Food and Agriculture Organization of the United Nations

Initiative on Soaring Food Prices

Regional Synthesis of Beneficiary Satisfaction and Impact Assessment Reports for ISFP TCP Projects in Asian Countries

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ABBREVIATIONS AND ACRONYMS

ASC	Agriculture Service Centre, Nepal
DAALI	Department of Agronomy and Agricultural Land Improvement, Cambodia
DADO	District Agriculture Development Office, Nepal
DAE	Directorate of Agriculture Extension, Bangladesh
DAP	Di Ammonia Phosphate
DFID	Department for International Development, United Kingdom
DPRK	Democratic People's Republic of Korea
DoA	Department of Agriculture
ECRU	Emergency Coordination and Rehabilitation Unit of FAO at the country level
ERU	Emergency and Rehabilitation Unit of FAO at the country level (similar to ECRU)
FAO	Food and Agriculture Organization of the United Nations
FASMEDs	Food, Agriculture, Small and Medium Enterprise Development Programme, Mongolia
FHH	Female-headed Households
GoN	Government of Nepal
HYVs	High Yielding Varieties
ICB	International Competitive Bidding
IDP	Internally Displaced People
IFPRI	International Food Policy Research Institute
IRR	Internal Rate of Return
ISFP	FAO Initiative on Soaring Food Prices
JT	Junior Technician
JTA	Junior Technical Assistant
LCB	Local Competitive Bidding
MAFF	Ministry of Agriculture, Forestry and Fisheries, Cambodia
MAIL	Ministry of Agriculture, Irrigation and Livestock, Afghanistan
MFARD	Mongolian Farmers' Association for Rural Development
MHH	Male-headed Households
MoA	Ministry of Agriculture, DPR Korea
MOFALI	Ministry of Food, Agriculture and Light Industries, Mongolia
MVs	Modern Varieties
NGOs	Non-Governmental Organizations
NPV	Net Present Value
NSC	National Seeds Company, Nepal
NWFP	North West Frontier Province, Pakistan
PSC	Project Steering Committee of Ministry of Agricultural Development and Agrarian Services, Sri Lanka
RAP	FAO Regional Office for Asia and Pacific
RNR	Natural Resource Centre
RO	Recipient Organization
SGR	Strategic Grain Reserve
SOFAR	Salam Organization for Afghanistan Rehabilitation, Afghanistan
SQCC	Seed Quality Certification Centre, Nepal
SSSC	SEAN Seed Service Centre, Nepal
SWOT	Strengths, Weaknesses, Opportunities and Threats
TCP	Technical Cooperation Project
TCPF	Technical Cooperation Programme Facility
TSP	Triple Super Phosphate
UN	United Nations
USD	United States Dollar
VDC	Village Development Committee, Nepal
WFP	World Food Programme
WTO	World Trade Organisation

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EXECUTIVE SUMMARY

A. Background

After several decades of stability in world grain markets, and even steady price declines in real terms, the world was confronted with rise in food prices beginning from 2002, gathering pace in 2006 and 2007 and reaching its peak in the early 2008. The global food crisis that stretched all over the world in 2007-08 demonstrated the fragility of the world food system and its vulnerability to shocks. Long-term structural trends underlying rapid growth in demand for food coincided with short-term cyclical or temporary factors adversely affecting food supply are the main reasons behind the spike in food prices. The main drivers triggering the observed unprecedented price hikes on the supply side were the supply shortfall due to adverse weather conditions and natural disasters and declining levels of cereal stock in major cereal-producing countries, and high petroleum prices leading to higher fertilizer prices and transportation and irrigation charges. On the demand side, increased demand for food commodities bio-fuel production and growing demand for livestock feed grain along with the export restriction and panic buying by governments and the private sector exerted pressure on the world food market.

A combination of decent weather in most growing regions, vigorous response from farmers, announcement of a small but timely release of imported rice stocks by Japan, and aggressive cut in export prices for rice by Vietnam in a bid to regain market share from Thailand provided a soothing effect against the price panics seen early in 2008. Since the relief came mainly from well-off countries, many developing countries still experience high domestic food prices at levels well above what prevailed before the crisis began. Their food market fundamentals such as the population growth, rising food demand, supply capacity constraints and the poor use of technology remain unchanged to avert the food crisis. The financial and economic crisis has further eroded their capacity to respond to the food crisis on their own as many of these countries are now facing adverse balance of payment positions, low foreign reserves and high inflation.

Increase in food prices has put millions of people at risk of food insecurity and poverty across the globe. The poorest people who spend nearly four-fifths of their incomes on food remain the most vulnerable to sharp rise in prices of food items. FAO estimated that in 2009 the number of undernourished in the world soared to the level of 1.02 billion people. This represents more hungry people than at any time since 1970 and a worsening of the unsatisfactory trends that were present even before the economic crisis. The increase in food insecurity is not a result of poor crop harvest but because high domestic food prices, lower incomes and increasing unemployment have reduced access to food by the poor.

Although home to largest producers and exporters of cereals and other food products, Asia was not unscathed by the global phenomenon of soaring food prices. The degree of transmission of soaring world prices of food and its impacts and responses at the country level however differed across the continent depending on domestic production situation the speed, size and effectiveness of policy responses. It is feared that the hike in food prices substantially reversed the little gains in poverty reduction that had begun to take place in many poverty-ridden countries since the new millennium. This has exposed these countries to the grave consequences of acute food insecurity as a prudent threat to their livelihoods.

B. FAO Initiative on Soaring Food Prices (ISFP)

In response to the threat to food security of soaring food prices, in December 2007 FAO Director-General launched the Initiative on Soaring Food Prices (ISFP). As a part of this initiative, in response to strong demand from countries in the Asia-Pacific region, FAO approved emergency assistance under its Technical Cooperation Programme (TCP) aimed to alleviate the impact of soaring food prices on the most affected vulnerable farming populations. In Asia, such TCP assistance was provided to ten countries (Afghanistan, Bangladesh, Bhutan, Cambodia, DPR Korea, Mongolia, Nepal, Pakistan, Sri Lanka and Timor-Leste). These were bolstered by a regional TCP project (TCP/RAS/3204) based in RAP to provide technical support and

monitoring and reporting of the activities from the regional level. The ISFP TCP projects, implemented for a year in 2008/09, completed their activities by December 2009.

The TCP projects' major component was seeds and fertilizer distribution, complemented by other inputs – irrigation channel construction and maize silos for seed storage in Bhutan, zinc sulfate and hand tools in Sri Lanka, and technical booklets in Cambodia. Project sites and beneficiaries were targeted and various input distribution systems were used to suit the respective country contexts. The budget for each TCP project was USD 500,000, except Cambodia which received USD 200,000 under the emergency assistance. Most procurement were made directly by FAO who also provided technical and financial support for country impact assessments.

C. Beneficiary satisfaction and impact assessment

Methods and process: In order to know precisely on how well has the project fared in achieving its stated objectives as well as to learn lessons for similar future initiatives, FAO organized country impact assessments providing the methodologies and guidelines to ensure uniformity and comparability across countries. The country level assessments were carried out by national consultants identified by the FAO Representatives with technical and funding support of TCP/RAS/3204 and the ISFP secretariat. The country assessment reports were completed between August 2009 and March 2010. This synthesis report draws from the respective country reports to synthesize at the regional the observed processes and impacts of ISFP TCP projects and based on respective country experiences, provide a coherent account of how such initiatives, whose demand are likely to increase, should be undertaken in the future.

The country-level beneficiary satisfaction and impact assessment method was designed by the ISFP Secretariat and sent to recipient countries with guidelines and formats to ensure consistency in reporting. The country teams carrying out the beneficiary satisfaction and impact assessments conducted field surveys using the guidelines and questionnaires provided by the ISFP Secretariat, except in the case of Pakistan and DPR Korea. Pakistan had carried out, the field survey on its own initiative before the ISFP guidelines and tools were provided and could not undertake a supplementary survey to collect missing information. In the case of DPR Korea, household level surveys were not possible as the households are organized under cooperatives, which served as the primary beneficiary and were interviewed accordingly. This regional synthesis was prepared by compiling the information in the country reports and arriving at the aggregate regional situation by calculating simple averages and weighted averages and neutral weights and the like to come up with country unique comparable numbers.

Overall results: The ISFP TCP projects aimed to support agricultural production through the provision of expensive and high quality inputs and other supports was conceived in an opportune time when the poor and deficit producer households of many countries in the Asia region were being victims of sky-rocketing prices of food which seriously threatened their livelihoods; and at international level, jeopardized the achievement of Millennium Development Goals.

The project has been able to target the areas and beneficiaries to include the poor, vulnerable and marginalized and female-headed households using appropriate criteria. In Nepal and Timor-Leste, the demand side pressure led to poor criteria application leading to thin scatter of inputs (seeds). Some innovative concepts beyond the project design, e.g. equity contribution for instilling the sense of ownership in Afghanistan, were also found.

Several variants of input distribution systems were adopted in different countries. The broad categorization of these systems can be in the form of i) institutional versus direct beneficiaries, ii) equal quantity per household versus quantity differed based on landholding/requirement, iii) government distribution versus NGO, private sector distribution or mixed distribution system, iv) single input distribution versus multiple input distribution, v) competitive bidding (ICB, LCB) in procurement versus direct procurement. All these variant systems have their respective advantages and disadvantages, and could potentially have varying influences in beneficiary satisfaction and perceived impacts.

Planned project activities have been implemented successfully in many countries with high but varying levels of satisfaction (on receiving inputs, timeliness, appropriateness and quality) across countries in process part (inputs distribution), and with positive perceived impacts. Even the quantitative assessments of productivity have shown crop yield improvements up to 40 percent compared to a year before the project. The production, access to food and ability to sell agricultural products are perceived to have been increased. Nepal and Timor-Leste, however, have performed rather poorly on account of delays in the distribution of crop seeds and high scatter.

Lessons Learned: It is understandable that due to the urgency of emergency support to the victims of soaring food grain prices in countries of Asia and the Pacific region, ISFP had to be planned hastily. However, the issues and concerns which emerged during the implementation of the project in ten Asian countries dealt in this report, has provided some lessons which may be useful in designing and implementing similar projects in the future.

i) Project Design

- A coherent project document specifying the basis of country selection, area and beneficiary selection framework, framework for the selection of project components and sub-components, basis for determining the choice of input distribution system, etc could have been useful in better targeting of the project as well as in explaining the observed differences across countries.
- Within the budgetary limitation of a TCP project, the support level per country on per household level has varied a lot which undermines equality across countries. The support level could be varied by using such criteria as size of the country and the population, level of poverty, level of price rises of the food grains and vegetables, and the effects of the price shock.
- The size of assistance provided was, in many cases, too small to make a dent on production. Higher impact could have been derived by scaling up the project support.
- Since the project had to be evaluated eventually, the baseline could have been planned to facilitate the evaluation process. While collection of an elaborate baseline data may be formidable and costly task for an emergency assistance project, a practical and modest approach to collect information on key indicators may be followed.
- The country and beneficiary innovation of putting beneficiaries' equity contribution of 20 percent of input cost in Afghanistan resulted in improved project targeting, and inculcated sense of ownership in the project which proved instrumental in enhancing the perceived impact from the project. Such a provision in the project, however small it might be, could also have covered more households with the project resources.
- Even within the framework of short term emergency support, the components to lead to longer term food security, such as irrigation, seed multiplication and storage etc could have added the relevance of the project.

ii) Impact assessment

- The guidelines provided by the ISFP Secretariat missed out some important variables, for example, the "adequacy" of inputs in explaining the beneficiary satisfaction level.
- The guidelines as such were found to have been interpreted differently in different countries perhaps because they lacked specificity and there was no orientation on this. Organization of orientation workshops at the regional level could have improved the consistency in data collection and reporting across countries.

Recommendations: Following recommendations have evolved from the observations and analysis of the country data

i) Project design related

- Project package was deemed to be extremely partial, and quantity inadequate, to make considerable dent in production and hence more complete and adequate quantity of inputs is proposed;

- Since high quality seeds were distributed under the project, an added component of support for seed storage (except for hybrid seeds) could have been useful for upcoming seasons.
- The project should have linkage to other existing initiatives, so that farmers could be provided with complete package of inputs and services that allows better as well as sustainable agricultural performance and outcomes.

ii) Project processes related

- Delays in seeds and fertilizers delivery affected the production performance in many countries, particularly Nepal and Timor-Leste, and these countries have suggested the project to have advance planning in procurement and transportation.
- Monitoring and supervision input in the project was found to be extremely weak in several countries and hence strengthening of this process was suggested
- Training inputs were deemed to be inadequate and untimely in many countries which affected the production performance. It was, therefore, suggested that the appropriate and adequate training input should precede before the actual inputs distribution
- Some counties, e.g. Bhutan, felt that the local procurement system could have been more cost effective and timely rather than direct FAO procurement. Advance planning in procurement and transportation of inputs is recommended.
- A few countries expressed reservation about the distribution of free inputs arguing that the system did not muster beneficiary ownership and also was instrumental in distorting the criteria application. In a country like Afghanistan, the beneficiaries voluntarily contributed 20 percent of the input cost which led to strict targeting. The suggestion to have at least some equity contribution in cost was suggested by Bhutan and Cambodia in their respective country reports.
- DPR Korea suggested more decentralized approach to TCP implementation in order to improve the project performance
- Nepal case revealed that the blanket distribution of a seed variety in all altitude ranges and in the same period was not appropriate. The country report suggested differentiating the technologies to make these more suited to different production conditions. This is generally applicable in other hilly areas as well such as Cambodia and Bhutan.

iii) Outside of project domain

- Credit arrangements for private input suppliers is considered necessary particularly in the context of FAO procurement rules which precluded the suppliers from receiving advances for input buying
- Linkage and coordination with other institutions for inputs not covered under the project should be built.

1. INTRODUCTION

1.1 Brief background on soaring food prices

After several decades of stability in world grain markets, and even steady price declines in real terms, the world was confronted with rise in food prices beginning from 2002. The real food price index spiked sharply upward in 2006 and 2007. By mid-2008, real food prices were 64 percent above their 2002 level. Figure 1 presents the movement of FAO food price index from 2006 to early 2010. While the food price index has since dropped from its peak in 2008, it still remains high, at the same level as in November 2007. The global food crisis that stretched all over the world in 2007-08 also demonstrated the fragility of the world food system and its vulnerability to shocks (Gustafson, 2008).

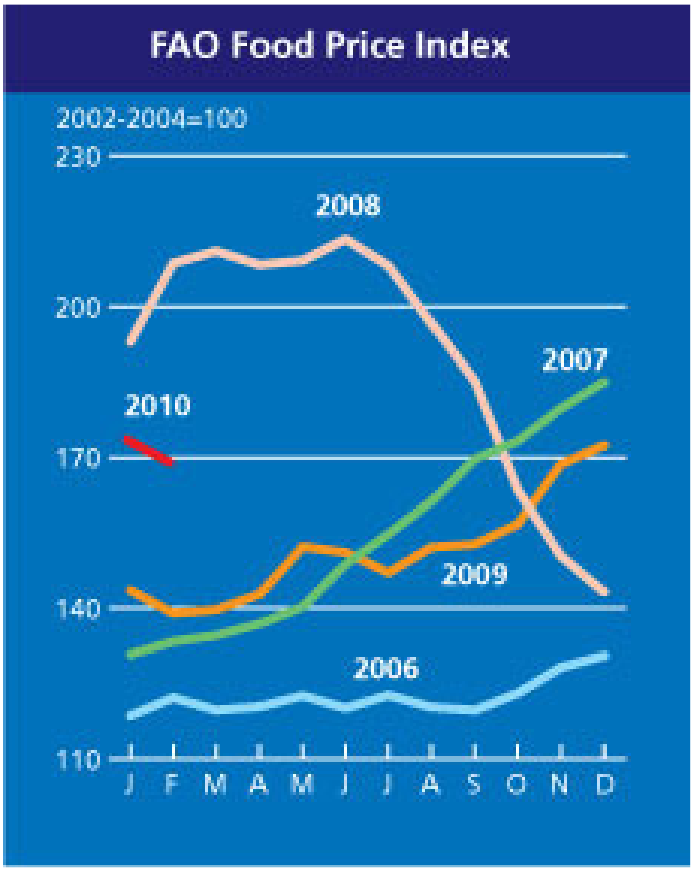

Figure 1: FAO food price index
Source: http://www.fao.org/worldfoodsituation/en/

The driving forces underlying the unprecedented price hikes are many and complex, and they include both supply-side and demand-side factors. Long-term structural trends underlying growth in demand for food coincided with short-term cyclical or temporary factors adversely affecting food supply. This led to a situation where growth in demand for food commodities continues to outstrip growth of their supplies (FAO, 2008a). Among the supply side factors were (i) significantly lower level of cereal stocks in the world - the stock to utilization ration in 2007-08 was 19.4 percent, the lowest in three decades - due to the change in agricultural policies of major cereal producers, (ii) production shortfalls in major cereal-producing countries during 2005-07 due to extreme weather events, including droughts and floods, and (iii) high petroleum prices until mid-2008 causing steep rise in fertilizer and transportation costs for food producers. On the demand side, high petroleum price created incentive for bio-fuel production which in turn led to increased demand for agricultural commodities, such as sugar, maize, cassava, oilseeds and palm oil, for bio-fuel feedstock.

Moreover, growing demand for food, particularly for feed grain-intensive livestock products, due to rising income and growing urbanization could also have added pressure. Interplay of these factors on food prices were exacerbated by speculative activities of investors in the aftermath of the economic crises, export restrictions and panic buying by countries to augment domestic food availability.

A combination of decent weather in most growing regions, vigorous response from farmers, announcement of a small but timely release in May 2008 of imported rice stocks by Japan, and aggressive cut in export prices for rice by Vietnam in a bid to regain market share from Thailand, seem to have stopped the price panics seen early in 2008. It should be noted, however, that the increase in food production in 2008/09 happened mostly in economically advanced countries. Many developing countries still experience high domestic food prices at levels well above what prevailed before the crisis began. Their food market fundamentals such as the population growth, rising food demand, supply capacity constraints and the poor use of technology remain unchanged to avert a significant negative change in the food security situation. The financial and economic crisis has further eroded their capacity to respond to the food crisis on their own as many of these countries are now facing adverse balance of payment positions, low foreign reserves and high inflation.

Increase in food prices has put millions of people at risk of food insecurity and poverty across the globe (IFPRI, 2008, DFID, 2009 and Ivanic and Martin, 2008 a). The poorest people who spend nearly fourth-fifth of their incomes on food remain the most vulnerable to sharp rise in prices of food items. Studies suggest that the present rise in food prices would increase poverty in many developing countries [Chaudhary and A. Chaudhary (2008), Ivanic and Martin, (2008b); and Wodon and Zaman, (2008)]. FAO estimated that in 2009 the number of undernourished in the world increased to 1.02 billion people. This represents more hungry people than at any time since 1970 and a worsening of the unsatisfactory trends that were present even before the economic crisis. The increase in food insecurity is not a result of poor crop harvest but because high domestic food prices, lower incomes and increasing unemployment have reduced access to food by the poor (FAO, 2009).

A heavy brunt of the food price rise effect is believed to be borne by the poorer countries, poorer regions, deficit producers and poor consumers. From 1970 to 2003, import dependency grew most among the least-developed countries compared with higher-income country groups. In 2003, least-developed countries relied on imports for 17 percent of their grain consumption, compared with 8 percent in 1970 . The price increases had forced many poor families to sell assets or sacrifice health care, education or food just to stay afloat, let alone ride out from the economic storm (FAO, 2009).

In the Asia-Pacific region, an already high food prices have threatened to reverse the hard-earned gains in poverty reduction, undermining the global fight against poverty. The future of food production is also not rosy. The climate change effects, which have begun to be evident in many countries, have plunked further pressure on food supply, particularly among poor and least developed countries who can not muster enough investment to adapt to the climate change effects. These facts together give rise to the possibility that if food prices resurge from the current soothing trend after mid-2008, the first Millennium Development Goal of halving poverty by 2015 could be jeopardized.

The production and price situations were particularly alarming in many Asian countries in 2007 and 2008 due to natural disasters like flood, cyclone and severe bouts of droughts which caused damages to major cereals creating severe shortage of food grains for domestic supplies and consumptions. During the year 2007/08, domestic rice prices doubled in Bangladesh and Cambodia and increased by 70 percent in Afghanistan, 55 percent in Sri Lanka, and 40 percent in the Philippines. Domestic wheat prices increased by 36 to 100 percent in Bangladesh, Mongolia, Pakistan, Kyrgyz Republic, Tajikistan, and Sri Lanka as shown in Table 1.1.

Table 1.1: Increase in domestic food prices: March 2007–March 2008 (%)

Country	Rice	Wheat	Meat
Afghanistan	70	16	30
Bangladesh	100	74	60
Cambodia	100		45
China	6	7.2	
India	9.3	2.5	
Indonesia	8.7		
Kyrgyz Republic		100	
Mongolia		40	
Nepal	20		
Pakistan	60	38	
Philippines	40		30
Sri Lanka	55	36	
Tajikistan		100	50
Vietnam	17		

Source: Country Data, ADB

During the one year period ending in March 2008, wheat export prices increased by 130 percent, rice by 98 percent, and maize by 38 percent. Therefore, the price impacts were most pronounced particularly in import dependent countries.

Country-specific Price Rise Accounts

Country specific price increases of major food grains are reportedly quite diverse and alarming during the past two years (2007-2008). In **Afghanistan**, food prices in June 2008 increased from 40 to 80 percent in different locations, with a country-wide average of 58 percent.

Bangladesh also witnessed huge price rise where the wholesale and retail prices of local coarse rice, the nation's major food staple, increased by 78 and 82 percent respectively, from June 2006 to June 2008, with the fastest monthly acceleration – 38 percent (wholesale) and 36 percent (retail) - occurring between October 2007 and March 2008. The increase in rice prices in Bangladesh was attributed to both internal and external factors. At the domestic level, severe floods that swamped large tracts of agricultural land in August and September 2007, and particularly Cyclone *Sidor* that hit the country on 7 November 2007, caused extensive damage to standing crops. This triggered fears of shortages of the staple and a scramble to secure supplies for current consumption and strategic reserves, further pushing the prices up. Furthermore, rising costs of key inputs such as fertilizers also fuelled the rice price hike. Similarly, the price of high quality seeds rose to around 15 percent in the year 2007 rendering it difficult for the marginal and small farmers to buy them.

In **Bhutan,** the monthly increases in food grain price were steady in 2008. The first quarter saw a double digit increase to almost 11 percent. The second quarter of the same year witnessed further increase to 12.3 percent mostly attributed to rise in the prices of dairy products, eggs, cereals, oils, fruits and fishes. The third quarter saw even further increase reaching an all time high of 12.5 percent. The price continued to rise in the fourth quarter to 11.75 percent as a result of an increase in the price of bread and cereals, dairy products, oil, fruits and especially egg and egg products which increased by as much as 40 percent.

Similarly, in **Cambodia**, the price, particularly of rice, which is the most commonly consumed staple, approximately doubled from May 2007 to May 2008. Although official statistics show the rice price becoming more stable or declining, the average price of rice in November 2008 was still 77 percent higher than a year before.

Price information in **DPR Korea** is rather sketchy because of centrally planned economy where prices are maintained at low levels. Though the official food prices show no clear linkage with changes in global food prices, price increase for petroleum-products like fuel and fertilizer in particular, limited the capacity of DPRK to produce food in required amount to guarantee national food security. The crop production was less

than average in the past years and subsequent harvests were severely affected by shortage of fertilizers resulting in an estimated national food deficit of 836,000 tonnes in 2008.

In **Mongolia,** food prices increased in the range of 8 percent to 148 percent between July 2007 and July 2008. Price of rice went up by 85 percent while flour increased by 68 percent. In particular, the soaring food prices of meat, wheat, vegetables and other imported food products severely impacted the low-income vulnerable groups.

Market prices of agricultural commodities in **Nepal** are increasing briskly in the last few years due to several reasons, both external and internal, such as drought, floods and natural hazards lowering crop production and productivity. Food and beverages make up more than half (53%) of the households' consumption basket in Nepal. As such, it has a significant impact on the overall price situation in the country. Since January 2007 food price inflation has exceeded overall inflation. During the first seven months of FY 2008, on a year-on-year basis, food prices increased at an average rate of 8.7 percent compared to overall inflation rate of 6.3 percent. But both general inflation and food price inflation (as the major driver of general price inflation) accelerated substantially during the second half of FY 2008. Food-price inflation is driven by high prices of cereals (rice in particular) and edible oil/ghee which together make up nearly 40 percent of the food basket. The Nepal Rastra Bank's Consumer Price Index (CPI) measures urban inflation and showed that the price of rice and rice products increased by 12.4 percent during FY 2008 as compared to 2.8 percent in FY 2007. Likewise, the price of oil/ghee rose by 13.5 percent in FY 2008 compared to 6.7 percent in FY 2007. For other food items such as, meat, fish, eggs, and milk price inflation had remained at more manageable levels. Food price inflation accelerated in 2008 and showed significant variation by region and commodity.

In **Pakistan**, consumer prices of wheat flour increased sharply in all provinces since July 2007. In food-deficit provinces, prices of wheat flour in May 2008 had more than doubled compared to a year earlier. The lowest increases in flour prices were registered in the main wheat surplus province of Punjab where average quotations in May were about one-third higher than their corresponding levels in the previous year.

In **Sri Lanka**, besides many other factors, drought during the main rainy season in late 2007/early 2008 severely affected paddy production, particularly in the Eastern districts, causing a short supply in the market. As a result, food prices soared up quite remarkably between 2007 and 2008 – 55 percent in rice and 36 percent in wheat. Increased price of wheat flour and its import limitation and rocketing prices of all food items had fall out effect on growing rice consumption in the country.

Timor-Leste also witnessed significant increase in food prices during the past few years. In early 2008, the price of the main food grains such as rice and maize more than doubled in local markets throughout the country. The price of rice went up from approximately US$0.30/kg to US$.70/kg while the price of maize rose from US$0.20/kg to approximately US$0.50/kg.

