

Revised 2005

PC-1 FORM

**GOVERNMENT OF PAKISTAN
PLANNING COMMISSION**



**ECONOMIC TRANSFORMATION INITIATIVE (ETI)
GILGIT-BALTISTAN**

(IFAD-GOVT OF GILGIT-BALTISTAN)

**Programme Cost: US \$ 120.15 million
 Pak Rs. 12,315.5 million**

**PLANNING & DEVELOPMENT DEPARTMENT, GOGB/
MINISTRY OF KASHMIR AFFAIRS & GILGIT BALTISTAN**

Currency equivalents

Currency Unit	= Pak Rs.
US\$1.0	= Pak Rs. 102.5

Financial Year

IFAD	Jan-December
Pakistan/GB	July-June

Weights and measures

1 kilogram	=	1000 g
1.00 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

Abbreviations and Acronyms

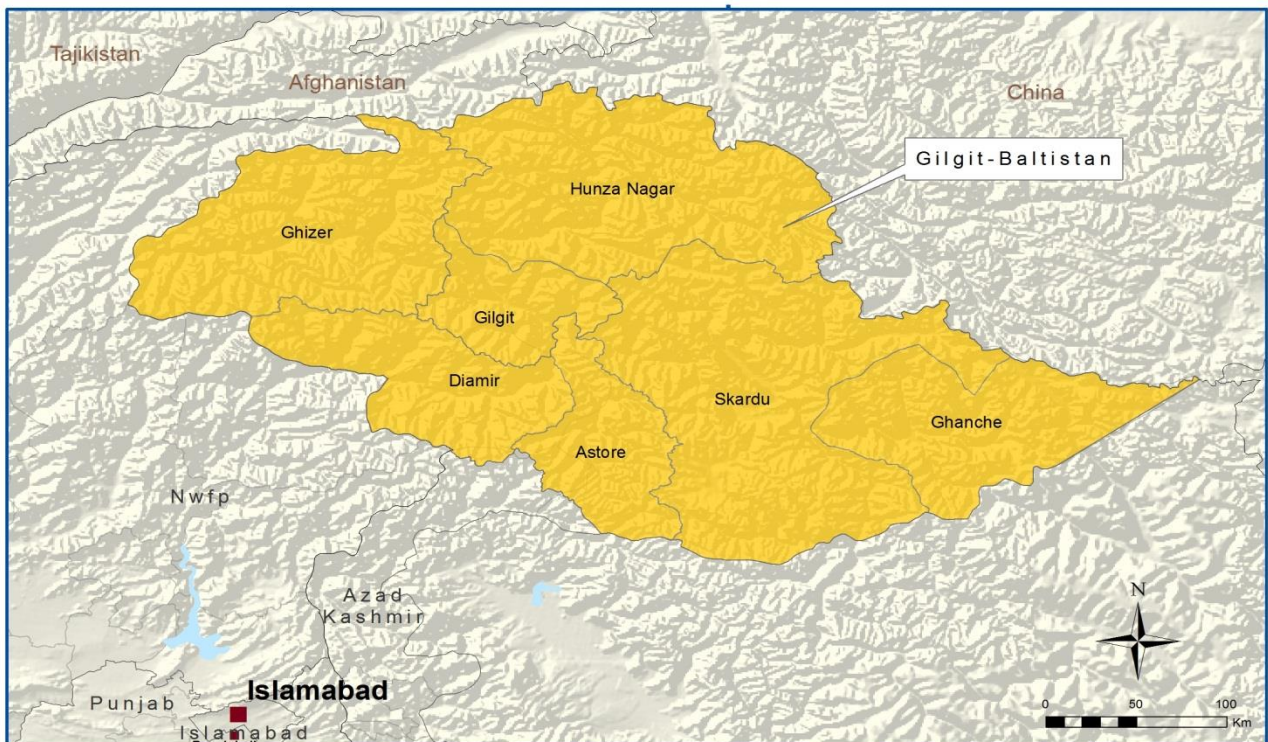
ADB	Asian Development Bank
AG	Auditor General of Pakistan
AKF	Agha Khan Foundation
AKRSP	Agha Khan Rural Support Programme
ASF	Agriculture Support Fund
AWPB	Annual Work Plan & Budget
CO	Community Organization
COSOP	Country Strategic Opportunities Programme
CPE	Country Programme Evaluation
CPI	Community Physical Infrastructure
CPMT	Country Programme Management Team
DCC	District Coordination Committee
DCU	District Coordination Unit
DPAP	Diamer Poverty Alleviation Programme
EIRR	Economic Internal Rate of Return
ETI	Economic Transformation Initiative
FAO	Food and Agriculture Organization of UN
FMR	Farm to Market Roads
FY	Financial Year (01 July to 30 June)
GDP	Gross Domestic Product
GB	Gilgit-Baltistan
GoGB	Government of Gilgit-Baltistan
GoP	Government of Pakistan
ICO	IFAD Country Office
ICIMOD	International Center for Integrated Mountains Development
IFAD	International Fund for Agricultural Development
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
KKH	Karakoram Highway
KM	Knowledge Management
LAMP	Livestock and Access to Markets Project
LG&RD	Local Government & Rural Development Department
LS&DD	Livestock and Dairy Development Department
LSO	Local Support Organization (AKRSP)
MDG	Millennium Development Goals
MoU	Memorandum of Understanding
MTDF	Medium-Term Development Framework
MTR	Mid-Term Review
M&E	Monitoring & Evaluation

NADP	Northern Areas Development Programme
NATCO	Northern Areas Transport Company
NGO	Non-Government Organization
P&D	Planning & Development Department
PC-1	Planning Commission Project Proforma 1
PCC	Project Coordination Committee
PCR	Project Completion Report
PCU	Programme Coordination Unit
PIM	Programme Implementation Manual
PPAF	Pakistan Poverty Alleviation Fund
PRSP-II	Poverty Reduction Strategy Paper-II of Pakistan
PSC	Project Steering Committee
PWD	Public Works Department
QA	Quality Assurance
QE	Quality Enhancement
SMC	Scheme Management Committee
SMP	Social Mobilization Partner
SOE	Statement of Expenditure
SPPAP	Southern Punjab Poverty Alleviation Project
TCL	Tissue Culture Laboratory
ToR	Terms of Reference
UC	Union Council (Lowest tier in local Government system in Pakistan)
USAID	United States Agency for International Development
UNDP	United Nations Development Programme
VCSF	Value Chain Support Fund
VCTAT	Value Chain Technical Assistance Team
VO	Village Organization
VPG	Village Producers Group
VPA	Valley Producers Association
WB	World Bank
WFP	United Nations World Food Programme
WMD	Water Management Directorate
WO	Women Organization

Islamic Republic of Pakistan

Economic Transformation Initiative in Gilgit Baltistan

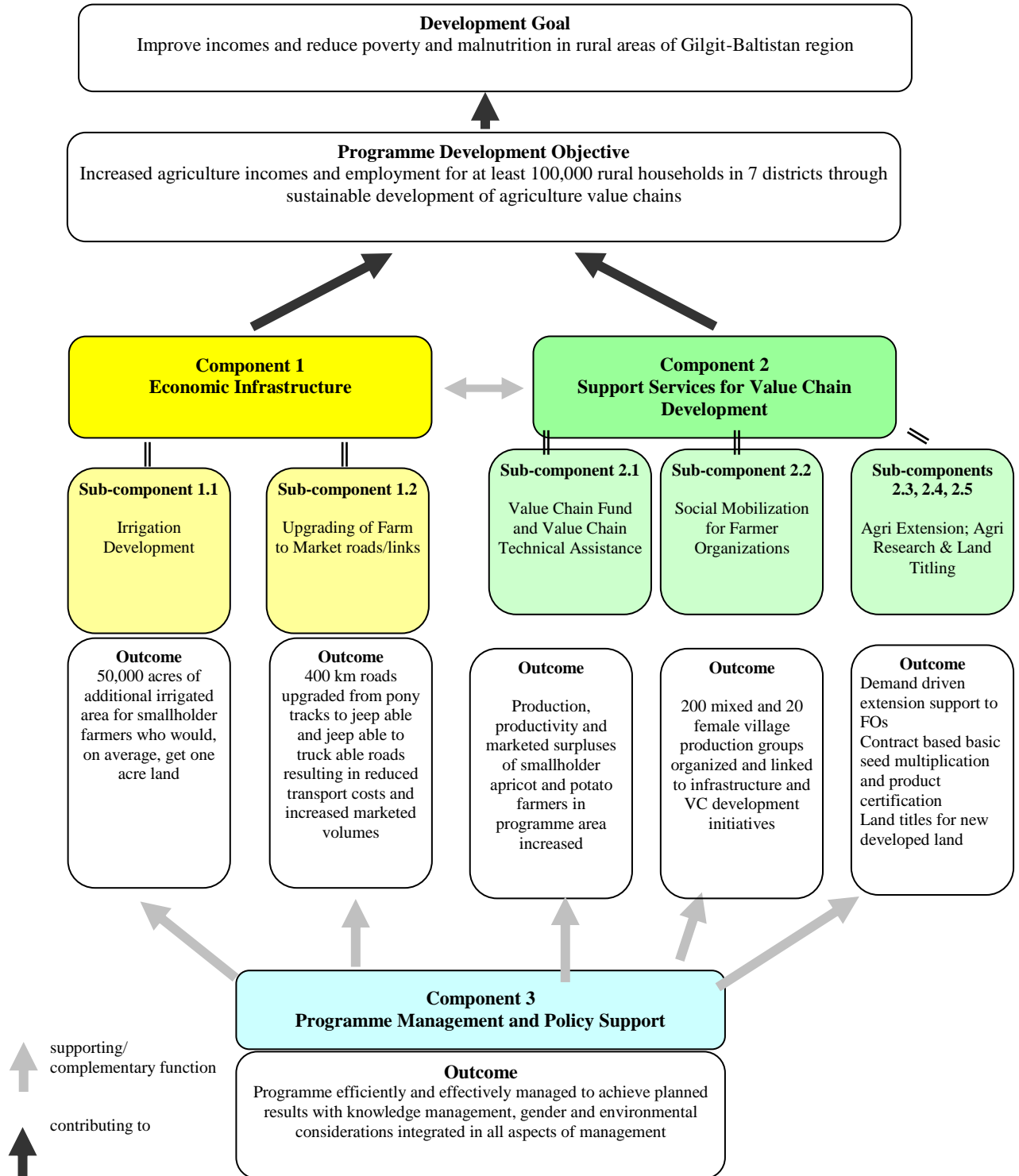
President's report



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 20-02-2015

PROGRAMME OVERVIEW



ETI Logical Framework

Description	Indicators	MOV	Assumptions/Risks
<p>Goal: Improved incomes and reduced poverty and malnutrition in rural areas of Gilgit-Baltistan region</p> <p>Development Objective: Increased agricultural incomes and food security for at least 100,000 rural households in 7 districts of Gilgit Baltistan on a sustainable basis</p>	<p>45,000 HHs decrease in population below poverty line</p> <p>10 % decrease in child malnutrition (under 5yrs old, chronic, acute-underweight and stunted)</p> <p>At least 100,000 households reached</p> <p>50% of target district HHs and value chain operators have increased their agriculture income by at least 25%</p> <p>25% increase in production and productivity of priority value chains</p> <p>35% increase in surplus marketed (potato and apricot)</p>	<p>PSLM surveys ETI Assessments against BISP Scorecard</p> <p>RIMS Survey (panel & control) WFP mapping of settlements and project activity reports</p> <p>RIMS survey (panel)</p> <p>Producer Org. anisations sales records</p> <p>Annual Outcome Surveys</p>	<p>Political and social stability in the region and its environs New developed land equitably distributed including women and landless poor Climatic abnormalities and natural calamities remain within acceptable tolerance levels</p> <p>Higher production, combined with project nutritional education and improved road access, will make substantive dent in malnutrition rates</p> <p>Programme activities implemented as per phasing Govt and partners are able to timely predict and respond to natural disasters and localised hazards</p>
<p>Outcome 1: 100,000 farm households increase production, productivity and sales in prioritized agricultural commodities</p> <p>Outcome 2: Sustained and community driven development approach established that is pro-poor and youth/gender- and nutrition-sensitive</p>	<p>50,000 households have expanded their agricultural land holding and 60,000 hhs increase sales to private sector partners</p> <p>200 mixed and 20 female producer groups established 10% women among farmers trained provided land titling, and constituting PO decision-making bodies 50 % funds recovered against estimated cost recovery for irrigation development 80 % recovered funds invested in village</p>	<p>Farmer organisations records</p> <p>Programme activity records and PO records</p>	<p>Improved quality, quantity and reliability in supply to contracted private partners will improve farm returns Investments in local value addition and reductions in transaction costs for traders/processors/wholesalers</p> <p>Youth have preference for working in village if economic opportunities are same or better than in towns and cities offering low-skill employment</p>
<p>Outcome 3: Agri-business actors invest in local processing and value addition to <i>improve marketing</i> of local food products</p> <p>Outcome 4: Govt and private agricultural services are sustainably improved/ expanded</p>	<p>220 contracts signed between FOs and private sector buyers Value of new investments by private actors in agriculture enterprises A pilot tested under DFID funded Credit Guarantee Scheme with State Bank</p> <p>50 000 farmers served by agricultural services (inputs, advisory services)</p>	<p>Investment fund applications plus private investor balance sheets</p> <p>client satisfaction surveys and DOA service delivery records</p>	<p>Sufficient quantity, quality and seedling reliability of agricultural products available to sustain PPPP</p> <p>All GB agricultural households will be able to access improved agricultural service provision, including women</p>
<p>Outcome 5: Government formulates and enforces pro-poor agricultural policies covering water, land titling, roads O&M and products and certification regime</p>	<p>Land Titling Regulation for ETI promulgated by end of year 1 Land Records/Titling cells established by end of year 1. Provincial Land Records and Titling Law promulgated by end of Project Year 2 Land titles provided for newly irrigated lands, including for women-headed households and youth Seed and product certification system functional Provincial water policy and roads O&M policy formulated and implemented by end of year 3</p>	<p>Public land registry records, PO contracts and records with farmers</p>	<p>Farmers using/producing improved seeds are able to increase productivity and sales</p>

Revised 2005

**GOVERNMENT OF PAKISTAN
PLANNING COMMISSION
PC-1 FORM
(PRODUCTION SECTORS)**

1. **Name of the project:** ECONOMIC TRANSFORMATION INITIATIVE, GILGIT-BALTISTAN
2. **Location:** Gilgit-Baltistan Province
3. **Authorities responsible for:**
 - i. **Sponsoring:** Government of Gilgit-Baltistan
 - ii. **Execution:** PCU, P&D Department, GoGB
 - iii. **Operation and maintenance:** GoGB
 - iv. **Concerned federal ministry:** MoKA&GB
4. **Plan provision:** The ongoing IFAD Country Strategic Opportunities Paper (COSP) 2010-2015 identified a multi-sector rural poverty reduction and agriculture development programme in GB, as a follow-up of previous IFAD-funded Northern Areas Development Project (1999-2009). The programme has been designed following a formal request from Government of Pakistan to IFAD. Government of Pakistan will provide a counter-part financing equal to 20% of the programme cost through annual PSDP allocations for Gilgit-Baltistan.

