being provided for operations support (in particular the deployment of the TCE budget holder and international procurement staff), cluster set up, and substantive support in the area of food security, nutrition, irrigation and assessment⁷⁴.

209. Procurement deployments were particularly important for accelerating country level procurement actions – however, the long planned establishment of a P4 international procurement position for Pakistan & Afghanistan (based in Islamabad) was only realised one year after the flood response began.

210. A high level interdepartmental task force was established by the Deputy Director General (Operations)/FAO in early October which focused on medium to longer term programming, and involved the technical cooperation department (TC), technical departments, and the regional office for Asia and the Pacific (RAP). The task force met only on one or two occasions and no minutes are available.

211. Follow up support for FAO medium to longer term planning did not occur until very recently when a mission was fielded to assist the country team in the preparation of the Country Programming Framework (CPF), and the Disaster Risk Management Plan of Action. There has been a notable absence of any input from the FAO regional office (Bangkok) or the multi-disciplinary team based there to the flood response. On the other hand, FAO HQ operational support, particularly during the first months of the response, was viewed as exemplary. The Director of TCE established regular meetings involving Director level staff from key support departments, where priorities were shared, and action plans developed for tackling inter-related finance, procurement and human resource issues. Similarly, TCES Desk officers also met regularly with relevant technical and administrative staff to coordinate the operations and synchronize the activities at field and HQ level.

212. With respect to staffing at country level, the reassignment of EU Food Facility staff and the availability of FAO EUFF offices, together with established relationships in different provinces, gave FAO a clear competitive advantage in the initial flood response. In terms of crops and irrigation, FAO had qualified and experienced staff able to respond quickly. Furthermore, experienced national staff in administration and procurement enabled the efficient processing of the much increased volume of payment transactions. The EUFF did not have livestock experts within the team, and the evaluation noted that a gap existed in terms of livestock expertise within the flood response staffing. In addition the evaluation also believes that the level of staffing for monitoring was insufficient given the scale of the response, the modality used of working through IPs, and the contextual complexities within which there are significant opportunities for misuse of influence, and fraud. Less than a quarter of FAO flood response staff were/are female and these staff tend to be based in Islamabad and fulfil administrative or coordination functions.

⁷⁴ There was a curtailed 3 day mission from the livestock service (AGA), but no missions from the crops division (AGP).

213. The scaling up in staffing appears to have gone relatively smoothly, and the recruitment of new national staff was accompanied by deployments of international staff, seconded under stand-by arrangements, from the Norwegian Refugee Council (NRC), to support communication, logistics, information management, and reporting.

214. The flood response involved the setting up of a complex cluster system involving 11 clusters active at national, regional and district levels. The evaluation heard some complaints that FAO, as agriculture cluster lead, did not put cluster coordination staff in position quickly enough. A comparative coordination capacity tracking sheet shows that while FAO was able to establish a full time cluster coordinator at national level in August, it lagged behind almost all of the other clusters in terms of deployment of dedicated coordinators to the 4 provincial⁷⁵ hubs. Furthermore, although the Government officially declared the end of the relief phase, and a migration of regional flood recovery coordination structures to official provincial capitals, in March 2011, the evaluation team found that, in September, there still remains limited FAO coordination capacity at provincial levels.

215. In 2011 funding for ERCU activities declined as 2010 projects closed and no new projects were launched. FAO maintained its staffing until the end of June when it went through a downsizing exercise whereby all staff were given notice of end of contract, and management reviewed what it considered to be the essential posts and available resources (principally from the new Spain and Belgium funded projects). This resulted in the retention of 72 staff (Aug2011) from the 145 flood response staff (May2011). While the documentation suggests that a systematic process was followed in the scaling down, feedback from staff interviewed indicated that it could have been more transparent. If, for example, an open competition for the remaining and new posts had occurred (job fair), some of the good staff, who found new jobs during the review period, may have been encouraged to stay on. Furthermore, while the staff review matrix indicates that some staff were identified as “highly preferred” by management, there have been no performance reviews of any of the ERCU national staff on which to base this assessment.