1.2 Summary of government responses to the soaring food prices

The governments of several Asian countries and the UN worked together to alleviate the worst impact of the high food prices on the most vulnerable population. The measures included the implementation of different policies and appeals for assistances. A brief account of these initiatives is discussed below:

Afghanistan: The Government of Afghanistan was amongst the countries to make important strategic interventions to address the crisis of food price rise during 2007/08. Through the Joint Emergency Appeal on High Food Price and Drought Crisis in early July 2008, the government attempted to respond to the crisis faced by the poorest farmers of Afghanistan, caused by the combination of persistent high food prices, a much reduced harvest, and stringent drought conditions across the country. The Government of Afghanistan also planned to establish a Strategic Grain Reserve (SGR) under its social protection scheme and requested FAO for an urgent assistance. In October 2009, the Ministry of Agriculture, Irrigation and Livestock (MAIL) procured 100,000 tonnes of wheat grain from Afghan farmers and stored it in main government silos in Kabul, Herat, Baghlan, Mazaar and Kunduz before winter for distribution to vulnerable populations, when

required. It also supported the local production capacity under MAIL's National Agriculture Development Framework. The framework pursues food security with an aim to ensure that the vast majority of the population has access to adequate quantity and quality of food, either by growing it, or by having sufficient money to buy it.

Bangladesh: The rise in prices of food grains in Bangladesh was associated with the rise in prices of fuel and electricity. The Government took compensatory measure to subsidize the locally manufactured urea at 75 percent of the normal price, helping to stabilize its price throughout 2007/08.

Cambodia: During the period of food crisis triggered by soaring price rises, the Royal Government of Cambodia took both short and long term measures to help the poor farmers. Important policy measures of the government were banning the rice exports, lifting ban on pig and pig meat import in order to suppress the pork prices (short term), releasing 200 tones of rice to the market at prices lower than the market, requesting World Food Programme to provide 3,000 tonnes of rice as grant, while the long term measures were to expand the irrigated land to increase rice production.

Nepal: In response to soaring food prices, the government of Nepal has planned responses in four temporal categories: (i) immediate Reponses spanning 6 months to a year; (ii) short term response spanning from 1 to 3 years; (iii) medium term strategies spanning the period of 3 to 5 years; and (iv) long term strategies for an undisclosed period. The immediate measures include (i) effective mobilization of food assistance, (ii) various support schemes to farmers, (iii) distribution of improved seed kits to farmers, (iv) support to rehabilitation of micro-irrigation schemes, (v) strengthening existing farmer managed irrigation schemes, (vi) implementation of pro-poor income enhancement programs, and (vii) market development. The responses planned are progressively food security sustaining, including market price stabilization, food distribution in remote districts, control on conversion of food grain into alcohol, land utilization policy and crop insurance policy.

Pakistan: In response to soaring prices, the Government of Pakistan (GOP) undertook immediate inclusive policy and trade related measures to keep food prices from further escalating and to provide wheat at affordable prices. In addition, the GOP plans to launch various social protection instruments to bail out vulnerable and poor people from the adverse impacts of price hikes. Key measures taken by the government include (i) situation assessment, (ii) wheat imports, (iii) increased border surveillance to curb wheat smuggling, (iv) removal of import duty on wheat, (v) timely announcement of Minimum Support Price (MSP) or reference price for wheat, (vi) adjustments in rice export policy, (vii) subsidy on agricultural inputs, (viii) administrative measures to keep food prices low, and (ix) social protection for the poor households.

Sri Lanka: In an endeavor to check food grain prices, the President of Sri Lanka launched the domestic food production campaign in September 2007 popularly named as (*Api Wawamu Rata Nagamu*) "Let us Cultivate and Uplift the Nation 2007 -2010". The main objective of the program was to attain self sufficiency in rice, other field crops, fruits and vegetables. The Ministry of Agricultural Development and Agrarian Services appointed crop leaders for these crops and were responsible for the preparation and successful implementation of the development plans for specific crops aiming to attain the expected objectives of the campaign.

Timor-Leste, a newly emerging country in the region, started facing social unrest due to unavailability of food during the political/social crisis by the end of 2006. In response, the government began allocating a significant amount of its budget to secure food imports, as well as introduction of subsidization and control of price on imported rice in order to ensure food accessibility. However, the "cheap-food" measure consumed as much as 15 percent of the total government budget in 2008, resulting in the decease of services delivery to other sectors. Realizing the sustainability issue of the food security of the entire nation, in particular with alarming population growth of 3.7 percent per year (2004 census), the government identified self-reliance in food as the number one national priority for 2009 and as number two national priority for 2010 with the objectives to increase annual domestic food production by 10 percent during these years.

In **Bhutan, DPR Korea** and **Mongolia**, the respective country reports did not provide information on the measures taken by the respective governments to address the hikes in food prices except for requests for support from international organizations.

1.3 FAO response to the crisis in the region

As reported earlier in section 1.1, in recognition of the threat to food security of soaring food prices, in December 2007 FAO Director-General launched the Initiative on Soaring Food Prices (ISFP) with the immediate aim of rapidly increasing food production during the 2008 and 2009 agricultural seasons, mainly by supporting direct access to inputs for smallholders. The initiative aims to assist governments in formulating country-specific action plans for food security interventions to be implemented along the twin-track approach – boosting food production while also guaranteeing access to food for the most vulnerable population groups affected by higher and more volatile food prices. FAO's assistance has taken the form of: (i) interventions to increase access by small-scale farmers to inputs (e.g. seeds, fertilizer, animal feed) and improve agricultural practices (e.g. water and soil management, reduction of post-harvest losses); (ii) policy and technical support; (iii) measures addressing smallholder access to markets; and (iv) a strategic response to cushion the effects of rising food prices in the short, medium and long terms through increased and sustainable investment in agriculture. (FAO, 2008).

As a part of this initiative, in response to strong demand from countries in the Asia-Pacific region, FAO approved emergency assistance under its Technical Cooperation Programme (TCP) aimed to alleviate the impact of soaring food prices on the most affected vulnerable farming populations. In Asia, such TCP assistance was provided to ten countries (Afghanistan, Bangladesh, Bhutan, Cambodia, DPR Korea, Mongolia, Nepal, Pakistan, Sri Lanka and Timor-Leste). The TCP projects were specifically designed to help farmers faced with high production costs to maintain production during the successive cropping seasons by providing free of cost certified high quality improved seeds of different crops directly to the beneficiaries at their doorsteps. In many countries, priority was placed on women headed and poor households as well as vulnerable groups and small farmers who could not afford quality inputs on their own. These were bolstered by a regional TCP project (TCP/RAS/3204) based in RAP to provide technical support and monitoring and reporting of the activities from the regional level.

Major activities in the region under ISFP included distribution of seeds, fertilizer and other inputs along with skill trainings for their application aiming to increase the acreage under modern varieties (MVs) and raise both production and productivity of major staple crops like rice, maize, pulse and vegetables. The projects had a common objective across countries to improve the food security of the target beneficiaries by improving food production through increased farm production, income and employment utilizing their own resources. The original timeframe of the projects were about one year (2008/2009). The level of project assistance was USD 500,000 for all countries irrespective of the size and the level of hardships, except Cambodia which received USD 200,000. The ISFP TCP projects were implemented for a year in 2008/09 and completed their activities by December 2009.

In **Afghanistan**, the project (TCP/AFG/3201/E) supported emergency agricultural activities through provision of certified wheat seed and fertilizer. In **Cambodia,** the Department of Agronomy and Agricultural Land Improvement (DAALI) in cooperation with the Local FAO office implemented a project TCP/CMB/3202. The objective was to provide support for carrying out various project component activities such as organizing farmer selection and training and distribution of quality rice seeds. In **DPR Korea**, the support was institutional - for the production of the winter/spring crops during the cropping season 2008 by providing urea fertilizer to selected farming cooperatives under OSRO/DRK/803/CHA project. In **Mongolia,** the project (TCP/MON/3202**)** supported to respond to the immediate needs of the small vegetable and potato producers. Similar project entitled TCP/SRL/3201 was implemented in **Sri Lanka** to boost rice production in the North Central and Eastern Province of the country in line with the government's strategy of bringing abandoned paddy lands back into production for self-sufficiency and price stabilization. Other countries viz. **Bhutan, Nepal, Timor-Leste and Pakistan** were also provided respective project support to implement the free delivery of quality inputs, particularly the seeds and fertilizers.

Technical Supports: FAO also responded to the requests of the governments in the region by extending technical backstopping at various levels to plan, monitor and implement the TCP input delivery projects. In **Afghanistan,** the project was coordinated by FAO's Emergency and Rehabilitation Unit. The FAO supported rigorous quality inspections of seeds and fertilizers and their storage until dispatch to sites, and proposal preparation for Strategic Grain Reserves. In implementing the project, FAO worked in close collaboration with MAIL and the Salam Organization for Afghanistan Rehabilitation (SOFAR), a Recipient Organization (RO) as an implementing partner and the ERU monitored and followed up on the implementation of project activities, drawing on FAO's extensive presence in the Afghanistan. In **DPR Korea**, FAO monitored the transportation, loading and unloading of fertilizer procured by WFP from Serbia. In **Bhutan, Cambodia and Nepal**, inputs procurement and deliveries were carried out by FAO in cooperation with the concerned government agencies. In **Bhutan**, FAO procured all materials (cements, pipes etc) directly through tendering and delivered to the sites for irrigation channels development. In **Cambodia**, inputs were delivered by FAO in cooperation with the Department of Agronomy and Agricultural Land Improvement (DAALI), MAFF and Provincial Department of Agriculture. Likewise, procurement of different inputs like seeds and livestock seeds/medicines was done by FAO in **Nepal** through competitive bidding process in close cooperation of the government.

1.4 Purpose of ISFP TCP project assessments

The overall objective of the assessment is to get quick feedback on generic impact including satisfactions and perceptions of respondents about FAO supported ISFP TCP projects on key areas. In addition, the assessment is also expected to generate experiences and lessons for sharing to optimize future emergency responses of similar nature. The specific objectives of the assessment are as follows:

- Assess the use of various inputs received by target groups, the knowledge level and willingness to adopt by beneficiaries;
- Assess the level of satisfaction of beneficiaries with the FAO ISFP TCP project and the impact that it had on their lives;
- Collect the views of project beneficiaries, implementing agencies and input suppliers on the major constraints or problems they faced with the project and suggestions that they have for improving them;
- Contribute to a lessons learning process that will be useful for optimizing future emergency responses; and
- Provide recommendations to better handle the emergency projects of similar nature in future.

1.5 Brief description of beneficiary satisfaction and impact assessments

The assessment of the national ISFP TCP projects and the regional synthesis is an outcome of a request by FAO governing bodies to assess the effectiveness and impact of the emergency project of this nature. The eventual objective is to see how effectively the supports were utilized at the country, regional and global level and whether and to what extent the expected benefits were realized in improving production and food security of the intended target beneficiaries. The ultimate goal of the assessment is to provide the FAO Member States and Governing Bodies a range of information on the utilization of the resources to generate the expected outputs of the investments including lessons learnt and constraints faced at different levels.

Beneficiary satisfaction and impact assessments were organized with financial and technical support from FAO in the following ten countries of Asia: Afghanistan, Bangladesh, Bhutan, Cambodia, DPR Korea, Mongolia, Nepal, Pakistan, Sri Lanka, and Timor-Leste. These assessments were not a part of original project design and hence there were no baseline surveys of the target beneficiaries to allow "before and after" comparison of project outcomes. In light of this situation, it was felt that the best way to gauge the project impact is to focus on the collection of beneficiaries' views on how they felt the projects had impacted on their lives – both positively or negatively. Following the decision to undertake the assessments at the country levels, in order to maintain uniformity in data collection at the country level and their synthesis at the

regional and global level, ISFP Secretariat developed and circulated common guideline framework in early September 2009. This common framework contained a brief guideline to carry out the survey, a survey questionnaire to be administrated to the sample beneficiaries, a brief questionnaire designed for the implementing agencies, excel sheet for data entry and processing and a report outline. The countries were allowed to adjust and modify the instruments as necessary to suit to their specific contexts while undertaking the survey and data collection without, however, foregoing the basic minimum information for comparative analysis.

As directed by the Secretariat, RAP circulated the above mentioned guidelines and questionnaires to all the FAORs in September 2009 providing some level of flexibilities to make necessary adjustments in these tools to suit the respective country contexts and specificities. Beneficiary satisfaction and impact assessment surveys were carried out with limited number of sample beneficiary households trying to capture their views and opinion on diverse parameters - knowledge and awareness level of beneficiaries; satisfaction levels in terms of receiving, timeliness, quality, appropriateness of inputs delivered; availability and use of inputs and change in crop yield and production and consumption; perceptions of respondents on overall production, accessibility level and ability to sell, comparing these indicators to before the project situations. For all information collected and analyzed, due emphasis is placed on gender dimension in order to assess project's performance from gender point of view. Traditionally, females have played important role in the household's economy in the countries of the region, especially in multiple activities ranging from seed preservation to planting and crop harvesting to food grain processing and storage and utilization. The assessment, therefore, also attempts to generate information on females' perceptions on key performance parameters.

The Regional ISFP Coordinator (Consultant) under the supervision of the Chief, Policy Assistance Branch, RAP, provided close technical support in collaboration with the ISFP Secretariat focal point officer. Technical backstopping included supporting the preparation of brief study proposal including methodology (sample size and sampling methods, data entry and analysis, data analysis and reporting outlines etc), preparation of consultant TOR, survey team formation and mobilization.
Afghanistan, Bangladesh, Pakistan and Sri Lanka had carried out impact assessment surveys on their own before the ISFP Secretariat guidelines and tools were provided in September 2009. In order to achieve uniform set of information to have complete data and to allow cross-country comparisons on variable of interest, these countries were requested to carry out supplemental surveys to generate additional information, following the common guidelines provided by the ISFP Secretariat. Pakistan could not carry out the supplemental survey because of the security situation. In other countries, budgetary allocations and technical supports to undertake fresh assessments focusing on key areas were provided by the Regional ISFP TCP project TCP/RAS/3204 based in RAP and the ISFP Secretariat.

The countries covered by the assessment and the sample sizes covered under each country assessment is shown in Table 1.2. A little methodological inconsistency is noted on the sample size for each country which ranged from a high of 20 percent of the beneficiaries (sample frame) in Afghanistan to as low as 0.8 percent in Nepal with an average of nearly 2 percent sample size. The low sample sizes in Nepal and Timor-Leste are because of the large number of households covered with thin spread of inputs due to the inability to apply strict criteria owing to demand side pressure. The inclusion of female-headed households in the sample has also varied considerably – from 2 percent in Bangladesh to as high as 31 percent in Bhutan. There was no information in country reports to ascertain whether these variations reflect proportionate representation from the respective sampling frames of the beneficiaries.

Table 1.2: Beneficiary households and sample size distribution by gender

	Countries	Number of beneficiary households	Number of sample households	Sample households by gender (%)		Sample as % of number of households
				Male	Female	
1	Afghanistan	2980	596	95	5	20.0
2	Bangladesh	11175	252	98	2	2.3
3	Bhutan	10969	250	70	31	2.3
4	Cambodia	7476	213	72	28	2.8
5	DPR Korea*	12304	15 Co-ops.			
6	Mongolia	9094	252	78	22	2.8
7	Nepal	36,864	300	89	11	0.8
8	Pakistan **	8320	416			5.0
9	Sri Lanka	8350	100	73	27	1.2
10	Timor-Leste	32,700	300	93	7	0.9
	Overall	**140,512**	**2,679**	**83**	**17**	1.9

Source: Country Reports, 2009.

* In DPR Korea, the direct beneficiaries included the 70 input recipient cooperatives and not the households and the assessment was confined to sample cooperatives. The figures in the table represent households federated with the beneficiary cooperatives although not directly benefited through the project.

** In Pakistan, the assessment was completed by the FAOR prior to the circulation of common guidelines and request was made later to conduct the assessment as per the common guideline circulated by the Secretariat. However, the supplementary survey was not possible due to security problem and only partial data where possible from the previous country assessment have been used in this regional synthesis report.

This report synthesizes at the regional level the contents of the beneficiary satisfaction and impact assessment report carried out in these ten countries. It compiles information provided in country reports on all aspects of assessment which makes it possible for cross country comparisons on key indicators. Additional methodology used in this synthesis is the aggregation across variables and across countries using simple averages, weighted averages and neutral weights which are discussed in relevant sections of the report. The regional synthesis also provides broader picture of effectiveness and impacts of input delivery projects implemented in the region along with the recommended actions for consideration during design and implementation of similar projects in the future.

2. SUMMARY OF TCP PROJECTS IN THE REGION

2.1 Overview of TCP projects in the region

The overall objective of the ISFP TCP projects was to boost agricultural production among small holders' farming systems to address soaring food prices and thereby increasing their food security. The specific objectives were to increase agriculture production by providing quality seeds and balanced use of fertilizers at generally no cost to producers and also help enhance the awareness, knowledge and capacity of target beneficiaries towards sustainable use of improved inputs in the long run.

Expansion of areas under hybrid and modern varieties of different crops during the year 2008-2009 was the key concern for most governments who requested for FAO's assistance to support agricultural production. In response, the ISFP projects were designed to assist vulnerable groups of people including small and marginal farmers of many countries in getting seeds/seedlings of modern varieties (MVs) and high yielding varieties (HYVs). Major activities included seed and fertilizer support to the beneficiaries depending upon local level needs and potentiality expecting that the project intervention would increase acreage under MVs leading to commensurate growth in production and productivity of staple crops like rice, wheat, maize, pulse and vegetable in the input recipient countries. The project was initiated with a view to boost agricultural production and consequent enhancement in food security through quality inputs support in small holders farming systems as a fitting response to soaring food prices. The target beneficiaries of the project in all countries were marginal and small farmers who constituted mostly the vulnerable groups living below threshold poverty levels defined by respective country standards.

In all countries, priority on selecting beneficiaries was accorded to women headed and poor households and to small farmers lacking their own investment capacity. Although inputs delivered across countries differed largely in both types and quantities, the target groups were commonly the poor and deprived households affected by soaring food prices. Main expected outcome of the project was to enhance the level of production within shortest possible period so that the hitherto marginalized beneficiaries get relieved from the hardship of price hikes in basic food commodities.

2.1.1 Project description and features

In a bid to enhance food security, ISFP TCP projects planned to distribute free production inputs to the selected farmers of selected pockets. The inputs thus distributed included mainly seeds of staple crops like rice, wheat and maize along with vegetable seeds in nine countries whereas only fertilizer was distributed in DPR Korea. In some countries, such as Afghanistan, Bangladesh, Bhutan, Cambodia and Timor-Leste, both seeds and fertilizers were provided through the project.

The target areas in most countries included remote and backward locations, areas affected by conflicts as well as recurrent natural disasters like droughts and floods. In few other countries namely Pakistan and Sri Lanka, the project focus was more in areas affected by conflict whereas in countries like DPR Korea and Mongolia, areas with high potential for growing specific crops were the basis for selection (Table 2.1).

Table 2.1: Overview of TCP projects in RAP region

Country	Project symbol	Brief project description		
		Objectives	Inputs distributed	Target areas and households
Afghanistan	TCP/AFG/3201	i) to boost production in food deficient areas; and ii) prevent price surge through increased food supplies among vulnerable groups.	**Seeds**: Wheat; **Fertilizers:** DAP and Urea	3 districts of Sari Pul Province viz. i) Sari Pul centre (1,000 hhs), ii) Sancharak (990 hhs), and iii) Sozma Qala (990 hhs), all affected by drought and high food prices. Total beneficiaries: 2,980 hhs.
Bangladesh	TCP/BGD/3202	i) to boost agriculture production of small farmers through use of balance inputs; and ii) increase food securit of poor and vulnerable farming families	**Seeds**: Rice, Maize, Lentil, Spinach, Red Amaranths, Radish, Carrot. **Fertilizers**: Urea, TSP and MoP	15 districts and 99 upazillas (subdistricts) affected by floods. Total beneficiaries included 11,175 small and marginal farm households.
Bhutan	TCP/BHU/3202	i) to boost agricultural production in small holders farming systems to address the soaring food prices through the distribution of free inputs.	**Seeds:** Maize, rice, cabbage, cauliflower, beans, radish and potato. **Seedlings:** Apple, orange and walnut	All 20 Dzonkhags of the country with a total number of 10,969 hhs.
Cambodia	TCP/CMB/3202	i) to boost agricultural production to mitigate the impact of the high food prices especially on vulnerable small holding farmers.	**Seeds**: Rice **Fertilizers**: Urea and DAP	Different provinces viz Kampong Speu, Kampong Chhnang, Kampot, Takeo, Kampong Cham and Prey Veng which were affected by drought and floods. Total beneficiaries 4,276 hhs.
DPR Korea	TCP/DRK/3202	The overall objective of the project was to improve the production of the winter/spring crops during the cropping season 2008 by providing urea fertilizer to selected farming cooperatives	**Fertilizer:** Urea	Main granary areas of North and South Pyongan, North and South Hwanghae Provinces and Pyongyang City. Total 12,304 hhs cultivating 18,661 ha land in a total of 70 beneficiary cooperatives.
Mongolia	TCP/MON/3202	To respond the immediate needs of the small vegetable and potato producers affected by the soaring food and agricultural input price	**Seeds:** Potato, Carrot, Beet Yellow; Beet deep red, Cucumber and Onioin	11 Aimags (Provinces) viz Selenge, Tuv, Arkhangai, Uvurkhangai, Zavkhan, Khuvsgul, Dornod, Bayan-Ulgii, Khovd, Gobialtai, Bayankhongor aimags, and nine districts of Ulaanbaatar City. The actual numbers of beneficiaries were 9,094 hhs against an estimated 8,000 hhs.

Country	Project symbol	Brief project description		
		Objectives	Inputs distributed	Target areas and households
Nepal	TCP/NEP/3202	To respond the urgent needs of the most vulnerable households and relieve them from soaring food prices and simultaneously encourage them grow crops through free distribution of various seeds.	**Seeds:** Rice, Wheat, Finger millet, Vegetables; **Other Inputs**: Animal feed and medicine	9 districts in total; 5 remote food deficit districts of mid and far west regions viz. Acham, Bajhang, Baitadi, Darchula and Jumla; 2 western terai districts viz Kailali and Kanchanpur and 2 eastern terai districts affected by Koshi flood viz Saptari and Sunsari. Total beneficiaries: about 40,000 including about 34,000 who received different types of seeds and the others livestock feed and medicine.
Pakistan	TCP/ PAK/3202	To maintain livelihoods and food security of the most vulnerable households of the remote and food insecure districts of Kohistan, Shangla and Batagram of North West Frontier Province, Pakistan	**Seeds:** Wheat and Maize: **Fertilizers:** Urea and DAP	Target areas: Three district affected by 2005 earthquake were the project's target areas. These were Shangla, Kohistan and Batagram of NWFP, Pakistan. A total of 8320 farming households were benefited from crop input support for Rabi (wheat crop) 2008-09 and Kharif (maize).
Sri Lanka	TCP/SRL/3201	To contribute to achievement of rice self–sufficiency in the country and make rice more affordable and available through the provision of agriculture inputs for Maha season 2008/2009	**Seeds:** Rice; **Other Inputs**: Zinc sulphate and handtools (mamoties)	Target areas: Ampara, Anuradhapura, Batticaloa and Polonnaruwa with a total of 8,350 beneficiary hhs.
Timor-Leste	TCP/TIM/3202	To increase domestic food production and improve household food security through the provision of quality agricultural inputs, particularly among small farm holders affected by soaring food prices	**Seeds**: Rice and maize. **Fertilizer**: Urea	Main food production districts of the countries including Baucau, Cova-lima, Bobonaro, Manatuto, Manu-fahi and Viqueque. Total beneficiaries; about 33,000 hhs.

Source: Country assessment reports

The total number of beneficiaries in the ten countries receiving the project support is 140,512 households which ranged from the lowest of 2,980 households in Afghanistan to 37,464 households in Nepal (Table 2.2).

Table 2.2: ISFP resource allocation and number of beneficiary HHs by country

Country	Budget ($)	Total beneficiary (hh)	Average budget ($per hh)
Afghanistan	500,000	2,980	167.79
Bangladesh	500,000	11,175	44.74
Bhutan	500,000	10,649	46.95
Cambodia	200,000	7,476	26.75
DPR Korea	500,000	12,304	40.64
Mongolia	500,000	9,094	54.98
Nepal	500,000	37,464	13.35
Pakistan	500,000	8,320	60.10
Sri Lanka	500,000	8,350	59.88
Timor-Leste	500,000	32,700	15.29
Total/average	**4,700,000**	**140,512**	**33.45**

Source: Compiled and computed from country assessment reports, 2009
Note: In Nepal, part of USD 500,000 was divided to distribute relief such as fodder and vaccination for livestock to Koshi flood victims (USD 100,000). Another USD 100,000 was given to the flood victims in Kailali and Kanchanpur districts.

This large number of beneficiaries was not pre-targeted in the design but had to be accommodated due to demand side pressure, particularly in the case of Nepal, Bhutan and Timor-Leste. Table 2.2 shows that all countries were provided with a project budget of USD 500,000 each except Cambodia which received only USD 200,000 for a project period of one year (2008/09 crop year). Average budget allocation per household varied significantly across countries with a lowest amount of USD13.35 in Nepal to as much as USD167.79 in Afghanistan with an aggregate all country average of USD33.45. The country-wise variation in the average support level per household is depicted in a pie chart presented in Figure 2. As stated already, the low per household support level in Nepal and Timor-Leste is because of the forced inclusion of households due to high and irresistible demand side pressure, as admitted in the respective country reports. Afghanistan was able to focus on a small number of carefully selected beneficiaries thus allowing to reach per household average support to a much higher level compared to the other countries.

In the case of DPR Korea, the beneficiary number reported are members of 70 Cooperatives which were supported by the project. In countries like Nepal, Bhutan and Timor-Leste, the beneficiary numbers are approximate because the input distribution transcended the original plan due to the inability to apply strict criteria.