4.1 **Programme Financing:**

	US\$ Million	Rs. Million	%
IFAD	67.00	6,867.5	56
Government	23.63	2,422.1	20
Co-Financing	22.98	2,355.5	19
Beneficiary Contribution	6.54	670.4	5
Total	120.15	12,315.5	100

5. Project objectives and its relationship with sector objectives:

5.1 **Programme Goal:** Improved incomes and reduced poverty and malnutrition in rural areas of Gilgit-Baltistan region benefitting around 100,000 rural households

5.2 **Programme Objectives:** Specific objectives include: (i) Substantial increase in irrigated crop area and production and improved connectivity with markets through strategic investments in economic infrastructure (50,000 acres of new irrigated land and 400 km FMR) (ii) Sustained and community driven development approach established that is pro-poor and gender/youth/nutrition sensitive (220 Village Production Groups) (iii) Agri-business actors invest in local processing and value addition to *improve marketing* of local food products (around 100 value chain partnerships) (iv) Government and private agricultural services are sustainably improved and outreach is expanded (extension and research systems strengthened), and; (v) promotion of supportive policy and regulatory environment (Provincial policies on water, FMR O&M, Land Titling and seeds/produce certification promulgated).

5.3 **Relationship with Sector Objectives:** ETI is in line with stated objectives of Agriculture Sector, PRSP-II and Vision 2025.

a. **ETI is directly linked to the following objectives of The Agriculture and Food Security Policy (draft) of Government of Pakistan:**

- create a modern, efficient and diversified agricultural sector that can provide high quality products to its industries and for export;
- ensure attractive incomes and decent employment for those who live and work in rural areas;
- use the resource base in an efficient and sustainable manner;
- flexibly adapt to climate change and be resilient enough to quickly recover from shocks and emergencies; and
- ensure that all sections of the population have stable access to adequate, nutritious and safe foods necessary for a healthy life

b. **ETI supports the key pillars of The Poverty Reduction Strategy Paper-II, of Pakistan as following:**

- Pillar II: Protecting the Poor and the Vulnerable
- Pillar III. Increasing Productivity and Value Addition in Agriculture
- Pillar VII: Promotion of Public-Private Partnerships
- Pillar IX: Governance

c. ETI is also supporting Government's **Vision 2025 in its Pillar "Energy, Water & Food Security** which requires:

- Protecting the most food insecure segments of population
- Creating a modern, efficient and diversified agriculture sector aligned with associated water and energy infrastructure
-providing high quality production and export
- Optimising production and supply mix by leveraging Pakistan's unique strengths

- Using the resource base in an efficient and sustainable manner in line with national and global standards
- d. ETI also responds to challenges and opportunities identified in **Gilgit-Baltistan Economic Report, 2011 (ADB, World Bank, GoGB)**

6. Description, justification, technical parameters and technology transfer aspects

6.1 Programme Justification: Gilgit-Baltistan is a remote mountainous region of smallholders with comparatively higher incidence of poverty. Agriculture productivity is generally low due to poor access to quality inputs, huge post-harvest losses (45% for apricot and 10% for potato) due to poor post-harvest handling, lack of local processing and value addition and poor access to markets. There is poor connectivity among the actors and stakeholders along the value chains of key products. Supportive policies and incentives are often weak or entirely missing.

GB faces all the generic challenges of a region placed in a difficult and challenging geography¹. It faces challenge of density due to low population, small holdings, small and scattered individual production, and lack of means for aggregation and collection, and lack of wholesale points/auction platforms. It also faces the challenge of **distances** within the region and from main markets and consumption centers with poor transport facilities. And finally it faces the challenge of **divisions** whereby there is lack of integration with value chains, disconnect between extension and research support services, gaps along entire length of value chain, absence of right policies and regulations, and inability to connect with private sector and market demand.

To overcome these challenges to its agriculture development, the region needs an integrated approach encompassing institutions, infrastructure and incentives². In terms of institutions, such an integrated approach includes support to farmer/producer associations to create output densities through aggregation; building public sector capacities for effective policy, extension and research support; building producer-public sector-private sector relationships and forums; and establishment of quality control and certification bodies. In terms of infrastructure, the region needs improved access to opportunities including inputs and output markets

Existing Knowledge base for Scaling up: There are number of small scale but successful pilots done on various products by number of bilateral donors, NGOs and government programmes in the region. The programme has the opportunity to scale-up these pilots on regional basis.

6.2 Programme Description:

6.2.1 GB's Production, Productivity and Value Chain Challenges: Agriculture in GB suffers from number of challenges affecting production, productivity and value addition. These challenges are:

- a. **Small and fragmented Land holdings:** The average cultivable land owned by the households in the area is very small (0.8 acre/hh) and scattered. The only option to

¹ www.worldbank.org/wdr2009

² As modelled/explained in WDR 2009.

increase the household landholding is to bring the cultivable barren land under plough through construction of gravity irrigation channels and other irrigation infrastructure.

- b. **Poor Access to Agriculture inputs:** Non-availability of improved seed, fertilizers and pesticides and farm machinery due to absence of main stream national and multinational seed and fertilizer trading companies; Non-existence of a public and private sector farm input supplying system; Lack of a public sector basic seed production system and trained seed producers/registered associations to multiply and market that seed; lack of public sector capacity to meet the demand of quality fruit plants; poor private sector capacity to produce quality fruit plants.
- c. **Lack of technology:** Gilgit-Baltistan with its limited land and water resources is in need of modern production and processing technologies. However, the area is critically lacking even the simplest production technologies which have been successfully adopted elsewhere in the world. This is due to: lack of R&D institutions; lack of capacity to produce suitable hybrid and synthetic varieties; lack of training for the technical staff; absence of quality seed testing and diseases diagnostic facilities with trained technicians; poor technical information base and lack of linkages with the national and international knowledge sources; lack of quarantine services for preventive measures to maintain the existing disease-free status of the GB.
- d. **Poor Crop Management and High Post-Harvest Losses:** Poor access to quality inputs and improved technology has limited the farmers' access to standard crop management practices which are critical to obtain a good harvest. The post harvest losses for apricot are as high as 45% whereas for potato they range from 10 to 15%. Mulberry is almost 90% lost.
- e. **Poor/Inadequate Irrigation infrastructure:** Irrigation is the life-line of agriculture in Gilgit-Baltistan. Majority of the channels are constructed by the communities without the use of modern engineering structures and hence are prone to natural disasters like flooding, landslides, earthquakes etc. The major issues in irrigation infrastructure are:
 - Unreliable and inefficient irrigation infrastructure
 - Thousands of acres of arable land available but lying barren due to lack of resources for new irrigation channels and expansion of existing channels
 - Decreasing water delivering capacity of water channels
 - Increasing repair and maintenance costs of the water channels
 - Lack of a standardized community based O&M system and user fees and lack of formal oversight and accountability
- f. **Poor Road Infrastructure and Distant Markets:** The region is isolated and far removed from major markets. The closest main market i.e. Islamabad is located at a distance of 630 km from Gilgit and 820 km from Skardu city. The condition of KKH is not supportive for transport of perishable agricultural commodities to main markets. Even within the region, many villages have not yet been linked with valley and sub-valley roads and the condition of existing road infrastructure is quite poor. Transportation of highly perishable fruits and vegetables from GB is a real challenge, as the travel time to end markets is measured in days, not hours. Lack of specialized transportation facilities, such as refrigerated trucks, makes the marketing of fresh

produce even harder. Similarly, due to inadequate storage facilities, farmers and local traders often cannot store perishable produce (such as seed potatoes) to fulfill the seed requirement of next seasons. Currently, the available storage facilities in GB can only accommodate 475 MT of seed potatoes - a fraction of the total seed requirement, estimated to be 8000 MT. Long distances also affect the access and affordability of inputs imported from outside.

- g. **Knowledge gap regarding fruit and vegetable processing:** The farmers in Gilgit-Baltistan lack the knowledge regarding the possibilities of processing various fruits and vegetables produced in the region. There are also no private sector processing facilities that could serve as alternate outlet and source of value addition.
- h. **Lack of volumes and quality:** Small landholdings, scattered production, lack of valley and district level aggregation platforms and lack of standardized products result in low volumes and poor quality that is not fit to attract outside buyers.

6.2.2 **Programme Focus:** While there are number of promising crops for value chain development, ETI will initially focus on two crops – apricot and potato. The crops have been chosen in view of their total production, importance for small-holder households income and nutrition, development potential and gender dimension. Depending on the results, the programme will consider at mid-term whether to expand to other value chains.

6.2.3 **Programme area:** ETI will have a regional approach to value chain development in view of cross-cutting nature of policy, regulatory and volume generation and aggregation aspects. However, the economic infrastructure development will be primarily focused on four poorest districts of Astore, Diamer, Ghanche and Ghizer and later in after Mid Term review will be implemented in the left over three districts with additional funding by Topping Up the current Programme with additional targets of 50,000 acres new land and 300 km FMR. The current estimated total population of the seven districts is 1.3 million (GB Government Estimates 2013) consisting of about 180,000 Households (with average family size of 7.2) and the total area is 72,496 sq km. There are around 609 villages and over 6000 male and female Village Organizations established under various programmes including AKRSP and DPAP³. Summary of programme area is as Table 1.

Table 1: Programme Area Villages, Households and Population Density

District	Tehsil	Population	Area Sq. Km	Population density	Union council	Rural UCs	Villages
Gilgit	1	217998	4046	54	11	10	58
Hunza/Nagar	4	145470	14246	10	15	15	85
Ghizer	4	178638	11772	15	16	16	82
Diamer	3	199007	6820	29	11	10	96
Skardu	4	322886	22124	15	32	31	171
Ghanche	2	131749	4103	32	15	15	71
Astore	2	106053	7221	15	8	8	46
Total	20	1301802	72496	24	108	105	609

³ Reliable demographic data is hard to come by as last census took place in 1998 and since then it is mostly based on estimates by various agencies. The estimates about population, household size and number of villages vary depending on the source used. In this report, figures are taken from Government of Gilgit-Baltistan presentations and reports of 2014 and BISP survey of 2008/9.

6.2.4 Target Districts profile. All programme districts are essentially rural. While below Tehsil level, the districts are divided into Union Councils but locally the more natural division in terms of access, social homogeneity, production orientation and operational ease are the valleys. And from a value chain development perspective, the valley will be the more natural unit for targeting and implementation. There is no uniform number of valleys per district and the number may range from 10 to 25 including main and branch valleys. In terms of main valleys, the entire region has around 60 main valleys. Main physical characteristics of a valley are that it shares same watershed and one main water stream and the main access road runs along the course of main stream. Most major valleys have smaller side valleys with their own water streams that link up with the main stream or river.

The villages appearing in GB official records are “Revenue Villages” which is not a “natural village”. A revenue village often consists of a number of distinct hamlets or sub-villages with their own names and identity and called a village in its own right in local usage. While the revenue village record may show around 1000 households, actually there would be no village of that size in one place and it would be combined total of a number of natural villages or hamlets each consisting of anything between 20 to over 100 households. Seasonal migration of some parts of rural valley populations to higher elevation pastures is still a norm leaving behind only those members who happen to be in employment or needed to tend the main house in the village.

There is considerable variation among target districts in terms of level of development, social power structures and societal attitudes. Some of it is related to religious and tribal structures and orientations and some to level of exposure to development and access to services and markets. Diamer is considered to be most conservative, more tribal and more prone to follow the local clergy. The literacy levels are among the lowest within the region for men and almost abysmal for the women. Astore is more dynamic and open with much higher literacy levels but constrained by the difficult access to main road and poor social and economic services. Ghanche is the farthest with smallest population and higher poverty rates but offers huge natural advantages in terms of production of disease free organic high value products due to its elevation and dry climate. Hunza is probably the most literate, most open and most well serviced district in the region thanks to its early exposure to AKRSP and general openness of the people to embrace change. However, its other half Nagar is still living in another time and is much underdeveloped. Ghizer, like Hunza, is more developed with a majority Ismaeli population, much higher literacy rates and is well connected to Gilgit.

6.2.5 Target Group: ETI will target about 100,000⁴ rural households with landholding of less than one ha, including around 5% households that are women headed and/or landless, in target districts. This will include households involved in production on existing lands for selected promising value chains (seed and table potato, and apricot initially and more products later) and households that benefit from the newly developed irrigated agriculture land (which in most cases would be households with some existing land in the same village or valley). The indirect beneficiaries from roads, value chain funds, reinvestment of recovered funds, and

⁴ Different sources quote 180,000 to 210,000 hhs in GB region and all sources are projections based on 1998 census. The conservative estimated would be 180,000 but for programme purpose, the figure of 210,000 has been used.

complementary activities by social mobilization partners etc. would be almost entire population of the target districts. In addition, the programme will target small-medium scale processors, value adders and marketing entities operating in the region.

- 6.2.6 **Targeting Strategy:** ETI will select priority valleys in each district for interventions. The selection will be based on multi-factor criteria including total population, number of poor households as per BISP survey, total production of priority crop, total cropped area, area available for irrigation development and farm to market road needs. Four valleys in each district scoring highest marks will be selected for initial two years. The number may be expanded from third year to other valleys and other value chains depending on progress and results. The entry point for programme would be organized groups of farmers at village level with due regard for women and youth groups. Within a valley, programme interventions will start with villages with existing community organizations that can be gelled into larger village producer groups and then gradual expansion to all villages in the valley.
- 6.2.7 **Gender strategy⁵.** Gender will be mainstreamed into all aspects of programme implementation and appropriate strategies will be adopted for areas with pronounced gender challenges. GoGB and NGOs over the years have initiated a number of programmes focused on gender and development. GoGB has fixed 33% quota for female representatives in various tiers of local government and also established a Women Development Directorate. A number of projects like “Self Employment Project for Women (2004-5)”, “Women’s Vocational Training Project (2004-5)”, “Doorstep Employment Project (2005-10)” have been implemented so far. The project’s strategies have so far benefitted over 18,000 women. An “Eve Market”, specifically for women entrepreneurs has been established in Skardu with 22 shops. ETI will build on these initiatives through a flexible approach to gender keeping in view the regional propensities and imperatives in each district.
- 6.2.8 ETI will also recognize the important role played by women in the on-farm and off-farm activities within the region. ETI, through social mobilization, will engage existing and newly formed women producer groups within the target valleys to ascertain women priorities in terms of value chain development, irrigation development and social development needs and priorities. Apart from actively encouraging and creating opportunities for participation in village producer groups, ETI will establish 20 women specific producer groups with women taking lead in all value chain development activities. ETI will also identify specific income opportunities for women like grading, packaging, polishing, processing that are more suitable for women in the local socio-cultural setting and train women for such jobs. Women centered value chains would be another area of focus including milk marketing groups, apricot by-product processing, pine-nut roasting and packing etc. Since women bear disproportionate burden of harvesting, post-harvest shelling, processing, drying of products etc., the programme would introduce appropriate labour savings devices/equipment for women use. The women headed households and landless poor will be exempted from repayment of 50% development cost of irrigation

⁵ The gender strategy of the project takes into account the experience in previous project NADP in the same region./Gender situation is very varied among different districts with Hunza-Nagar and Ghizer being quite advanced and open and women mobility and participation in everyday decision-making quite pronounced. Skardu, Ghanche and parts of Gilgit and Astore are somewhere in between. While Diامر is still comparatively conservative but much more progressive as compared to initial phase of NADP. There is now a recognition and keenness for more facilities for female education and a considerable number of English medium schools for girls have now opened in Darel, Tangir and Diامر Tehsils with high enrolment rates.

and all able bodied priority groups will be given priority access to wage earning opportunities under the programme invested infrastructure.