216. Finally, the mission notes that at the time of the mission, a number of national staff from the northern areas have been redeployed to support the new flood response in the south of Pakistan⁷⁶. While the retention of experienced staff is important, and temporary redeployment is a normal surge response, care needs to be taken to ensure that staff are, whenever possible, locally recruited, through open competition, with knowledge of the area and local languages. As redeployed staff benefit from daily living allowances (DLA), such an approach will also ensure that human resource costs are minimised. HR policies should be amended so that DLAs are only allowable for a certain limit of time.

3.3 Institutional Learning

217. As mentioned previously FAO Pakistan does not have a rigorous staff performance appraisal procedure, or a documented system to evaluate the performance of its implementing

⁷⁵ Peshawar, Multan, Sukkur, (covering Balochistan) and Hyderabad.

⁷⁶ One month after the floods began in the south, FAO had still not advertised for prospective new posts in Sindh.

partners. They do, however, undertake various forms of post distribution surveys or impact assessments used to gauge the effectiveness and impact of its intervention.

218. It was interesting therefore, that the After Action Review (AAR), undertaken in April and May 2011, specifically did not measure impact, therefore detracting from its conclusion, that the operation was a “significant success”⁷⁷. The review did not gather staff feedback beyond the ERCU Islamabad office in Pakistan, and was not in contact with the implementing partners, Government counterparts, or the beneficiaries. This lack of depth in the review methodology further reduces the substance of its findings.

219. That said, the review did provide a number of recommendations, most of which this evaluation agrees with. However, beyond the management feedback document, the mission could not establish how the AAR suggested changes were being incorporated into operational activities.

220. With respect to independent evaluations of previous FAO disaster responses in Pakistan, the following recommendations are particularly relevant:

1. The evaluation of the CERF Funds utilised between 2007 – 2009 (extracts)⁷⁸:
 - Strengthen the agriculture cluster and lobby the donor community, UN agencies, NGOs and the Government;
 - Improve internal management and coordination and equip itself with more experienced and specialised emergency staff;
 - Map out local and international NGOs working in disaster prone areas in order to select the best IPs in case of any emergency;
 - Improve quality control of inputs;
 - FAO needs to coordinate better with relevant UN agencies during emergencies;
 - Closer links with trusted IPs and inputs suppliers would help expedite interventions;
 - “Avoid procuring mixed products (such as compound animal feed)”;
 - “Hire female field workers to assess women-related livelihood needs”;
 - FAO must do more to monitor its own and IP activities.

Clearly, there were operational issues identified during the evaluation that senior management would have aware of prior to the start of the floods response. Some of those issues still remain, and have been echoed in this evaluations own findings.

⁷⁷ Pakistan Floods - After Action Review, 2011. Executive Summary, Page 3.

⁷⁸ CERF Evaluation Final Report, July 2010, Bahadar Nawab, Paigham Shah, Shagufta Jeelani.

2. The evaluation of FAO's 2005 Earthquake Response (extracts):

- Deploy a qualified procurement specialist
- Raise in country signing authority
- Ensure community participation in early recovery and rehabilitation assistance
- Irrigation technical standards should be applied more systematically and consistently
- FAO must build a capacity to monitor IP performance
- FAO should update the 3W information and present it in a map form
- A environment friendly livelihoods development policy in mountainous areas was voiced.

221. Although this is a short extract, it can be seen that some of the recommendations have been adopted, with a positive impact, however some recommendations, which have now been around for a long time e.g. monitoring IP performance, still remain valid today. Overall, the mission finds that FAO Pakistan lacks a clear institutional learning system or approach.

3.3.1 *Monitoring*

222. As in previous disaster responses (e.g. the 2005 earthquake), post-distribution (PDS) and post-harvest (PHS) surveys were the main tools employed for monitoring purposes, with a significant difference that under the 2010 Flood Response the enumerators were FAO staff, as opposed to IP staff used in 2005.

223. M&E field staff raised the issue that feedback from them was not sought in the development of these PDS, PHS and disaster livelihood assessment questionnaires, apart from asking what level of workload they be relied on to undertake. It was noted that the questionnaires needed vetting from the enumerators perspective and could have been clearer and more comprehensive.

224. Apart from these surveys, there was no monitoring and evaluation plan, nor tools and formats with clearly demarcated indicators to effectively monitor the program implementation. This was a lapse on part of the FAO-ERCU Islamabad office which failed to provide the leadership required to set up an effective M&E system.