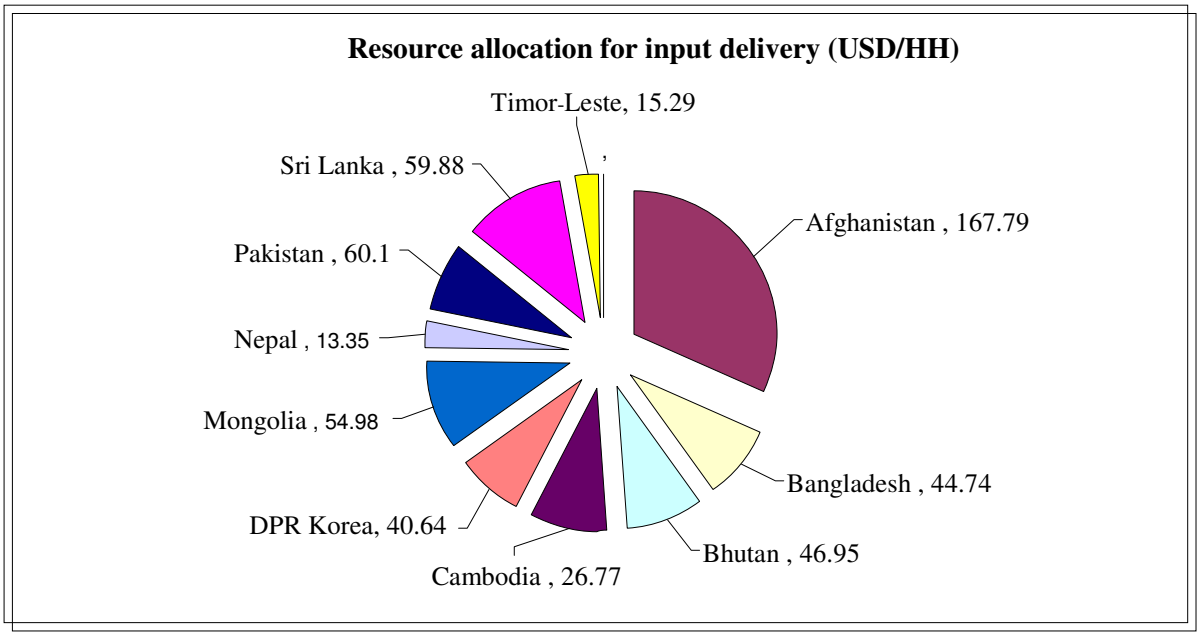

Figure 2: Pie chart depicting the average budget level per beneficiary household in recipient countries

2.1.2 Regional overview of inputs distributed

Major inputs distributed to the beneficiaries of different recipient countries include seeds of food crops, vegetables and fruits; and urea and DAP fertilizers. Other inputs include support for irrigation channels, maize silo (Bhutan), small equipment (Sri Lanka), and information booklets (Cambodia). All countries except DPR Korea received one or the other kind of seeds.

A total of 2,642 tonnes vegetable seeds of different crops were distributed to 124,108 beneficiaries, the value worth of which was not reported in many country reports. The three countries, for which the value is reported, show an average seed price of $0.88 per kg. Using this average price, the value of support in terms seeds amounts to $1.95 million. Similarly, 38,279 beneficiaries of six countries (Afghanistan, Bangladesh, Cambodia, DPR Korea, Pakistan and Timor-Leste) received a total of 1,913 tonnes of fertilizers. The two countries which reported the value of fertilizer showed an average price of $0.82/kg which when applied to the total fertilizer distributed in all countries shows the aggregate value of support to be $1.51 million. Due to lack of consistency in reporting, it is difficult to precisely estimate the aggregate magnitude of inputs distributed, the value of support and the actual number of beneficiaries. Nevertheless, using parameters from countries where data were available and correcting for the multiple counting in the case of beneficiaries, a rough estimate is generated according to which, a little over 140,000 beneficiaries have received support valued at approximately $3.5 million, or approximately three-fourth of the total project budget. The available details on inputs distribution are presented in Table 2.3. The detailed information used to construct Table 2.3 is presented in Annex 1, Tables 1 to 10.

Table 2.3: Quantity and value of inputs distributed and number of beneficiary HHs by country

Countries	Seeds (all)			Fertilizer			Other inputs			Total		
	Volume (Kg)	Value (USD)	HH benefitted	Volume (Kg)	Value (USD)	Beneficiaries (HHs)	Volume (Kg)	Value (USD)	Beneficiaries (HHs)	Volume (Kg)	Value (USD)	Beneficiaries (HHs)
Afghanistan	149,000		2,980	298,000		2,980				447,000		2,980
Bangladesh****	25,448	42,928	11,175	523,875	383,038	11,175				549,323	425,966	11,175
Bhutan *	362,516	152,691	10,649				134	25,217		362,650	177,908	10,649
Cambodia**	88,000	47,790	4,676	140,000	127,890	2,800	16,780	2,500		245,280	178,180	7,476
DPR Korea***				465,000		12,304				465,000		12,304
Mongolia	601,410		9,094							601,410		9,094
Nepal	124,821		37,464							124,821		37,464
Pakistan****	208,000		8,320	416,000		8,320				624,000		8,320
Sri Lanka****	615,000		8,350						8,350	657,426		8,350
Timor-Leste	425000		32000	70000		700				495,000		32,700
All countries	**2,511,195**	**243,409**	**124,108**	**1,912,875**	**510,928**	**38,279**	**16,914**	**27,717**	**8,350**	**4.440,484**	**782,054**	**140,512**

Source: Compiled from Country Reports. 2009

Note: Most countries have not reported the value of inputs distributed. The total value of inputs in the table above represents the value of inputs supplied by the ISFP TCP projects in two to three countries only; therefore grossly undermines the total contribution in value terms. Detailed breakdown of inputs distributed and other information by country are presented in Annex 1, Table 1-10.

* In Bhutan, other inputs represent maize silo. Irrigation channels (128 km) supported by project are not reflected in the above tables. Some beneficiaries supported for irrigation schemes are not included in the total

** In Cambodia, other inputs represent 16,780 booklets published and distributed to the beneficiaries which are not included in the total.

*** In DPR Korea, the figures for beneficiaries represent the households who are associated with 70 Cooperatives supported by the project.

**** In Pakistan, Sri Lanka and Bangladesh, the same beneficiaries received more than one input and thus not accounted in total to avoid double counting. In Sri Lanka, zinc sulfate and small equipment (mammoties) were distributed as other inputs the magnitude and value of which is not reported.

2.1.3 Socio-economic profile of sample beneficiary households

The impact assessment survey covered 2,679 sample households in 9 countries and 15 Cooperatives in DPR Korea. A large proportion (83%) of the study sample constituted the male-headed households. Total direct beneficiaries from the project in all 10 countries are reported at about 140,512 who constituted mostly the vulnerable groups of the communities including marginal and poor farmers who were affected by one or other types of problems such as droughts, floods, cyclone, conflicts, and whose livelihood was greatly threatened by the soaring prices of food grains. The beneficiaries were also the economically most deprived groups, unable to invest and sustain their farming because of increased cost of modern farm inputs, primarily the seeds and fertilizers. The project derives its rationale from having supported these most vulnerable groups with inputs which they could have barely afforded on their own.

Demography and land holding situation

The demographic and land holding situation has been reported for only 8 countries where the impact assessment surveys were conducted as per the common guidelines provided by the ISFP secretariat. AS mentioned before, in DPR Korea, the support was provided to the cooperatives, and thus the household survey was not conducted. In the case of Pakistan, project's impact assessment was completed before the common guideline was issued from the TCP. Later, the guidelines and support for supplemental survey were provided but the adverse security situation in the country rendered it impossible to carry out the survey. The detailed demographic information about the beneficiaries of the recipient countries is presented in Annex 2.

Average age of the support recipient household heads in the 8 countries covered was 47.5 years, old enough to make informed decisions on project resource utilization. Relatively older household heads were from Bhutan and Mongolia while the relative younger household heads were found in Nepal (44.1 years). Since the overall age range of household heads is very narrow (about 6 years), this variable is of less relevance in comparing performance across countries.

The average family size is 6 persons with Afghanistan leading the country group with 8 persons and Sri Lanka having the lowest family size (4 persons).

Average land holding size of the beneficiaries in the region is estimated at 1.89 ha, one-third of a hectare on an average per capita (Table 2.4). Only Afghanistan, Mongolia and Timor-Leste had the average holding size above 2 hectares. Bangladeshi and Cambodian beneficiary households operated less than a hectare of farming land and had the lowest per capita holding size (0.12 ha). Nepal and Sri Lanka represent cases where in the former, modest family land holding is converted into a very low per capita holding (0.15 ha) due to big family size (7.8 persons), and in the latter, the same modest family holding is shared by small family size (4 persons) to give a relatively comfortable per capita holding of 0.37 ha.

Table 2.4: Demography and land-holding of the sample households

Country	Average Age	Average family size	Average food sufficient months	Proportion FHH	Average holding size	Per capita land (ha)
Afghanistan	47.0	8.0	4.9	4.9	4.25	0.53
Bangladesh	45.3	6.1	9.3	2	0.71	0.12
Bhutan	50.9	5.5	10.3	30.8	1.80	0.33
Cambodia	49.5	5.2	8.8	27.7	0.63	0.12
Mongolia	50.0	4.6	6.7	22	2.15	0.47
Nepal	44.1	7.8		11	1.20	0.15
Sri Lanka	47.3	4.0		27	1.48	0.37
Timor-Leste	46.2	6.4	9.2	7	2.86	0.45
Average	47.5	6.0	8.2	16.7	1.89	0.32

Source: Compiled from Country Reports, 2009.

Note: Details are in Annex 2. In DPR Korea, Cooperatives were supported and hence no household survey was conducted. In the case of Pakistan, the country report was prepared on its own prior to receiving the guidelines from TCP and the supplemental survey was not possible due to adverse security situation.

Table 2.5 reveals that there is significant gender imbalance in the possession of land in countries of the region and Mongolia leads all countries in this imbalance where the average holding size of female-headed households (FHH) is only 21.5 percent (almost 5 times lesser) of the average holding of male-headed households (MHH). Bhutan is in the other extreme, where the holding size of FHH is 2.07 times higher than that of male MHH. This has pulled the regional average to a more satisfactory level. In Sri Lanka, the situation is more equitable. On the region aggregate, FHHs have slightly above three/fourth of the holding compared to the MHHs. In terms of food sufficiency, the beneficiaries of not a single country could muster the availability of food all year round. Maximum sufficiency level was reported by Bhutan (10.3 months) followed by Timor-Leste and Bangladesh. The country in the lowest echelon in terms of food security is Afghanistan (4.9 months). Nepali and Sri Lankan reports did not provide information on the food security situation.

Table 2.5: Overall land holding size by gender of household heads

Countries	Land holding size (ha/hh)			FHH holding as % of MHH holding
	Male	Female	Both	
Afghanistan	4.30	3.30	4.25	76.7
Bangladesh	0.72	0.44	0.71	61.4
Bhutan	1.35	2.80	1.80	207.4
Cambodia	0.67	0.53	0.63	79.1
Mongolia	2.60	0.56	2.15	21.5
Nepal	1.29	0.50	1.20	38.8
Sri Lanka	1.47	1.49	1.48	101.4
Timor-Leste	2.90	2.3	2.86	79.3
Average	**1.91**	**1.49**	**1.89**	**76.7**

Source: Compiled and computed from country reports, 2009

Keys: FHH – female-headed household; MHH – Male-headed household

Livestock holding

The information on livestock holding was not available for three countries – Bangladesh, DPR Korea and Pakistan. In the case of countries from where data were available, Table 2.6, derived from Annex 3.2, shows that the beneficiary households raised a number of different species of livestock and birds with higher proportion of sheep, goats, chicken, cattle and buffaloes. The average number of animals and birds raised by the male-headed and female-headed households by species of animals and birds is also shown in the table.

Table 2.6 Livestock holding situation by species, country and gender

Livestock types	Average number reared per household	
	Male	Female
Cattle	2.80	2.20
Sheep	5.06	2.87
Goats	4.33	3.72
Chicken/ poultry	4.57	3.98
Donkey	0.28	0.18
Horse	0.77	0.45
Pig	0.84	0.50
Duck	1.14	1.14
Camel	0.00	0.02
Non livestock	0.00	0.00
Buffalo	1.16	4.24
Pigeon	2.95	0.50
Fish ponds	183.91	0.33
Beehive	0.05	0.05
Poultry/duck	0.77	0.48

Source: Compiled from Annex 3

Note: Information on livestock holding was provided by only 7 countries. Bangladesh, DPR Korea and Pakistan did not provide information on livestock holding.

Since direct addition of the number of animals and birds does not make sense because of their differing sizes and values, a system of weighting to convert these into adult cow equivalent has been adopted. The cow equivalence of other animals is 0.7 for camel, 0.8 for water buffalo and horse, 4 for pigs, and 8 for sheep (Fenna, 2000). Using this conversion system to adult cow equivalent, Table 2.7 shows the average adult cow equivalent number of animals and birds raised by the male-headed and female-headed beneficiary households in different countries. The table reveals that, the average holding of animals is higher (8.6) in the case of male-headed households as against only 6.5 in the case of FHH. Highest number of animals was raised in Timor-Leste (10.8) while the lowest number was found in Cambodia (2.6).

Table 2.7: Adult cow equivalent livestock raised by beneficiary households by country and gender

Country	Male			Female		
	Average number reared per household		Average grower %	Average number reared per household		Average grower %
	All case	Yes case		All case	Yes case	
Afghanistan	5.1	7.7	66.5	5.5	8.0	69.0
Bhutan	6.4			6.4		
Cambodia	2.6	3.5	76.7	1.9	8.2	23.3
Mongolia	7.6	35.9	21.1	3.7	33.7	10.9
Nepal	3.7	13.4	27.7	2.7	45.4	6.0
Sri Lanka	3.0	18.8	15.8	4.8	24.7	19.5
Timor-Leste	10.8	35.8	30.2	5.5	22.3	24.8
Average	5.6	19.2	39.7	4.4	23.7	25.6
Weighted average	8.6	26.1	32.8	6.5	35.6	6.5

Source: Compiled from Annex 3.2 with conversion to adult cow equivalent.

2.2 Input distribution systems used in TCP projects

2.2.1 General

Significant variations are noted in the mechanism of input distribution across the countries and the choice of mechanism may have bearings on the efficiency and effectiveness of the distribution system and associated satisfaction level of the beneficiaries, which are analyzed and examined in chapter - III of the report. Differences were apparent, specifically, in the levels of involvement of government agencies, FAO unit and staff, international agencies, NGOs and local level government bodies and communities. In most countries, FAO provided technical assistance in implementing the projects whereas government agencies were directly involved in executing the programs by outsourcing to the contractors for procurement and supplies of inputs through local competitive bidding process. However, NGOs were also more active in some countries for input supplies and distribution whereas private sector groups were contracted out for these tasks in some countries. The detailed information on input distribution systems adopted by different countries is presented in Annex 4.1 for the institutional account of the system and Annex 4.2 for the procurement and delivery mechanism.

2.2.2 Description of beneficiary and site selection process (including criteria)

Overall, the selection criteria and procedures of TCP project locations seem to have something in common in many countries. Hard hit remote and inaccessible areas adversely affected due to natural disasters including earthquake, recurrent droughts, floods, cyclones, crop diseases, conflicts posing consistent threats and giving rise to vulnerability of the people seem to be on the top priority list for the support. However, in some countries, the selection has embodied more blanket approach trying to reach many areas and households with limited inputs with less stringent measures adopted while selecting sites and beneficiaries. It was also found that some countries could not stick to the pre-defined criteria in selection owing to immense pressure from the side of the local people.

In general, the ISFP TCP projects were targeted for areas where farming communities were worst affected by rising food grain prices as well as high cost of farm inputs thus preventing them to use adequate amount of farm inputs. At the country level, the areas affected by natural calamities (droughts/floods/cyclones/earthquake, etc) and internal conflicts and geographically remote and inaccessible areas without adequate infrastructures were placed on priority. These criteria were adopted in most countries of the region viz. Afghanistan, Bangladesh, Nepal, Pakistan, Sri Lanka, etc. On the other hand, in some countries, viz. DPR Korea and Mongolia, potential areas for increased agricultural production were selected

for support under TCP input delivery projects. Table 2.8 provides country-specific information on the site and beneficiary selection criteria adopted, and the sites eventually selected.

Table 2.8: Project locations and selection criteria of sites and beneficiaries

	Countries	Project sties/locations	Site selection criteria	Beneficiary selection criteria
1	Afghanistan	Three districts viz 1. Sari Pul center 2. Sozmaqala and 3. Sancharak with 39 villages.	(i) Drought affected villages ii) accessibility (security), (iii) water availability, (iv) community/shura willingness and cooperation.	i) Households having at least two jeribs (0.4 hectares) of irrigated land; ii) farmers suffered by drought or other natural; iii) Internally Displaced People (IDP) and returnees resettled since one year; iv) female/orphan-headed household, disabled, elderly persons. **Total beneficiaries: 2,980 hhs.**
2	Bangladesh	15 districts with 99 upazillas	Cyclone (Sidor) and flood affected districts and villages	Flood affected marginal and small farmers cultivating between 0.02 to 1.0 ha of land. **Total beneficiaries: 11,175 hhs.**
3	Bhutan	All 20 Dzonkhags of the country.	Agro-climatically suitable production pockets for different crops in all 20 districts of the country.	Landholder progressive//interested individuals and farmer groups focusing vulnerable people who work on cooperative basis. Total beneficiaries: 10,969 hhs.
4	Cambodia	Provinces such as Kampong Speu, Kampong Chhnang, Kampot, Takeo, Kampong Cham and Prey Veng	Locations where crops were destroyed by drought and pest outbreaks.	Main target beneficiaries were women-headed households (widows), poor households and those whose crop productions were severely affected by droughts and pest outbreaks. **Total beneficiaries: 4,276 hhs**.
5	DPR Korea	70 coop. farms in 38 counties in North and South Pyongan, North and South Hwanghae Provinces and Pyongyang City	Main granary areas of the countries with potential for increased production.	No individual household selection made for input supply in DPR Korea. A total of **12,304 beneficiary households** in DPR Korea belonged to 70 Cooperatives supported for input (urea fertilizer) distribution under TCP.
6	Mongolia	11 Aimags (Provinces) and all the 9 districts of Capital City –Ulaanbaatar.	HDI, poverty incident rate, unemployment and vegetable growing households as well as natural factors such as climate, elevation, soil and access to waters.	Selection based on two sets of 10 criteria: i) the livelihood indexes - household size, level of income, support from relatives/outside, employment and registration as poor/vulnerable household; and ii) the technical capacity of the household - experience in growing vegetable and potato, access to land, access to water, past benefits from external assistance (domestic or foreign source), and labor force availability. **Total beneficiaries: 9,094 hhs**.

7	Nepal	Phase I: Achham, Bajhang, Baitadi, Darchula and Jumla; Phase II: Sunsari and Saptari (livestock); Phase III: Kailali and Kanchanpur	Most backward and remote districts in far and mid west region; VDCs affected by Koshi flood 2009 (livestock) and 2008 flood affected districts.	Less than 0.5 ha land holding size and food sufficiency period of less than six months; backward and marginalized communities (dalits and disadvantaged people) usually hit by recurring drought and hailstorms with limited accessibility to infrastructures. In Kailali and Kancanpur, flood affected families with less than 0.68 ha (1 bigha) land were selected for input supply but farmers with more land size were also provided inputs due to community obligation and pressure. **Total beneficiaries: 36,864 hhs.**
8	Pakistan	Three districts in NWFP viz. 1. Shangla, 2. Battagrame, and 3. Kohistan	Low crop and livestock productivity, vulnerability to natural disasters like earthquake of 2005 and recent mishap of internal conflict.	Low income food insecure people who are unable to meet their household food need due to continuous surge in food prices and declining food production. **Total beneficiaries: 11,920 hhs.**
9	Sri Lanka	1. Batticaloa district, 2. Anuradhapura district, 3. Polonaruwa district; and 4. Ampara district	Conflict affected and poverty stricken border villages and areas of four districts.	Priority given to Samurdhi beneficiaries (low-income households), resettled farmers in the East who had previously abandoned their land due to the conflict and were resuming their farming, and farmers who had been affected by the flooding in the North Central region. **Total beneficiaries: 8,350 hhs**.
10	Timor-Leste	Maize seeds in 12 out of 13 districts; rice seeds in all 13 districts and fertilizer in 7 districts only.	Potential crop production areas of the country.	Smallholder farmers who suffered crop failure during previous year due to natural disaster such as flood, drought, landslide etc as well as infestation by pests and insects; internally displaced people during 2006/07 political crisis and most vulnerable people i.e. widows. **Total beneficiaries: 32,700 hhs**

2.2.3 Description of method/system for distributing inputs

Different input distribution modalities were adopted in different countries during the implementation of ISFP TCP input delivery projects. The political, geo-physical and socio-economic environments of the countries have largely governed the decisions on the practices of input procurement, supplies and distribution at different hierarchies- ranging from central level policy making to grassroots level operations. The projects at large were implemented through partnerships of different stakeholders such as the government line ministries and departments, FAO country offices/ units, local NGOs, private sector input suppliers and local government bodies depending upon specific needs and capacity of each country and a brief description of different modalities adopted in different recipient countries is presented in the subsequent paragraphs.

In Afghanistan, FAO collaborated closely with the Ministry of Agriculture, Irrigation and Livestock (MAIL) and the Partner Salam Organization for Afghanistan Rehabilitation (SOFAR), an NGO for the implementation of the project. All planned inputs were successfully procured and distributed. Unlike in other countries where the project inputs were distributed free of cost, beneficiaries in Afghanistan contributed 20 percent of the input cost as their equity share. This was not planned by the project but rather came as a country and beneficiary innovation to ensure local ownership of the project. Wheat seed and fertilizer specifications were provided by FAO Headquarters. Wheat seeds were procured locally from the private seed enterprises with the quality certification at dispatch sites duly arranged. Fertilizers (urea and DAP) were procured through local tender, which were rigorously inspected, at the loading point, by a third international superintendent company (DW Logistic) to ensure compliance to technical specifications.

In Bangladesh, the project was implemented by Directorate of Agriculture Extension (DAE) with a well organized implementation structure from centre to local level. Technical assistance and logistics were provided by FAO, Dhaka for procurement, delivery of inputs at *Upazila* (sub-district) level and monitoring of progress. FAO was responsible for procuring and transporting the inputs (seeds and fertilizers) up to the selected *Sidor* (name of the cyclone that hit Bangladesh in 2007) and flood affected Upazilas including loading-unloading. Distribution of inputs was done by *Upazila* Agriculture Officer, Sub-Assistant Agriculture officers and *Upazila* Agricultural Rehabilitation Committee.

In Bhutan, FAO procured and supplied the inputs directly through contractors who delivered them to the RNR sites at the *geogs* (grassroots political unit at the village level) in all districts. The government extension agents working at the grassroots were assigned to distribute the inputs to the households.

In **Cambodia,** the inputs were delivered by FAO in cooperation with the Department of Agronomy and Agricultural Land Improvement (DAALI), Ministry of Agriculture, Forestry and Fisheries (MAFF) and the provincial Departments of Agriculture. Beneficiaries in the affected areas suggested by the local authorities were selected based on poverty levels of the households. The procurement process was initiated immediately after the project approval. In order to ensure effectiveness in using the inputs, the selected farmer beneficiaries were provided with relevant technical trainings carried out by technical officers of the DAALI, in close collaboration with all concerned Provincial Agriculture Departments.
In **DPR Korea**, the Ministry of Agriculture (MoA) was designated as the Government agency responsible for project implementation. A total of 465 tonnes of fertilizers were imported from Serbia and transported by World Food Programme (WFP). Distribution was made to 70 beneficiary cooperative farms in 38 counties located in the main granary areas of North and South Pyongan, North and South Hwanghae Provinces and Pyongyang City where it was immediately applied primarily to spring barley as well as to vegetables. Amounts given to cooperatives were in two fixed packages (5 tonnes and 10 tonnes), depending on the size of cultivated land.

In **Mongolia**, the project was designed to be mainly implemented through existing operational institutional networks within the Ministry of Food, Agriculture and Light Industries (MOFALI), involving the Green Revolution Program of the Crop Production Division, and the Information, Monitoring and Evaluation Department. A steering and piloting committee was established which supervised the implementation of the project as planned. The MOFALI appointed a National Project Coordinator who took responsibilities: i) to assist FAO-Beijing in procurement of material and equipment, preparing tender documents, and selecting

suppliers; ii) to select the beneficiaries; and iii) to carry out physical monitoring of project activities. MOFALI selected seed suppliers through open tendering. The project was implemented through the Food, Agriculture, Small and Medium Enterprise Development Programmes (FASMEDs) at the *aimag* (province) level and by the *soum* (district) Governors' Offices at the local level.

In **Nepal,** procurement and distribution mechanism was rather cluttered involving multiple stakeholders. Inputs like seeds and livestock feeds/medicines were procured by FAO through local competitive bidding. National Seeds Company (NSC), a Government public undertaking was selected for the delivery of wheat seeds. A third party contractor was selected for transporting the wheat seeds up to the delivery points of respective districts. In the same way, SSSC (SEAN Seed Service Centre) was given the contract for transporting the vegetable seeds to final distribution points of the respective districts (except Jumla) and finger millet seeds to Jumla. Finger millet seeds were procured from Sindhu Cooperatives, Dolakha. The NGO partners, FAYA Nepal and NNSWA were given contract to distribute rice seeds (30 kg per hh) to Kailali and Kanchanpur districts respectively, the beneficiaries in which case were identified by the respective Village Development Committees (VDCs). Private contractors were involved for transporting veterinary and livestock feeds and medicines to Sunsari and Saptari districts from Hetaunda Feed Plant, a Government undertaking. Seeds were distributed through the contractors in case of hill and high hill districts. NSC delivered wheat seeds from its Nepalgunj office to respective districts using private transport contractor. Concerned contractors or NGO partners were assigned to collect, store, package and transport up to the designated delivery points or road heads of the concerned districts. Superintendent of seed quality standards was involved by FAO in collaboration with Seed Quality Certification Centre (SQCC) for checking the seed samples and packaging. Vegetable seeds were sent to Jumla by FAO directly. Vegetable composite package weighing 247 gm in total consisted of seven types of each vegetable in a packet.

In **Pakistan**, the TCP project was implemented through implementing partner CARAVAN, a local NGO relying on the established organizational set up of FAO Emergency Coordination and Rehabilitation Unit (ECRU) in Pakistan. Well tested targeting and distribution mechanism, quality control and monitoring as well as close links with reliable implementing partners were ensured for the smooth implementation of the project. The TCP project with the help of implementing partner NGO procured and distributed the inputs - a package of wheat and fodder seeds as well as fertilizers, to selected vulnerable farming households.

In **Sri Lanka**, the Project Steering Committee (PSC) under the Ministry of Agriculture Development and Agrarian Services was the overall implementing body of the project at the central level. At the district level, Deputy Directors of Agriculture Extension coordinated project activities, while the Deputy Director, Programme Monitoring of the Department of Agriculture (DoA) provided overall coordination. Inputs were procured from reputed private seed suppliers in Sri Lanka in line with the FAO procurement procedures. Seed paddy, Zinc sulphate and mammoties were procured from companies based in the capital Colombo, who were responsible for delivering the inputs to the target districts on time. All inputs procured were delivered on time to the four target districts, without delay or problems.