6.2.9 The M&E system would monitor gender and targeting dimensions in a disaggregated manner. SMPs will engage female social organizers for organizing women producer groups and facilitating identification of women preferences in programme’s development activities. To the extent possible, all women related training would be delivered in-situ to overcome the constraints of mobility. A detailed description of women and vulnerable groups and targeting strategy is reported in Annex 2 (Poverty, Targeting and Gender).

6.2.10 **Inter-district allocation of resources** would be determined on the basis of average percentage score of each district in terms of combined factors of area, population, current cultivates area, new area available for irrigation development, and production share in two priority value chains and other important products. All percentages will be added and overall average score of each district will determine its share in programme investment budget. On this basis, following are the shares of each district in the main investment budgets and village, household coverage as well as development of new irrigation and road upgrading. Individual district share for four core programme districts is reflected in Table 2

Table 2: District Allocation on Basis of Percentage Share in Key Attributes

Factor	All selected Districts	Share in total			
		Ghizer	Diamer	Ghanche	Astore
Population – No	615,447	29%	32%	21%	17%
Geographical area - Km ²	29,916	39%	23%	14%	24%
Cultivated area – acres	76,800	36%	43%	4%	18%
Potential area for New irrigation - acres	131,056	4%	59%	26%	11%
Potato production (m.tons)	45,491	24%	5%	33%	37%
Apricot Production (m.tons)	43,311	33%	3%	57%	7%
Cereals (m.tons)	60,300	25%	59%	12%	05%
Other fruits	24,900	26%	46%	16%	12%
Average	100%	27%	34%	23%	16%
Share in Village Producers Groups -No	220	59	75	51	35
Share in Roads – km	400	108	136	92	64
Share in New land - acres	50,000	13,500	17,000	11,500	8,000

6.2.11 **Value Chain Component Allocation to be flexible and across the region:** The value chain development has a regional dimension and therefore Component 2 activities will not be confined just to the core four districts. In terms of production of initial two priority products, potato and apricot, Hunza-Nagar produces 40% of the total regional production of potato and Skardu contributes 22%, and in apricot Hunza-Nagar contributes 20% and Skardu 39%. Development of these two value chains without these two important contributing districts would not produce the desired impact. So the value chain funds and activities will be deployed in a flexible manner in a regional perspective. The entry point for programme’s value chain development

activities in non-core districts will be the existing FEGs established under other programmes. New FEGs may also be established where need and interest exists.

6.2.12 Resource Allocation Within Districts: Within the districts, the programme would employ a combination of targeting and ‘potential-for-development-of-value-chain’ strategies aimed at ensuring an equitable distribution of programme benefits. Overall, the programme would adopt an inclusive targeting approach based on identification of promising potato and apricot production around which demand-driven partnerships between the smallholder producers and private and associative sectors can be developed. Principal targeting mechanisms would include geographical and commodity based targeting, enabling and empowering approaches, and procedural measures to promote the involvement of disadvantaged households, women and youth and the inclusion of remote communities.

6.2.13 Complementary Activities: Two sets of complementary activities, both economic and social, will be undertaken in the programme. Some of these will be funded through the recovered funds from irrigations development and others will be undertaken by social mobilization partners through other sources of funding. Both sets of activities will follow the initial need assessment and prioritization undertaken by the communities with the needs of the poor and vulnerable being duly incorporated.

6.3 Programme Outcomes and Components:

6.3.1 The overall goal of the programme is to improve incomes and reduce poverty and malnutrition in rural areas of Gilgit-Baltistan region. Specific objectives include: (i) Substantial increase in irrigated crop area and production and improved connectivity with markets through strategic investments in economic infrastructure (ii) Sustained and community driven development approach established that is pro-poor and gender/youth/nutrition sensitive (iii) Agri-business actors invest in local processing and value addition to *improve marketing* of local food products (iv) Government and private agricultural services are sustainably improved and outreach is expanded, and; (iv) promotion of supportive policy and regulatory environment

6.3.2 ETI Approach and Strategy: The programme will be implemented over a seven year period and comprises of three complementary and mutually reinforcing components: (i) Economic Infrastructure for Value Chain Development, (ii) Support Services/PPPP for Value Chain Development, and (iii) Programme Management and Policy Support. ETI will have a programmatic approach. ***Programme Steering Committee will adjust the selection of products for value chain development, and districts/VPGs for value chain and infrastructure development during implementation on the basis of results, experience and monitoring feedback.***

6.3.3 Centrality of Participation and Social Mobilization: Programme will be implemented across 200 villages of region through effective social mobilization approach. Terms of engagement will be agreed with the community at the very start. There will a parallel three-track approach involving villages with existing promising products for value chain development, villages where new irrigated land is going to be developed and organized groups of rural men and women already engaged in product processing, value addition and marketing.

6.3.4 **SMPs, Government Partner Agencies and VCTAT Interface at Village/Valley Level:** While PCU and RCUs will be responsible for overall coordination, the SMPs, government partner agencies, Agriculture Extension, Research/Tissue Culture Labs, WMD and PWD will coordinate their respective activities at the village producer groups and valley association levels in accordance with annual workplan and budget phasing and guidelines provided in the PIM. Delivery of technical inputs as per business plans and agreements with the groups will be the responsibility of the line departments and VCTAT. PCU and Programme Coordination Committee will have the overall responsibility to plan and coordinate the inputs from all these partners.

6.3.5 **Policy and regulatory** aspects will be addressed in close collaboration with the provincial government and relevant federal agencies. Technical assistance will be provided to the relevant agencies for this purpose. Programme components are summarized below with full details provided in Annex 4.

6.3.6 **Overall Programme:** The programme will consist of three mutually reinforcing components i.e. Economic Infrastructure, Support Services for Value Chain Development and Programme Management. Total cost of the programme is US\$ 120.15 million with a programme implementation period of seven years starting July 2015. The programme will cover Gilgit Baltistan region with economic infrastructure covering only the four poorest districts while value chain component will cover all seven districts. Programme Management structure will be headed by a dedicated PCU under P&D Department located in Gilgit.

6.3.7 **Component 1: Economic Infrastructure for Value Chain Development (US\$ 63.93 million/62% of base cost):** The component is aimed at substantially increasing the current irrigated area in the target districts and providing improved access to markets through upgraded road links.

6.3.7.1 **Sub-component 1.1- Irrigation Development (US\$ 44.36 million/43% of base cost):** The sub-component is aimed at developing 50,000 additional acres of irrigated and in the targeted 04 districts of GB region. Priority will be assigned to irrigation facilities for bigger chunks of land, say around 250 to 1000 acres or more in the initial phase and then moving to smaller schemes on a sliding scale. In doing so, inter district balance and equity in terms of phasing would be kept in view. Water Management Directorate (WMD), based on three different surveys, has already identified 43 water channels with a command area of 52,000 acres covering all 7 districts. The identification of channels is based on surveys conducted/facilitated by three different agencies in the past. The agencies include, JICA, MIES (the engineering wing of AKRSP) and WMD itself. Out of these around 23 schemes covering an area of 13,000 acres fall in four priority districts and will be the focus of programme during the initial period.

Per Unit Cost of Proposed Channels: The average cost of identified channels varies widely across districts and with agencies that conducted surveys. The cost of priority channels was updated by the Design Mission on the basis of current scheduled rates. Further, estimates of 8 randomly selected channels from four districts were analyzed in detail to reach a workable estimation. Based on that, an average cost of US\$ 580 per acre has been estimated for programme purpose.

Implementation Approach and Methodology for Irrigation Development: Programme will follow a participatory approach to irrigation development, building on already tried and tested local models. SMP will lead the way in this. However, unlike the prevailing practice in community executed schemes, where over 20% community contribution is expected, the schemes under ETI will not require any community contribution in the shape of labour or materials. ETI will pay the full cost, as approved by PCU, for labour and materials but communities will have to payback 50% cost of the scheme into a community based account for future investment on their own priority social and economic development priorities. ETI will also pay US\$ 100 per acre to the beneficiaries to enable them to develop the new land quickly for cropping. A formal scheme management/water user association arrangement with appropriate accountability mechanisms will be established as part of agreement with beneficiary community.

Repayment Mechanism: The final acquitted cost of scheme will be the basis for calculation of 50% repayment by the beneficiary community. Women headed households and landless will be exempt from repayment. Each of the beneficiary's share will be calculated on the basis of his land share in newly developed land. For example: if a scheme led to development of 100 acres at cost of Rs. 100,000, then per acre cost is Rs. 1000 and if a beneficiary gets one acre, he will be supposed to pay back Rs. 500 over three cropping seasons. So his payment per cropping season would be around Rs. 170. The community's scheme management team will be responsible for these recoveries. A bank account will be opened for management of recovered funds and the account will be jointly operated by SMT President and an ETI nominated staff (depending on situation, can be SMP or WMD or any suitable combination). The recovered funds would be utilized only for the activities prioritized in village development plans. Every activity selected for utilization of these funds would require to be planned and budgeted with the help of SMP staff and implemented only after approval of RCU.

Repayment Oversight and Management Mechanism: Repayment funds will be treated as a Community Asset and would be available only for activities and purposes that benefit the entire community through development investment identified collectively. Fund management will be carried out in a transparent and accountable manner jointly by the community nominated persons and programme appointed staff. Repayment liability of each irrigation scheme beneficiary will be clearly computed at the completion of scheme and conveyed to SMT in writing along with schedule and timing of repayment and responsibility for repayment collection and its deposit in the bank account. Repayment collection will be done during the scheduled meetings of the village producer organization and duly accounted for in a repayment account book and promptly deposited in the designated bank account. Account balances details will be shared/reviewed in each monthly meeting of VPG/WUA. Use of collected funds will require community resolution identifying the priority scheme for use of collected funds, technical feasibility of the scheme by ETI/SMP and approval of proposed scheme if found feasible by the programme. Scheme execution process will be again through a community nominated Scheme Management Team with oversight and monitoring by SMP and ETI. Expenses on scheme will be presented in the monthly meetings of VPG/WUA. DCU Accounting Staff will carry out annual supervision of all Repayment Funds to ensure their proper management and usage.

Term of Partnership between Community and ETI: Selection of scheme for construction and its financing by ETI will follow an agreement between the community, SMP and WMD/PWD. Once a scheme is identified as feasible, the beneficiary community will be organized into a Village Producers Group and the VPG will select a Scheme Management Team. The agreement will be signed by the Scheme Management Team (SMT) selected by the community through consensus and SMT will be responsible to the project for all aspects of construction agreement. Main terms of agreement will be:

Main interventions and implementation responsibilities in this component will be:

- *GIS Mapping and Baseline Survey:* Programme will support, in pre-start-up phase, a GIS mapping exercise to address some of the current information gaps in terms of total feasible area available for irrigation development, location and size of each parcel of land, ownership status, water availability etc.
- *Consultancy Support:* Programme will finance an initial consultancy support to WMD and PWD for the detailed design and cost estimation of initial five representative schemes to establish proper design and cost parameters and community partnerships terms and conditions templates. After this, the rest of schemes will be implemented by WMD.
- *Scheme Identification and Phasing:* PCU and WMD/PWD, in consultation with concerned SMP, will be responsible for scheme identification and their priority for development as part of the annual workplan and budgeting exercise. The priorities and phasing will be adjusted from time to time depending on progress and experience (for phasing see Working Paper 1).
- *Community Mobilization and Organization:* Identification and organizing of beneficiaries will be by Social mobilization partner who will explain the terms and conditions, along with concerned WMD/PWD staff and facilitate agreement on terms and conditions; establishment of scheme management team for construction and post construction O&M along with O&M terms and conditions.
- *Design and Cost Estimation:* Initial five schemes with the help of a consultancy firm and for the rest of schemes by WMD/PWD staff itself as per approved design parameters
- *Approval and Agreement with Community:* Final approval will be accorded by PCU, on recommendation of WMD/PWD and SMP and WMD/PWD and SMP will sign the agreement with the beneficiary community.
- *Scheme execution/construction by community* under direct supervision of SMP and overall oversight of WMD/PWD and full cost payment of all items of work to community; SMP will be paid a percentage of scheme construction cost for their supervision and support overheads
- Provision of US\$ 100 per acre to beneficiary households for land development and the development will be supervised and monitored by WMD/PWD and SMP;
- 50% recovery of scheme cost over three harvest periods by scheme management team supported by SMP and deposit into joint account of Village Producers Association and ETI nominated official and use of funds for approved business promotion activities of association and prioritized development needs of the communities in the villages;

- Training of youth groups in construction, stone blasting, other land development tool and machinery operation etc. Each Group will be provided a set of appropriate tools for their work(40 groups – 400 youth)
- 7 Pilots, one in each district, for identification of cost-effective solutions for lift-water schemes on main rivers to irrigate the lands (*Daas*) along the main rivers like Indus, Shyoke, Gilgit, Hunza etc. by WMD and/or a suitable private sector partner
- Development of provincial water policy including formal community based O&M system and their formal adoption
- Capacity building of WMD and PWD Department including revised mandate and organizational structure, vehicles and equipment, incremental staff and training and travelling costs

Water Availability and Rights and Right of Way for Scheme: An established right on source of water will be a fundamental requirement, along with adequacy of source and non-disputed nature of land, for financing of any scheme under the project. Right of way for new irrigation channels will be arranged by beneficiary community/WMD as per prevailing customs and norms and IFAD funding will not finance any costs on land acquisition/right of way for the identified irrigation schemes.

Irrigation Schemes O&M: ETI will adopt, and further refine, the formal beneficiary centered scheme O&M system introduced by AKRSP and WMD. A water user association representing the beneficiaries will be established before the start of construction. The WUA will have formal rules of business duly agreed between the community and executing agency. The rules of business will specify the user fees, mode of their management and usage, scheme O&M responsibilities and operating procedures etc. The user fees will be managed through a bank account with multiple signatories nominated by WUA. As part of the provincial water policy formulation through ETI funded TA, the role and responsibilities and structures of WUAs will be given a proper regulatory cover and system will be established for their monitoring and accountability.

Implementation: Under the overall management and control of Infrastructure Specialist, PCU, the sub-component will be implemented through WMD and Public Works Department with medium size and simple schemes assigned to WMD and large complex schemes assigned to PWD. This is necessary in view of relative capacity of the two agencies and programme needs for early development of new irrigated area. SMP will be responsible for mobilizing target communities, negotiating pre-execution agreements on terms and conditions and post-completion re-payment of 50% construction costs and its further utilization for community social and economic development. AWP/Bs of the programme, prepared in consultation with WMD and SMP, will guide the annual targets of the sub-component and WMD responsibilities at all levels.

6.3.7.2 **Sub-component 1.2 - Farm to Market Roads: (US\$ 19.56 million/19% of base cost):** FMR component is aimed at improving critical road linkage for the supported value chains for linking the production areas to valley roads and main roads. The sub-component will finance upgrading of 400 km of shingle compacted roads. Existing pony tracks will be upgraded to jeep able roads (40% of total) and jeep able roads will be upgraded to truckable roads (60% of total). In addition, a lump sum provision of 220 meters of bridges would be made. Wherever any additional land/right of way is involved, that would be the government and community responsibility. Completion of

roads will be aligned with development of value chains in various areas and land development under irrigation component.