225. Field monitoring was left at the discretion of field M&E officers, which in isolated cases used the "Back to Office Reports" to record monitoring findings. For the most part, monitoring was limited to visits to distribution points, ticking off names from beneficiary lists. As indicated in the section above, monitoring staffing was inadequate both in terms of number and expertise.

Example: The Evaluation Team visited Khairpur, Sindh. The IP distribution list indicated 73% reported female beneficiaries based on final beneficiary data. The 73% figure was in stark contrast to the national average of 8%. On checking with randomly selected communities, it was found that the beneficiary list incorrectly listed female members of the house as direct recipients when the actual packages were received by the male heads of households. It was evident that the list was never verified and, if taken as a reflection on the remaining data, raises a question mark on the authenticity of the gender disaggregated data and the targeting of specifically female headed and vulnerable households within FAO reported data.

226. The example indicates that one of the biggest gaps in the FAO M&E system was a lack of a gender balanced team. This limited access of FAO to half the members of the beneficiary households (women) and reduced their already limited participation in the program.

227. Highly dependent on the capacity of the field M&E staff, the quality of M&E trainings also varied. Trainings were held on the generation of beneficiary tokens, reporting formats, daily distribution reports etc. however, given the non-existence of thorough reporting formats, the utility of these trainings could have been higher.

228. Beginning in the middle of 2011, FAO began taking steps to address the absence of an M&E system in the organization. Since then, an M&E specialist has been hired to analyse the capacity gaps in national M&E staff, provide recommendations, and future training support. The specialist will also consolidate and report on data collected under the flood response, as well as finalising a work plan for future monitoring and assessment activities.

229. Security, however, was a constraint on the ability of the monitoring staff to access the field. Considering the distances involved, the need to sometimes travel with an escort, and regulations regarding when staff had to return to the office, it was difficult to visit more than a couple of villages each day.

3.3.2 Reporting Formats

230. Reporting requirements from IPs did not cover key information such as the timing of delivery of inputs, gap analysis of targeted and actually supported households etc., which are key indicators of program effectiveness. Some IPs that chose to report additional information followed varying formats that were incomparable (e.g. reporting varied between village, UC or district levels). Similarly, the lack of clear specific selection criteria also contributed to the difficulty in comparison between IP packages and performance. FAO can learn from monitoring tools developed by WFP and study their effectiveness, such as the Quarterly Key Performance Indicator (KPI), used for evaluating Cooperating Partners.

3.3.3 Lessons Learnt and Good Practice

- Future large scale emergency responses in insecure areas should consider third party monitoring as was used by UNICEF, WFP and other agencies in the flood response.
- Agreement such as the engagement, through an MoU, with the On Farm Water Management Departments, that led to effective monitoring and support on the CFW intervention, could be replicated.
- Reporting to donors by FAO was also brought into question with several donors reporting dissatisfaction with poor communications, especially with respect to reporting of delays in programme implementation. Open and regular communication with donors increases the possibility of adjusting programmes, and builds trust and possible future funding opportunities.

3.4 Security

231. The security situation in Pakistan has been quite volatile for some time now. Much of the country including the national capital is considered to be very insecure (phase 4) and precautions are in place which govern most aspects of staff movement and housing/office security requirements⁷⁹. These result in both an increased financial burden and operational constraints on FAO's programme. As a non-accompanied duty station, working in Pakistan puts additional strain on international staff who are separated for longer periods from their families.

232. The mission recognizes that the security environment has had a negative impact on FAO's ability to deliver assistance (risks of theft/hijacking) as well as to provide technical support and supervision of the programme in some districts. The necessity of having armored vehicles and police escorts for some field work can clearly effect perceptions of partners and communities and FAO's image. Time spent at community level for routine monitoring is limited by the fact that it is rarely possible to stay overnight at district level (so fieldwork involves long hours driving for a few hours of onsite work) .

233. The mission found that FAO has taken adequate security precautions although office conditions may not be fully MOSS compliant. A national "security and monitoring officer" has been recruited under the ERCU programme and based in the FAO Representation to support FAO Administration on security issues.