In **Timor-Leste**, the project was implemented by FAO Emergency and Rehabilitation Unit (ERU) in coordination with the government. Implementing teams were formed constituting selected NGOs and district agricultural officers who supervised the inputs distribution. ERU procured the inputs through suppliers from abroad – seeds from Indonesia and urea from other countries in the region.

Table 2.9 unveils types and quantities of inputs distributed under ISFP TCP projects in different countries. The distribution in most countries involves seeds of cereal crops, viz. rice, maize, wheat as these crops are the main staple food crops in these countries from food security point of view. In Mongolia, potato and vegetable seeds were distributed because of their high production potential to improve food security of vulnerable people. Vegetable seeds were also distributed in Bangladesh, Bhutan and Nepal. In DPR Korea, urea fertilizer was distributed to the cooperatives rather than seeds as the fertilizer use levels in the country were very low.

The table also shows that the Inputs delivered at household level and their use varied considerably across countries. In Afghanistan and Pakistan, the distribution comprised a fixed package (25 kg each of wheat

seed, urea and DAP). In Nepal and Timor-Leste, the quantity per household was substantially reduced due to coverage of more households due to demand side pressure. In Mongolia, potato seed distribution was varied based on the area available for cultivation with the beneficiaries and so was the case in Cambodia in distributing rice seeds and fertilizers. These diversities tend to reflect the respective country contexts.

Table 2.9: Summary of inputs distributed in different countries

	Countries	Type of inputs distributed	Average quantity (Kg)	Input procurement system	Remarks (distribution system and targets)
1	Afghanistan	Wheat seeds, urea and DAP	50 kg/ hh of each input	The project, after the approval of FAO, procured inputs from private suppliers through local competitive bidding.	Equal distribution of 150 Kg in total of all inputs per households to 2,980 hhs, 20% equity contributed by farmers. SOFAR, local NGO distributed the inputs.
2	Bangladesh	Rice, maize, lentil, carrot, spinach, red amaranth and radish seeds	0.2 kg to 5 kg/ hh	FAO procured and delivered the inputs up to the selected sites and procurement was done through tendering/ bidding locally.	Varied amount distributed free of cost (only one type of seed per HH) to total 11,175 hhs by government agency.
3	Bhutan	Maize, rice, wheat and vegetable seeds viz brocolli, radish, cauliflower, beans, orange saplings	5 kg of maize and 10 to 50 gram of vegetable seeds per hh.	FAO procured all inputs and awarded contracts directly to local contractors/ suppliers through bidding.	Varied amount distributed free of cost to 10969 hhs by government agency .;
4	Cambodia	Rice seeds and fertilizer (urea and DAP)	19 kg of rice seed and 72 Kg fertilizer/hh on average per hh.	FAO/ DAALI procured inputs through local bidding.	Varied amount distributed free of cost to 4,276 hhs by FAO in cooperation with DAALI.
5	DPR Korea	Urea	5- 10 tonnes/ cooperative	The project procured fertilizers from Serbia through tendering while FAO monitored unloading of the same at the port while transportation was done by WFP.	Varied amount distributed free of cost to 70 Cooperatives depending on farm size by the government agency
6	Mongolia	Potato, carrot, beet, beet red, spring onion and cucumber	58 kg potato seed per hh and 12 .5 gram to 62.5 gram of vegetable seed per hh.	FAO Beijing, in consultation with Project Coordinator (government) procured the inputs.	Varied amount distributed free of cost (10-75 Kg/hh) to 9,094 hhs by MOFALI / FASMED's local bodies (government agency)
7	Nepal	Rice, wheat and vegetable seeds and livestock feed (straw and medicine)	30 kg rice seeds, wheat 5 kg, finger millet 1 kg and 247 grams vegetable seeds/ hh.	FAO procured all inputs through competitive bidding locally.	Rice seeds in Kailali district, wheat in Baitadi district, finger millet in Jumla district and vegetable in Jumla and Baitadi districts. In Kailali and Kanchapur, seeds were further distributed free of cost among relatives/neighbours due to social obligation to about 40,000 hhs; the distribution target was much lower; and inputs were distributed by government agency in hills and NGO in Terai
8	Pakistan	Wheat seed, urea and DAP	25 Kg/ hh of each input	Direct procurement by the project with the help of implementing NGO through local bidding	Equal amount distributed to each hh (75 Kg of all inputs) free of cost to 11,920 hhs by implementing NGO as per FAO targeting mechanism.

9	Sri Lanka	Rice seeds, zinc sulphate and hand tools	58 kg of rice seed per hh.	Direct procurement by FAO through local bidding	Varied amount distributed free of cost to 8,350 hhs by government agency.
10	Timor-Leste	Rice and maize seeds and urea fertilizer	10 Kg of maize seeds and 20 Kg of rice seeds;	Direct procurement/ purchase by FAO from Indonesia with the selected suppliers.	Varied amount distributed free of cost by implementing team comprising of government staff and NGOs to 33,000 hhs despite much lower target due to high demand.

Source: Country Reports, 2009.

2.3 Farmers' impressions on receiving agriculture inputs

2.3.1 Awareness of farmers

The information on awareness was not available from DPR Korea and Pakistan for reasons cited in the methodology section. Countries from where the information were available, the responses seem rather mixed and vague and partially consistent with the set official targeting criteria in some countries and not in others.

The information on the awareness about why the beneficiaries were selected to receive project inputs was not available in the case of **Afghanistan**.

In **Bangladesh**, for instance, it was found that majority of the households were aware about the reasons why they were chosen to receive inputs. Interestingly, the women were more aware than the men. Most of the respondents explained that they were selected to receive inputs because they were seriously affected by cyclone *Sidor* in 2007 and flood which tallied with the officially set criteria.

In **Bhutan**, The answers to this awareness related questions were varied with different interpretations. Some of them answered directly while others responded indirectly, and as simply as 'it is good to get seeds free of costs'. The awareness level must be considered low as their responses did not match with the criteria laid out by the project namely the interest to grow crops and willingness to work in group.

In **Cambodia,** a large number of people reported they were entitled to receiving inputs as they were hard hit by food price rises and their food security was threatened. However, the other criteria for which they were selected were being widows and households hit by flood which were missed in their expressions. Hence, they are considered partially aware – the country report showing 58.7 percent awareness level.

In **Mongolia**, as high as 97.1 percent respondents answered that they knew why they were receiving seeds from the project, while the rest 2.9 percent answered in negative. The former group cited a couple of reasons for their selection and these were: i) improving their livelihoods (54.5%); ii) lack of cash (17.1%); iii) improving seed quality (15.9%); iv) suggested by sub-districts (10.6%); and v) no seeds (2.0%) which, however, are somewhat different from the officially established criteria comprising the livelihood index and technical capability of farmers. Data show that 96.8 percent of all the sample households knew why they were selected to receive agricultural inputs, while the percentage was comparatively higher for male-headed households (98.5%) than for female-headed households (92.7%). This indicates that while the level of awareness was very high, female-headed households were marginally less informed than their male counterparts.

In **Nepal's** Kailali district, less than half of the sample households (both male and female) were aware about receiving rice seeds - probably due to less extension and publicity or even due to some fundamental weaknesses in planning. The reasons of their selection were expressed as being victims of flood, for improving their livelihoods, for increasing productivity of their marginal lands, and for testing the adaptability of seeds. These reasons somehow conform with the purpose of input distribution and the underlying selection criteria.

In Baitadi district, male-headed households revealed higher level of awareness on receiving of the wheat and vegetable seeds compared to high level of ignorance among female-headed households. The perceived reasons for their selection were the District Agriculture Development Officer (DADO) and VDC publicity, and as being poor and flood victims. In Jumla district of Nepal, most of the sample households including both male and females had no knowledge why they were selected as beneficiaries for receiving finger millet and vegetable seeds. It is to be noted that the lack of awareness among farmers about their being selected to receive particular inputs could be one major factor for their dissatisfaction to the support for reasons of lack of preparedness and eventually the crop failure.

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The overall awareness level of farmers in Nepal was only 42.5 percent with males being considerably more aware.

Information from **Sri Lanka** indicates different perception of respondents about their selection which are interesting but not consistent with the official criteria set. For example, official criteria used for the selection of beneficiaries relate to low-income households, resettled farmers in the East who had previously abandoned their land due to conflict and were resuming their farming, and farmers who had been affected by the floods in the North Central region. As against these criteria, a high 37 percent respondents reported the reason of being a farmer; 23 percent as being poor; 14 percent whose harvests were destroyed by flood; 10 percent who had land for cultivation and the remainder cited others reasons.

Timor-Leste: As high as 93 percent of the male respondent beneficiaries expressed that they were aware about why they were selected to receive the project inputs. The awareness level of women in this respect was rather low at 78 percent.

2.3.2 Knowledge of agriculture inputs received and willingness to adopt

To assess the knowledge of agriculture inputs received by the TCP project and their willingness to adopt, the beneficiaries were asked (i) whether they had used the TCP type inputs previously, (ii) whether they were previously trained on the use of TCP type inputs, (iii) whether they could buy TCP type inputs locally, and (iv) whether they would be willing to buy TCP inputs, if these were available in the market. The information was sought to get an idea whether the TCP input recipients had prior knowledge, training and familiarity about similar inputs and whether they were willing to use these inputs if available locally. While most country reports contain these information, the same e were not available from DPR Korea and Pakistan for reasons cited in the methodology section. The data obtained from other country reports with regard to knowledge on TCP type inputs are presented in Annex 5.

Regional average knowledge level and willingness to adopt: . The responses on the four questions posed to the beneficiaries to assess the knowledge level and willingness to adopt have been compiled and presented in Table 2.10 which has been compiled from the information in Annex 5.

About 50.7 percent beneficiaries had used the TCP inputs before and a slightly higher percentage (57.4%) had received training on TCP inputs. However, more beneficiaries were trained in TCP fertilizers (67.2%). Thus the average knowledge level of beneficiaries can be considered higher for fertilizers. However, the willingness to buy fertilizers, if they were available locally was much lesser in fertilizers showing lesser willingness to adopt TCP fertilisers. Willingness to adopt TCP seeds was thus higher.

Table 2.10: Regional aggregate knowledge level and willingness to adopt

Inputs	Percentage of beneficiaries			
	who had used TCP inputs before	who had received training on TCP inputs before	who have access to TCP inputs locally	willing to buy TCP inputs if they were available
Fertilizers	48.8	67.2	48.3	48.2
Seeds	52.5	47.6	64.5	66.8
Average	50.7	57.4	56.4	57.5

Source: Compiled from Annex 5.

Knowledge level and willingness to adopt by gender: Overall, the knowledge level of male-headed households was marginally higher (by 3.2%) than the female-headed households. Male-headed households were found to be more knowledgeable in seeds use than female-headed households as shown by a higher difference in the knowledge level. Table 2.11 shows the gender disaggregated information on the knowledge level. Male's slight superiority in the knowledge level is plausible because they are generally more exposed to market and have more access to government extension services.

Table 2.11: Regional aggregate knowledge level and willingness to adopt by gender

Inputs	Percentage of beneficiaries							
	who had used the TCP inputs before		who had received training on TCP inputs before		who have access to TCP inputs locally		willing to buy TCP inputs if they were available	
	Male	Female	Male	Female	Male	Female	Male	Female
Seeds	48.8	47.5	46.8	45.0	56.9	50.0	56.4	48.5
Fertilizers	32.5	32.5	56.9	55.0	51.4	51.6	51.4	45.0

Source: Compiled from Annex 5.

Knowledge level and willingness to adopt by country: Average knowledge level and willingness to adopt by country is compiled separately for seeds and fertilizers, which comprise the major inputs, distributed under the ISFP TCP projects.

On the whole only 52.5 percent beneficiaries of all countries were found to have used to TCP seeds before but significant variations are noted across countries from zero in Afghanistan to 100 percent in Cambodia. Likewise, a greater proportion of beneficiaries (66.8%) were willing to buy TCP type inputs if these were available locally while only 47.6 percent beneficiaries reported that they had received prior training on the use of TCP type inputs. However, it should be noted that all input recipients in case of Afghanistan were provided training during TCP input distribution which is found commendable in applying the skill and increase crop production. As high as 64.5 percent beneficiary respondents with the exception of Afghanistan reported that they had access to TCP seeds locally with Cambodia accounting for highest percentage (92%).

Table 2.12: Knowledge level of TCP seeds and willingness to adopt by country

Countries	Percentage of beneficiaries			
	who had used the TCP seeds before	who had received training on TCP seeds before	who have access to TCP seeds locally	willing to buy TCP seeds if they were available
Afghanistan	0.0	100.0	0.0	0.0
Bangladesh	39.8	57.5	56.2	56.9
Bhutan	57.2	40	56.4	52
Cambodia	100.0	3.3	92.0	85.4
Mongolia	60.9	59.1	55.5	70.6
Nepal	38.4	25.6	80.8	78.0
Sri Lanka	77.0	10.0	62.0	77.0
Timor-Leste	46.9	37.9	48.6	47.4
All countries	**52.5**	**47.6**	**64.5**	**66.8**

Source: Compiled from Annex 5.1.

In other countries, the knowledge level and willingness to adopt was modest, ranging between 45.2 percent in Timor-Leste to 61.5 percent in Mongolia.

Regarding fertilizers, more proportion of beneficiaries (67.2%) reported having been trained prior to the project on the use of TCP type fertilizers while only 48.2 percent were willing to buy TCP type fertilizers if these were available locally. This shows an opposite knowledge level scenario between seeds and fertilizers. Country wise, Afghanistan beneficiaries are found as most disadvantaged in terms of prior use, access and willingness to buy TCP fertilizer. On the contrary, for two of the four parameters i.e. prior use and training on fertilizer use, DPR Korea ranks highest with 100 percent each. While Bangladesh beneficiaries seem to have modest level of knowledge and willingness for all four parameters, a much higher percentage of Cambodian farmers (97.2%) reported to have both the access and willingness to buy TCP fertilizer

Table 2.13: Knowledge level and willingness to adopt TCP fertilizers by country

Countries	Percentage of beneficiaries			
	who had used the TCP fertilizers before	who had received training on TCP fertilizers	who have access to TCP fertilizers locally	willing to buy TCP fertilizers if they were available
Afghanistan	0	100	0	0
Bangladesh	36.5	58.4	56.1	55.7
Cambodia	58.7	10.3	97.2	97.2
DPR Korea	100	100	40	40
All countries	48.8	67.2	48.3	48.2

Source: Compiled from Annex 5.2

Note: Fertilizers were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea, Pakistan and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis.

2.3.3 Satisfaction levels on inputs received

General

The respondents in different countries of RAP Region have expressed different levels of satisfaction on the inputs they were provided under TCP projects. In order to gauge respondent's views, a five scale rating option was provided ranging from highly dissatisfied to highly satisfied levels for a particular input that they received and used. The major inputs distributed under the projects included crop seeds viz. rice, wheat, maize, millet and potato and different types of vegetable seeds which were meant both for contributing to family income from sale and improving nutritional status of members through consumption. The inputs also included fertilizers in some countries with urea and Di Ammonia Phosphate (DAP) as most common types. The analysis is intended to measure the satisfaction levels for four dimensions of each input delivered-receiving, timeliness, appropriateness and quality as each of them has equal importance to enhance crop production and raising food security. The expressed levels of satisfaction and reasons thereof from the respondents on these parameters are judged to be quite important in providing feedbacks for the policy making and implementing agencies for designing future project interventions. The detailed information on satisfaction levels expressed by the beneficiaries of eight countries for which the information was available, is presented in Annex 6. For two countries – DPR Korea and Pakistan – the information on beneficiary satisfaction level were not available for reasons cited in the methodology section.

In order to convert the scores for each satisfaction levels to a single unique comparable number (labeled as "weighted unique score" in the tables), a neutral weighting system (weights adding to zero) was followed. Under this -1 weight was given to highly dissatisfied, -0.5 to dissatisfied, 0 to indifferent, 0.5 to satisfied and 1 to highly satisfied. Variance divided by mean or average is used intermittently as a ratio to trace the level of divergence within a category, where deemed useful. The higher the variance/mean, the higher will be the divergence.

Box 1: Demonstrating the Computation of Weighted unique score.

In order to demonstrate how the neutral weighted score is computed, the scores in receiving have been multiplied by the neutral weight (whose total add to zero) and the value placed in the weighted score. The sum of all weighted scores is the overall weighted unique score. A 100 percent weighted score would mean the highest level of satisfaction which is only possible when the score of 100 is found in the highly satisfied category. Similarly minus 100 score would mean highly dissatisfied situation which is only possible if there is the score of 100 in the highly dissatisfied case with other cells zero.

Condition	Receiving	Neutral Weight	Weighted score
Highly dissatisfied	0.6	-1	-0.6
Dissatisfied	2.1	-0.5	-1.05
Indifferent	6.1	0	0
Satisfied	30.7	0.5	15.35
Highly satisfied	60.6	1	60.6
Total	**100**	**0**	74.3

Seeds

Aggregate regional satisfaction level: The information on the aggregate satisfaction level from seed distribution program of the TCP under different heads such as receiving, timeliness, appropriateness and quality is presented in Table 2.14.

Table 2.14: Percentage satisfaction level among seed recipients and weighted score

Condition	Receiving	Timeliness	Appropriateness	Quality	Average
Highly dissatisfied	0.6	2.6	1.2	0.4	1.2
Dissatisfied	2.1	8.5	4.6	2.9	4.5
Indifferent	6.1	9.1	6.9	7.1	7.3
Satisfied	30.7	33.0	41.3	32.3	34.3
Highly satisfied	60.6	46.9	46.1	57.3	52.7
Total	**100**	**100**	**100**	**100**	**100**
Weighted unique score	**74.3**	**56.6**	**63.3**	**71.6**	**66.4**

Source: Compiled from Annex 6.

According to the table, the aggregate satisfaction level on the whole seed distribution component of the project was 66.4 percent which is satisfactory but having ample scope for improvement. Highest satisfaction level was found in receiving category (74.3%) followed by seed quality (71.6%) and appropriateness (63.3%). Beneficiaries in the region were least satisfied with the timeliness of the provision of seeds registering a lowest score of 56.6 percent. There is, therefore, a need to have a better planning for the procurement and transportation of these inputs well ahead of the application period.

Satisfaction level by gender: The information on the aggregate satisfaction level by gender from seed distribution under the ISFP TCP projects under different heads such as receiving, timeliness, appropriateness and quality is presented in Table 2.15. According to the table, the female-headed households were more disgruntled (only 60.7% aggregate satisfaction level) about the project's seed distribution component than male-headed households (67.7%) by a margin of 7 percent. Female-headed households' higher level of

dissatisfaction is pervasive – across all categories of receiving, timeliness, appropriateness and quality; albeit with varying level of differences with the perception of the male-headed households. The highest level of difference in satisfaction was found in the case of receiving (10.2%) followed by timeliness (8%) and appropriateness (7.9%). In the case of seed quality, the difference was minimal (1.7%) meaning that both gender tended to agree on the quality aspect. Women headed households' major discontent was in the timeliness of the supply of seeds (50.2% satisfaction level) and least discontent with seed quality (70% satisfaction level). This appears consistent with the general observation in the region that the women headed households encounter more problems and constraints in the access to various developmental services. The observed result may be an extension of the common practice in the region – of ignoring female's concerns. Any future project of this nature must take these results into account and build appropriate gender equality measures in service delivery.

Table 2.15: Percentage satisfaction level among seed recipients and weighted score by gender

	Receiving		Timeliness		Appropriateness		Quality		Average	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Highly dissatisfied	0.6	0.4	2.2	3.8	0.8	2.7	0.6	0.2	1	1.8
Dissatisfied	1.5	3.2	7.8	9.9	4	5.1	2.8	2.4	4	5.1
Indifferent	5.6	10	9.1	10.3	6.7	9.6	6.5	7.6	7	9.4
Satisfied	30	37.3	33.3	32.8	41.4	40.5	33.1	37.1	34.4	36.9
Highly satisfied	62.3	49.1	47.6	42.5	47.1	42.1	57.1	52.8	53.5	46.6
Total	**100**	**100**	**100**	**99**	**100**	**100**	**100**	**100**	**100**	**100**
Weighted unique score	**76**	**65.8**	**58.2**	**50.2**	**65**	**57.1**	**71.7**	**70**	**67.7**	**60.7**

Source: Compiled from Annex 6.

Satisfaction level by country in receiving seeds: Table 2.16 provides the scale of satisfaction in receiving seeds as reported by the beneficiaries by country (except DPR Korea and Pakistan where no such survey was conducted). According to the table, highest level of satisfaction was expressed by the beneficiaries from Afghanistan (87,2% satisfaction level) while the least satisfied beneficiaries were from Timor-Leste (47.5%) registering a wide range of nearly 40 percentage point difference in satisfaction level across recipient countries. The all country average satisfaction level was 74.2 percent. The satisfaction trend appears to be similar across countries as shown by low variance/mean ratios.

Table 2.16: Satisfaction level with receiving seeds

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0	1.2	23.4	75.5	87.2
Bangladesh	1.6	0	3.5	30.7	64.2	78.0
Bhutan	0.4	6.3	9.6	21.3	62.5	69.6
Cambodia	0	0.8	0.3	24.6	74.1	86.0
Mongolia	0.0	1.2	6.8	17.2	74.9	82.9
Nepal	1.8	0.7	3.2	43.2	51.0	70.6
Sri Lanka	1	4	2	36	57	72.0
Timor-Leste	0.3	3.7	21.8	49.0	25.2	47.5
All Countries	**0.6**	**2.1**	**6.1**	**30.7**	**60.6**	**74.2**
Variance/mean	**0.8**	**2.5**	**8.2**	**4.1**	**4.7**	**2.2**

Source: Computed and compiled from Annex 6.1.

A natural question is why people become dissatisfied, even to a small extent, in receiving seeds for free? It was found that the sources of dissatisfaction were mismatches in desired and supplied materials with regard to the type, variety, quantity and timing. For example, finger millet seeds in Nepal were distributed after the normal sowing season and therefore did not perform well. It was not known whether a demand survey preceded the decision to distribute a particular crop seed of certain variety, certain quantity and on a certain date for each country but this could definitely have helped to enhance the satisfaction level of the beneficiaries.

Satisfaction level by country in timeliness of seed delivery: Table 2.17 provides the level of satisfaction in the timeliness of seeds delivery as reported by the beneficiaries at country level. According to the table, highest level of satisfaction was expressed by the beneficiaries from Afghanistan (92.6% satisfaction level in composite score) while the least satisfied beneficiaries were from Timor-Leste (21.6%) showing a wide range of 71 percentage point difference in satisfaction level between the most satisfied and the least satisfied country. This is also confirmed by a high variance/mean values under satisfied and highly satisfied columns. Country average satisfaction level was low at 56.6 percent and represents the lowest among the categories mainly due to problems in timely delivery in Timor-Leste and Nepal.

Table 2.17: Satisfaction level with timeliness of seeds

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0.2	1.5	11.3	87	**92.6**
Bangladesh	1.2	1.9	13.6	33.5	49.8	**64.4**
Bhutan	0.8	10.6	10.6	23.6	54.4	**60.1**
Cambodia	0	4.9	3	47.15	45	**66.1**
Mongolia	1.1	2.7	19.1	22.4	54.9	**63.7**
Nepal	7.6	23.9	9.6	28.5	30.4	25.1
Sri Lanka	5	7	2	37	49	**59.0**
Timor-Leste	4.71	16.84	13.47	60.61	4.38	**21.6**
All Countries	**2.6**	**8.5**	**9.1**	**33.0**	**46.9**	**56.6**
Variance/mean	**8.0**	**67.5**	**40.9**	**238.8**	**546.6**	**92.6**

Source: Computed and compiled from Annex 6.2.

Satisfaction level by country in appropriateness of seeds: Table 2.18 shows the satisfaction levels of beneficiaries in appropriateness category as reported by the beneficiaries at country levels. According to the table, highest level of satisfaction was expressed by the beneficiaries from Afghanistan (85.2% satisfaction level) while the least satisfied beneficiaries were from Nepal (31.8%) registering a wide range of nearly 52 percent difference in satisfaction level between the most satisfied and the least satisfied. As shown by the country report, the problem in Nepal was the distribution of improved variety of finger millet seeds in Jumla district while the beneficiaries were accustomed to growing the local varieties. Koirala (1989) has found that, under the low input regime often found in developing countries, local varieties perform better because of their hardiness and sturdiness. So, most farmers did not use the seed and those few who did, also performed very poorly. The country average level of satisfaction was low at 63.2 percent.

Satisfaction level by country in quality of seeds: The observed satisfaction levels in the quality of seeds distributed as reported by the beneficiaries in different countries are presented in Table 2.19. According to the table, highest level of satisfaction was expressed by the beneficiaries from Afghanistan (87.2% satisfaction level) followed closely by Cambodia and Mongolia, while the least satisfied beneficiaries were from Timor-Leste (47.5%) registering a wide range of nearly 40 percentage point difference in satisfaction level between the most satisfied and the least satisfied country. The country average satisfaction level was satisfactory at 74.2 percent. Satisfaction trends were also found to be more or less similar across countries.

Table 2.18: Satisfaction level with appropriateness of seeds

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0.2	3.1	23.1	73.7	85.2
Bangladesh	0.4	0.8	3.1	33.9	61.9	78.1
Bhutan	1.3	5.5	9.7	20.6	63.0	69.3
Cambodia	0	4.35	1.8	70	23.8	56.6
Mongolia	0.0	0.0	5.2	22.3	72.6	83.7
Nepal	3.2	14.7	23.8	31.9	26.4	31.8
Sri Lanka	4	7	3	45	41	56.0
Timor-Leste	1.1	4.0	5.4	83.4	6.1	44.8
All Countries	1.2	4.6	6.9	41.3	46.1	63.2
Variance/mean	1.9	5.1	7.6	13.4	14.0	5.8

Source: Computed and compiled from Annex 6.3.