Main Activities: Main inputs/activities include:

- *GIS Mapping and Baseline Survey:* GIS mapping and baseline survey will be carried out prior to project start-up and will help initial identification and prioritization and linking of roads with the promising existing production areas and future irrigated land development. The activities will be eligible for retroactive financing.
- *Selection of a consultant by PCU* for survey, detailed design, tender documents and construction supervision
- *Prequalification of Contractors:* Only prequalified contractors will be eligible for participation in the ETI financed roads. Pre-qualification will be carried out by PWD under the supervision of roads consultant and with participation of PCU engineering staff. Efforts will be made to invite better capacity contractors from within and outside the region to participate and not more than 15 contractors will be pre-qualified.
- *Packaging of Roads:* Roads in same valleys, regions or districts will be packaged in a manner to make reasonably large packages that are attractive for bigger and better capacity contractors with credible track record.
- *Land Acquisition/Right of Way:* Beneficiary communities and/or government will be responsible for provision of land for the new roads. IFAD funding will not finance any costs on land acquisition/right of way for the identified roads.
- *Formulation of Provincial roads master plan and O&M policy* including establishment of a dedicated O&M fund by Government of GB for assured regular maintenance of the roads on annual basis
- *PWD capacity building* including provision of vehicles, equipment, road maintenance machinery pool, incremental staff salaries and allowances, and consumables

Phasing: Road selection will follow selection of priority valleys/villages and identification of land for irrigation development. Therefore little construction activity is envisaged during year 1. Main construction activities will be undertaken during year 2 to year 6 of programme implementation.

Implementation: PCU, through its infrastructure Expert, will exercise overall control over the entire procurement and payment process to ensure quality and timeliness. GB PWD will be responsible for implementation of ETI's FMR sub-component through dedicated staff at provincial and district levels. PWD will work in close coordination with WMD and SMPs for phasing and selection of roads and execution of road works.

- 6.3.8 **Component 2: Support Services/PPPP for Value Chain Development – US\$ 31.25 million/30% of the base cost):** The component will revolve around a commercial and market oriented production and value addition by organized groups of farmers and other value chain players. The component will focus on two products, apricot and potato during the initial phase and inclusion of any additional products will be considered during MTR. The component will provide comprehensive and mutually-supportive solutions to current challenges in developing value chains for the main cash crops (apricot and potato initially). The component will be implemented with the support of multiple partners including public sector extension and research institutions, private/corporate sector and farmers organizations. The overarching principle will be to follow 4-P model involving effective partnerships between

producers (farmers), public sector (extension, research) and private sector (local entrepreneurs, down country seed companies and corporate clients). This component consists of a number of interconnected and complementary sub-components.

6.3.8.1 Sub-Component 2.1 Value Chain Support Fund and Technical Assistance: (US\$ 20.29 million/20% of base cost): The objective of this sub-component is to meet financing needs of value chain actors including farmers, traders, processors, transporters, exporters and packagers. The fund will operate on “matching-grants basis”. The fund will be managed by an autonomous and representative Fund Management Committee with its secretariat in PCU. Value Chain Manager will be the focal person for this sub-component and Secretary of the Fund Management Committee. The main criteria for access to funds by private sector entrepreneurs will be formal registration, documentary proof of engagement in that particular activity and track record, a feasible proposal/business plan that demonstrates that the activity will directly contribute to adding value to any of the local produce or its access to better markets with better returns for farmers and region, and a proof of applicants own contribution/matching investment in the venture (*Detailed description and procedures are given Annex 4*). The support needed from extension and research services will also be determined in the plan and any costs on provision of such services and inputs (e.g. basic seed for potato seed production) will be part of this financing proposal. Farmers Organizations/VPGs will be eligible to access funds on the basis of production/marketing plans endorsed by VCTAT and underpinned by established partnerships for supply/sale to private sector entities within the region or outside. (*Detailed terms and conditions will be developed by VCTAT at the start of the programme after stakeholder consultations*).

Eligible Partners for VCSF: It is anticipated that the majority of partnerships would involve identified farmer groups and any of the following:

- An agribusiness or private sector firm or association of firms engaged in the sector;
- A knowledge or service provider (private, public or civil society entity, such as University or NGO, public extension and research service providers);
- Smallholder farmer cooperatives or associations;
- A multiple partnership involving more than two of the above, with one partner designated as the lead.

Partnership development: There are some existing promising farmers groups and producers association, marketing associations and aggregation services providers that will be engaged to serve as models and experience generators. In addition, the PCU would advertize and call for proposals for additional partnerships. The PCU, through its Fund Management Committee, would examine the solicited proposals and identify eligible proposals. If need be, the VCTAT will assist the proponents in improving their proposals to meet the required standards. Financing of eligible proposals would be appraised by the VCTAT and placed before Fund Management Committee for approval.

By the end of the programme, it is expected that up to 100 partnerships would be assisted and up to 60,000 smallholder farmers would directly and indirectly benefit from such matching grant partnerships. About 20 processing facilities would be established through programme support for value addition and reduction in wastage.

Technical Support to Women, Youth and Small Entrepreneurs: The SMPs, VCTAT and line agencies staff would assist those potential partners with lower capacity (such as women or youth, and farmers in more remote areas) in the preparation of their proposals and subsequent implementation once their proposals are approved. Assistance could extend to continued support in monitoring the implementation of the partnerships.

Pilot Testing of Credit Guarantee Scheme: In order to identify sustainable sources of formal financial channels for agriculture and value chain development in GB, ETI will approach State Bank of Pakistan for a pilot under DFID-funded *Credit Guarantee Scheme for Small and Rural Enterprises* under DFID's Financial Inclusion Programme.

Value Chain Technical Assistance Team: A multi-disciplinary value chain technical assistance team (VCTAT) will be engaged, with both long and short term experts, to assist the programme and value chain actors in developing sound business proposals and plans and assist all involved in effective execution of these plans. The main disciplines covered by the team would include Fruit Value Chains Development, Vegetable Value Chain Development, Agri Products Processing, Agri products Economic and Financial Analysis, Small-holder Agriculture Marketing and Value Addition etc. The team will be based in PCU and will report to Programme Coordinator through Value Chain Development Manager. *See Annex 1 for Details of Value Chain Technical Assistance Team*

6.3.8.2 Sub-Component 2.2: Social Mobilization (Farmers Organization & Institution Building) (US\$ 4.01 million/4% of base cost): Social mobilization and organizing the farmers in village level production groups and valley level producers associations is meant to address the current challenges of scattered production, lack of aggregation and quality control forums, challenges of extension and research links to smallholders, disincentive for the private sector in approaching individual small producers spread over large areas and lack of credible institutions at producer level to engage with. A social mobilization partner is required also for implementation of irrigation development sub-component which involves community driven implementation approach linked to recovery/repayment of 50% of construction cost. Nutrition related activities will be mainstreamed into activities at the community level, particularly with the women and youth. A TOT will be conducted to further train the SMP staff and extension agency staff in nutrition knowledge and skills which will be onward imparted to male and female members of VPG/FEGs as part of community training and mobilizations activities. Appropriate nutrition related materials will be sourced or developed for distribution and dissemination. ETI social mobilization component will be implemented through engagement of experienced NGOs/RSPs through a competitive process. One or more SMPs can be selected for three programme regions in GB depending on their individual capacities, experience and area-wise advantages. Process and criteria for selection and TOR is given in Annex 2.

Main activities and steps in social mobilization sub-component will include:

- i. Engagement of social mobilization partners for three regions through a competitive process by PCU
- ii. Development of a social mobilization and community interaction strategy by SMP (s) on the basis of programme objectives in collaboration with PCU, line departments and private sector

- iii. Training of SMPs staff in programme objectives and approach, coordination processes to engage with other implementing partners, reporting and accountability and deployment of trained staff
- iv. Selection of priority valleys and crops on the basis of Baseline Survey and in close collaboration with Department of Agriculture (Extension & Research), VCTAT and PCU/RCU.
- v. Engagement with existing active production and marketing groups. Immediate priority crops include seed and table potato production and apricot production, marketing and processing.
- vi. Dialogue with the villages in selected valleys to establish 220 village producer groups (10% women groups), including women, around specific crops and preparation of village development needs/plan in economic and social sectors
- vii. Development and delivery of nutrition improvement related activities including training need assessment, TOT, training of SMP and extension staff, development and distribution of nutrition information materials and training of male and female nutrition activists at village level.
- viii. Identification and engagement of special target groups including women, women-headed households, special needs individuals, landless and unemployed youth for targeted assistance as well as assurance that they get equitable priority benefit from project funded activities.
- ix. Phased formation of village producers associations in a manner to organize all target villages and most of the valley producers associations by end of year 3.
- x. Establishment of 20 Valley Level Producers Associations, at least one in each valley, representing village producers groups and assisting them, in collaboration with TA team, in establishing formal structure, registration, business plan and opening of accounts etc.
- xi. 3-4 Regional Producers Associations formed once the Valley Associations are fully operational and working profitably.

6.3.8.3 Sub-Component 2.3: Agriculture Extension (Department of Agriculture) (US\$ 2.13 million/02% of base cost): Main objective of this sub-component is to provide demand driven extension services to organized groups of men and women farmers including training in pre and post-harvest practices, soil testing soil improvement, farmer operated commercially run nurseries for improved fruits and vegetable plants and assistance to Agriculture Research in operating contract based potato seed multiplication and adaptive trials.

Activities and Responsibilities: The main activities assigned to Extension Wing include: assignment of its district and field staff in support of programme implementation; farmer training, as identified during the business development plan formulation at the village and valley level, adopting a Farmer-to-farmer training approach whereby key farmers will be trained for each group and association who will train the fellow farmers for a particular crop; assist farmer groups in establishment of commercially run nurseries for the production of quality fruit and vegetable planting materials including access to improved progeny sources and access to Value Chain Development Funds for their capital needs. The soil testing labs would be made fully functional and all target villages will be provided soil testing and related soil improvement advice. Support o Agriculture Research in operation of seed potato programme. To enable the Extension Directorate to fulfill its responsibilities in an efficient manner, essential required equipment, mobility and incremental staff will be funded by the programme.

6.3.8.4 Sub-Component 2.4: Agriculture Research, Department of Agriculture (US\$ 2.69 million/3% of base cost): Main aim of this subcomponent is to address the current paucity of quality potato seed in the region through a farmer and contract centered basic seed production programme. The sub-component will also strengthen local capacity for seed certification and product certification for export.

Main inputs covered under this sub-component include:

- a. Full rehabilitation (green houses, screen houses) of the three tissue culture labs along with capacity enhancement to be able to support production of 25,000 tons of seed potato in GB
- b. Procurement of equipment machinery and chemicals and baseline inputs (imported potato basic seed, fertilizer, pesticides) and establishment of a revolving fund for sustainable seed production operation
- c. Facilitation of agreements between potato seed and table potato producer groups and private sector purchasers in Punjab and elsewhere and supply of basic and certified potato seed as per business plans of the producers
- d. Establishment of contract growing with farmers for seed multiplication including farmer training
- e. Construction of eight 50 mt capacity seed stores in key production areas
- f. 50 adaptive research trials to select optimal areas for production of seed and table potato
- g. Directorate capacity building including equipment, incremental staff salaries and allowances for the seed certification office in Gilgit and daily wage workers wages for TCL

6.3.8.5 Sub-Component 2.5: Land Titling System, Provincial Land Commissioner: US\$ 2.13 million/2% of base cost): Main objective of this sub-component is to secure land titles for the beneficiaries of irrigation land development through issuance of legally valid land titles by District land revenue agency. To initiate establishment of a proper land records and titling system in GB, the programme will adopt a two pronged strategy whereby it will assist the provincial government to carry out the required legislative work for a provincial land titling framework but, at the same time, get an interim regulation promulgated that safeguards the interests of programme's beneficiaries for the newly developed irrigated areas. Such a regulation will establish the basis for classification of lands identified for development and the shares of people living in the beneficiary/claimant community. At the same time, ETI will assist the provincial government to start establishing the basics of a computerised land records system at provincial and district levels on the pattern and software design of systems being established in Punjab and Sindh provinces.

Project Inputs and Activities and Responsibilities: The Provincial Land Commissioner will notify a focal person from the provincial government to be responsible for this activity who would also be member of the PCU Coordination Committee. Implementation of all project financed activities and reporting thereon will be the responsibility of Land Titling Focal Person. The main activities and inputs under this sub-component will be:

- a. *Legal Consultancy for Provincial Law and Interim Regulation*- a legal expert will be engaged to assist the provincial government in drafting a new land law that is commensurate with the local customs and usages and provides a fair system across the area for recording and protection of land rights and their enforcement. The interim regulation shall be promulgated by the end of Programme year 1 while updated Provincial Land Law will be promulgated by the end of Programme Year 2. Office of Provincial Land Commissioner will take the lead in all aspects of legal formulations supported by PCU in terms of necessary consultancy services.
- b. *Establishment of Provincial and District Land Record Computerisation Cells* – Cells will be established at the office of Provincial Land Commissioner and District Revenue Offices for computerization of land records starting initially with the land developed under ETI. The cells will be subsequently developed in full-fledged Land Record Offices by the provincial government. The cells will be established by end of Programme year 1.
- c. *Procurement of servers and computers along with allied equipment for the provincial and district cells along with software* – basic equipment for putting in use the software for land-records data of ETI sponsored land development and issuance of titles to the beneficiary households will be procured through project funding and installed at provincial and district offices
- d. *Training of the provincial and district staff and study tour to Punjab*: The selected staff would be sent for training and study tour of Punjab Board of Revenue and Selective districts to study the system and learn tools of trade.
- e. *Recording of Data and maps of lands selected for irrigation development by district land records cells along with beneficiaries* – To initiate the system, the digitized maps of land selected for development and data of the beneficiaries along with allocated parcels of lands will be recorded in the new computerised system. District Revenue agency will provide land classification and ownership status certificate for each parcel of land selected for irrigation development prior to initiation of any work on that scheme.
- f. *Issuance of land record titles by the cells to each beneficiary under the interim regulation of provincial government* – once the land is developed, each allocated parcel of land will be verified by the revenue staff and district cells will issue an official land ownership title to each individual under the interim regulation.

6.3.9 **Component 3: Programme Management and Policy Support: (US\$ 8.33 million/08% of Base Cost):** This component aims at providing an effective programme coordination, procurement, monitoring and technical support capability at Gilgit-Baltistan level for effective management of programme resources and attainment of its objectives. Key elements of programme management and policy support component will be:

- a. **Federal Level:** At the federal level, Economic Affairs Division will be the main coordinating agency for IFAD and other donor financing and its subsequent monitoring. JS WB, ADB and UN will be the main focal person.
- b. **Provincial Lead Implementing Agency.** Planning & Development Department, GoGB will be the Lead Implementing Agency and will implement the programme through an autonomous and fully empowered PCU.