4 Co-ordination and Advocacy

234. The goal of coordination and the role of the agriculture cluster and working group is to develop a common analysis of needs, to reduce gaps and duplication in response, to strengthen the effectiveness of response through the promotion of good practice, dialogue and partnerships, and to encourage the transition towards early recovery. With respect to FAO's leadership as a cluster/working group convener is concerned, feedback from the stakeholders consulted has been positive. FAO was also able to forge an effective on-going relationship with NDMA. Similarly, at the field level, FAO's "bridging" role between the government and IPs has been appreciated by both stakeholders, although with some variation at the provincial levels. There do not appear to be any established mechanisms for measuring the performance of cluster coordination. As a cluster coordination, FAO needs to be able to demonstrate that their cluster co-ordination adds value terms of enhancing the relevance, efficiency, effectiveness and impact of the response.

4.1 Needs Assessments

235. A number of needs assessments have been carried out over the course of the past year under the cluster but, due to the differences in formats, are difficult to compare. In addition to the preliminary assessment (Aug10), and FAO contribution to the WB/ADB

⁷⁹ The FAOR and ERCU Coordinator are responsible for field security matters including the implementation of security requirements, such as the implementation of Minimum Operating Security Standards (MOSS) and Minimum Operating Residential Security Standards (MORSS).

(Oct10), and the Detailed Livelihoods Assessment (DLA) led by the WG in June 2011, the agriculture sector gap analysis was done in April 2011 (based on 3Ws). However, a significant number of cluster members mentioned using McRAM⁸⁰ as the basis for their program interventions due to the perceived delay in the gap analysis. Despite co-chairing of the Agriculture and food security (A&FS) Working Group, WFP/FAO collaboration appears to be minimal with no joint assessments or programming ventures undertaken.

236. In terms of outstanding needs, post emergency response phase, the government undertook a UC-ranking exercise in early 2011 jointly with UNOCHA which also included assessment of outstanding agricultural needs and priorities with inputs from FAO.

4.2 *Coordination with Government*

237. The clusters initially held fortnightly meetings which were well attended, but after the transition to A&FS Working Group, the frequency of meetings and its attendance has reduced significantly. The clusters helped coordination with the government, however, this coordination was to a greater extent horizontally with DCOs, but not vertically i.e. with EDOs or Provincial officials, although this might have been expected of the government itself. Similarly, the degree of coordination with the government varied significantly from one hub to another, as did the degree of government satisfaction with FAO's performance.

238. In Sindh, FAO staff had the beneficiary lists vetted by the respective EDO Agriculture, or Revenue Department. However, government officials in KP and Punjab appeared unaware of FAO's activities in project areas, and complained of the same.

239. The government agricultural support criteria in Punjab provided a much wider coverage of the affected population, i.e included affected households with up to 25 acres, while FAO covered up to 3 acres, meaning a potentially high degree of duplication.

240. Conversely, too close coordination linkages in other districts, particularly in Sindh, where beneficiary lists were vetted by the concerned EDO, and a No Objection Certificate (NOC), issued, raised concerns about potential political interference, and the diversion of aid from the targeted population, to the well connected.

241. In KP, the mission noted that coordination between FAO and PDMA were positive, however an unusual reversal of roles was observed. PDMA reported that they technically cleared new NGO initiatives while the FAO cluster/WG coordinator cleared these initiatives for NOCs administratively i.e. to ensure that the activities did not duplicate what other organizations were doing in the same areas.

4.3 *Coordination within FAO*

242. In many cases, there appeared to be a disconnect between the FAO program and cluster staff, which resulted in duplication between the FAO program, and the network of

⁸⁰ Multi-cluster Rapid Assessment Mechanism (McRAM) The Multi-cluster Rapid Assessment Mechanism (McRAM) is a post-emergency assessment tool that uses questions designed by the Clusters in Pakistan <http://mcram.org/Default.aspx>. The assessment, lead by UNICEF, was carried out in August 2010.

implementing partners. For instance, in District Shikarpur, it was noted that an FAO implementing partner provided a Kharif input package to previously supported beneficiaries under another NGO project (directly funded USAID sunflower package). On questioning FAO field staff, it was conveyed that FAO policy is limited to non-duplication within FAO program alone. The fact that this reduces program effectiveness and impact, in addition to limiting coverage and undermining the cluster system, does not appear to be well understood by the FAO staff.

4.4 *Information Management and Communications*

FAO's lead role in mapping and use of SUPARCO imagery, contributed to a better analysis of the scale and severity of the flood damage. It has been noted that the agriculture cluster took the lead in tracking and mapping the 3Ws (who is doing what where) at the Union Council level, expanding the tool's depth. Once in place the 3Ws provided cluster members with fortnightly coverage updates and were reported as useful. However, the flow of information was noted to be one-way by many IP staff, and cluster members.