Table 2.19: Satisfaction level with quality of seeds

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0.2	0.7	1.5	29.3	68.4	87.2
Bangladesh	0.8	1.6	2.7	23.0	72.0	78.0
Bhutan	0.4	2.5	6.2	27.0	63.9	69.6
Cambodia	0.0	1.5	0.9	41.2	56.5	86.0
Mongolia	0.0	0.8	8.5	14.2	76.6	82.9
Nepal	1.1	4.0	28.5	17.6	48.9	70.6
Sri Lanka	1.0	6.0	2.0	46.0	45.0	72.0
Timor-Leste	0.0	6.6	6.2	60.3	26.9	47.5
All Countries	0.4	2.9	7.1	32.3	57.3	74.2
Variance/mean		1.8	11.7	7.6	4.7	2.2

Source: Computed and compiled from Annex 6.4.

Fertilizers

Fertilizers (urea and DAP) were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea, Pakistan and Timor-Leste. Of these countries, Timor-Leste's response was inconsistent (did not add to 100) and was thus excluded. Therefore, the results on the level of satisfaction presented in the paragraphs below present the situations in the remaining four countries - Afghanistan, Bangladesh, Cambodia and DPR Korea.

Aggregate regional satisfaction level: The information on the aggregate satisfaction level from fertilizer distribution program of the TCP under different heads such as receiving, timeliness, appropriateness and quality is presented in Table 2.20. According to the table, the aggregate satisfaction level on the whole fertilizer distribution business of the project was 76.2 percent, much better compared to that in seeds distribution. Yet there is scope for improvement. Highest satisfaction level was found in receiving category (89.9%) followed by quality (86.2%) and appropriateness (73.9%). Beneficiaries in the region were least satisfied with the timeliness of the provision of fertilizers registering a lowest score of 54.6 percent. The trend across categories (receiving, timeliness, appropriateness and quality), however, were similar in terms of order, to that in seeds distribution.

Table 2.20: Overall satisfaction with fertilizers

Condition	Receiving	Timeliness	Appropriateness	Quality	Average
Highly dissatisfied	0.0	1.8	0.0	0.1	**0.5**
Dissatisfied	0.0	18.7	0.1	0.2	**4.7**
Indifferent	0.4	6.5	7.6	0.4	**3.7**
Satisfied	19.5	14.8	36.9	26.1	**24.3**
Highly satisfied	80.1	58.3	55.5	73.3	**66.8**
Weighted unique score (%)	**89.9**	**54.6**	**73.9**	**86.2**	**76.2**

Source: Compiled from Annex 6.5 to 6.8.

The satisfaction level would have been much higher, had there been less problems in the timing of fertilizer delivery in DPR Korea as will be observed later.

Satisfaction level by gender: The information on the aggregate satisfaction level by gender from fertilizer distribution program of the TCP under different heads such as receiving, timeliness, appropriateness and quality is presented in Table 2.2. Contrary to the general expectation in the region, the female-headed households were more satisfied (86.5% aggregate satisfaction level) about the project's fertilizer distribution scheme than male-headed households (77.4%) by a margin of 9.1 percent. More strangely, the higher level of satisfaction of FHH was spread across all categories of receiving, timeliness, appropriateness and quality; with more pronounced level of difference in the case of timeliness (20%) followed by appropriateness (7.3%) and quality (3.1%). The lowest difference between FHH and MHH was in receiving category (1.6%). MHHs were more discontent on timeliness and appropriateness aspects of fertilizer distribution.

Table 2.21: Satisfaction with fertilizers by gender

	Receiving		Timeliness		Appropriateness		Quality		Average	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Highly dissatisfied	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	**0.0**	**0.0**
Dissatisfied	0.0	0.0	0.4	0.0	0.1	0.0	0.2	0.0	**0.1**	**0.0**
Indifferent	0.3	0.0	12.3	1.1	0.8	2.3	0.4	1.3	**3.6**	**1.4**
Satisfied	27.4	24.9	28.5	12.0	47.3	29.8	39.7	32.7	**37.6**	**24.1**
Highly satisfied	72.3	75.1	58.8	86.9	51.8	67.9	59.7	66.2	**58.7**	**74.5**
Weighted unique score	**86.0**	**87.6**	**72.9**	**92.9**	**75.5**	**82.8**	**79.5**	**82.6**	**77.4**	**86.5**

Source: Compiled from Annex 6.

Satisfaction level by country in receiving fertilizers: Almost 90 percent satisfaction in receiving fertilizers is shown by the data compilation in Table 2.22. Fertilizer being relatively expensive input, receiving it at no cost would obviously not leave much room for dissatisfaction. Hence more responses are tilted towards the better satisfaction levels. The most satisfied country is Bangladesh (97.1%) followed by Cambodia (93.1%) and Afghanistan (85.9%). DRP Korea is the least satisfied country but still with a high satisfaction level of 83.5 percent. Hence fertilizer distribution appears to have been handled more effectively than the seeds. However, some significant concerns remain which will be discussed later in this report. Country wise variations in satisfaction level are low implying uniformity in perception.

Table 2.22: Satisfaction level with receiving fertilizers

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0	1.4	25.5	73.1	85.9
Bangladesh	0	0	0	5.8	94.2	97.1
Cambodia	0	0	0	13.85	86.15	93.1
DPR Korea	0	0	0	33	67	83.5
All Countries	0.0	0.0	0.4	19.5	80.1	89.9

Source: Computed and compiled from Annex 6.5.

Note: Fertilizers were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis.

Satisfaction level by country in timeliness of fertilizer delivery: Regional aggregate satisfaction level with regard to timeliness in delivery was rather poor (54.6%) as shown in Table 2.23. It is due to the difficulty in timely delivery of fertilizers in DPR Korea which resulted in high dissatisfaction level in that country as shown by negative weighted unique score which pushed the average down. The satisfaction levels were high in Afghanistan and Bangladesh while it was modest in Cambodia.

Table 2.23: Satisfaction level with timeliness of fertilizer delivery

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0	1	13.7	85.3	**92.2**
Bangladesh	0	1.6	3.5	5.8	89.1	**91.2**
Cambodia	0	0	1.6	39.5	58.85	**78.6**
DPR Korea	7	73	20	0	0	**-43.5**
All Countries	**0**	**0.53**	**2.03**	**19.67**	**77.75**	**87.3**

Source: Computed and compiled from Annex 6.6.

Note: Fertilizers were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis. Similarly, Korea data are reported but not considered in the average computation since the information did not come from the households.

Satisfaction level by country in appropriateness of fertilizers: Regional aggregate satisfaction level with regard to the appropriateness of fertilizer distributed was 73.9 percent as shown in Table 2.24. Here again, the regional average was pushed down by the case of DPR Korea where the beneficiaries had low satisfaction level (46.5%). Relatively lesser satisfaction on appropriateness of fertilizer was also found in Cambodia. A high level of satisfaction with regard to appropriateness of fertilizer distributed was found in Bangladesh (94%) followed by Afghanistan (85.5%).

Table 2.24: Satisfaction level with appropriateness of fertilizers

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0	0.2	2.5	23.5	73.8	**85.5**
Bangladesh	0	0	0.8	10.5	88.7	**93.95**
Cambodia	0	0	0	60.55	39.45	**69.725**
DPR Korea	0	0	27	53	20	**46.5**
All Countries	**0**	**0.07**	**1.10**	**31.52**	**67.32**	**83.0**

Source: Computed and compiled from Annex 6.7.

Note: Fertilizers were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis.

Satisfaction level by country with regard to fertilizer quality: Quality of fertilizers distributed to different countries under TCP appears to be quite reasonable as found by high level of satisfaction expressed by the beneficiaries in almost all fertilizer receiving countries. The regional aggregate satisfaction level is 86.2 percent (Table 2.25). Most satisfied beneficiaries were found in Bangladesh (97.5%) and relatively lower satisfaction level was among the Cambodian beneficiaries.

Table 2.25: Satisfaction level with quality of fertilizers

(In percentage)

Countries	Highly dissatisfied	Dissatisfied	Indifferent	Satisfied	Highly satisfied	Weighted unique score
Afghanistan	0.2	0.7	1.5	27.7	69.9	**83.2**
Bangladesh	0	0	0	5.1	94.9	**97.45**
Cambodia	0	0	0	38.7	61.3	**80.65**
DPR Korea	0	0	0	33	67	**83.5**
All Countries	**0.066667**	**0.23**	**0.50**	**23.83**	**75.37**	**87.1**

Source: Computed and compiled from Annex 6.8.

Note: Fertilizers were distributed in only five countries – Afghanistan, Bangladesh, Cambodia, DPR Korea and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis.

The country contexts associated with satisfaction levels in seeds and fertilizers: The high prices of improved seeds and fertilizers in **Afghanistan** were problems for the poor farmers and the TCP responded appropriately by distributing quality seeds and fertilizers in time. Hence, the beneficiaries had high satisfaction levels in all categories - receiving, timeliness, appropriateness and quality of seeds and fertilizers. Most of the farmers in the three districts of Afghanistan covered by TCP were not able to cultivate wheat in the previous year due to lack of wheat seed and the project came as a boon to them.

In **Bangladesh**, the TCP project solved the problem of post-flood financial crisis of the beneficiaries. Without such support, they could not have afforded to buy expensive improved seeds and fertilizer in the open market. The Bangladesh country report (2009) shows very high returns to beneficiaries from distribution of TCP seeds and fertilizers. The discounted economic surplus from producing crops under the project support was estimated at $801.6 thousand with a producer surplus of $585.9 thousand; a consumer surplus of $215.7 thousand; a benefit- cost ratio of 1.56; an internal rate of return (IRR) of over 80 percent; and a net present value (NPV) of $278.3 thousand (Bangladesh Country Report)[1].

[1] The readers should be cautioned that the information may be misleading as one year project with limited and only variable inputs can not provide the series of annual net benefit streams to calculate IRR and B/C ratio.

In **Cambodia**, timeliness and appropriateness were slight problem areas in both seeds and fertilizers. Late delivery of seeds led to the unavailability of seed inputs for some villages of Takeo and Kampong Speu provinces However, project's sharper gender focus on fertilizer distribution led to high satisfaction level of female-headed households in this category.

DPR Korea, where only urea fertilizer was distributed to the cooperatives, represents the worst project case where untimely delivery led to a high level of dissatisfaction among a whopping 73 percent of the beneficiaries. Since only urea was distributed, the satisfaction level was low in appropriateness aspect as well from fertilizer nutrient balancing perspective. The DPR Korea case was instrumental in pushing down the aggregate regional satisfaction level in project's fertilizer distribution program.

In the case of **Mongolia**, the beneficiaries were highly content with potato seeds distribution but less content with other seeds distribution due to problems of delivery in time.
In **Nepal**, female-headed households complained about the delivery timing of the rice seeds but the major problem was the late delivery of finger millet seeds in Jumla district. While some farmers kept the seeds for next season, the few who planted late had very poor yield. Vegetable seed distribution was smoother leading to high level of satisfaction among the recipients. Another problem was highly scattered distribution due to the inability of the implementing organization to effectively enforce the criteria which has been duly admitted in the country report.

In **Sri Lanka**, the satisfaction levels were modest in seed distribution with slight problems in the appropriateness in the type and variety of the seeds distributed. Zinc sulphate and hand tools were distributed as other inputs in Sri Lanka and the satisfaction levels were low at around 50 percent.

Timor-Leste is another country which witnessed considerable problems in timeliness and appropriateness in seeds delivery.

Other Inputs

Seeds and fertilizers are the major inputs distributed the TCP project. Besides these some other inputs support were provided in 3 countries – 128 km irrigation channels and maize seed storage silos in Bhutan; zinc sulphate and hand tools (mammoties) in Sri Lanka; and technical information booklets in Cambodia. These inputs were provided as per the expressed needs in the respective countries – irrigation development in Bhutan to increase crop productivity, zinc sulphate to control *khaira* disease in rice caused by zinc deficiency, and booklets to enhance technical knowledge on crop production under improved practices.

The satisfaction levels from the provision of these inputs were modest and mixed. While the appropriateness of these inputs in the respective country contexts were appreciated, the delivery of cement and pipes for irrigation channels were delayed considerably prohibiting the use of irrigation input to enhance the effectiveness of other inputs distributed, particularly in Trashigang and Lhuentse districts of **Bhutan**. The sources of the problems were in tender calls and contracts in irrigation development. In **Sri Lanka**, zinc sulphate was a new input which needed training to make its effective use. The training on zinc sulphate use was judged to be grossly inadequate in relation to the need. The satisfaction levels for zinc sulphate are receiving (52%), timeliness (50%), appropriateness (49%) and quality (29%) of the zinc sulphate provided. Hand tools were not available to all target beneficiaries yet among the recipients, the satisfaction levels were somewhat higher.

2.3.4 Perceived impacts of TCP on beneficiary households

In the previous section, the reporting was on the process part – the distribution of seeds, fertilizers and other inputs. Process is a necessary condition for achieving outcomes (production) and impact (e.g. welfare from the utilization of the outcome such as food security, increase in household nutrition, etc.) but not a sufficient condition. Since the project support was partial (few inputs), the perceptions on impact may have been influenced by other inputs and processes which were outside the project scope or domain. The impact part is

discussed in this section at the beneficiaries' perception level in terms of deterioration (negative change) and improvement (positive change). The detailed information on perceived impacts is presented in Annex 7.

As in the case of satisfaction level reported in section 2.3.3, the individual average values in the table are converted to a single unique comparable number using a neutral weighting system (weights adding to zero). Under this -1 weight was given to "deteriorated a lot", -0.5 to "deteriorated a little", 0 to "unchanged", 0.5 to "improved a little" and 1 to "improved a lot". The computation technique has already been demonstrated in Box 1.

Aggregate regional perception level on impact: The beneficiaries in the aggregate from all countries reported positive impact from TCP's support as reflected by positive aggregate change score of 36.2 percent improvement. This, however, is much lower than the level of satisfaction expressed on the process part – i.e. the seeds, fertilizers and other inputs distribution. The highest impact was perceived in production (40%) followed by food accessibility (37.5%). Relatively lower impact was perceived on ability to sell the output (31.2%).

Since the beneficiaries were purposefully targeted to include poor and marginal farmers and the intervention levels were modest, the impact can be the improvement in enhancing food and nutrition security and lesser in the ability to sell. In this sense, the perception results seem plausible. The aggregate regional perception levels on impact are presented in Table 2.26.

Table 2.26: Percentage aggregate perceived impacts

Condition	Production	Accessibility	Ability to sell	Average
Deteriorated a lot	5.6	4.7	4.5	**5.0**
Deteriorated a little	10.0	12.0	12.8	**11.6**
Unchanged	10.7	10.7	17.9	**13.1**
Improved a little	45.5	48.7	45.0	**46.4**
Improved a lot	28.0	23.9	19.6	**23.8**
Total	**100**	**100**	**100**	**100**
Weighted unique score	**40.0**	**37.5**	**31.2**	**36.2**

Source: Compiled and computed from Annex 7

Perception on impact by gender: A gender disaggregation of the perception on impacts from TCP support presented in Table 2.27 shows that both male and female-headed households perceived positive changes in impact. However, the male-headed households were more optimistic, i.e. perceived more impact (37.3%) compared to female-headed households (28.8%) by a margin of 8.5 percent. The perception across gender was consistent in all categories – production, accessibility and ability to sell, in the sense that female-headed households had lower impact perception values in all categories reflecting either their pessimism or the actual lower magnitude of realizations in production, accessibility to food and ability to sell. This is despite higher level aggregate satisfaction level expressed by female-headed households in fertilizer distribution from the project. The reason may be overall less access of female-headed households to production services such as extension advice, supply of credit and other inputs, such as irrigation, which were generally not covered under the project scope. The extension advice in particular may be deficient because the agricultural extension cadres in the countries of the region are overwhelmingly dominated by men and they prefer to cater to the male farmers. The females generally opt not to join in such jobs because there is no critical mass of female extension cadres and hence they have fear of being embarrassed.

Table 2.27: Perceived impacts by gender

	Production		Accessibility		Ability to sell		Average	
	Male	Female	Male	Female	Male	Female	Male	Female
Deteriorated a lot	5.4	8.8	4.4	6.4	4.3	5.9	4.7	7.0
Deteriorated a little	10.3	10.8	11.6	15.6	13.2	15.8	11.7	14.1
Unchanged	10.6	11.8	10.4	10.5	17.7	19.8	12.9	14.0
Improved a little	48.1	40.5	49.2	49.2	46.1	32.7	47.8	40.8
Improved a lot	29.3	27.9	24.0	18.9	18.7	20.7	24.0	22.5
Weighted unique score	**42.8**	**34.0**	**38.4**	**29.3**	**30.9**	**23.3**	**37.3**	**28.8**

Source: Compiled and computed from Annex 7.

Perception on Impact by country

Production

Aggregate perceived impact on production is found to be 40 percent improvement according to the weighted unit score. The highest level of perception of impact is reported in the case of Afghanistan (98.8%). Other countries are far behind, including an overall deterioration of -5.9 percent reported in the case of Nepal. The perceived deterioration in Nepal can be attributed to several factors – the project implementation related factor being the considerable delay in the distribution of seeds. The perceived impact is positive but very low in the case of Timor-Leste (12.7%) and slightly higher in Cambodia (24%). All other countries have satisfactory level of impact perception ranging from 36.5 percent in Sri Lanka to 66.3 percent in Mongolia. Details are presented in Table 2.28.

Table 2.28: Perceived impact in production

Country	Deteriorated a lot (%)	Deteriorated a little (%)	Unchanged (%)	Improved a little (%)	Improved a lot (%)	Weighted unit score
Afghanistan	0.2	0.0	0.8	0.0	99.0	98.8
Bangladesh	0.0	1.9	6.2	85.0	5.4	47.0
Bhutan	0.0	13.9	11.0	54.6	20.6	40.9
Cambodia	13.1	17.4	7.5	32.4	29.6	24.0
Mongolia	0.8	1.2	4.5	51.2	42.1	66.3
Nepal*	19.0	22.4	10.1	48.1	0.3	-5.9
Sri Lanka	1.0	8.0	19.0	61.0	11.0	36.5
Timor-Leste	11.0	15.4	26.4	31.4	15.7	12.7
All countries	**5.6**	**10.0**	**10.7**	**45.5**	**28.0**	**40.0**

Source: Compiled from Annex 7.1.

Accessibility

Aggregate perceived impact on food accessibility is found to be 37.5 percent improvement – slightly lower than in the case of production, perhaps due to losses during storage and processing. The highest level of perception of impact is reported in the case of Afghanistan (79.2%) followed closely by Mongolia (71.1%). Other countries are far behind; including 2.9 percent perceived overall deterioration reported in the case of Nepal for the same reason as reported in the case of production. There is more or less consistency between the perceived production and perceived accessibility, the latter being lower by nearly 3 percent in all countries except Afghanistan where the difference is almost 20 percent. This is perhaps due to higher level of

per capita consumption or high level of losses or both. Nepal's case is inexplicable because accessibility is perceived to be less deteriorated than production. The corresponding figures are presented in Table 2.29.

Table 2.29: Perceived impact in food accessibility

Country	Deteriorated a lot (%)	Deteriorated a little (%)	Unchanged (%)	Improved a little (%)	Improved a lot (%)	Weighted unit score
Afghanistan	0.2	0.2	1.7	36	61.5	79.2
Bangladesh	1.2	1.9	6.2	85.2	5.4	45.9
Bhutan	0.0	17.3	2.1	50.2	30.5	46.9
Cambodia	7.5	23.9	12.7	39.4	16.4	16.7
Mongolia	0.4	0.8	4.8	44.2	49.8	71.1
Nepal	14.3	25.3	12.2	48.1	0.0	-2.9
Sri Lanka	4	8	20	57	11	31.5
Timor-Leste	9.9	18.4	25.9	29.4	16.3	11.9
All countries	**4.7**	**12.0**	**10.7**	**48.7**	**23.9**	**37.5**

Source: Compiled from Annex 7.2.

Ability to sell more

The impact perception with respect to the ability to sell shows an overall improvement of 31.2 percent, which is 6 percent lower than the perceived access to food. However, the relation between accessibility and ability to sell are muddled perhaps due to varying poverty levels of beneficiaries in different countries. The Cambodian and Nepal cases are inexplicable. In Cambodia, the perceived ability to sell is reported to have deteriorated despite positive results in production and accessibility. The opposite case is found in Nepal where the perceived ability to sell is positive (improved) despite perceived negative results (deterioration) in both production and accessibility. The detailed account of perceived impact on ability to sell is presented in Table 2.30.

Table 2.30: Perceived impact on ability to sell more

Country	Deteriorated a lot (%)	Deteriorated a little (%)	Unchanged (%)	Improved a little (%)	Improved a lot (%)	Weighted unique score
Afghanistan	0.2	0.2	8.2	32.9	58	74.2
Bangladesh	1.2	0.8	6.7	79.1	12.3	50.3
Bhutan	0.9	27.2	3.4	52.8	15.7	27.7
Cambodia	9.9	25.8	30.5	29.6	4.2	-3.8
Mongolia	0.4	1.2	18.4	46.8	32.2	54.6
Nepal	11.7	21.5	22.3	40.8	3.7	1.7
Sri Lanka	5	10	21	54	10	27.0
Timor-Leste	7.1	15.7	32.7	23.7	20.9	17.8
All countries	**4.5**	**12.8**	**17.9**	**45.0**	**19.6**	**31.2**

Source: Compiled from Annex 7.3.

* In Nepal, perceived impacts for crop production represent average values of Jumla (millet) and Baitadi (wheat and vegetable crops)

Supplemental quantitative information on impact

The outline for regional synthesis provided by the ISFP Secretariat with regard to impact analysis was only on the perception part because the impact is a longer term phenomenon and would not be expected to be quantified within the short project period of one year. However, the country reports from recipient countries in the region reported actual changes at least on the production (output) part which is used in this regional synthesis report as a supplement to the analysis made in the previous section (Section 2.3.4).

The TCP impacts on crop production have been reported differently in different countries in RAP region. Review of many countries indicate that combination of factors like availability and use of seeds, seed quality, timeliness, knowledge and training of farmers together with other factors like weather conditions, irrigation facilities, markets etc are noted equally important in giving desired results rather than a single or few factors. Country-wise brief description on crop production is made in the section below.

Crop production situation in different countries

In most countries except Nepal and Timor-Leste, yields of various crops are reported to have increased at varying rates in the TCP year compared to the previous year. This may be attributed largely to use of improved inputs provided by the project. Table 2.31 presents the range of yield increment of different crops in different countries. A rather detailed account of production level changes in different countries in presented in Annex 8.

Table 2.31: Crop yield improvement with TCP inputs by country

Countries	Perceived impact*	Yield change
Afghanistan	84.1	30% yield increase in rice
Bangladesh	47.7	6-60%
Bhutan	38.5	5-70%
Cambodia	12.3	9% rice yield increase
DPR Korea		16-31% yield increase
Mongolia	45.8	14-56%
Nepal	15.3	Decreased in most crops
Pakistan		11% increase
Sri Lanka	22.7	67% in rice
Timor-Leste	17.2	Slight increase
All countries	**31.8**	**Moderate**

Source: Compiled and computed from Annex 8.
* Brought from Table 3.7

3. ANALYSIS OF INPUT DISTRIBUTION SYSTEMS OF TCP PROJECTS

Chapter 2 helped to know what transpired from the projects' input distribution programme in terms of process (satisfaction) and impact (perceived impact) but the chapter did not relate the results with the varied distribution systems adopted in the project. This chapter is devoted to such an analysis.

3.1 Main types of input distribution systems used in the region

Several variants of input distribution systems were followed in different countries. The broad categorization of these systems can be in the form of i) institutional vs. direct beneficiaries, ii) equal quantity per household vs. quantity differed based on landholding/requirement, iii) government distribution vs. NGO, private sector distribution or mixed distribution system, iv) single input distribution vs. multiple input distribution, v) competitive bidding (ICB, LCB) in procurement vs. direct procurement; vi) high vs. low support levels; and vii) free distribution vs. equity contribution from the beneficiaries. All these variant systems have their respective advantages and disadvantages, and could potentially have varying influences in beneficiary satisfaction and perceived impacts. These are discussed below:

Institutional vs. direct beneficiaries: Institutional system of delivery is adopted only in DPR Korea and in all other countries inputs are distributed directly to the individual producer households. DPR Korea being a socialist country following commune system of production, the choice of system for input distribution is suited to the country context. However, the system does not lend to the assessment of the micro-level satisfaction and impact on the household level including the gender analysis.

Equal quantity per household vs. quantity differed based on landholding/requirement: The system of equal and varied distribution of inputs to households is mixed both within and across countries. For example, in Afghanistan, all beneficiary households have received equal amount of seeds and fertilizers, both packaged in a single package. In Bangladesh, the quantity of seeds are equal but of different types to different households, probably based on demand. Equal distribution system is managerially easy and quick but there may be surpluses in some households and deficits in other households. As an opportunity, this can be advantageous to the poor whose land is likely to be less and the resultant surplus can be sold by such households to finance other requisite inputs. No such incidences have, however, been reported in the various country reports.

Having said the above, the justification for equal distribution of inputs to all beneficiaries in a country should have come from the *gini* coefficient of the cultivated land across households, lower *gini* value meaning more or less equal distribution of land.

Government distribution vs. NGO, private sector distribution or mixed distribution system
Evidences around the globe abound on the relative inefficiency of the public distribution systems and higher efficiency and flexibility of the NGOs and the private sector. This fact appears to have been acknowledged in the inputs distribution programs under the ISFP TCP projects where private sector and NGOs have been used in final door to door input distribution on contract basis despite the overall project implementation being carried out by the government departments. The problems have come not in distribution per se, but in procurement and transportation resulting in delayed delivery of major inputs.

Single input distribution vs. multiple inputs distribution
Another input distribution system entailed a single input distribution, as in the case of DPR Korea where only urea is distributed, vs. Nepal where multiple inputs in varying quantities were distributed. As in the case of equal distribution, single input distribution is managerially easy as opposed to multiple inputs. However, single input could only be a small subset of total input and the support may be labeled as patchy. Multiple inputs distribution is likely to reach closer to holistic support which the poor target beneficiaries opt for. But again the value matters. Even a single input distributed could constitute a substantial part of the total cost of production if the input distributed is of high value.

Competitive bidding (ICB, LCB) in procurement vs. direct procurement

Competitive bidding, be it local or international is an internationally accepted fair practice of procurement as against direct purchase from the market which may entail financial malpractices. However, competitive bidding requires an often lengthy process compliance subjecting the system to a possibility of delay in procurement which the TCP project has painstakingly witnessed in many countries. Again, several organizations have varying rules of procurement which may help or hinder timely procurement. FAO procurement rules, which do not allow advances to the successful bidders in procurement, have been found to be a problem in LCB as the bidders in smaller countries do not generally possess sufficient financial resources. Mongolia had raised this issue in its country report while Bhutan report went to the extent of claiming that the country's own procurement process would have been faster and more cost-effective. This has been one of the principal sources of delay in inputs procurement in the TCP projects.