- c. **Programme Steering Committee:** headed by the Chief Secretary, a Steering Committee will be established in GB to provide the overall policy and administrative support, coordination and direction to the project in accordance with IFAD Financing Agreement. Rest of the membership will be Reps of M/O Kashmir Affairs & Gilgit Baltistan, M/O Planning Development & Reforms, Secretaries of Planning & Development, Finance, PWD, and Agriculture. Heads of social mobilization partner agencies, three representatives of Village Producer Groups and two representatives of private sector entrepreneurs/processors related to sponsored value chains will also be members. Detailed terms of reference will be issued as part of Programme Implementation Manual.
- d. **Programme Coordination Unit:** PCU will established in Gilgit and will be headed by a Programme Coordinator who will be responsible for the implementation of programme activities as per Programme Financing Agreement and procurement guidelines, PC-I and approved annual work plans and budgets. PCU will be administratively attached to Planning & Development Department of GB but otherwise fully autonomous and empowered to implement the programme fully in terms of the Financing Agreement between IFAD and Government of Pakistan.
- e. **Regional Coordination Units:** Regional Coordination Units will be established in three regions at Skardu, Gilgit and Diamer (Chilas). RCU's will be small lean units performing on field coordination and monitoring and reporting functions.
- f. **Policy Support:** ETI will provide policy formulation support to the government in number of areas related to value chain development as well as priority areas for project investments. These include Land Settlement and Titling, Irrigation Water Policy, Roads O&M Policy, Seed and Products Certification and quality certification etc.
- g. **Donor & Development Coordination:** ETI will develop effective coordination and experience sharing mechanisms with other donor, NGO and government funded programmes on value chain development in GB region. These include USAID-funded Satpara Development Prject, JICA funded Apricot Value Chain Development Project and AKRSP and ASF supported activities. P&D, as executing agency for ETI, and as provincial planning and development coordinator for all actors involved in value chain development, will facilitate this process. PCU based value chain committee will include representatives from other projects/programmes in their deliberations for mutual learning and coordination.
- h. **Pre-Start-up and Startup Activities:** Based on lessons learnt in previous IFAD projects in Pakistan, a number of pre-startup and startup activities will be implemented to ensure a timely start for eh programme. Among pre-startup activities, a hazard mapping survey with mitigation measures will be completed in association with WFP through an IFAD grant. A GIS survey of priority valleys will be carried out to establish a digital basis for irrigated lands and roads development. A short term consultancy support will be provided to P&D Department for PC-I formulation to ensure that is completed and submitted to Planning Commission for approval prior to loan negotiation. A Programme Expediter will be engaged to assist the provincial government in completing formalities for PCU and VCTAT recruitments, procurement of initial set of vehicles and equipment, identification of buildings for PCU and DCU establishment and preparation of first year AWP/B.

6.4 **Procurement:** The Procurements under ETI would be made in accordance with IFAD Procurement Guidelines (2004) and any national/local directive, regulation or process that is contrary to IFAD Guidelines shall be of no consequence as far as the Programme financed procurement is concerned. The Programme would use different procurement processes like single source selection, direct contracting or national competitive bidding or international competitive bidding depending on the type, urgency and size of the procurement. The implementing partners\co-financiers would also procure goods and services, delegated to them, for the Programme following IFAD Procurement Guidelines. A consolidated annual procurement plan will be prepared at PCU level based on the annual work plan and budget (AWPB). However the 1st procurement plan will be prepared for 18 months of the Programme. The procurement methods to be used are the following:

- a) For vehicles, goods, office equipment and publication of materials: (i) for contracts estimated to cost more than USD 100,000 (or equivalent),– national competitive bidding; (ii) for contracts estimated to cost more than USD 5,000 but less than USD 100,000 (or equivalent) – national shopping, requiring quotations from at least three reputable suppliers; and (iii) for contracts valued below USD 5,000 (or equivalent) - direct contracting.
- b) For technical assistance, workshops, training and studies – quality based selection or single-source selection The contracts valued at USD 100,000 or more would be subject to national competitive bidding, and for such contracts all documents on bidding, evaluation and contract award would be submitted to IFAD for prior review and provision of ‘no objection’. Contracts valued at less than USD 100,000 would be subject to post review during supervision missions; however, PCU would submit two copies of the signed contract to IFAD, together with the analysis of the respective bids and the recommendations for award, immediately after contract signature.
- c) In accordance with the IFAD Procurement Handbook, International Competitive Bidding will be the mandatory method of procurement for contracts above the following value:
 - Goods: Above USD 200,000
 - Works: Above USD 1,000,000
 - Services: Above USD 100,000
- d) **Review of Procurement by IFAD:** Award of any contract costing USD 100,000 or equivalent or more shall be subject to prior review by the Fund. However, this threshold may be modified by the Fund during the course of Programme implementation.
- e) **Contracts Register:** PCU, and all implementing agencies dealing with procurement of goods and services under ETI, shall maintain a Contracts Register. All contracts, whether requiring IFAD prior approval or not, shall be listed in the Register of Contracts with the dates of approval. Two conformed copies of each and all awarded contracts to be financed – in part or in full – from the proceeds of the financing must be submitted to IFAD. A record of the contracts awarded within a calendar month must be submitted to IFAD using a duly completed Form C-10. All records of

amendments will also be maintained according to the prescribed procedure as well as all required forms to be submitted with each WA for which payments against the contract are being made.

6.5 Planning, Monitoring and Evaluation and Learning Framework:

6.5.1 Annual Work Plan and Budgets. The AWP&B will be the key planning document for the programme. The planning format will follow the programme logical framework with clearly spelled out monitoring indicators that can be easily measured and reported. Annex 6 gives more details of the planning, monitoring and evaluation arrangements.

6.5.2 Monitoring & Evaluation. Programme results will be measured at output, outcome and results levels and will be measured against indicators provided in programme logical framework. The system will be guided by IFAD Results and Impact Management System (RIMS). An M&E plan will be formulated at the start of programme that would provide the basis for annual M&E plans and activities contained therein.

6.5.3 The overall responsibility for the M&E activities will lie with PCU/RCUs. The Planning, Monitoring and Evaluation System (PME) will be finalized and made operational, in consultation with all implementing partners, within the first six months of programme start-up. The PME will be part of an overall Information, knowledge management and communication system that will provide timely and accurate information on implementation progress and feedback for management decision making. It will also show progress against planned programme results. All indicators will be disaggregated according to gender and socio-economic status to the extent possible so as to enable a proper assessment as to whether the programme is reaching its intended target beneficiaries, poor households, smallholders, women and vulnerable groups.

6.5.4 Structure and Components: Programme PME system will consist of simple planning formats with limited number of key monitoring indicators that can be easily monitored and reported by all levels of implementation with time and cost efficiencies. Programme will use simple processes, structures and instruments including a simple computer based software with multiple user interface at all levels to ensure that important M&E information is available to all stakeholders in a timely manner. The design will be aligned with Government/P&D monitoring and reporting structures for foreign funded projects to minimize duplication of effort. Baseline information will be made the basis for all measurements of programme outcomes and impacts. Knowledge management and communication will closely linked and aligned with PME framework for effective feedback and knowledge sharing. All staff involved with PME system at different levels will be provided adequate training including farmers organizations and other private sector partners.

6.5.5 PCU's AWP/B will be an enabling umbrella plan for all components. Exact scheme and FO-wise business plans will be prepared once the FO and a scheme has been identified and all necessary preparatory steps completed. At FO level, commodity specific business plans will be prepared in detail covering all aspects of value chain development for that commodity including private sector partnerships, need/use of Value Chain matching funds, training requirements and assistance needed from extension and research entities.

6.5.6 Surveys and Studies: A baseline survey will be conducted, preferably before programme start-up, but latest by end of third month of programme implementation to establish log frame/RIMS based benchmarks related to outcomes and results vis-à-vis programme beneficiaries.

6.5.7 Annual Planning & Progress Reviews: PCU will convene annual planning and progress reviews involving all stakeholders to take stock of existing progress and constraints and plan for the next year AWP/B. This will be in addition to quarterly planning and review sessions for review of progress and planning for next quarter. Seasonality of implementation is a major factor in GB and all annual and quarterly planning will particularly focus on ensuring readiness to maximise the use of short summer seasons of the area for maximum progress. Programme internal planning and review processes would be backed by regular IFAD supervision and implementation support missions.

6.5.8 Learning and knowledge management. Learning and knowledge management (KM) is a key feature of the programme. Systematic knowledge management and learning will be used as a means to make the programme more effective and efficient, enable it to review and simplify processes, adapt much faster to the emerging lessons, and achieve greater impact. The main purpose of KM processes within the programme is to ensure that knowledge generated is systematically identified, analyzed, documented and used to improve performance. Key features of the knowledge management approach in ETI include:

6.5.9 Preparation of a programme level KM strategy by PCU, in line with IFAD policy on KM, during the first year of implementation. The strategy will focus on the processes that will be involved in building a robust KM system in the programme.

6.5.10 A programme website will be completed within the first year of implementation and used as a knowledge sharing tool, and also linked to IFAD Asia website. The KM team will extensively document and share knowledge generated in the programme. The QRM forums will be used as potential KS venues for capturing lessons learned and best practices leading to development of related knowledge products.

6.5.11 Key information from M&E studies, reviews and exposure visits, lessons and best practices will be disseminated through knowledge products such as newsletters, publications, case studies and reports, etc.

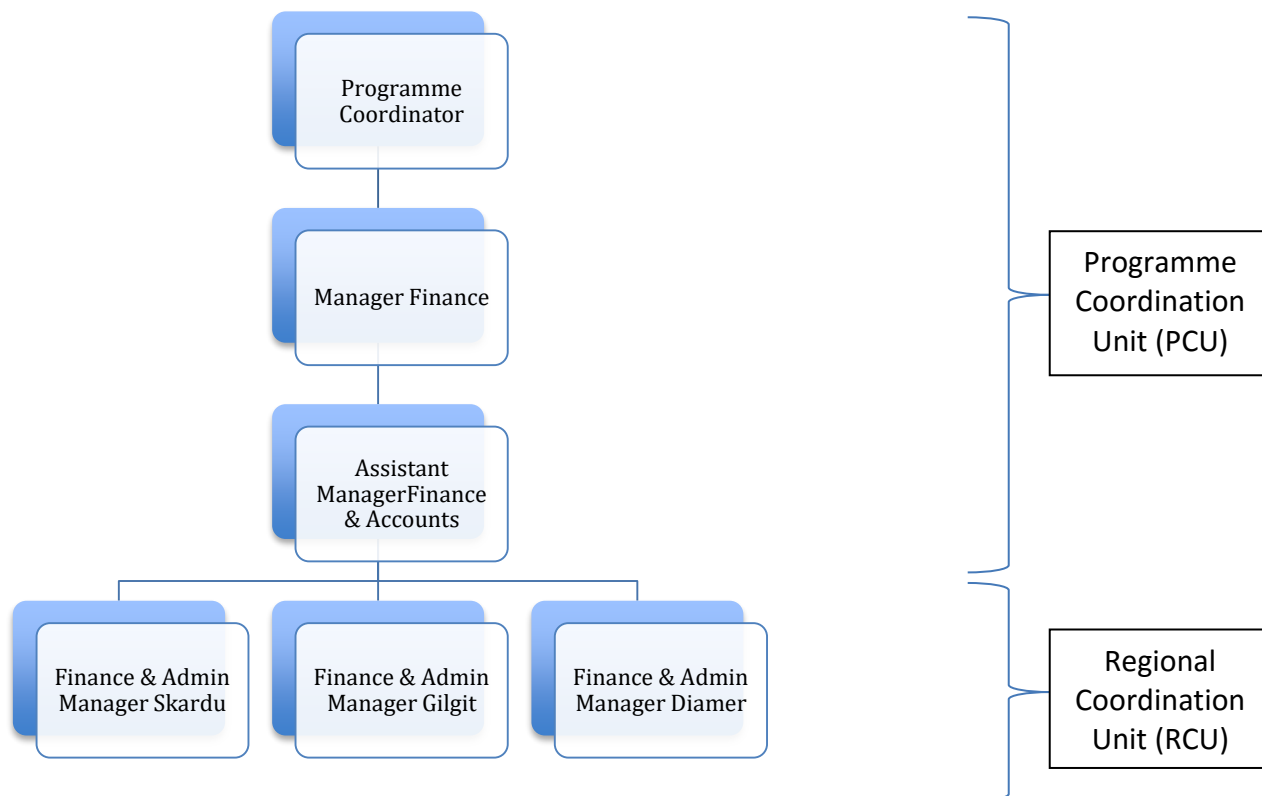
6.5.12 IFAD Country Office will facilitate close lesson learning and exchange of experience between ETI and other IFAD funded projects in the country in areas of common interest and approach. LAMP in Punjab and GLLSP in Balochistan offer important knowledge and lessons in engagement of SMPs and social mobilization approach for small holders and value chain and marketing development for small producers. SPPAP, Punjab offers excellent poverty targeting approaches.

6.6 Financial Management and Audit

6.6.1 Organizational Structure of Finance and Staffing: The financial management functions for ETI will be undertaken by a Manager Finance & Accounts (MFA) and an Assistant Manager Finance & Accounts at the PCU level. Director Finance &

Accounts will report to the Programme Coordinator of ETI. While PD/PC will be Principal Accounting Officer for government purposes, MFA will have the overall responsibility of financial management function of ETI.

At RCU level, there will be one Regional Finance and Admin Manager, reporting administratively to Regional Coordinator, and functionally to Director Finance & Accounts in PCU. The organogram of Finance function of ETI will be as follows:



IFAD, government counterpart funds and funds from any other co-financiers will be managed by Finance Unit with completely separate systems of funds flow, budgeting and accounting, as detailed below.

6.6.2 IFAD Funds Flow Mechanism- IFAD and counterpart funds will have completely segregated fund flows to separate, dedicated accounts at both provincial and district levels, to ensure clear, verifiable audit trail. IFAD funds will be managed at three separate tiers, namely Designated Account, sub-Accounts (at district levels) and Revolving Fund Accounts (at departmental level/Value Chain Fund Manager level).

6.6.3 Designated Account- IFAD funds will be disbursed to IFAD Designated Account at PCU level, opened in National Bank of Pakistan, after routing through State Bank of Pakistan, in compliance with GOP OM No. F.2(1)BR-II/2007-1618 dated 27, 2011, relating to “New procedure for the maintenance and operation of Revolving fund accounts opened for IDA, IBRD, and ADB Credits/ Loans”. These procedures are applicable on DA’s of all IFIs’ ongoing public sector Programmes in Pakistan, including IFAD’s public sector Programmes. IFAD share of all PCU level expenditures will be paid out of this account. For opening this account, an administrative approval from the Expenditure Section of Finance Department of GoGB will be obtained..

The Programme will use the imprest account method for the Designated Account advance by IFAD. The imprest will be the amount advanced to the Designated Account, and then be periodically replenished. The maximum advance, or authorized allocation, will be 6-months' of average planned expenditures to be financed by IFAD, which is USD 5 million for ETI. This authorized allocation of imprest ceiling (USD 5 million) will be defined in LTB. The nature of this Imprest Account will ensure allocation and retention of funds in USD, though all payments will be made in Pak rupees. The transactions will be recorded by NBP as per exchange rate applicable on the date of transaction/ payment. The bank statement will also mention USD receipts and payments.