4.5 *Technical Support*

243. Dissemination of technical guidelines such as Rabi and Kharif Guidelines, and facilitation of technical information sharing between partner organisations through regular newsletters has been a success of cluster communications system, as has been the utilisation of in-house expertise at the national level. However, it was clear that the leadership role played by the national cluster in providing technical support to partners was not replicated to the same extent in the field. FAO's involvement of the relevant government line departments in coordination and in conducting trainings of partners was appreciated.

244. After the establishment of the Agriculture Gender Working Group in February 2011, several trainings have been held by the agriculture cluster on gender. These include gender awareness training, conducting of socio-economic and gender analysis (SEAGA) and use of gender marker. A nutrition seminar was also organized by FAO Pakistan with support of the nutrition unit in headquarters.

4.6 *Lessons Learnt and Good Practice*

- A timely Rabi response following a monsoon flood necessitates the inclusion of agricultural inputs in the initial flash appeal. FAO leadership needs to advocate for this and see it as a priority. The inclusion of agriculture in the Food Security cluster in the flash appeal for the floods in southern Pakistan in 2011 is a sign of progress.
- Joint assessments and use of a standard assessment formats are needed so that various assessments could be comparable.
- Coordination with the government without inviting undue political influence is understandably, a hard balance to manage, and was evidently not well achieved in the flood response, with a high variability in levels of coordination and reports of political interference.
- Information management and use of satellite imagery were important in effectiveness of the clusters, and can play a potential role in the monitoring of infrastructure related activities.

- Technical support provided by the cluster and in-house expertise of FAO was important in guiding the response. However, the utility of these materials at the field level has not been validated⁸¹, where the role of line departments in conducting trainings appeared more prominent

⁸¹ Although the results of a questionnaire recently conducted among cluster members has indicated that the material produced by the Cluster has been considered very relevant

5 Conclusions and recommendations

245. In a competitive humanitarian environment it is difficult at times to see exactly what are FAO's comparative advantage, and added value. The unavoidable use of implementing partners in large disasters, plus its relatively high administrative costs, leaves the organisation susceptible to donor preferences for value for money interventions, and as such, future funding difficulties. This response, one of the largest FAO emergency responses ever, will go some way to counteract that, as it is generally considered a success amongst the donor community, based predominantly on the initial achievement of distributing inputs for the Rabi planting season, thus avoiding a massive humanitarian problem.

246. This positive reflection is reasonable in that FAO has realised its original programmatic objective of revitalising the agricultural sector in flood affected communities. However, delays on the irrigation and livestock components of the response detract from this success, as does the failure to properly target the most needed beneficiaries, neither proportionally geographically, nor locally, compared to the numbers affected.

247. FAO needs to accentuate its comparative advantage in the eyes of the donors, and to promote its mandate to support agricultural development, its technical expertise, its community capacity building capabilities, and its relationship with the government, gained over years of providing agricultural advice, and co-ordinating and liaising with international partners on their behalf.

248. An opportunity exists to develop a country program framework that not only prioritises emergency preparedness and response, but also works to tackle the underlying causes of vulnerability to the recurrent hazards of floods, drought, and earthquakes.

249. To achieve this, FAO needs to return to the communities, not through implementing partners, but to initiate, themselves, agricultural extension programmes through farmer field schools, participatory community based capacity building initiatives that will provide a sustainable impact in terms of natural resource usage, livestock management, and cropping practices. Furthermore, FAO needs to investigate and increase its own capacity in "modern" methodologies of supporting communities beyond the distribution of agricultural input, i.e. cash and voucher initiatives, low cost credit provision, and value chain development. This will increase both the individual, and the community's resilience to future disasters, that sadly, in Pakistan, will inevitably occur.

250. Furthermore, FAO needs to improve its institutional learning practices, and in particular, needs to strengthen its operating systems, therefore increasing its capacity to adapt, and to respond rapidly to changing needs and future emergency interventions. The centralised approach and lack of empowerment of provincial offices and staff, has caused delays and has not effectively utilised the available potential.