High vs. low support levels

The support level or the value of input package provided to households under the TCP project has varied significantly across recipient countries with a high of $167 in Afghanistan to a low of $13 in Nepal. While some of this diversity in support level has been introduced by the inability of the implementers to apply the criteria, such as in the case of Nepal, Bhutan and Timor-Leste, but others have been part of the original design, equal aggregate support level regardless of the size and population. The project could have varied this amount based on the size of population, the poverty level, the magnitude of losses from natural disasters, etc. for ensuring inter-country equality.

Free distribution vs. equity contribution from the beneficiaries

Free distribution of inputs, which is a theme in the TCP project, is ideal when the project is precisely targeted to the poorest households who find difficulty in financing for inputs. However, some countries like Cambodia and Bhutan expressed that a provision for equity share in input cost on the part of the beneficiaries would have helped in instilling or enhancing the sense of ownership of the project. Afghanistan went to the extent of actually implementing the equity share arrangement through the payment of 20 percent of the input cost by the beneficiaries.

The effect of the above systems is manifested or reflected in the timeliness of delivery, appropriateness of the inputs and the quality of the inputs. Using the country scores on these variables and taking the linear average gives a composite score of effectiveness of the whole input distribution system in a country. This composite average on the effectiveness of the distribution system is calculated and presented in Table 3.1 for seeds and Table 3.2 for fertilizers. The average figures in the tables are used later in exploring the relationship between the input supply system and the given variables. These results show that fertilizer distribution was more effective than seeds distribution. Similarly, the performance is found to be better in countries where inputs were distributed equally (for example in Afghanistan and Pakistan) although this may be coincidental as performance is influenced by several factors – effective supervision of quality and distribution of inputs being the most important one (Also refer Table 2.9).

Table 3.1: Effectiveness of TCP seeds distribution system by country

Countries	Timeliness	Appropriateness	Quality	Average
Afghanistan	92.6	85.2	82.5	86.8
Bangladesh	64.4	78.1	81.9	74.8
Bhutan	60.1	69.3	75.7	68.4
Cambodia	66.1	56.6	76.3	66.3
Mongolia	63.7	83.7	83.3	76.9
Nepal	25.1	31.8	54.7	37.2
Sri Lanka	59	56	64	59.7
Timor-Leste	21.6	44.8	53.8	40.1
All Countries	**56.6**	**63.2**	**71.5**	**63.8**

Source: Compiled and computed from Tables 2.18, 2.19 and 2.20.

Table 3.2: Effectiveness of TCP fertilizer distribution system by country

.

Countries	Timeliness	Appropriateness	Quality	Average
Afghanistan	92.2	85.5	83.2	87.0
Bangladesh	91.2	94	97.5	94.2
Cambodia	78.6	69.7	80.7	76.3
All Countries	**87.3**	**83.1**	**87.1**	**85.8**

Source: Compiled and computed from Tables 3.24, 3.25 and 3.26.
Note: Fertilizers were distributed in only 5 countries – Afghanistan, Bangladesh, Cambodia, DPR Korea and Timor-Leste. In the case of Timor-Leste, the samples were all males and the response values in percentage did not add to 100 and hence was excluded from the analysis. In the case of DPR Korea, the information was not available.

3.2 Effectiveness of input distribution systems

3.2.1 Satisfaction level with inputs received

The relationship between satisfaction on seeds and the effectiveness of seed distribution is found to be perfect not only in the aggregate but also in all countries. The reason is because the variables which determine the level of satisfaction and those determining the effectiveness of the input distribution system are mostly common in the aggregate. In Nepal, the relationship is slightly lower due to a host of problems, particularly related to the inappropriateness of the seeds and delayed delivery but high satisfaction score on receiving seeds. The computed values are shown in Table 3.5.

Table 3.5: Relationship of seed distribution effectiveness and satisfaction on seeds by country

Countries (Column 1)	Average satisfaction score (Column 2)	Average effectiveness score (Column 3)	Effectiveness score/Satisfaction score (Column 4)
Afghanistan	86.9	86.8	1.00
Bangladesh	75.6	74.8	0.99
Bhutan	68.7	68.4	1.00
Cambodia	71.3	66.3	0.93
Mongolia	78.4	76.9	0.98
Nepal	45.5	37.2	0.82
Sri Lanka	62.8	59.7	0.95
Timor-Leste	41.9	40.1	0.96
All Countries	**66.4**	**63.8**	**0.96**

Source: Compiled and computed from Tables 2.17, 2.18, 2.19, 2.20 and 3.1.

The relationship between satisfaction level and effectiveness of fertilizer distribution is presented in Table 3.6 for the countries which have received fertilizers. The relationship has been found to be near perfect.

Table 3.6: Relationship of fertilizer distribution effectiveness and satisfaction on fertilizer by country

Countries	Average satisfaction score	Average effectiveness score	Effectiveness score/Satisfaction score
Afghanistan	86.7	87.0	1.00
Bangladesh	95.0	94.2	0.99
Cambodia	80.5	76.3	0.95
All Countries	**87.4**	**85.8**	**0.98**

Source: Compiled and computed from Tables 2.13, 2.14, 2.15, 2.16 and 3.2.

3.2.2 Perceived impacts of TCP on beneficiary households

The match between the effectiveness of input distribution and the perceived impact of the beneficiaries, presented in Table 3.7, shows the input distribution effectiveness to be much higher in all countries than the perceived impact except in the case of Afghanistan where the relationship is found to be strong. The reason is the relationship between the process and outcome which is found to be disturbed by various factors. Input distribution is a process which is found to be generally satisfactory as revealed by the level of satisfaction expressed by the beneficiaries. However, the right process is only a necessary condition for outcome and impact. It is not sufficient. This means that even a full compliance of the process, in this case inputs distribution, does not guarantee the full outcome and impact.

Table 3.7: Relationship of input distribution effectiveness and perceived impact by country

Country (Column 1)	Average perceived impact score (Column 2)	Average effectiveness score (Column 3)	Effectiveness score/Impact score (Column 4)
Afghanistan	84.1	86.9	1.03
Bangladesh	47.7	84.5	1.77
Bhutan	38.5	68.4	1.78
Cambodia	12.3	71.3	5.80
Mongolia	45.8	76.9	1.68
Nepal	15.3	37.2	2.43
Sri Lanka	22.7	59.7	2.63
Timor-Leste	17.2	40.1	2.33
All countries	**31.8**	**65.6**	**2.06**

Source: Compiled and computed from Tables 2.29, 2.30, 2.31.

A relationship between level of satisfaction from inputs distributed (Table 3.5, Column 2) and the perceived impact on production (Table 3.7, Column 2) was examined from the available data which has been presented in line diagram form in Figure 3.

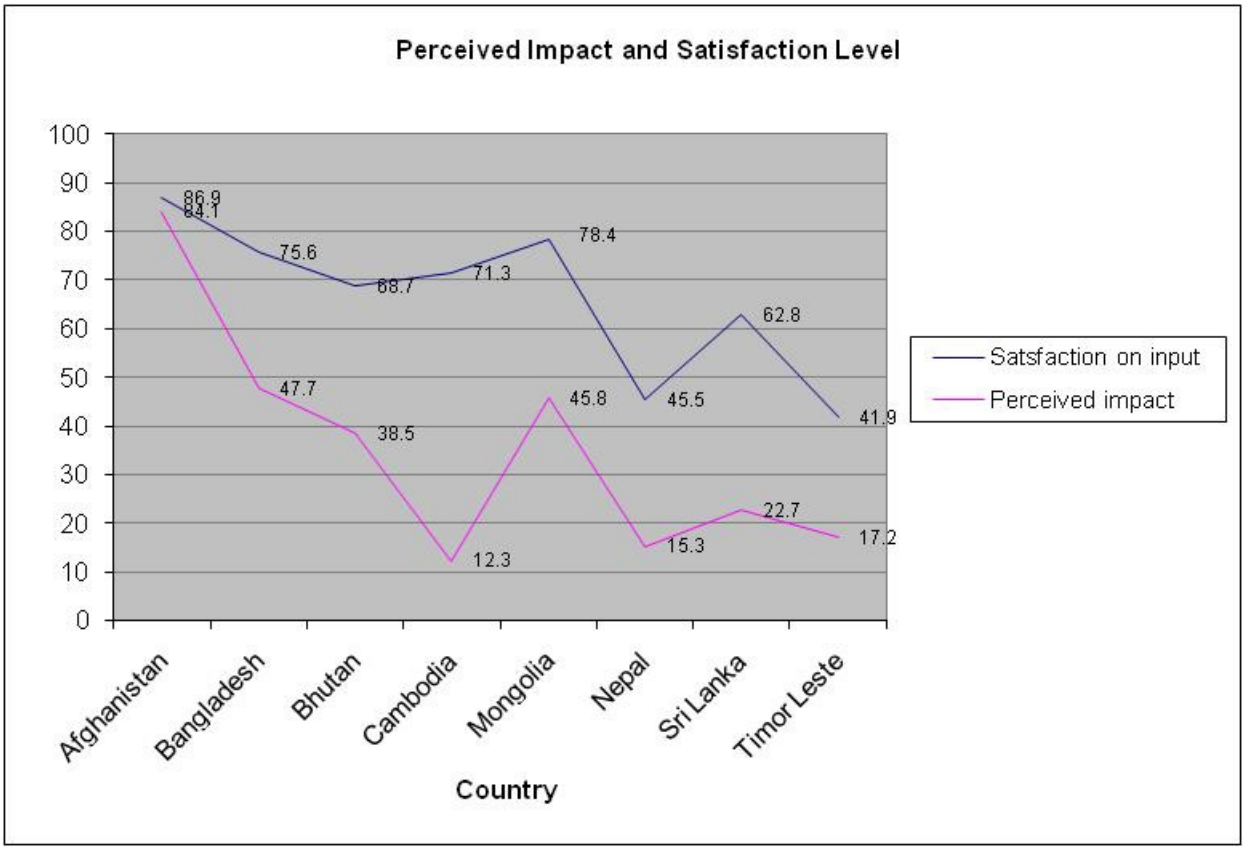

Figure 3: Relationship between satisfaction level from input distribution and aggregate perceived impact

The graph indicates that only in the case of Afghanistan, the right process has been translated into right outcome (perceived impact on production ability to sell and food availability). In other countries, the

difference (gap between two line graphs) is large, meaning that the process is not sufficiently translated into outcome. The same dynamics is reflected in the relationship between the effectiveness of inputs distribution with the perceived impact. This large gap is due, among others, to some exogenous factors like droughts and floods which affected production in countries like Nepal, Timor-Leste and Cambodia. Since TCP project did not provide all inputs required for production, the beneficiaries may have encountered difficulties in mustering other inputs which were not in the project domain.

3.2.3 Constraints of input distribution systems

The input distribution systems under ISFP TCP projects appear quite varied across the countries depending upon country's socio-economic, geo-physical, political environments. Nevertheless, some common problems have been observed in most countries during the implementation of the project affecting the performance adversely. Weak planning, limited financial and technical capacities of input suppliers, inadequate resources of farmers, poor implementation and monitoring are some of the major issues reported in many countries which are briefly mentioned below.

Limited supply of inputs: The inadequacy of inputs supplied by the project was reported as a major constraint in many countries of the region. Many vulnerable groups (including resident farmers, returning refugees and IDPs) in **Afghanistan** are still in need of various inputs to resume their agricultural livelihoods and the inputs supplied under the ISFP TCP was not enough to meet the demand of the many poor people. In **Cambodia**, the project originally planned to provide inputs to some 2,500 families in Takeo province but in reality the number of beneficiaries increased to 7,476 households due to high demands for free inputs. The seed inputs received by farmers were divided into smaller amount in order to reach many other farmers who were not targeted originally. **In Nepal**, the quantity of vegetables seeds distributed was significantly low (e.g. 2 to 5 grams) and most farmers just broadcasted the seeds in a small plot (particularly in rainfed areas of Baitadi) without much care and attention. Rice seeds were also distributed in small quantity in Nepal. The distribution was planned to 2,500 households but 6,546 households were supported by sharing the seeds in smaller quantities in Kanchanpur and about 3,000 households (about 20 percent more due to splitting of packets) in Kailali district. In Bhutan, the original non-recipients filed complaints with the local administration and were eventually granted support, thus leading to thin distribution of seeds.

In the above context, another additional explanatory variable – satisfaction level on the adequacy level could have been added.

Inefficient and delayed supply of inputs: One single major constraint faced by beneficiaries in many countries is the inefficient, untimely or delayed supply of inputs affecting crop plantation adversely. The input supplier companies in **Afghanistan** were in difficult financial situation to purchase raw inputs from their contracted seed growers and to perform other operations such as cleaning, processing, packaging and getting the certificate for supply. The entire process was lengthy and had adverse effect on vulnerable farmers to get certified seed for autumn 2008 planting season.

Likewise, the first important problem experienced by majority of the beneficiary farmers (36.1%) in **Bangladesh** was wrong timing of inputs delivery. They opined that if inputs were supplied at least 15 days earlier, they could have produced the crops in the early season and fetched higher prices for their products. The maize seed suppliers delayed seed delivery due to requirement of germination tests. In **DPR Korea**, some beneficiary cooperatives evaluated the approach as not so appropriate noting that the project activities lacked punctuality in accordance with cropping stages and the delay in supply and transport restrained further improvement in crop production. Import of urea from Serbia consumed large amount of project budget as transport fee and this reduced amount of fertilizer supply. **In Nepal,** the major weakness was noted during planning with respect to selection and distribution of appropriate quality of seeds and their timely supplies. The timeliness for distribution of some seeds like finger millet and vegetables in higher elevations like Jumla was not appropriate. Most of the farmers retained the seeds for next season planting. Some farmers who planted the seeds late in the season got a very poor harvest. The distribution of same type and variety of seeds in different altitude ranges was also not appropriate.

Lack of associated components: In Bangladesh, farmers viewed their second and third important problems to be irrigation water crisis (26.2%) and marketing problem (12.7%). The marketing problem was associated with late harvest of vegetable crops and low price. Similarly, high rental cost of tractor and thresher leading to difficulties to access the service by poor people was a single major problem reported by a largest segment (79%) of male respondents in Afghanistan followed by other problems such as crop disease and pesticide, lack of agricultural inputs and manpower stated by fewer percentages.

Constraints in procurement and delivery: Input delivery to DADO or NGO partners in **Nepal** was made through contractors who took substantial time to collect the seeds from the suppliers and deliver to the sites which caused delays in the entire process of delivering inputs to the farmers. Input deliveries, particularly in the hills of Nepal, was a major challenge as timely input delivery system was hampered due to frequent landslides, blockade of roads, non-availability of plane charter and lack of proper storage and transportation means. Since the supply of seeds was done through Agriculture Service Centres (ASCs) in the hills, seeds were delivered to the farmers through farmer representatives. These farmer representatives could not get the transportation cost and hence farmers in close proximity of ASCs got preference than those in remote areas defeating the purpose of distributing seeds to the neediest households in remote areas. Although the contractors or NGO partners were required to store the seeds in safe place to protect from rain and moisture, it was not possible for lack of these facilities during the transportation of inputs to remote hill districts.

Beneficiary selection, targeting and implementation: The beneficiary selection criteria were not exactly followed in **Nepal** and hence the purpose of distributing the seeds to only vulnerable households was not met. In certain areas, seeds were distributed mostly to the interested households rather than to target households meeting the criteria. For instance, as mentioned above, in absence of transportation cost for movement, representative farmers assigned to distribute seeds in the local areas confined themselves to their close neighbours and relatives rather than reaching to the distant farmers who were amongst the major target groups. Selection of beneficiaries could not be done according to criteria suggested by FAO as seeds were distributed to beneficiaries exceeding the landholding size criteria (e.g. vegetables for one *ropani* (approximately 0.05 hectare) and wheat for households having 1-5 *ropanis*)

Weak coordination, monitoring and supervision: Lack of coordination between DADO and implementing NGO partner caused problem in the selection of household beneficiaries, monitoring, evaluation and reporting of the activities in **Nepal**. The DADOs were not happy on the implementation of all input (seed) distribution by the NGO partners and viewed that they were not involved in the monitoring of the seeds distribution and its performance in the field. Seeds distributed without proper quality check during packaging and prolonged handling without proper storage, drying and precautions also resulted in duplication of packets, difference in quality due to different lots, missing of some seed packets (e.g. in vegetables).

Limited project time: The implementing agency in Afghanistan observed the project period of about 9 months as a major constraint within which all activities like village selection, beneficiary selection, conducting a base line survey, post distribution and impact assessment survey and report preparation were to be done. Implementation of micro-projects (construction of veterinary clinics and extension office), as per MAIL policy and long time taken to get technical clearance was another major problem which was the main unforeseeable constraint observed during implementation of the project which delayed the constriction activities within the project life.

In **Mongolia,** most of the informants pointed out the following problems which took place during the project implementation: late supply of vegetable seeds (19.2%); limited and inappropriate (stony in Ulaanbaatar) vegetable fields (17%); lack of project coordination and ongoing monitoring (17%); droughts and lack of waters (14.9%); too many applicants to the project (12.8%); and lack of knowledge and experience of the beneficiaries to grow potato and vegetables (10.6%). The input supplier in Mongolia (MFARD) observed the major constraints faced during implementation as follows: i) the procedure of the purchase of potato seed was too complicated and took long time; ii) the distribution of potato seeds took long time reaching the beneficiary households; iii) the farmers (seed multipliers) were requesting advance payments from the

MFARD after signing the contracts; and iv) the locations of the project sites were too far from the seed suppliers (600-1,600 km) which created difficulties for the transportation of potato seeds and increased transport costs. In **Sri Lanka**, key challenges faced by the implementing partners were as follows: i) insufficient quantities of seed paddy; ii) untimely provision of seed paddy; iii) some households had not received fertilizer subsidies; iv) low rainfall, unusual drought in some areas caused crop damage in some areas; v) crop damage by animal attacks, and vi) mild spread of BPH attack.

3.2.4 Suggestions for improving input distribution systems

Most country reports tended to indicate that the suggestions are the same as recommendations and hence not many inputs were provided in this regard. Further, even the countries which have provided suggestions, they have not indicated the sources (beneficiaries, implementing agencies, input suppliers and FAO staff) from which the suggestions have evolved. Hence, this section has been shortened to include major suggestions with regard to the input distribution systems adopted letting others to be included in the recommendations part in Chapter 5.

- The lengthy procurement process of FAO was found to be instrumental in the delayed delivery of inputs in many countries (Timor-Leste, Nepal, Bhutan, etc). Some counties, e.g. Bhutan, felt that the local procurement system could have been more cost effective and timely rather than direct FAO procurement. It was therefore suggested that the FAO should either trust the respective government's procurement processes or, at the least, prepare plans for procurement and transportation of inputs well ahead of the actual requirement period of these inputs.
- The non-existence of the advance system to the successful bidder under the FAO procurement rule was raised by Mongolia and few other countries and it was suggested that the project should link the suppliers with the credit providers.
- Many countries suggested strengthening the monitoring and supervision inputs in distribution.
- Cambodia and Bhutan suggested that there should be some equity share in cost of inputs on the part of beneficiaries in order to enhance the sense of project ownership among them. This was practically demonstrated by Afghanistan.
- Nepal suggested varying the type and variety of seeds for different altitude ranges in the hill districts.

The above and other suggestions have been dealt in the recommendations part (Section 5.2).

3.3 Strengths, weaknesses, opportunities and threats (SWOT) of the input distribution systems

As stated already in chapter 3.1, various input distribution systems were adopted in different countries trying to align the systems with the specific country contexts. The country reports do not seem to have sufficiently understood the fact that the strengths, weaknesses, opportunities and threats pertain to the input distribution systems used and not to the whole project. Nevertheless, the comparative strengths, weaknesses, opportunities and threats as observed from the country reports, although at scattered level, are compiled and summed up in Table 3.8.

Table 3.8: Comparative strengths, weaknesses, opportunities and threats (SWOT) of the input distribution systems used in different countries

Input distribution system category	System options	Countries where adopted	Strengths	Weaknesses	Opportunities	Threats
Procurement	Competitive bidding (ICB, LCB)	ICB in Korea and Timor Leste LCB in other countries	Globally accepted fair system	Possible delays due to lengthy process requirements		Possible delays in procurement affecting performance
	Direct purchase		Quick procurement	Not fair and accepted practice in projects; possible rent-seeking tendencies		Possible rent-seeking tendencies
Distribution target	Institutional	DPR Korea in fertilizer distribution (to cooperatives)	Easy to manage or administer			Transparency issue on input delivered and project impacts.
	Direct beneficiaries	All other countries		Difficult to manage	Better beneficiary HH targeting	
Distribution quantity	Equal	Afghanistan, Pakistan	Easy to manage or administer			
	Varied	All other countries	Higher beneficiary coverage	Difficult to manage		
Distribution by	Government	All countries	Pervasive network Low cost	Bureaucratic inefficiency		Rent seeking tendency; delays in distribution affecting performance
	NGOs	Afghanistan, Pakistan, Timor Leste, Nepal, Mongolia	Generally effective distribution; flexibility in management	High cost	Better performance if competent NGOs are engaged	
	Private sector		Generally high distribution efficiency			
Distribution mode	Free	All other countries	Poor benefit more	Less coverage; criteria application difficult		
	Beneficiary equity	Afghanistan	More coverage, ownership feeling	Difficult for the poor	Differentiated subsidy by poverty level	

4. INTEGRATION OF TCP PROJECTS INTO OVERALL GOVERNMENT RESPONSES TO SOARING FOOD PRICES

Activities of the ISFP are not limited to inputs distribution alone. The guidelines for FAO's support specifically recognized the need to integrate the production enhancement programmes under ISFP with the national strategies and the existing partnership arrangements already in place rather than creating new structures; seed multiplication; upscaling conservation agriculture as an alternative to the limited supply and high cost of fertilizer; post-harvest storage; small-scale water harvesting, irrigation and drainage systems; capacity building of the associated service providers; the promotion of producer associations to facilitate marketing to ensure better returns. FAO has made an attempt to follow a coherent strategy in all the countries it assisted. It carried out food security situation assessments in 38 countries with 10 in Asia and the Pacific. A number of briefing papers on policy responses as well as a technical guide on country level action have been prepared and a strategy paper on how to improve the institutional capacity in rural areas strengthening farmer's participation in rural development is being prepared by an interdepartmental working group.

In the backdrop of the above background, the integration of TCPs in the overall government responses to soaring food prices in the countries in the region have been discussed briefly.

Afghanistan
The TCP project further came as part of MAIL's National Agriculture Development Framework to support the local production capacity of the poor farmers. The framework pursues food security with an aim to ensure that the vast majority of the population has access to adequate quantities and quality of food, either by growing it, or by having sufficient money to buy it.

Bangladesh
In Bangladesh, free inputs delivery supplemented government's policy of subsidizing locally produced urea at 75 percent and that of TSP and potash at only 15 percent, helping stabilize the price throughout 2007/08. Farmers also reported that the price of fuel and electricity went up 60 percent during the same period, despite being subsidized by the Government at the rate 40 and 2 percent respectively and the free input distribution under TCP was of significant support for the poor beneficiaries.

Bhutan
The Royal Government felt the urgency to accelerate its food productions especially for the more vulnerable poor farmers who could not have benefited much from the regular agricultural program support. Assistance needed to be intensified to alleviate the deteriorating poverty situation after it was hard hit by the escalating food price crisis. The ISFP TCP project was in line with this policy of the government.

Cambodia
In Cambodia, the support interventions under TCP input delivery project were coherent with the policy measures taken by the Royal Government of Cambodia to help safeguard the food security of poor farmers discussed under Section 1.2 of this report.

DPR Korea
Global food price increase, higher prices for petroleum-products and fertilizer further limited the capacity of the government to produce food in required amount to guarantee national food security. During the 2008 agricultural year, allocation of fertilizer to cooperative farms was around 60 percent of that in 2007, and well below the actually required quantity for growing main seasonal crops. Most domestic fertilizer production facilities in DPRK, including urea production, are greatly in need of renovation and their actual capacity stands well below the installed capacity. Fertilizer provided under the ISFP TCP project, greatly, supplemented the fertilizer allocations given by the MoA, increasing the amounts of fertilizer application to the desired levels. Urea fertilizer was distributed to 70 beneficiary farms in 38 counties located in the main granary areas of North and South Pyongan, North and South Hwanghae Provinces and Pyongyang City

where it was immediately applied primarily to spring barley as well as to vegetables. Amounts given to farms were either 5 or 10 tonnes, depending on the size of arable land. Where chemical fertilizer was in short supply, priority was given to crops and fields with potential of higher yields.

Mongolia
The project is designed to be mainly implemented through existing operational institutional networks within the MOFALI, involving the Green Revolution Program of the Crop Production Division**.** Most of the activities were performed under MOFALI with the direct involvement of the Green Revolution Council from the Crop Division. The Council was also involved in the selection of beneficiaries whereas the MOFALI selected seed suppliers through open tendering. Physical monitoring of project activities was performed by the Monitoring, Information and Evaluation Division of the MOFALI. The project was implemented through FASMEDs at the *aimag* (province) level and by the *soum* (district) Governors' Offices at the local level utilizing the existing set up and aiming to reach the vulnerable communities.

Nepal
As a response to the soaring food prices, the government of Nepal formulated the temporally categorized – immediate term measures, short term measures, medium term strategy and longer term strategy. The TCP project fully complements the immediate term strategy of the government of Nepal and the upcoming medium and longer term interventions planned within the ISFP are fully compatible with Nepal's strategies.

Pakistan
In Pakistan, the project was implemented in the most backward districts of the country viz. Shangla, Kohistan and Batagram where more than 50 percent of the population live below the poverty line. The whole locality is mountainous and difficult to access and the government is providing assistance to the communities since 2005 earthquake for the revival of agriculture and livelihood improvement. In tandem with government's policies of supporting the people of these areas, the project procured and distributed the package of wheat seed and fertilizers to the selected, vulnerable farming households.