6.6.4 Sub-Accounts- There will be sub-Accounts/ Programme Accounts, opened in each of the three regions of Programme implementation, which will be Pak-rupee denominated as well as with the line departments managing Programme funded activities. This will be a dedicated IFAD bank account, outside government accounting and fund flow mechanism. The funds from the Designated Account will be administered by the Programme Coordinator, who will transfer the funds in Pak Rupee to the sub-Accounts/ Programme Accounts held in district-level branches of National Bank of Pakistan. All expenses by RCUs at district level and line departments will be paid out of these sub-Accounts. RCUs and line departments will report expenditures to PCU in Pak Rupee only. The Programme Coordinator will replenish the sub-Accounts/ Programme Account at district and departmental level on the basis of justification of expenditures already advanced to the Programme Account.

PCU will consolidate all expenditures at PCU and district levels, and request replenishment of the Designated Account. In order to minimize transaction costs, the PCU will submit requests for replenishments to the Designated Account for a minimum amount of USD500,000 (10% of the initial advance).

6.6.5 Payment to Social Mobilization Partner/ NGO: SMPs will be paid in terms of their agreement with the programme and eligible activities and phasing. They will open a dedicated account for this purpose at programme specified bank. These will also be treated as Programme sub-accounts and will be subject to same terms and conditions as the line departments and DCUs.

6.6.6 Funds Flow of Counterpart Funds- Counterpart funds will be managed through standard government mechanism of Annual Development Program allocations, transferred to dedicated Assignment Account 1 at provincial level, opened specifically for ETI's counterpart funding allocations, under sanction of P&D and Finance Departments. However, this Assignment account will be included in the overall cash balance of the Government for the purposes of financial reporting and bank reconciliation.

6.6.7 Withdrawal Applications Signatories, Bank Account Operations and Expenditure Approvals: The signatories for WA's will be Programme Coordinator ETI, or in his official absence, Deputy Programme Coordinator ETI or Director Finance ETI. GoGB will furnish to IFAD satisfactory evidence of the authority of these personnel authorized to sign WA's and the authenticated specimen signature of

each such person. IFAD will be notified of any change in the signatories authorized to withdraw funds from the loan account.

- 6.6.8 **Accounting Software-** For IFAD loan accounting, a low-cost, simple accounting software will be installed, which enables accounting as per components, disbursement categories and sources of funds, by providing different fields for each voucher entry. The software will allow at least 3 users' access, will be licensed, and will have sufficient data entry, chronological and double-entry related controls.
- 6.6.9 **Safeguard of Programme Assets-** Following safeguards will be adopted during implementation:
- Maintenance of a register of contracts;
 - Maintenance of an asset register, treating all items of procurement with useful life of more than one year, and value in excess of USD 5,000, as assets with appropriate asset coding
 - Assets' disposals or scrapping will only be carried out in compliance with all applicable policies, and with all necessary approvals;
 - All transfers of assets, procured through IFAD loan, will be utilized for the purposes of furthering the objectives of ETI, and IFAD will be duly informed of all such transfers, and envisaged use of assets after Programme life;
 - The audit scope will include review of overall asset management function of ETI applicable on assets financed through the grant.
- 6.6.10 **Accounting and Internal Control systems-** For the purpose of the Programme, a detailed Programme Implementation Manual will be developed and adopted to ensure compliance of IFAD disbursement, procurement and other requirements, as well as for capturing international best practices as far as practicable.
- 6.6.11 **Financial Reporting-** Regular periodic expenditure and progress reports will be submitted, at least once every quarter, to PCU, by the RCUs, line departments and VCF Management agency providing details of all revenues and expenses.
- 6.6.12 **External Audit-** Auditor General of Pakistan will perform external audit of ETI, with no formal selection or appointment required. Annual audit reports will be issued within 6 months from the end of fiscal year, i.e. by 31st December every year. Non-compliance to the deadline will expose the Programme to suspension. Audit of SMPs and any other private sector entities managing ETI funds will be carried out by a Chartered Accountant Firm selected with the concurrence of PCU and non-objection of IFAD for audit TORs, subsequent to which auditors will be appointed within two months of loan effectiveness (for first year) and within two months from close of financial year for subsequent years. Audit report will be furnished to IFAD within six months of closure of annual accounts.
- 6.6.13 **Anti-Corruption Policy Compliance:** The Programme shall comply with IFAD's and Government's Anti-corruption policy. Any established fact of fraudulent, corrupt, collusive or coercive actions shall attract a range of sanctions in accordance with the provisions of applicable IFAD rules and regulations and legal instruments.

6.7 Technical Parameters: In case of irrigation development, a consultant will be engaged to establish standard design parameters on five initial irrigation schemes and that template will be followed for the rest of the schemes. For right of way for irrigation schemes and post completion O&M, the programme will adopt the existing community based mechanisms through establishment of Water User Associations and Scheme Management Teams.

For roads, ETI will follow the prevailing government standards in terms of road width and alignments and will be further reinforced, with assistance from a long-term consultancy support. Particular attention will be paid to environmental aspects and safeguards against flash-floods and land-sliding.

For value chain development, producers/farmers organizations and processors will be assisted in adopting prevailing phyto-sanitary and other certification regimes to ensure quality of produce for both local and international markets. Necessary capacity building of Agriculture Extension, Research and Seed Certification Departments will be funded by ETI.

All Programme Recruitments and engagement of service providers will be carried out through transparent competitive processes following PPRA guidelines and IFAD Procurement Guidelines.

6.8 Technology Transfer Aspects: ETI will contribute to transfer of technology in number of areas. These include:

- 6.8.1 Climate resilient and environment sensitive designs for roads and irrigation
- 6.8.2 Establishment of a seed and product certification regime in line with international standards like EURGAP etc.
- 6.8.3 Introduction of appropriate technology for the processing and value addition of local products starting with apricot and potato and expanding to other products like nuts and vegetables
- 6.8.4 Introduction of appropriate technologies for the drying of apricot and storage of seed potato
- 6.8.5 Labour saving technologies for the women engaged in apricot drying/processing and vegetable production and marketing
- 6.8.6 Introduction of appropriate transport for various high value agriculture products including cold reefer trucks through NATCO and private sector

7. Capital cost estimates:

7.1 Date of Estimation: ETI Programme costs were estimated on the basis of prevailing market rates in Feb 2015.

7.2 Basis of Costs: The Pak Rupee/dollar conversion rate used is US\$ 1= Pak Rs. 102.50. The cost estimates for the civil works (irrigation, roads and bridges) are based on schedule of rates notified by Finance Department GoGB for the year 2014-15. The estimates for equipment and vehicles are based on actual costs obtained from the market including prevailing duties and taxes. Cost of land, for land contributed by community as community contribution, has been calculated on the basis of rates currently being paid for land acquisition for various ongoing projects. The salaries and

allowances estimates are based on prevailing public sector and private sector salary levels in GB. For financial and economic analysis, the rates of different commodities and inputs have been calculated on the basis of local market survey by the Mission and interviews with the farming communities to collect farm-gate and wholesale market prices.

7.3 **Year-wise Phasing of Physical Activities:** Year-wise phasing of main programme activities under the two main components and sub-components are as following Table 3:

Table 3: Physical Phasing of Main ETI Activities

Component/ Sub-component	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total
1.1 Irrigation								
Channel Const. (acres)	2500	12,500	17,500	17,500	--	--	--	50,000
Land Develop;	--	10,000	10,000	10,000	10,000	10,000	--	50,000
1.2 Roads								
Survey & Design (km)	100	100	100	100	--	--	--	400
Construction	--	100	100	100	100	--	--	400
2.1 Value Chain Fund (Grants)	351	793	793	793	763	440	15	3,948
Value Chain Partnerships	10	20	30	30	10	--	--	100
Processing Facilities	1	2	3	4	5	5	--	20
2.2 Social Mobilization								
Village Producer Groups	29	44	44	44	44	15	--	220
Valley Associations	7	9	8	4	2	--	--	30
Regional Associations	--	--	--	1	1	1	1	4
2.2 Agri Extension								
Private Plant Nurseries	24	26	--	--	--	--	--	50
Training (p/days)	400	500	500	400	360	--	--	2,160
2.4 Agri Research								
Green Houses (Nos)	4	--	--	--	--	--	--	4
Screen Houses (Nos)	7	--	--	--	--	--	--	7
Potato Seed Stores	2	2	3	--	--	--	--	7
Training (P/days)	575	575	1,075	1,000	1,000	--	--	4,225
Potato Seed Prod. (tons)	--	1,000	3,000	5,000	7,000	9,000	--	25,000
2.5 Land Titling								
Provincial Land Law	1	--	--	--	--	--	--	1
Land Record Cells	8	--	--	--	--	--	--	8
Land Titles (acres)	2,500	12,500	17,500	17,500	--	--	--	50,000
3. Programme Management								
Estab. Of PCU	1	--	--	--	--	--	--	1
Estab of RCUs	3	--	--	--	--	--	--	3
Baseline Survey	1	--	--	--	--	--	--	1
Recruit: of VCTAT	1	--	--	--	--	--	--	1
Engagement of SMP	1	--	--	--	--	--	--	1

7.4 **Component-wise Cost Summary:** The component-wise cost summary is as following Table 3:

Table 4: Component wise Cost Summary in Pak Rs and US\$

	(Pak Rs '000)			(US\$ Million)				
	Foreign	Local	Total	% Foreign Exchange	% Total Base Costs	Foreign	Local	Total
A. Economic Infrastructure								
1. Irrigation & Land Development	3,410,463	1,136,821	4,547,284	10	43	33.27	11.09	44.36
2. Farm to Market roads	1,503,675	501,289	2,004,964	15	19	14.67	4.89	19.56
Subtotal Economic Infrastructure Support Services/PPPP for Value chain	4,914,138	1,638,110	6,552,248	11	62	47.94	15.98	63.93
B. Development								
1. Vaue Chain Fund	1,559,651	519,884	2,079,535	4	20	15.22	5.07	20.29
2. Social Mobilization	309,563	102,846	412,409	3	4	3.02	1.00	4.02
3. Agri Extension	163,690	54,563	218,253	3	2	1.60	0.53	2.13
4. Agri Research	206,848	68,949	275,797	5	3	2.02	0.67	2.69
5. Land Titling & Record system	163,552	54,517	218,069	1	2	1.60	0.53	2.13
Subtotal Support Services/PPPP for Value chain Development	2,403,303	800,759	3,204,063	4	30	23.45	7.81	31.26
Programme Coordination Unit	640,069	213,356	853,425	3	8	6.24	2.08	8.33
Total BASELINE COSTS	7,957,511	2,652,226	10,609,737	8	100	77.63	25.88	103.50
Physical Contingencies	240,363	97,998	338,361	11	3	2.35	0.96	3.30
Price Contingencies	1,025,077	342,326	1,367,403	4	18	10.00	3.34	13.33
Total PROJECT COSTS	9,222,950	3,092,550	12,315,500	8	121	89.980	30.171	120.151

7.5 **Year-wise Financial Phasing:** Year-wise financial phasing of programme components (including physical and price contingencies) is depicted in following Table 5:

Table 5: Component-wise Financial Phasing including contingencies:

	Pakistan							
	Economic Transformation Initiative Gilgit-Baltistan (ETI)							
	Project Components by Year -- Totals Including Contingencies (US\$ Million)							
	Totals Including Contingencies							
	2015	2016	2017	2018	2019	2020	2021	Total
A. Economic Infrastructure								
1. Irrigation & Land Development	3.35	11.99	16.11	16.91	1.71	1.82	0.49	52.38
2. Farm to Market roads	0.87	4.77	4.63	5.02	5.12	0.12	0.13	20.66
Subtotal Economic Infrastructure	4.22	16.76	20.73	21.93	6.83	1.94	0.62	73.04
B. Support Services/PPPP for Value chain Development								
1. Vaue Chain Fund	2.49	4.20	4.85	5.33	3.98	2.39	0.54	23.78
2. Social Mobilization	0.54	0.94	0.98	1.03	1.01	0.18	0.01	4.70
3. Agri Extension	0.49	0.37	0.35	0.35	0.37	0.32	0.35	2.59
4. Agri Research	0.78	0.44	0.49	0.38	0.41	0.35	0.37	3.22
5. Land Titling & Record system	0.48	0.32	0.31	0.33	0.36	0.38	0.41	2.59
Subtotal Support Services/PPPP for Val	4.78	6.27	6.98	7.43	6.12	3.63	1.67	36.88
C. Programme Coordination Unit	1.65	1.26	1.35	1.31	1.47	1.50	1.69	10.23
Total PROJECT COSTS	10.64	24.29	29.06	30.67	14.43	7.07	3.98	120.15
Percent of total	8.9%	20.2%	24.2%	25.5%	12.0%	5.9%	3.3%	100.0%

7.6 **Retroactive Financing:** In order to give the programme a headstart, number of programme preparatory activities are planned to be completed before the start-up. These include all key recruitments, baseline survey, procurement plans, renting of offices and procurement of some initial equipment etc. Towards that end, retroactive financing up to US\$ 0.5 million, would be available for eligible activities and will be reflected in Financing Agreement.

7.7 **Detailed Cost Tables:** Component-wise detailed cost tables are attached as Annex 3.

8. **Annual operating and maintenance cost after completion of the Project:** Summarized account of annual operating and maintenance costs of ETI investments after programme completion is as following:

8.1 **Irrigation:**

Investments: GB has a well-established community based irrigation O&M system. The maintenance costs of irrigation schemes are met through the contributions made by the beneficiary farmers. The user fees determined by the scheme management committees who are also responsible for collection, account management and fund usage. Same system will operate in case of irrigation schemes funded by ETI. There will be no operational or maintenance liability for GB Government for STI invested schemes.

Incremental Staffing: A total of 44 incremental staff will be hired for Water Management Directorate in view of its current very limited capacity and ambitious target of new 50,000 acres of irrigated land. The staff will be recruited on programme specific contracts. In case they are regularized and taken on permanent government salary roll, the annual financial liability will be US\$ 0.25 million or Rs. 25.65 million excluding any future salary and allowance changes.

8.2 **Farm to Market Roads:**

Investments: ETI will finance 400 km farm to market shingle-compacted roads and 100 meters of bridges. The annual maintenance costs for these roads will be as per provincial PWD yard-stick and part of provincial annual O&M budget for roads.

Equipment/Machinery Pools: ETI GB will finance procurement of vehicles and equipment for machinery pool for road maintenance works. The pool will be used by department itself and rented out to contractors engaged for road maintenance. Total cost of such vehicles equipment is US\$ 1.5 million/Rs. 153.75 million. Post programme annual maintenance cost for equipment and machinery would be Rs. 30.75 million @ 20% maintenance and depreciation cost.

8.3 **Value Chains:** The Value Chain Technical Assistance Team will be engaged for the programme duration from private sector and there will be no post-programme liability for the government. The matching grant investments with the farmers' organizations and processors, value adders and transporters will be the responsibility of concerned entities after the programme.