Main recommendations:

Recommendation 1:

FAO Pakistan should quickly finalise the Country Programming Framework, ensuring that it includes disaster risk reduction and management as a core strategic pillar, also using the document as a resource mobilisation tool, to leverage funding for agricultural flood recovery, and DRM capacity development, over the medium term. This will also involve the operationalisation of the FAO/WFP/UNDP MoU on recovery in Pakistan. (Action: FAOR, TCE & ERCU-Pak, TCI)

Recommendation 2:

In future responses FAO needs to advocate on behalf of the tenant communities in order to maximize the impact of the items distributed, and to reduce the influence of local powerbrokers. This should lead, over time, to a longer term advocacy initiative on land reform.(Action: FAOR, ERCU-Pak, NRC)

Recommendation 3:

Both the capacity and structure of FAO Pakistan’s monitoring system, needs to improve drastically, so as to ensure better beneficiary identification, reduced levels of misallocation of distributed items, and better monitoring of the results of interventions. Targeting guidelines require review and improvement. Furthermore, a system of evaluating the impact and efficiency of co-ordination needs to be elaborated and implemented (Action: FAOR, ERCU-Pak and Global FS Cluster Coordinator).

Recommendation 4:

A change in organisational culture is required so as to empower in-country staff to respond in a more efficient, and effective manner. This includes, but is not limited to a) formally involving the FAOR in decisions regarding the recruitment of senior emergency and recovery staff (Action: TCE) and considering merging of the two FAO offices at the earliest moment possible, b) opening an “imprest account” for the ERCU so as to facilitate the speedier processing of payment and reducing bureaucratic delays. (Action: CSF), c) developing standard operating procedures, and d) in the context of GoP decentralization, increasing the authority and responsibilities of provincial offices to plan and manage field programme interventions. This may require recruitment of new staff and/ capacity building of existing staff (Action: FAOR & ERCU)

Recommendation 5:

Enhance emergency preparedness and institutionalise learning opportunities and activities, in particular, establish formal follow-up procedures on previous evaluations and after-action-reviews, establish a performance appraisal systems for all staff (including NPP and longer term PSA/consultants), and implementing partners and commercial suppliers. This will serve as a pre-qualification assessment for future emergency contracts (Action: FAOR and TCE/ERCU-Pak)

Recommendation 6:

Interim or staged payment schedules should be encouraged, particularly within large contracts, thereby reducing the finance costing inherent therein. (Action: FAOR, TCE & ERCU-Pak)

Recommendation 7:

To make systematic that which worked effectively but on an ad hoc basis in the Pakistan response. Standard operating procedures and a classification system for categorizing the severity and scale emergencies should be developed/adopted in support of fast-tracking administrative actions. (Action: TCE, CSA/F/H, LEG)

Recommendation 8:

With respect to funding, pre-agreements with identified donors (including CERF) need to be established in order to precipitate the establishment of a nationwide cluster system, available for any future large scale disaster responses. The level of SFERA funding should be raised proportionately dependent on the scale of the disaster and the funding commitments made. (Action: TCE HQ and Global Food Security Cluster Coordinator)

Recommendation 9:

To improve the integration of gender issues into FAO's programming, more women need to be employed within FAO Pakistan, not only at senior level in the organisational, but also in the programme and monitoring teams, so as to improve access to female members of the community. (Action: FAOR, ERCU-Pak)

Recommendation 10:

FAO needs to learn from its cash for work initiative, and develop its internal capacity for future usage of this, and other cash transfer mechanisms, including the use of vouchers and unconditional cash transfers. (Action: TCE HQ)

Recommendation 11:

FAO needs to follow up on training of staff and sector partners to better promote the use of good practice guidelines such as SPHERE, LEGS, and SEAGA. (Action TCE HQ and technical units)

Recommendation 12:

Targeting of beneficiaries needs to be improved. The recently developed "beneficiary selection and targeting, inter sectoral guidelines for Pakistan" should be evaluated and where advisable adopted. (Action: ERCU Pak)

Recommendation 13:

Shift emphasis in supporting flood affected agricultural communities beyond agricultural inputs towards the provision of low cost credit, value chains development, and agricultural extension. For tenant farmers in particular, develop an approach that focuses on the underlying causes of their vulnerability (land rights) and which seeks to diversity their livelihood strategies (FAOR and ERCU Pak)