Timor-Leste
Several short term interventions had been carried out by the Government and partners to increase areas for domestic food production. With the experience of social unrest due to unavailability of food during the political/social crisis by late 2006, the government has allocated a significant amount of its budget to secure food imports, as well as introduction of subsidization and control of price on imported rice in order to ensure food accessibility. Realizing the sustainability issue of the food security of the entire nation, in particular with alarming population growth of 3.7 per cent per year (2004 census), the government declared self-reliance on food as the number one national priority for 2009 and the number two national priority for 2010 with the objectives to increase domestic food production by 10 percent annually during these years. To accomplish this as well as for capacity building of farmers, provision of good quality inputs was necessary to immediately boost food production by smallholder farmers in order to deal with soaring food prices and consequently strengthening their household food security is in line with the government priority and contributes to its objectives.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The ISFP project to support agricultural production through the provision of expensive and high quality inputs and other support was conceived in an opportune time when the poor and deficit producer households of many countries in the Asia region were suffering from sky-rocketing prices of food which seriously threatened their livelihoods; and at international level, jeopardized the achievement of Millennium Development Goals.

The project has been able to target the areas and beneficiaries to include poor, vulnerable and marginalized and female-headed households using appropriate criteria. In Nepal and Timor-Leste, the demand side pressure led to poor application of the criteria leading to thin scatter of inputs (seeds). Some innovative concepts beyond the project design, e.g. equity contribution for inculcating the sense of ownership in Afghanistan, were also found.

Several variants of input distribution systems were adopted in different countries. The broad categorization of these systems can be in the form of i) institutional vs. direct beneficiaries, ii) equal quantity per household vs. quantity differed based on landholding/requirement, iii) government distribution vs. NGO, private sector distribution or mixed distribution system, iv) single input distribution vs. multiple input distribution, v) competitive bidding (ICB, LCB) in procurement vs. direct procurement. All these variant systems have their respective advantages and disadvantages, and could potentially have varying influences in beneficiary satisfaction and perceived impacts.

Planned project activities have been implemented successfully in many countries with high but varying levels of satisfaction (on receiving inputs, timeliness, appropriateness and quality) across countries in process part (inputs distribution), and with positive perceived impacts. Even the quantitative assessments of productivity have shown crop yield improvements up to 40 percent compared to a year before the project. Impacts in terms of increased production, enhanced access to food and ability to sell agricultural products have all been perceived to be positive. Nepal and Timor-Leste, however, have performed rather poorly on account of delays in the distribution of crop seeds and high scatter.

5.2 Lessons learned and way forward

It is understandable that due to the urgency of emergency support to the victims of soaring food grain prices in countries of the Asia Pacific region, ISFP had to be planned hastily. However, the issues and concerns which emerged during the implementation of the project in ten RAP countries dealt in this report, has provided some lessons which may be useful in designing and implementing similar projects in the future.

Project Design

- A coherent project document specifying the selection criteria for country, area and beneficiary, framework for the selection of project components and sub-components, and the basis for determining the choice of input distribution system could have been useful in better targeting of the project as well as in explaining the observed differences across countries.
- Within the budgetary limitation of a TCP project, the support level per country on per household level has varied a lot undermining equality across countries. The support level could be varied by using such criteria as size of the country and the population, level of poverty, level of increase in the prices of food grains and vegetables, and the effect of natural disasters.
- The size of assistance provided was, in many cases, too small to make a dent on production. Higher impact could have been derived by scaling up the project support.

- Since the project had to be evaluated eventually, the baseline could have been planned to facilitate the evaluation process. While collection of an elaborate baseline data may be formidable and costly task for an emergency assistance project, a practical and modest approach to collect information on key indicators may be followed.
- The country and beneficiary innovation of putting beneficiaries' equity contribution of 20 percent in input cost in Afghanistan resulted in improved project targeting, and inculcated sense of ownership in the project which proved instrumental in enhancing the perceived impact from the project. Such a provision in the project, however small it might be, could also have covered more households with the project resources.
- Even within the framework of short term emergency support, the components to lead to longer term food security, such as irrigation, seed multiplication and storage, could have added the relevance of the project.

Impact assessment

- The guidelines provided by the ISFP Secretariat missed out some important variables, for example, the "adequacy" of inputs in explaining the beneficiary satisfaction level.
- The guidelines as such were found to have been interpreted differently in different countries perhaps because they lacked specificity and there was no orientation on this. Organization of orientation workshops at the regional level for the country teams carrying out impact assessment could have improved the consistency in data collection and reporting across countries.

5.3 Recommendations

Based on the country reports, review of other related work and the analysis of data made in this report, following suggestions and recommendations related to project design and process as well as those issues outside the project domain are offered for consideration.

Project design related

- Project package was deemed to be extremely partial, and quantity inadequate, to make considerable dent in production and hence more complete and adequate project package is proposed;
- Since high quality seeds were distributed under the project, an added component of support for seed storage (except for hybrid seeds) could have been useful for upcoming seasons.
- The project should have linkage and coordination component to take care of other inputs which are not within the project scope.

Project processes related

- Delays in seeds and fertilizers delivery affected the production performance in many countries, particularly Nepal and Timor-Leste, and these countries have suggested the project to have advance planning in procurement and transportation.
- Monitoring and supervision input in the project was found to be extremely weak in several countries and hence strengthening of this process was suggested
- Training inputs were deemed to be inadequate and untimely in many countries which affected the production performance. It was, therefore, suggested that the appropriate and adequate training input should precede before the actual inputs distribution
- Some counties, e.g. Bhutan, felt that the local procurement system could have been more cost effective and timely rather than direct FAO procurement. Advance planning in procurement and transportation of inputs is recommended.
- A few countries expressed reservation about the distribution of free inputs arguing that the system did not muster beneficiary ownership and also was instrumental in distorting the criteria application. In a country like Afghanistan, the beneficiaries voluntarily contributed 20 percent of the input cost which led to strict targeting. The suggestion to have at least some equity contribution in cost was suggested by Bhutan and Cambodia in their respective country reports.

- DPR Korea suggested more decentralized approach to TCP implementation in order to improve the project performance
- Nepal case revealed that the blanket distribution of a seed variety in all altitude ranges and in the period was not appropriate. The country report suggested differentiating the technologies to make these more suited to different production conditions. This is generally applicable in other hilly areas as well such as Cambodia and Bhutan.

Outside of project domain

- Credit arrangements for private input suppliers is considered necessary particularly in the context of FAO procurement rules which precluded the suppliers from receiving advances for input buying
- Linkage and coordination with other institutions for inputs not covered under the project should be built.

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ANNEX 1: SUMMARY OF INPUTS DISTRIBUTED

Annex 1: Table 1

Country: Afghanistan
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Wheat	149,000	2,980		District: Sari Pul Province; Villages: i) Sari Pul cnetre ii) Sancharak and iii) Sozma Qala
Total				
Fertilizers				
DAP	149,000	2,980		Same as above
Urea	149,000	2,980		Same as above
Total	**298,000**	**2980**		

Annex 1: Table 2

Country: Bangladesh
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Rice (Boro, BR29)	11,250	2,250	7,661	The fifteen target districts are i)Kurigram, ii)Rangpur, iii)Lalmonirhat, iv) Nilphamari, v) Gaibandha, vi) Tangail, vii) Madaripur, viii) Sirajgonj, ix) Chandpur, x) Manikgonj, xi)Faridpur, xii) Sherpur, xiii) Jamalpur, xiv) Feni, xv) Shariatpur
Maize	2250	1,500	3,587	
Lentil	7500	1,500	14,130	
Spinach	3375	1,500	7,091	
Red Amaranths	450	1,500	1,761	
Radish	285	1,425	1,198	
Carrot	338	1,500	7,500	
Total	**25,448**	**11,175**	**42,928**	
Fertilizers				
Urea	223.5		80,907	
TSP	178.35		206,708	
MoP	122.025		95,423	
Total	**523.875**		**383,038**	

Annex 1: Table 3

Country: Bhutan
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number ofbeneficiary households	Value (Nu)	Value (USD)	Target areas (districts/ villages)
Maize	93,500		2,337,500	50,815	All 20 Dzonkhags of the country viz.
Paddy	4,390	384	142,150	3,090	
Potato	184,000	2,000	1,760,000	38,261	
Vegetable seeds (16 varieties) packets	50,000	7,311	1,404,710	30,537	
Citrus (No. of saplings)	27,200	954	1,088,000	23,652	
Walnut (No. of Saplings)	2,002		220,220	4,787	
Pear (No. of saplings)	1,424		71,200	1,548	
Total	**362,516**	**10,649**	**7,023,780**	**152,691**	

Annex 1: Table 4

Country: Cambodia
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Rice	88,000	4,676		Target areas: Kampong Speu, Kampong Chhnang, Kampot, Takeo, Kampong Cham and Prey Veng.
Total	**88000**	**4,676**		
Fertilizers				
Urea and DAP	140,000	2,800		
Total	**140,000**	**2,800**		

Annex 1: Table 5

Country: DPR Korea
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Fertilizers *				
Urea	465,000	12,304		Target areas: major cereal-producing centers in DPRK i.e main granary areas in western plain land viz 14 cooperative farms in 9 counties in Pyongyang City, 16 cooperative farms in 6 counties in South Pyongan Province, 5 cooperative farms in 3 counties in North Pyongan Province, 18 cooperative farms in 10 counties in South Hwanhae Province, 15 cooperative farms in 7 counties in North Hwanghae Province and Pyongyang Vegetable Research Institute were supplied with FAO urea fertilizer
Total	**465,000**	**12,304**		

** In DPR Korea, 70 cooperative farms involving 12304 beneficiary families were provided urea under TCP input delivery project.*

Annex 1: Table 6

Country: Mongolia
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				Target areas: 11 Aimags viz Selenge, Tuv, Arkhangai, Uvurkhangai, Zavkhan, Khuvsgul and Dornod aimags), high mountainous areas (Bayan-Ulgii and Khovd aimags) and partially semi-desert areas (Gobialtai and Bayankhongor aimags
Potato	600,000			
Carrot	500			
Beet yellow	400			
Beet deep red	150			
Cucumber	260			
Onion	100			
Total	**601,410**	**9,094**		

Annex 1: Table 7

Country: Nepal
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Rice	90,000	3,000	Not known	Kailali (10 VDCS) see report
Wheat	30,295	6,059	Not known	Baitadi, 42 VDCs
Finger millet	2,430	2,430	Not known	Jumla, 28 VDCS
Vegetables	2,096	8,489	Not known	Baitadi and Jumla, 60 VDCs
Total	**124,821**	**19,978**		

Annex 1: Table 8

Country: Pakistan
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Wheat	208,000	8,320		Target districts: Koshistan, Shangla and Batagram of North West Frointier Province, Pakistan. Each farmer received 25 Kg of wheat seed and equal amount of DAP and urea fertilizer. In Kharif (summer) each beneficiary farm household received an amount of 25 kg maize seed and 12.5 kg DAP and 12.5 kg urea fertilizer.
Maize		3,600		
Total	**208,000**	**11,920**		
Fertilizers				
Urea	208,000			
DAP	208,000			
Total	**416,000**			

Annex 1: Table 9

Country: Sri Lanka
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				
Rice	615000	8,350	341,296	Ampara, Anuradhapura, Batticaloa and Polonnaruwa districts of the North Central and Eastern Province of the country.
Total	615,000			
Other inputs *				
Zinc sulphate	30,000		51,628	
Handtools (mammoties)	6,000 Nos		33,674	
Total		**8,350**		

*Other inputs were also provided to most of the households provided with rice seeds.

Annex 1: Table 10

Country: Timor-Leste
Summary of inputs distributed

Inputs distributed	Volume (kg)	Number of beneficiary households	Value (USD)	Target areas (districts/ villages)
Seeds				Maize seeds in 12 out of 13 districts; rice seeds in all 13 districts of the country
Maize	225,000	22,000	225,000	
Rice	200,000	10,000	200,000	
Total	425,000	32,000	425,000	
Fertilizers				
Urea	70,000	700	45,000	Manatuto, Baucau, Viqueque, Covalima, Manufahi, Bobonaro, Oecusse and Ainaro.
Total	70,000	700	45,000	

Annex 2: Socio economic characteristics of sample households

	Afghanistan			Bangladesh			Bhutan			Cambodia			Mongolia			Nepal			Sri Lanka			Timor-Leste			Overall		
	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female	All sample households	Male	Female
Gender (%)	100.0	95.1	4.9	100.0	98.0	2.0	100.0	69.2	30.8	100.0	72.3	27.7	100.0	78.0	22.0	100.0	89.0	11.0	100.0	73.0	27.0	100.0	93.0	7.0	100.0	83.5	16.6
Avg. age	47.0	47.0	46.0	45.3	45.5	34.8	50.8	51.7	49.2	49.5	47.8	54.1	49.0	50.0	50.0	44.1	44.5	41.0	47.0	47.0	48.0	46.0	46.0	49.0	47.3	47.2	46.5
Avg. family size	8.0	8.0	8.0	6.1	6.1	7.4	5.5	5.7	5.2	5.2	5.4	4.5	4.5	4.7	4.1	7.7	7.9	6.8	4.0	4.0	4.0	6.5	6.5	5.6	5.9	6.0	5.7
Avg. Land holding (ha)	4.25	4.30	3.30	0.71	0.72	0.44	1.80	1.35	2.80	0.63	0.67	0.53	2.15	2.60	0.56	1.20	1.29	0.50	1.48	1.47	1.49	2.86	2.90	2.30	1.89	1.91	1.49
Avg. months of food security	4.9	4.9	4.8	9.3	9.3	7.0	10.3	10.3	10.2	8.8	8.9	8.5	6.5	6.7	6.9							9.2	9.2	9.4	8.2	8.2	7.8

Note: Information on average months of food security in a year was not available from Nepal and Sri Lanka.

Annex 3.1: Overall livestock holding position of sample households

Livestock types	Afghanistan			Bhutan			Cambodia			Mongolia			Nepal			Sri Lanka			Timor-Leste			Overall		
	HHs. Holding livestock (%)	Livestock No.	Yes case av.	HHs. Holding livestock (%)	Av. Livestock holding	Yes case av.	HHs. Holding livestock (%)	Livestock No.	Yes case av.	HHs. Holding livestock (%)	Livestock No.	Yes case av.	HHs. Holding livestock (%)	Livestock No.	Yes case av.	HHs. Holding livestock (%)	Livestock No.	Yes case av.	HHs. Holding livestock (%)	Livestock No.	Yes case av	HHs. Holding livestock (%)	Livestock No.	Yes case av
Cattle	79	1.6	2.0	95.2	5.7	6.0	87.8	2.3	2.7	28.6	2.2	7.7	62.0	2.6	4.2	27.0	2.3	8.5	37.7	1.8	4.9	59.6	2.7	5.1
Sheep	87	12	13.8							23.8	5.5	22.9	25.0	0.8	3.1				3.0	0.3	10.3	34.6	4.6	12.5
Goats	62	4	6.4							23.0	11.9	51.7	40.0	2.9	7.4	12.0	0.3	2.5	35.7	1.8	5.1	34.6	4.2	14.6
Chicken/ poultry	80	7	8.8	64.80	4.83	7.5	77.00	8.80	11.4	4.80	0.30	6.3				26.00	1.30	5.0	84.30	7.6	9.1	56.1	5.0	8.0
Donkey	81	1.1	1.4																			80.7	1.1	1.4
Horse	10	0.1	1.0							15.5	1.73	11.2							14.3	0.3	2.3	13.4	0.7	4.8
Pig				20.8	0.39	1.9	24.4	0.42	1.7	8.7	0.14	1.6	15	0.35	2.3				89.3	3.5	3.9	31.6	1.0	2.3
Duck							23.5	2.55	10.9										1	0.1	6.0	12.3	1.3	8.4
Camel										0.4	0.03	7.5										0.4	0.0	7.5
Buffalo				0.4	0.02	5.0							71	0.99	1.4				30.3	1.9	6.3	33.9	1.0	4.2
Pigeon													20	0.2	1.0				1.7	0.3	16.8	10.9	0.2	8.9
Fish ponds				2	0.023	1.2							5	400					1.3	6.6	506.0	2.8	135.5	253.6
Beehive													5	0.29	5.8							5.0	0.3	5.8
Poultry/duck													60	4.48	7.5							60.0	4.5	7.5
Goat/sheep				20.4	0.86	4.2																20.4	0.9	4.2
Bull																2	0.1	5.0				2.0	0.1	5.0

Annex 3.2: Livestock holding by gender

Livestock types	Afghanistan				Bhutan			Cambodia				Mongolia				Nepal				Sri Lanka				Timor-Leste			
	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.	% male HH holding livestock	Avg holding of Male HHs	% female HH holding livestock	Avg holding of female HHs.
Cattle	79	1.6	83	2	5.95		5.23	74.9	2.53	25.1	1.83	25.9	2.29	38.2	2.04	53	2.56	9	1.93	30	9.8	19	4.4	39.1	4.88	19	1
Sheep	87	12	90	11.9								23.9	6.17	23.6	3.29	21	0.79	4	0					2.9	11.38	4.8	2
Goats	62	4	72	4.2								24.9	13.84	16.4	5.82	30	2.88	10	3.48	11	1.7	15	3.3	37.6	5.05	9.5	5.5
Chicken/ poultry	79	7	90	6.2				75	9.86	25	6.03	6.1	0.39	0	0					19	5	44	4.8	84.2	9.22	85.7	6.83
Donkey	81	1.1	76	1.1																							
Horse	11	0.1	3	0.1								17.8	2.18	7.3	0.25									14.3	2.33	14.3	2.33
Pig					0.45		0.26	78.8	0.47	21.2	0.29	11.2	0.19	0	0	12	0.39	3	0					89.2	3.97	90.5	2.68
Duck								78	2.83	22	1.81													0.7	4	4.8	5
Camel												0	0	1.8	0.13												
Non livestock												58.9	0	0	0												
Buffalo					0.02		0									60	1.04	11	0.43					31.9	5.92	9.5	25
Pigeon					0.08		0									14	0.22	6	0					1.4	17.5	4.8	3
Fish ponds																4	430.11	1	0					1.1	673.33	4.8	2
Beehive																4	0.32	1	0.3								
Poultry/duck																51	4.62	9	2.89								
Goat/sheep					0.31		1.1																				
Bull																				3	3	0	0				

Annex 4.1: Input Distribution System used in TCP Projects

Countries	Description of agriculture input delivery system	Input supplier(s)	Implementing agency(ies)	Selection process of beneficiary households (including criteria)	Selection process of target areas (including criteria)
Afghanistan	Certified wheat seed and fertilizer were procured through competitive local tenders. National seed enterprises were sub-contracted for seeds. All inputs were distributed at subsidized prices (20%) costing USD 28 for a package consisting of 50 kg seeds, 50 kg DAP and 50 kg urea.	i) Afghan National Seed Enterprise	Salam Organization for Afghanistan Rehabilitation (SOFAR) a local NGO and the Department of Agriculture, Irrigation and Livestock (DAIL), Ministry of Agriculture, Irrigation and Livestock (MAIL).	Farmers with access to at least two *jeribs* (0.4 hectares) of irrigated land; farmers with access to irrigation water; farmers without seeds or in difficulties in accessing seeds; farmers suffered by natural calamities; internally displaced/ returnee; widow or orphan headed, female-headed hhs.	The village selection criteria included: (1) most affected villages by drought, accessibility (security), (2) water availability, (3) community/*shura* willingness and cooperation to implement the project.
Bangladesh	The seeds and fertilizers were procured and transported up to the *Upazila* by FAO. After receiving from FAO, the local Agricultural Rehabilitation committee distributed the seed and fertilizer among the selected small and marginal farmers. Tenders were floated and procurements made after testing the quality of inputs with local dealers through competitive bidding.	Local dealers/ inputs suppliers through competitive bidding.	The implementing agency was Department of Agricultural Extension (DAE). The local Agri. Rehabilitation Committee distributed seeds and fertilizers to the target beneficiaries.	The beneficiary households were selected from cyclone *Sidor* and flood affected marginal and small farmers cultivating 0.02 to 1 ha land. A list of beneficiaries was prepared based on their past experience on particular crop to provide crop specific supports.	Cyclone *Sidor* and flood affected 15 districts and 99 *upzillas* were selected by the DAE in consultation with FAO.
Bhutan	The inputs especially seeds/seedling were procured directly by FAO from the Druk Seed Company in Paro and supplied to the Geog RNR office. FAO also awarded contracts for the rehabilitation of small irrigation schemes directly.	Druk Seed Company at Paro, Bhutan	The RNR office at the *geog* (political unit at grassroots level) was involved in implementing the project in close coordination and support from FAO.	Farmers holding lands and interested to grow crops under group approach were selected for supply of inputs. But inputs were to be distributed equally on ground of social equity as there was pressure from community for free inputs.	The target districts/pockets were selected based on production potentiality of specific crops. Flat irrigated lands were selected for rice cultivation whereas agro-climatically suitable pockets were selected for vegetable production and distribution of fruit seedlings.

Cambodia	Inputs were supplied by FAO in cooperation with the Department of Agronomy and Agricultural Land Improvement (DAALI), MAFF and Provincial Department of Agriculture. Each household was provided with 19.3 kg of improved rice seeds.	FAO in cooperation with DAALI and MAFF.	Department of Agronomy and Agricultural Land Improvement (DAALI).	The identification and selection of the target villages and communes, as well as the target beneficiaries were done in participatory manner. The main target beneficiaries were women-headed households (widows), and households whose crop productions were severely affected by droughts and pest outbreaks.	Identification and selection of provinces for the project was based on the severity of impacts due to drought and pest attack in the previous year. The provinces selected were Kampong Speu, Kampong Chhnang, Kampot, Takeo, Kampong Cham and Prey Veng
DPR Korea	The Ministry of Agriculture and World Food Programme (WFP) were involved in the implementation of the project. WFP procured the inputs (465 tonnes of urea) from Serbia under FAO's monitoring and distributed to a total of 70 cooperative farms amounting to 5-10 tonnes depending upon arable land.	WFP procured and transported the inputs.	Ministry of Agriculture (MOA)	No household is selected for input distribution in DPR Korea.	70 coop. farms in 38 counties located in the main granary areas of North and South Pyongan, North and South Hwanghae Provinces and Pyongyong City.
Mongolia	The Ministry of Food and Light Industries (MOFALI) selected seed suppliers through tender. The Mongolian Farmers' Association for Rural Development NGO (MFARD) was selected as the supplier of potato seeds and Arvin Shimt Gazar Co., Ltd as the supplier of vegetable seeds.	MFARD, a NGO and Arvin Shimt Gazar Company supplied the potato and vegetable seed respectively on contract.	Ministry of Food and Light Industries (MOFALI) at the central level and the Food, Agriculture, Small and Medium Enterprise Developments (FASMEDs) at the *aimag* level and by the *soum* Governors' Offices at the local level.	The selection of beneficiaries was done in accordance with the Guidance and through the two sets of criteria: i) the livelihood indexes - household size, level of income, support from relatives/outside, employment and registration as poor/vulnerable household; and ii) the technical capacity of the households.	11 out of 21 *aimags* (provinces) and 9 districts of Ulaanbaatar City were selected. Most severely affected areas by soaring food prices were selected.

Nepal	All inputs (seeds, livestock feeds/ medicines) were procured by FAO through competitive bidding locally. Inputs were supplied/ transported and delivered by different companies selected through bidding process.	National Seed Company (for wheat seed), Seed Service Centre (for vegetable seeds), Sindhu Cooperative (for finger millet seed) and 2 NGOs (for rice seeds).	District Agriculture Development Offices under the Department of Agriculture are the main implementing agencies of the project. In Kailali and Kanchanpur districts 2 NGOs were also engaged for the implementation.	Main criteria were vulnerability and food insecurity of households suggested jointly by FAO and MoAC and approved by District Agriculture Development Committee (DADC) and District Development Committee (DDC) and District Disaster Relief Committee (DDRC). Criteria used for selecting households were: < 0.5 ha of land/household and food sufficiency for a period of less than 6 month a year.	Five remote hill districts (four in far west and one in mid west) were selected based on the Human Development Index (HDI) i.e. vulnerability and food sufficiency period. Kailali and Kanchanpur in the far west and Saptari and Sunsari ain the eastern region were selected for reason of damages caused by floods.
Pakistan	FAO Emergency Coordination and Rehabilitation Unit (ECRU) organized procurement and delivery of inputs - wheat and fodder seeds and fertilizers. A local NGO, CARAVAN, was used as an implementing partner.	CARAVAN, a local NGO	FAO and CARAVAN a local NGO implemented the project.	Vulnerable farming households belonging to poor and medium income groups; households affected by 2005 earthquake.	Three most backward districts of Northwest Frontier Province (NWFP) were selected for input supply. A major criteria used for selection was poverty incidence where more than 50% population lives below poverty. Another criteria was impacts of 2005 earthquake and difficult access. Districts selected were: i) Shangla ii) Kohistan and iii) Batagram.
Sri Lanka	All inputs were procured from reputed private seed suppliers in line with the FAO procurement procedures. Seed paddy, Zinc sulphate and mammoties were procured from companies based in the capital Colombo and were responsible for delivering the inputs to the target districts by a given date.	Private seed supplier companies based in Colombo.	Department of Agriculture (DOA)	The main criteria used during beneficiary selection was priority for Samurdhi [1] beneficiaries (low-income households), resettled farmers in the East who had previously abandoned their land due to the conflict and were resuming their farming, and farmers who had been affected by the flooding in the North Central region	Conflict-affected and poverty-stricken border villages/areas in four districts were selected. These included two in the North Central Province (Anuradhapura and Polonnaruwa) and two in the Eastern Province (Batticaloa and Ampara).

Timor-Leste	FAO headquarter was involved in the supply of fertilizer and the FAO local office was involved in procuring the seeds through suppliers who were responsible to deliver the inputs at the sites.	Private seed supplier companies.	NDA/ NGO	District implementing teams comprising NGOs and District Agriculture Officers were formed in each district. The team, local bodies and FAO staff together selected the households. Criteria used for hh selection were: i) smallholders suffered by crop failure in previous year ii) small farmers internally displaced during 2006/07 political crisis, and iii) most vulnerable member in community i.e widows.	Main food grain production districts of the country including Manatuto, Baucau, Viqueque, Covalima, Manufahi, Bobonaro, Oecusse, Ainaro.