- 8.4 **Social Mobilization:** The social mobilization partners will be engaged through a competitive process under output and results based agreements for the duration of the programme with no post-programme liability.
- 8.5 **Agriculture Extension:** A total of 25 incremental staff will be hired for Agriculture Extension Directorate in view of its current very limited capacity. The staff will recruited on programme specific contracts. In case they are regularized by Government of GB after programme completion and taken on permanent government salary roll, the annual financial liability will be US\$ 0.15 million or Rs. 15.38 million, excluding any future salary and allowance changes. For the vehicles and equipment provided under ETI, the annual O&M cost would be US\$ 0.10 million or Rs. 10.25 million per annum.
- 8.6 **Agriculture Research:** Research Directorate will recruit 22 incremental staff for programme purposes out of which 10 will be technical staff and rest support staff like Malis and drivers. In case they are kept on roll after programme completion, the annual liability for the government would be US\$ 0.13 million or Rs. 13.33 million per annum. For the vehicles and equipment provided under ETI, the annual O&M cost will be an additional US\$ 0.06 million or Rs. 6.15 million per annum.
- 8.7 **Land Titling and Record System:** ETI will assist GoGB to establish seven district and one provincial land records cells with 11 incremental staff. Post programme annual O&M costs will be US\$ 0.27 million or Rs. 27.67 million. Levy of appropriate land transfer/titling fees will more than offset this cost for the government.
- 8.8: **Programme Management:** The programme management structures including PCU and RCUs will be for the duration of the programme and will entail no post-programme operational and maintenance liability for the Government. All the equipment and fixtures procured for the PCU and RCUs will be transferred to P&D Department at the end of programme period.
9. **Demand and supply analysis:** ETI will invest in three main activities namely: (i) Development of 50,000 acres of new irrigated land; (ii) construction of 400 km of farm to market roads; and, (iii) value chain development of apricot and potato during the initial phase with provision for inclusion of more products from the region after mid-term review. Summary of the demand and supply analysis with respect to the three main investments of the programme is as following (detailed analysis of two components is available in Working Papers 1 and 2 of Programme Design Report):
- 9.1 **Irrigation Development:** GB is situated in the extreme north of the country interspersed by three mighty mountain ranges of Karakoram, Himalaya and Hindukush. The total geographical area is about 72,500 square kilometres (km²) with a population of 1.3 million living in more than 600 villages with a population density of 18 persons per km². A large majority of the area is mountainous and only about one percent of the total area is currently cultivated. Irrigation is essential for any area to be cultivated as the region largely falls outside the monsoon range and receives very little rain. Apart from the one percent cultivated area, the rest is covered by mountains, rivers and glaciers (66 percent), rangelands (23 percent) and forest (4 percent). The average per household landholding is only 0.84 acre; and 66 percent of agricultural land lies in single cropping zones at high altitude amidst arid mountains.

GB region is endowed with some natural advantages in terms of elevation and crop growing seasons and produces some very high value fruits and vegetable crops. However, the realization of full potential is currently constrained due to small landholdings. Around 140,000 acres of cultivable waste land can realistically be provided irrigation in the region. These lands have feasible water source and design options, which can be developed if investments are made available. Diamer district has the highest cultivable waste area of about 77,000 acres followed by Skardu with more than 54,000 acres. Detail of cultivated and cultivable waste areas by district is shown in Table 6 below:

Table 6: Cultivated and Barren Area by District

S.No.	District	Cultivated Area (Acre)	Barren Area* (Acre)
1	Diamer	32,656	77,120
2	Astore	13,532	13,966
3	Ghizer	27,872	5,856
4	Ghanche	2,740	34,114
5	Hunza-Nagar	16,904	26,149
6	Skardu	72,240	54,454
7	Gilgit	17,217	19,702
Total		183,160	231,360

* *Culturable Waste*

Source: Directorate of Water Management

Irrigation Development Potential: Following the programme formulation Mission, the Water Management Directorate carried out a rapid survey of the GB region to identify irrigation schemes with secure water source, clean land ownership and land development potential and identified 296 channels in all seven districts with total command area of 139,765 acres. Out of these 160 schemes are in the priority four target districts of ETI with a total potential command area of 71,528 acres. The identified schemes cover whole range in terms of number of beneficiary households and command area. The smallest ones are 6-7 acres with 9 to 15 beneficiary households where as the large ones are over 2000 acres with beneficiary households numbering from 900 to over 2000. This huge variation in command area potential and beneficiary households calls for a clear criteria for selection of priority investments so as to focus programme resources where the maximum progress and benefit could be achieved. A strong point of this survey is that all the schemes with any kind of water source or land ownership dispute have been also identified and separately parked for future use. The district-wise break-up of surveyed schemes is reflected in following Table 7:

Table 7: District-wise Detail of WMD Surveyed Potential Channels (Nov 2014)				
S/No	District	Beneficiary House Holds	Total No of Channels surveyed	Command Area (Acres)
1	Hunza-Nagar	22968	43	12196
2	Gilgit.	17553	50	22602
3	Skardu.	14947	43	33439
4	Diamer	49557	48	23057
5	Ghizer	18243	56	30600
6	Ghanche	5180	18	8714
7	Astore	4156	38	9157
	Total	132604	296	139765

Operative Experience and Practices: ETI will build on/scale up already well-established and tried and tested approaches to irrigation infrastructure development in the region. Historically, irrigation channels have been developed by the communities themselves and every community has considerable skill base in channel construction and maintenance. Some of the irrigation channels in GB are over 500 years old. In recent times, AKRSP, PWD, WMD, NADP and Local Government Department have all have worked in participatory irrigation development in the region and accumulated vast experience in this sub-sector. In the operative construction methodology, the communities provide a share of the cost, ranging from 20% to 40%, in the shape of labour and local materials. Some very large and complex schemes were however assigned to PWD Department in view of their better engineering skills and implementation capacity, and communities inability to contribute 20% share and such schemes were executed through contractors. However, post completion O&M in such schemes still remained community responsibility. Community contribution is onerous for the communities for the large schemes covering over 500 acres and has been the main reason, apart from availability of financing, for non-development of some of the medium to large schemes in the recent past. The community contribution based approach also works against the interests of IFAD target group i.e. poor and landless. Village infrastructure investments are supposed to create wage-earning opportunities for the poor and capitalise their household economy. Requirement of community contribution in the shape of free labour deprives such households from this income generation opportunity.

Programme Approach: The programme will follow a more innovative approach whereby communities will not be required to make upfront contribution. ETI will pay full cost of the schemes and the communities will be required to payback 50% of the

cost of the scheme into a joint community and SMP/PCU managed account over three cropping years. This approach will provide remunerative wage opportunities for the local poor and landless and infuse considerable cash into local subsistence economy. Staggered repayment period, aligned with incomes from newly developed land will enable the communities to easily payback the amount involved. Part of the recovered amount will be used for scheme maintenance (by placing funds in a fixed profit-based account) and part of the funds would be available for community development (public good) and/or for investment in value chain activities (private good). The guidelines and terms and conditions for this are included in PIM. The traditional O&M practices will be formalized through establishment of Water User Groups with defined management structure and prescribed user fees and management of such fees.

Allocation of New Developed Land: There is no uniform land tenure system in GB region and different systems and practices prevail in different districts depending on the historical status of the area. In three districts, the land settlement took place and records of rights were prepared whereas in four other districts, the land ownership is still based on historic tribal and clan rights. There are three broad categories of land that is available for new irrigation development. First, where the land is community's property and divided between the community members and the community is now looking for funds to develop irrigation facility. Second, communal land (*Shamilat*) that is yet to be divided and is currently being used as common pasture or just lying idle. Third, *Khalsa Land/State Land* that would require Government sanction under the *Nautore (New Broken Land) Rules* in order for it to be developed and distributed. But the common thread among all the land tenure systems is that communal development of new irrigated area *results in equal distribution of land among all households in the community*. There are two models for this distribution. One is prevalent in Diamer District where every male member of a household, irrespective of age, gets one equal share in the land being distributed. So the households with larger number of male members get proportionately more land. The second model is prevalent in rest of the region where each household gets an equal share of land irrespective of the size of the family.

Scheme Selection Criteria: ETI will follow an integrated and coordinated approach to implementation of programme activities so that they collectively support the programme objective of enhanced incomes for the target beneficiaries through a value chain development approach. Towards this end, the programme will upfront prioritise valleys in each district on the basis of their current production of targeted crops, number of villages and households, potential for new irrigation development and roads development and existing status of farmers enterprises and groups. Once valleys and target villages are selected, a specific criteria will be used to select the feasible irrigation schemes. This criteria will include:

- Scheme is technically and environmentally feasible and computed economic returns justify the investment
- Availability of sufficient and reliable quantity of water for most part of the year – preferably perennial.
- Availability of free right of way for channel construction.
- Absence of any land and water right disputes.
- Community's willingness to equitably distribute the new developed land among all community members including women headed households and the landless local residents

- Community's willingness to pay back 50% of the total irrigation development cost in 3 cropping seasons from the date of land development completed.
- Community's willingness to develop the land parallel to irrigation development
- Should not have potentially adverse or negative environmental effects/impact.

Scheme Ranking Criteria: Since the project target area has potentially more land available for irrigation development compared to project target, the programme shall therefore select schemes for investment on the basis of a ranking criteria from among the list of feasible schemes available with the WMD and PWD and annexed to this working paper. The ranking criteria will have following elements:

- First priority to schemes with over 300 acres potential command area or over 300 beneficiary households
- In case of improvement / widening of existing channel, the proportion of new land (barren) to be irrigated should add at least 60% of the existing irrigated area
- The beneficiary community should be within the priority valley selected for programme's value chain development interventions and the scheme may contribute to development of identified value chain
- Demonstrate relative cost effectiveness in terms of larger impact (% irrigated area, number of beneficiary population/villages, % increase in agriculture produce, and potential for more value addition etc.).
- Should have at least 12% economic rate of return on investment.
- Maximum cut-off limit in terms of cost per scheme should be US\$ 1.5 million.

Design consulting firm for irrigation will develop a weighted/score based formula for PCU, WMD and PWD to assist in ranking of the schemes.

Costs and Economic Feasibility: Based on the latest analysis of costs of eight representative schemes, average cost of Rs. 58,000 per acre has been used for the programme costing purpose. This still brings the question as to what would be the maximum permissible cost per scheme under ETI programme. The safest course for this would be to judge the schemes in terms of their economic feasibility and rate of return. Using the prevailing discount rate of 12%, if any scheme offers the return of 12% or more on investment then it should be considered feasible. However, there should still be a maximum cut-off limit for an individual scheme to ensure equity in allocation of programme resources across the target districts and valleys. For this purpose, a maximum cut-off limit of US\$ 1.5 million is recommended.

Land Development Support: Past experience shows that it takes resource poor farmers a long time to fully develop the new irrigated areas. Land is traditionally developed through manual labour, mostly from within the house and some hired skilled workers for stone blasting etc. Part of the reason for this is financial constraints and part is tradition. This method takes an average household five to seven years to develop its land. In order to ensure that new command area of ETI sponsored irrigation is quickly brought under full cultivation, the programme would therefore support individual farmers by sharing the land development cost through cash assistance of US\$ 100 per acre. It is recognized that in most of the cases this would not meet the full cost of development but this is meant as an encouragement support rather than the full cost for development. ETI will assist the beneficiary WUA to engage appropriate machinery (diggers, excavators, dozers and/or tractors) on rent for the land development through a collective contract. This will ensure cost effectiveness, speed and efficiency. ETI management may also consider an umbrella contract with capable firms on per hour

basis for different kind of machines and communities can then approach the firm through ETI for engagement of machinery on standardized agreed rates.

Cost Repayment System: Beneficiary community would be required to pay back fifty percent of the scheme development cost over three cropping years from the time of planting of first crop on the newly developed land. The amount of repayment would be agreed with the community at the time of signing of agreement for the irrigation development between the WUA and executing agency and social mobilization partner. The community will open a bank account in a commercial bank which will be jointly managed by the community nominated representatives and one representative nominated by ETI (can be SMP or WMD depending on ground situation). A roster of all scheme beneficiaries along with their land share will be prepared and per crop repayment for each beneficiary will be calculated and recorded in the roster. WUA will be responsible for recovery of this amount on agreed times for three years. WUA will be responsible to make up for any individual default. A collective or substantial default on part of any community/WUA will lead to suspension of further programme activities and investments with that community.

Youth Construction Teams: Once priority valley and villages are selected for ETI interventions, the social mobilization partner will identify unemployed willing youth to organize into Youth Construction Teams. 40 such teams would be organized during the first three years of programme implementation. Each team will be provided basic training in irrigation scheme construction including measurements, reading of scheme designs, masonry work, steel fixing/shuttering etc. On completion of training, each team will be provided with a standard set of tools. These teams would be engaged on preferential basis in construction of irrigation schemes and upgrading of roads by implementing agencies and contractors.

Farmer Training: Short in-situ training will be conducted jointly by the SMP and scheme executing agency for the scheme beneficiaries and WUA office bearers to explain the main features of the scheme and roles and responsibilities of the partners including repayment mechanism and its usage.

Irrigation Schemes Execution Responsibility: In view of the existing capacity constraints of Water Management Directorate and relative better capacity of PWD, ETI will also follow a hybrid model for scheme execution. The larger and complex schemes of over 300 acres or above Rs. 15 million will be implemented by PWD. Schemes lower than those limits and simple in technical aspects will be implemented by Water Management Directorate. The methodology and steps for scheme identification, design, community engagement and participation, Youth Groups engagement, WUA formation and agreement, 50% repayment, role of SMP etc. however will remain the same in both cases. WMD and PWD will notify dedicated staff at provincial and district levels who would be dedicated department staff for ETI projects only. PCU will be responsible for overall monitoring and quality assurance for both sets of schemes and implementing agencies.

- 9.2 **Farm to Market Roads:** Despite the fact that the world's highest paved road, the Karakoram Highway (KKH) connecting China with Pakistan at Khunjerab Pass (at an elevation of 4,693 metres) runs through GB for most part of its total length, the overall roads density is low compared to other regions and national average. In GB, the road density (0.07) is about one-sixth of Pakistan's average (0.38) and about one-half of road

density for Balochistan province (sharing close to similar geography). Table below presents a comparison of road density among various provinces/region in Pakistan.

Table: Road Density by Region/Province

Province / Region	Road Density (Km/sq.km)
Sindh	0.57
Punjab	0.51
KPK	0.3
Balochistan	0.15
GB	0.07

Source: GB Economic Report (2011)

Available road data and discussions with various line agencies give a rosy picture in terms of access as over 80% of villages located in all districts are reported to have some form of road connectivity. The level of connectivity however varies widely from metaled road to only 12 feet wide 4x4 jeep-able road. The remaining around 20% of unconnected villages are characterized by either one or a combination of factors including; thinly spread, or remotely located on much higher elevation, comprising very few houses etc. Most of the villages in GB lie along many main valleys commencing from high altitude pasture areas and normally culminate at some main road at lower elevation along a major river. Across these main valleys there are inner-valleys and their roads culminate on the main valley roads.

Type and Length of Existing Roads: In GB, existing roads generally fall under two categories by type of construction; (i) Metaled (paved) roads and (ii) Shingle Roads. Each of these types is further classified into two sub-types based on its ride capacity: (a) Truck-able, and (b) Jeep-able. Apart from the slope/gradient configuration, the main difference between two sub-types is the width; which is 24 feet for truck-able while 12 feet is provided for Jeep-able roads. Total length of roads in GB is estimated as 6,764 km; of which only 24% are metalled ones, while remaining 76% (5,134 km) are shingle roads. Of the shingle roads, only 8% are truck-able roads while the remaining roads are accessible through 4x4 jeeps only with huge difference in cost of travel, time and comfort. Table 8 below provides a summary of road lengths by type and by district.