Annex 4.2: Inputs distribution systems and practices adopted in TCP Projects and their results

Afghanistan

Input	Distribution system	Institution	Coverage HH
Wheat seeds	Procured from private	FAO	2980
	Equal distribution (50 kg/hh)		
	20% equity born by recipient HHs		
	Implementation	FAO, SOFAR	
	Private contract for distribution	Afghan National seed company	
	Supervision/coordination	FAO (ERU)	
Fertilizers (Urea and DAP)	Procured through LCB	FAO	2980
	Equal distribution (100 kg/hh)		
	20% equity born by recipient HHs		
	Implementation	FAO, SOFAR	
	Inspection by International superintendent	DW logistic	
	Facilitation/coordination	MAIL	
	Transportation on contract	FAO	
	Distribution by NGO partner RO	SOFAR	

Bangladesh

Input	Distribution system	Institution	Coverage HH
Seeds (rice, hybrid maize, lentil and vegetables)	Procurement	FAO	11,175
	Transportation up to upajilla	FAO	
	Implementation	Dep. Of Ag. Extension	
	Distribution by government agency	Agricultural Rehabilitation	
	Varied input		
Fertilizers (Urea and DAP)	Procurement	FAO	11,175
	Transportation up to upajilla	FAO	
	Transportation to site		
	Implementation	Dep. Of Ag. Extension	
	Distribution by government agency	Agricultural Rehabilitation	

Bhutan

Input	Distribution system	Institution	Coverage HH	Remarks
Seeds (maize, paddy, potato, beans and vegetable seeds - 16-variety package, seedlings of citrus, walnut and pear)	Direct procurement	FAO	10,649	
	Implementation by government	RNR		
	Distribution	RNR		Some delay due to administrative problems
Other input (Irrigation channels 128 km))	Procurement	FAO		Criticized for by-passing government channel
	Implementation	Contractor		Some delay and cost increase due to FAO rules
				Poor coordination with Dzhonkha

Cambodia

Input	Distribution system	Institution	Coverage HH	Remarks
Improved rice seeds	Procurement	FAO	4,676	
	Coordination	DAALI		
	Distribution	DAALI		Some delay due to administrative problems
	Equal distribution			
Fertilizer	Pocurement	FAO/DAALI	2,800	
	Transportation	FAO		
	Training	Department of Agronomy		

DPR Korea

Input	Distribution system	Institution	Coverage HH	Remarks
Urea fertilizer	Procurement	WFP from Serbia	12,304	
	Transportation up to HQ	WFP/Contractor		Higher transport cost
	Quality monitoring	FAO		
	Implementation	WFP/MOA		
	Distribution	Institutional (cooperatives)		
	Quantity variable by size of land			

Mongolia

Input	Distribution system	Institution	Coverage HH	Remarks
Potato seeds	Procurement by LCB	MOFALI/MFARD	9,094	Late in tendering hence delayed supply
	Implementation	MOFALI		
	Varied distribution based on land			
Vegetable	Procurement by LCB	MOFALI/Arvin shimt gazar co. ltd.		
	Equal distribution			
	Training selected farmers	Government dep.		
	Training all farmers	Government dep.		

Nepal

Input	Distribution system	Institution	Coverage HH	Remarks
Rice and wheat seeds	Procurement by LCB	FAO	19,978[2]	Remarks
	Supplier of wheat seed	NSC (gov.)/ contractor		
	Transportation by contractor	KK Parbahan sewa		
	Distribution by NGO partners (Rice)	FAYA Nepal and NNSWA		
	Equal distribution	NGO/DADO		On-distribution to neighbours caused wrong targeting, criteria not followed
	Quality inspection	FAO/SQCC (gov)		
	Monitoring			
Finger millet seeds	Procurement by LCB	FAO		Wrong variety chosen
	Supplier	Sindhu coop, Dolakha		Delayed supply
	Transportation	SEAN		
	Distribution by contractors			
	Monitoring	DADO		
Vegetable seeds	Procurement by LCB	FAO		
	Distribution by contractors in hill districts gov.	DADO		Blanket distribution for all altitudes
	Transportation	FAO		Problems of landslides, chartered plane, thus delayed, small quantity
	Transportation to site	NGO contractors		
	Equal distribution			
	Procurement by LCB	FAO		
	Monitoring	DADO		
	Packaging	Contractors		Wrong packaging due to poor supervision, admixture, missing and duplication
Livestock feeds/	Procurement through LCB	FAO		
	Distribution by contractor	Hetauda feed plant		

[2] Total beneficiaries for Nepal is estimated at 40,000 households.

medicines		(Gov)		

Pakistan Procurement

Input	Distribution system	Institution	Coverage HH	Remarks
Wheat seeds	Implementation	FAO/CARAVAN (Local NGO)	8,320	
	Equal distribution			
	Training	DOA		All farmers covered
Fertilizers	Procurement	FAO		
	Implementation	FAO/CARAVAN		
	Equal distribution (25 kg/hh)			

Sri Lanka

Input	Distribution system	Institution	Coverage HH	Remarks
Rice seeds	Procurement	FAO	8,350	Procured on time
	Suppliers	Private seed companies		
Other inputs (zinc sulfate and mammoties)	Procurement	FAO		
	Suppliers	Private seed suppliers		
	Transportation	Private contractors		Supplied on time
	Implementation	DOA		Political influence, security
	Monitoring			
	Training	DOA		Zinc sulfate use

Timor-Leste

Input	Distribution system	Institution	Coverage HH	Remarks
Maize and rice seeds	Procurement by import from Indonesia	FAO	32,700	Maize seed procurement delayed, custom clearance, quarantine, SPS
	Suppliers	Private seed suppliers		
	Transportation	Private contractors		
	Distribution	Local NGOs/DAO monitoring		
	Training	Gov. dep.		
Fertilizers	Procurement by import	FAO HQ		4 months delay in supply
	Transportation	Private contractors		
	Distribution	Local NGOs/DAO monitoring		
	Training	Gov. dep.		

Source: Country Reports, 2009

Annex 5.1: **Knowledge of seeds received and willingness to adopt**

Countries	% of beneficiaries who have used the TCP seeds before			% who have in the past received training on TCP seeds			% who have access to TCP seeds locally			% willing to buy TCP seeds if they were available		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan (Rice)	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Bangladesh (All seeds)	39.8	39.4	60.0	57.5	60.0	57.6	56.2	60.0	56.3	56.9	57.3	40.0
Bhutan (All seeds)	57.2	57.8	55.8	40	45.5	37.6	56.4	57.8	53.2	52	57.8	41.6
Cambodia (Rice)	100.0	100.0	100.0	3.3	2.6	5.1	92.0	92.9	89.8	85.4	84.4	88.1
Mongolia (Potato/ Veg.)	60.9	61.5	58.8	59.1	58.8	59.2	55.5	59.3	41.6	70.6	70.3	71.8
Nepal (All seeds)	38.4	34.1	43.3	25.6	22.1	29.5	80.8	78.6	82.8	78.0	75.9	80.2
Sri Lanka (Rice)	77.0	NA	NA	10.0	NA	NA	62.0	NA	NA	77.0	NA	NA
Timor-Leste	46.9	48.9	14.6	37.9	38.6	26.0	48.6	50.1	26.0	47.4	49.2	17.7
All countries	**52.5**	**48.8**	**47.5**	**47.6**	**46.8**	**45.0**	**64.5**	**56.9**	**50.0**	**66.8**	**56.4**	**48.5**

Source: Country Reports, 2009
Note: No seed inputs are distributed in DPR Korea and hence not considered in the table.

Annex 5.2: Knowledge of fertilizers received and willingness to adopt

Countries	% of beneficiaries who have used the TCP fertilizers before			% who have in the past received training on TCP fertilizers			% who have access to TCP fertilizers locally			% willing to buy TCP fertilizers if they were available		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	100	100	100	0	0	0	0	0	0
Bangladesh	36.5	36.4	40	58.4	58.4	60	56.1	56	60	55.7	56.1	40
Cambodia	58.7	61	52.5	10.3	12.3	5.1	97.2	98.1	94.9	97.2	98.1	94.9
DPR Korea	100			100			40			40		
Timor-Leste												
All countries	**48.8**	**32.5**	**30.8**	**67.2**	**56.9**	**55.0**	**48.3**	**51.4**	**51.6**	**48.2**	**51.4**	**45.0**

Source: Country Reports, 2009
Note: No household survey carried out in DPR Korea; data in Timor-Leste was inconsistent and hence not considered in the table.

Annex 6.1: Satisfaction level with receiving seeds (all seeds)

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0	0	0	1.2	1.2	0	23.4	23.4	58.6	75.5	75.6	41.4
Bangladesh	1.6	1.6	0	0	0	0	3.5	3.2	20	30.7	31	20	64.2	64.3	60
Bhutan	0.4	0.6	0.0	6.3	5.5	8.0	9.6	9.1	10.7	21.3	23.0	17.3	62.5	61.8	64.0
Cambodia	0	0	0	0.8	0	1.7	0.3	0.6	0	24.6	18.8	30.5	74.1	80.5	67.8
Mongolia	0.0	0.0	0.0	1.2	1.3	0.0	6.8	5.4	8.5	17.2	21.8	24.7	74.9	71.7	66.8
Nepal	1.8	2.2	0.0	0.7	0.9	0.0	3.2	2.3	8.3	43.2	43.6	38.3	51.0	51.0	53.3
Sri Lanka	1	0	3	4	1	11	2	2	4	36	30	52	57	67	30
Timor-Leste	0.3	0.4	0.0	3.7	3.6	4.8	21.8	21.3	28.6	49.0	48.4	57.1	25.2	26.4	9.5
All Countries	**0.6**	**0.6**	**0.4**	**2.1**	**1.5**	**3.2**	**6.1**	**5.6**	**10.0**	**30.7**	**30.0**	**37.3**	**60.6**	**62.3**	**49.1**

Source: Country Reports, 2009

Annex 6.2: Satisfaction level with timeliness of seeds (all seeds)

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0.2	0.2	0	1.5	1.5	3.4	11.3	11.4	3.4	87	86.9	93.2
Bangladesh	1.2	1.2	0	1.9	2	0	13.6	13.5	20	33.5	33.7	20	49.8	49.6	60
Bhutan	0.8	1.2	0.0	10.6	7.9	16.4	10.6	12.2	6.9	23.6	23.8	23.3	54.4	54.9	53.4
Cambodia	0	0	0	4.9	1.3	8.5	3	2.6	3.4	47.15	51.9	42.4	45	44.2	45.8
Mongolia	1.1	1.7	0.0	2.7	3.1	3.3	19.1	18.9	29.8	22.4	23.7	24.7	54.9	52.7	42.3
Nepal	7.6	7.6	10.4	23.9	24.0	23.1	9.6	8.7	15.9	28.5	29.8	30.0	30.4	30.0	14.3
Sri Lanka	5	1	15	7	8	4	2	1	3	37	32	52	49	58	26
Timor-Leste	4.71	4.71	4.76	16.84	16.30	23.81	13.47	14.49	0.00	60.61	60.14	66.67	4.38	4.35	4.76
All Countries	**2.6**	**2.2**	**3.8**	**8.5**	**7.8**	**9.9**	**9.1**	**9.1**	**10.3**	**33.0**	**33.3**	**32.8**	**46.9**	**47.6**	**42.5**

Source: Country Reports, 2009

Annex 6.3: Satisfaction level with appropriateness of seeds (all seeds)

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0.2	0.2	0	3.1	3	6.9	23.1	23	34.5	73.7	73.8	58.6
Bangladesh	0.4	0.4	0	0.8	0.8	0	3.1	3.2	0	33.9	34.1	20	61.9	61.5	80
Bhutan	1.3	1.8	0.0	5.5	3.0	11.0	9.7	10.9	6.9	20.6	21.2	19.2	63.0	63.0	63.0
Cambodia	0	0	0	4.35	1.9	6.8	1.8	1.9	1.7	70	68.8	71.2	23.8	27.3	20.3
Mongolia	0.0	0.0	0.0	0.0	0.0	0.0	5.2	5.0	2.4	22.3	25.1	33.6	72.6	70.0	64.0
Nepal	3.2	3.3	1.8	14.7	14.8	15.9	23.8	21.8	40.9	31.9	33.8	14.3	26.4	26.3	27.1
Sri Lanka	4	0	15	7	7	7	3	3	4	45	41	55	41	49	19
Timor-Leste	1.1	0.8	4.8	4.0	4.3	0.0	5.4	4.7	14.3	83.4	84.0	76.2	6.1	6.3	4.8
All Countries	**1.2**	**0.8**	**2.7**	**4.6**	**4.0**	**5.1**	**6.9**	**6.7**	**9.6**	**41.3**	**41.4**	**40.5**	**46.1**	**47.1**	**42.1**

Source: Country Reports, 2009

Annex 6.4: Satisfaction level with quality of seeds (all seeds)

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0.2	0.2	0.0	0.7	0.7	0.0	1.5	1.5	3.4	29.3	29.0	69.0	68.4	68.6	27.6
Bangladesh	0.8	0.8	0.0	1.6	1.6	0.0	2.7	2.8	0.0	23.0	23.4	0.0	72.0	71.4	100.0
Bhutan	0.4	0.6	0.0	2.5	1.2	5.4	6.2	5.4	8.1	27.0	27.5	25.7	63.9	65.3	60.8
Cambodia	0.0	0.0	0.0	1.5	1.3	1.7	0.9	0.0	1.7	41.2	46.8	35.6	56.5	51.9	61.0
Mongolia	0.0	0.0	0.0	0.8	0.9	0.0	8.5	8.3	5.3	14.2	17.8	22.8	76.6	73.0	72.1
Nepal	1.1	0.9	1.8	4.0	4.9	0.0	28.5	25.0	32.5	17.6	22.4	9.8	48.9	46.8	55.8
Sri Lanka	1.0	2.0	0.0	6.0	5.0	7.0	2.0	3.0	0.0	46.0	38.0	67.0	45.0	52.0	26.0
Timor-Leste	0.0	0.0	0.0	6.6	6.7	4.8	6.2	6.0	9.5	60.3	59.9	66.7	26.9	27.5	19.1
All Countries	**0.4**	**0.6**	**0.2**	**2.9**	**2.8**	**2.4**	**7.1**	**6.5**	**7.6**	**32.3**	**33.1**	**37.1**	**57.3**	**57.1**	**52.8**

Source: Country Reports, 2009

Annex 6.5: Satisfaction level with receiving fertilizers

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0	0	0	1.4	1.3	0	25.5	25.3	58.6	73.1	73.4	41.4
Bangladesh	0	0	0	0	0	0	0	0	0	5.8	6	0	94.2	94	100
Cambodia	0	0	0	0	0	0	0	0	0	13.85	11.6	16.1	86.15	88.4	83.9
DPR Korea	0			0			0			33			67		
Timor-Leste		0			0			0			66.67			33.33	
All Countries	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**	**0.3**	**0.0**	**19.5**	**27.4**	**24.9**	**80.1**	**72.3**	**75.1**

Source: Country Reports, 2009

Annex 6.6: Satisfaction level with timeliness of fertilizers

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0	0	0	1	1	0	13.7	13.7	6.9	85.3	85.2	93.1
Bangladesh	0	0	0	1.6	1.6	0	3.5	3.6	0	5.8	6	0	89.1	88.9	100
Cambodia	0	0	0	0	0	0	1.6	0	3.2	39.5	50	29	58.85	50	67.7
DPR Korea	7			73			20			0			0		
Timor-Leste		0			0			44.44			44.44			11.11	
All Countries	**1.8**	**0.0**	**0.0**	**18.7**	**0.4**	**0.0**	**6.5**	**12.3**	**1.1**	**14.8**	**28.5**	**12.0**	**58.3**	**58.8**	**86.9**

Source: Country Reports, 2009

Annex 6.7: Satisfaction level with appropriateness of fertilizers

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			% Highly Satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	0.2	0.2	0	2.5	2.5	6.9	23.5	23.3	34.5	73.8	74	58.6
Bangladesh	0	0	0	0	0	0	0.8	0.8	0	10.5	10.7	0	88.7	88.5	100
Cambodia	0	0	0	0	0	0	0	0	0	60.55	66.3	54.8	39.45	33.7	45.2
DPR Korea	0			0			27			53			20		
Timor-Leste		0			0			0			88.89			11.11	
All Countries	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**7.6**	**0.8**	**2.3**	**36.9**	**47.3**	**29.8**	**55.5**	**51.8**	**67.9**

Source: Country Reports, 2009.

Annex 6.8: Satisfaction level with quality of fertilizers

Countries	% Highly dissatisfied			% Dissatisfied			% Indifferent			% Satisfied			Highly satisfied		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0.2	0.2	0	0.7	0.7	0	1.5	1.5	4	27.7	27.5	69	69.9	70.3	27.7
Bangladesh	0	0	0	0	0	0	0	0	0	5.1	5.2	0	94.9	94.8	100
Cambodia	0	0	0	0	0	0	0	0	0	38.7	48.4	29	61.3	51.6	71
DPR Korea	0			0			0			33			67		
Timor-Leste		0			0			0			77.78			22.22	
All Countries	**0.1**	**0.1**	**0.0**	**0.2**	**0.2**	**0.0**	**0.4**	**0.4**	**1.3**	**26.1**	**39.7**	**32.7**	**73.3**	**59.7**	**66.2**

Source: Country Reports, 2009.

Annex 7.1: Knowledge of seeds received and willingness to adopt

Countries	% of beneficiaries who have used the TCP seeds before			% who have in the past received training on TCP seeds			% who have access to TCP seeds locally			% willing to buy TCP seeds if they were available		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan (Rice)	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Bangladesh (All seeds)	39.8	39.4	60.0	57.5	60.0	57.6	56.2	60.0	56.3	56.9	57.3	40.0
Bhutan (All seeds)	57.2	57.8	55.8	40	45.5	37.6	56.4	57.8	53.2	52	57.8	41.6
Cambodia (Rice)	100.0	100.0	100.0	3.3	2.6	5.1	92.0	92.9	89.8	85.4	84.4	88.1
Mongolia (Potato/ Veg.)	60.9	61.5	58.8	59.1	58.8	59.2	55.5	59.3	41.6	70.6	70.3	71.8
Nepal (All seeds)	38.4	34.1	43.3	25.6	22.1	29.5	80.8	78.6	82.8	78.0	75.9	80.2
Sri Lanka (Rice)	77.0			10.0			62.0			77.0		
Timor-Leste	46.9	48.9	14.6	37.9	38.6	26.0	48.6	50.1	26.0	47.4	49.2	17.7
All countries	**52.5**	**48.8**	**47.5**	**47.6**	**46.8**	**45.0**	**64.5**	**56.9**	**50.0**	**66.8**	**56.4**	**48.5**

Source: Country Reports, 2009

Note: No seed inputs are distributed in DPR Korea and hence not considered in the table.

Annex 7.2: Knowledge of fertilizers received and willingness to adopt

Countries	% of beneficiaries who have used the TCP fertilizers before			% who have in the past received training on TCP fertilizers			% who have access to TCP fertilizers locally			% willing to buy TCP fertilizers if they were available		
	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female	All sample HH	Male	Female
Afghanistan	0	0	0	100	100	100	0	0	0	0	0	0
Bangladesh	36.5	36.4	40	58.4	58.4	60	56.1	56	60	55.7	56.1	40
Cambodia	58.7	61	52.5	10.3	12.3	5.1	97.2	98.1	94.9	97.2	98.1	94.9
DPR Korea *	100			100			40			40		
Timor-Leste												
All countries	**48.8**	**32.5**	**30.8**	**67.2**	**56.9**	**55.0**	**48.3**	**51.4**	**51.6**	**48.2**	**51.4**	**45.0**

Source: Country Reports, 2009

* In DPR Korea the figures represent responses of 15 sample cooperative farms and no information are available by gender.

Annex 8: Analysis of crop yield situation in the project year and before

<table>
<tr><th>Countries</th><th>Details of crop yields</th><th>Remarks</th></tr>
<tr><td>Afghanistan</td><td>The overall average yield of FAO irrigated varieties (wheat) was 1 958 kg per hectare (783 kg per 0.4 ha for TCP seed) and the overall average yield of the local varieties was 1 500 kg per hectare according to information from DAIL of Sari Pul province during TCP from their own seed (local varieties). Therefore, the average yield increase from FAO irrigated varieties was approximately 500 kg per hectare (30 percent) higher compared with the average yield achieved from local varieties.</td><td>Average yield increased by 500 kg/ha (30%) for wheat.</td></tr>
<tr><td>Bangladesh</td><td>High crop yields have been reported in Bangladesh for many crops in TCP year. Below table shows considerable increase in yield of all crops after TCP compared to before TCP.
<table>
<tr><th rowspan="2">Crop</th><th colspan="2">Before TCP</th><th colspan="2">After TCP</th><th rowspan="2">% change</th></tr>
<tr><th>Avg. land area planted (ha)</th><th>Avg. yield (kg/ha)</th><th>Avg. land area planted (ha)</th><th>Avg. Yield (kg/ha)</th></tr>
<tr><td>Carrot</td><td>0.08</td><td>5930</td><td>0.09</td><td>7346</td><td>23.9</td></tr>
<tr><td>Rice</td><td>0.13</td><td>5076</td><td>0.13</td><td>5641</td><td>11.13</td></tr>
<tr><td>Maize</td><td>0.13</td><td>4690</td><td>0.13</td><td>4991</td><td>6.4</td></tr>
<tr><td>Lentil</td><td>0.12</td><td>968</td><td>0.13</td><td>1081</td><td>11.7</td></tr>
<tr><td>Spinach</td><td>0.04</td><td>5848</td><td>0.07</td><td>7017</td><td>20</td></tr>
<tr><td>Red Amaranth</td><td>0.13</td><td>3450</td><td>0.09</td><td>5520</td><td>60</td></tr>
<tr><td>Radish</td><td>0.08</td><td>10128</td><td>0.08</td><td>11237</td><td>10.9</td></tr>
</table></td><td>Average increase of crop yields varied from 6 % to 151% with 11% in rice and 6% in maize.</td></tr>
<tr><td>Bhutan</td><td>
<table>
<tr><th rowspan="2">Sl. No.</th><th rowspan="2">Crop</th><th colspan="2">Average Yield (Kg/Ha)</th><th rowspan="2">% change</th></tr>
<tr><th>Before TCP</th><th>During TCP</th></tr>
<tr><td>1</td><td>Cabbage</td><td>3782</td><td>5316</td><td>40.5</td></tr>
<tr><td>2</td><td>Beans</td><td>3472</td><td>4719</td><td>5.9</td></tr>
<tr><td>3</td><td>Cauliflower</td><td>2322</td><td>3909</td><td>68.3</td></tr>
<tr><td>4</td><td>Radish</td><td>2102</td><td>2302</td><td>9.5</td></tr>
<tr><td>5</td><td>Mixed vegetable</td><td>2254</td><td>2364</td><td>4.9</td></tr>
<tr><td>6</td><td>Potato</td><td>9550</td><td>11748</td><td>23</td></tr>
<tr><td>7</td><td>Maize</td><td>2042</td><td>3489</td><td>70.9</td></tr>
<tr><td>8</td><td>Paddy</td><td>2444</td><td>3358</td><td>37.4</td></tr>
</table>
However, in some cases, crops suffered losses partly to its failure to correct the irrigation infrastructure on time. The results also show that 10% of male and 22% of female household heads performed poorly.</td><td>Crop yields are reported in between 5% to 71% for different 8 crops.</td></tr>
</table>

<table>
<tr><th>Countries</th><th>Details of crop yields</th><th>Remarks</th></tr>
<tr><td>DPR Korea</td><td>The survey showed that the project such as this kind of emergency project assisted farmers directly in their crop production through supply of expensive inputs.

<table><tr><th>Cereal crops</th><th>Average yield increase (%) in TCP year</th></tr><tr><td>Barley as first crop</td><td>21.74</td></tr><tr><td>Potato as first crop</td><td>30.82</td></tr><tr><td>Wheat as first crop</td><td>16.9</td></tr><tr><td>Main crop rice</td><td>19.6 (estimated)</td></tr><tr><td>Main crop maize</td><td>26.41 (estimated)</td></tr></table></td><td>Yield increased in the range of 16 to 31% for different crops.</td></tr>
<tr><td>Mongolia</td><td><table><tr><th>Crop</th><th>Change in yield in TCP year</th></tr><tr><td>Potato</td><td>25.2</td></tr><tr><td>Carrot</td><td>14.4</td></tr><tr><td>Yellow beet</td><td>56.0</td></tr><tr><td>Beet red</td><td>-22.3</td></tr><tr><td>Onion</td><td>19.2</td></tr><tr><td>Cucumber</td><td>25.7</td></tr></table></td><td>Yield increased in between 14 to 56% except Beet red crop.</td></tr>
<tr><td>Nepal</td><td>About 70% of the farmers in Jumla unused and stored the finger millet seeds for the next season due to late arrival
Improved rice seed (Radha-4) was early maturing, looked quite impressive and provided yield up to 2900 kg/ha higher than that of local. However, the yield of all rice varieties suffered a decline of about 25% due to severe floods.
Wheat yield also declined by about 20-30% in irrigated condition and 30-70% in rainfed condition than the normal crop.
Finger millet crop in Jumla could not bear grain and produced no grain yield due to late planting, drought and frost. Some of the vegetables performed well in Jumla and Baitadi. Cabbage could not bear head in Baitadi[3]. Likewise, radish could not accumulate root biomass in Jumla. Likewise, quality of radish seeds distributed to Jumla (some lots) was perhaps below optimum standard.</td><td>Decreased for most crops due to floods, droughts and late plantation.</td></tr>
<tr><td>Pakistan</td><td>Beneficiaries experienced around 11.3 percent increase in production during the year when compared to the previous year. However, in comparison non beneficiaries experienced 14.5 percent reduction in production during the year when compared to the previous year</td><td>Yield increased by 11.3% for beneficiaries against a decline of 14.5% for non beneficiaries.</td></tr>
<tr><td>Sri Lanka</td><td>Crop yields (Rice):
i) Maha 2007 season= 2500 kg/ha
ii) Maha 2008 season= 4180 kg/ha</td><td>Yield increased by more than 1600 kg (67%) for rice in 2008 compared to 2007.</td></tr>
<tr><td>Timor-Leste</td><td>Crop yields.
i) Rice
- Before TCP 1309 kg/ha
- After TCP 1372 kg/ha
ii) Maize
- Before TCP 800 kg/ha
- After TCP 776 kg/ha</td><td>Limited growth only in rice crop.</td></tr>
</table>

Source: Country Reports, 2009.

[3] Cabbage is a cross-pollinated crop and its seeds (in some seed lots) might have been cross-pollinated with other crops of cruciferaceae family and quality might have deteriorated even before distribution.