Table 8: GB: Road Lengths by Type and by Districts

S. No	Road Type	Diamer	Astore	Skardu	Ghizer	Gilgit	Hunza-Nagar	Ghanche	Total
1	Mettled Road- (truck-able) – km	65	143	337	236	141	250	105	1,277
2	Mettled Road- (jeep-able) – km	-	27	69	20	208	30		353

3	Shingle Road (truck-able) – km	-	22	213	50	38	40		363
4	Shingle Road (jeep-able) – km	830	373	1,649	539	334	700	346	4,771
Total		895	564	2,268	845	721	1,020	451	6,764

Source: GB PWD

PWD is the designated government agency responsible for implementing construction of roads and carrying out maintenance. Apart from road sector (called Transport and Communication -T&C), the department is also responsible for construction and maintenance of three other sectors, (i) Area, Rural & Urban Development, (ii) Irrigation, and (iii) Physical Planning and Housing (PPH). However the major chunk (60%) of development budget is spent in road sector, followed by 27% in PPH, 12% in area, rural & urban development while merely 0.5% in Irrigation sector.

ADP Funds Allocation and Utilization: On an average, about Rs. 2,700 million is allocated to PWD under Annual Development Program (ADP). In the last three years, on average, about 93% of allocated budget was released by the government. The funds utilization by PWD appears quite good and stands at 97% against the released amount.

Institutional Set Up and Staff Distribution: The PWD is headed by a Secretary (usually a senior level bureaucrat from central civil services), who is assisted by two Chief Engineers, one for each region (Gilgit and Baltistan). Three Superintending Engineers (SEs) head their respective circles and assist the Chief Engineers. In all 7 districts there are B&R (Buildings & Roads) set up called division each headed by an Executive Engineer (XEn), All XEns are supported by 2-3 Assistance Executive Engineers and by 4-6 sub engineers. In addition to B&R, there are two more divisions; one in each region, responsible for water supply and sanitation activities.

Total staff strength is around 9,000 of which only 22% are regular staff while 78% are temporary and paid on daily wage basis. The temporary staff are largely used for maintenance activities. Of the permanent staff 25-30 % are technical/professional staff while the remaining are support staff

GB Road Maintenance System: In GB, maintaining a 6,764 km long road network represents a big challenge particularly when a large majority (76 %) roads are jeep-able/truck-able shingle roads. The difficult terrain, high altitudes, steep slopes, deep and narrow valleys, remoteness, harsh weather leading to shorter working span in a year (9 months), frequent land sliding and flash floods, all these factors contribute to make road maintenance challenging. Despite all these odds, PWD has been reasonably efficient in maintaining its road network.

Currently road maintenance is carried out either (i) by the department (PWD) itself, or (ii) through contractor(s). The department normally carries out the routine maintenance

that is relatively small in nature using its own machinery pool and road coolies located in three divisions i.e Baltistan, Gilgit and Diamer. The routine maintenance usually includes; cleaning of side drains, removal of debris resulting from land slide, strengthening of retaining/breast walls, draining out any stagnant water and filling of small patches on road structure. Of the total, about 70% employees in PWD are characterized as temporary staff. Of these about 60% are involved in road sector maintenance activities. For shingle roads as a loose yard stick, one coolee (laborer) is responsible for maintenance of 2 km long section of a road. Each coolee is equipped with necessary maintenance tools that include; chisel, shovel, pick-axes and wheel borrow etc. One supervisor looks after the work of around 15-20 Quillies and he reports to respective sub-engineer.

Larger maintenance works are outsourced and awarded to contractors. The type of works include, removal of intensive debris as a result of heavy landslides, re-construction of a fully damaged/ washed away road section or culverts/bridges, re-construction of retaining walls etc. PWD roughly proposes about 1.6% of total capital cost of a road as maintenance cost for budgeting purpose. But in real terms this much amount was never allocated and released to PWD by GB government through normal ADP. As an average PWD receives O&M funds of Rs. 100 million annually for all sectors against an annual demand of Rs. 1 billion. Of this only less than half is spent on the maintenance of roads which translates into just Rs. 7,300 per km maintenance cost as against minimum requirements of Rs. 30,000-40,000 per km.

Maintenance Machinery Pools: PWD maintains three machinery pools in GB, one each at Diamer, Gilgit and Skardu for regular maintenance of the roads. These pools consist of dozers, tractor-trolleys and excavators and are deployed when there are larger slides after rains or floods. Pools are operated by regular staff and fuel costs are met from regular O&M budget. Current strength of machinery pools is inadequate compared to total length of roads (5009 km) that need to be maintained in seven districts especially after rains, snows and floods. Detail of current machinery pools is as following

i).	Excavators	04 x Nos.
ii).	Dozers	10 x Nos.
iii).	Tractors	25 x Nos.
iv).	Drilling Machines	07 x Nos.
v).	Road Rollers	09 x Nos.
vi).	Shingle Cabin Datsun	05 x Nos.

PWD Contractors: PWD implements its development projects and large maintenance works through a good pool of contractors with total number reaching 300+. These contractors are duly registered with Pakistan Engineering Council (PEC) under various categories. The PEC is a statutory body, constituted under an Act (1976), with main function of regulating the engineering profession in the country. One of its main statutory functions includes registration of contractors/operators. Apart from registration with PEC, these contractors are also registered with PWD. Annual renewal of this registration is mandatory which is based on past performance. Table 9 gives approximate number of PWD contractors by category and respective ceiling for award of work.

Table 9: Number of PWD Registered Contractors by Category

S.No.	Category	No. of Contractors	Limit of Construction / cost of Project (million Rs.)*
1	C-1	10	Upto 1800
2	C-2	40	Upto 800
3	C-3	50	Upto 400
4	C-4	200+	Upto 150

Source: GB PWD

* PEC Prescribed Requirements

Based on the experience in the previous IFAD funded project in the region, and recommendations of the PCR, the ETI programme would adopt a relatively stringent criteria and mechanism to ensure selection of capable and competent contractor(s) from the available pool. Criteria would be based on a transparent and qualitative process of short-listing. This screening process would allow only pre-qualified contractors to participate in the programme bidding and to eventually be awarded works. The entire process would be led and overseen by an engineering consulting firm that would also be responsible for detailed design and construction supervision.

9.3 **Value Chain Development:** ETI will initially focus on two agriculture value chains, apricot and potato, and a milk value chain pilot for women entrepreneurs.

9.3.1 **Apricot Value Chain:** FAO data on global production of apricot shows that nearly 50 countries in the world produce apricot at a commercial scale. The total production of apricot by these countries as recorded by FAO is round 2.1 Million MT in 2013 out of which about 93% is produced in 18 countries. Pakistan is placed as the 4th largest producer with a production of 177,630 MT. Though Pakistan is major producer of apricot fruits, its share in the top 18 countries production is only 6% as the fruit is not globally traded on a wide scale.

Another source shows world production of top 10 countries as 2.6 million MT in 2012 (see Table 10 below). Turkey is the largest producer in the world with a production of 716,415 MT accounting for 27.4% of the 10 countries. **In this list Pakistan is placed at 3rd position with a production estimated as 325,779 Mt (12.5%).** Local production of apricot is given as 0.17 million tons

Table 10: Top 10 countries of Apricot Production -2012

No	Country	Apricot Production MT	%
1	Turkey	716,415	27.39%
2	Iran	487,333	18.63%
3	Pakistan	325,779	12.45%
4	Uzbekistan	265,000	10.13%
5	Italy	205,493	7.86%
6	Algeria	172,409	6.59%
7	Japan	120,600	4.61%
8	Morocco	113,216	4.33%
9	Egypt	106,165	4.06%
10	Spain	103,400	3.95%
Total		2,615,810	100.00%

Source <http://www.thecountriesof.com>

World Trade in Apricot: The international trade of apricot involves fresh fruits and dried fruits in addition to kernels. In 2011, world fresh apricots exports were recorded as 253,267MT⁶. France is the largest exporter of fresh Apricots. The Table 11 below illustrates the main 6 exporting countries and volumes exported in 2011. The main importers of fresh apricots are Russia, Germany and Italy.

Table11. Main exporters of Fresh Apricots

No	Country	Quantity MT
1	France	48 687
2	Spain	31 655
3	Italy	20 333
4	Turkey	28 489
5	Greece	14 597
6	South Africa	5 908

Source: (FAOSTAT) NOVAGRAM Website

The world exports of dried apricots in 2011, was estimated at 146,649 MT. The main exporter of dried apricots is Turkey that exports more than 90,000 Mt annually accounting for 62 % of world dried apricot exports. Other main dried apricot exporters are Tajikistan, Kazakhstan and Uzbekistan.⁷ The dried apricots are generally treated with sulfur dioxide which preserves a vivid orange color. There are also organic apricots exported in dried form that are much darker in color.

The export market for fresh apricots is stable while the exports of dried apricots are not significantly increasing attributed to the imposition of varying and strict health safety Food Certification requirements by countries such as USA, UK and many EU countries. However, products such as apricots remain as potential export products because of the possibilities of promoting apricots as organic and health products in the international markets

Apricot Production in GB: The updated data on agriculture production in GB region is limited. The published data available dates back to 2009. However, discussions held with stakeholders in the region, suggest that the data on production remains more or less the same at present for many agriculture crops. Table 12 captures some fruit production data of the GB region. Apricot represents 67% of the fruit production and 52% land area cultivated under fruits in GB. Nearly 13,000 Ha are under apricot cultivation in a very scattered manner in the valleys of GB and accounts for an annual production of around 114,000MT (2009) of fruits or 67 % of all fruits produced in the GB region. Though this production is not valued or commercialized entirely, the total value of this production can be estimated at PKR 2,280 Million or US \$ 22.8 million at a minimal farm-gate price of PKRs 20/Kg⁸. Out of the 10 major fruit crops in GB, apart from apple and apricot, all the other fruit crops (Grapes, pears, peaches, pomegranates, cherry, walnuts and almonds are negligible in terms of production and area under cultivation and volume of production which mostly varies between 1% to 6 % of each of the total fruit production in the province.

⁶Idem .

⁷ Idem

⁸ Estimate at PKRs 20 per KG.

Table 12: Area and Production of fruit crops in Gilgit-Baltistan⁹

Fruits	Fruit Bearing	Non Fruit Bearing trees	Total	Area	%	Production	%
	Trees		Trees	(Ha)		(T)	
1. Apricot	1876116	1095819	2971935	12921	52%	114286	67%
2. Apple	566088	330413	896500	3898	16%	19539	12%
3. Grapes	193237	77511	270748	1177	5%	5710	3%
4. Pears	58207	34359	92566	402	2%	2434	1%
5. Peaches	95541	23921	119462	519	2%	3204	2%
6. Pomegranate	121363	67370	188733	821	3%	3991	2%
7. Cherry	174685	124767	299452	1302	5%	2386	1%
8. Mulberry	194640	113484	308124	1355	5%	9617	6%
9. Walnut	225292	103307	328599	1429	6%	6577	4%
10. Almond	147928	125209	273137	1188	5%	1629	1%
Total	3,653,098	2,096,158	5,749,257	25,012	100%	169,373	100%

Source: Fruit Production & its Utilization in Gilgit-Baltistan, Tables 1.1.1 and 1.1.2, Agriculture Statistics Report, by Mr. Zaman, 2009

Post Harvest Losses: Despite the economic importance of the apricot production in GB, it is reported that 46% of the production is lost at farm level, and this translates into an estimated loss of US\$. 15.58 million at PKR 20 per Kg at farm gate price. This is a huge income lost to the producers in the rural sector and translates into a loss of around US\$ 160 per households for the 100,000 small holder families engaged in apricot production. Apricot represents the second highest lost value crop after mulberry in the province. One of the major factors for such high losses is that the ripening season of apricot competes with the harvesting wheat crop that is accorded much higher priority by the farmers than apricot harvesting. So the family labor is entirely focused on wheat harvesting due to its higher psychological value as a food security crop.

At present the total production of GB is not commercialized as fresh or value added products. From the remaining 54% (61,560 MT), about 21% (24, 633MT) of apricots produced are consumed at home level as fresh or in dried form. About 33% or 37,091 MT are commercialized as fresh or processed/dried form. Therefore the real value of the production commercialized can be estimated at US\$ 7.42 million as farm gate income to farmers generated through apricot production. This value will be much higher once the separate value is added to the portion of dried apricots sold at farm gate level. A price varying from PKRs 120 to 150 is mentioned as selling price of dried apricot at farm gate level. Given all these factors, the apricot value chain has a high income generation potential within the horticulture sector of GB.

Table 13 : Postharvest losses of Fruits in GB¹⁰

Fruits	Production	Wastage	%
	(T)	(T)	Losses
Apricot	114286	43083	46
Apple	19539	4154	24

⁹ Source – Working Papers –IFAD mission consultant –By Muhammad Asif Khan

¹⁰ Source – Working Papers –IFAD mission –By Muhammad Asif Khan

Grapes	5710	1296	25
Pears	2434	524	25
Peaches	3204	1007	33
Pomegranate	3991	900	15
Cherry	2386	425	21
Mulberry	9617	5646	72
Walnut	6577	138	3
Almond	1629	6	0
Total	169373	57178	34%

Yields and revenue to the farmers of Apricot: At present the average yield of apricot is estimated to be around 6MT Acre. This is a higher yield than any other fruit crop in the province. However, there is still potential to increase the productivity of crops by using better varieties, better crop management and harvesting techniques and thereby increasing the revenue to the farmer. An increase to 7 Mt per hectare could result in an increase of PKR 20,000 or US\$ 200 per MT at farm gate level which is a significant additional income to farmers with relatively low marginal costs. This is easily attainable as it involves minimum training in management of crops and reduction of post-harvest losses since some work on this direction is being done by AKRSP and UAP.

As indicated in the Table 14 below, gross revenue per acre from apricot is PKRs121,833 from existing plantations that could be increased to PKR 167,520 from new plantations under the “with project” conditions. The net revenues from existing plantations are PKR 71,743 that could be increased to PKR 125,245 under “With project” situations. The net revenues from existing planting will increase to PKR 86,410 per acre simply on account of improved crop husbandry. Other crops such as grapes and cherries produced in a small volume fetch comparatively a better value than apricot per ha. However, the volumes available of these other crops are limited. Though the other fruit crops prices per unit are interesting, they are not the crops with potential to bring a high income to a larger numbers of farmers as in apricot due to their low volumes and highly perishable nature. Apricots are produced in large volumes, and on-farm drying practices already known help the farmers to preserve the products for a longer period. Therefore, prices for apricots are stable and the income generation ability of it is much higher than the other fruits in the province.

Table 14: Gross Revenues per acre from Apricot plantings¹¹

	Without Project	With Project	
		Existing planting	New planting
Avg. yield – kg	6,092	7,000	7,615
Price per kg – Rs	20	20	22
Revenue – Rs			
Fruit income	121,833	140,000	167,520
Input costs/ 100 plants – Rs			
Pit making			10,000
FYM @ Rs 2.50/ kg	250	250	250
Plant/ Seed			30,000

¹¹ Source – Estimates done by IFAD team member Mohammad Asif Khan

Phosphate @ Rs 64/kg	7,680	7,680	12,800
Nitrogen @ Rs 43/kg	5,160	5,160	8,600
Potash @ Rs 75/ kg			3,750
Pesticide treatment – LS	1,500	1,500	2,000
Misc. Items – LS	1,500	1,500	2,000
Subtotal of cost	16,090	16,090	69,400
Labor costs @ Rs 500	34,000	37,500	51,500
Total cost (including labor)	50,090	53,590	120,900
Cost without Planting & harvesting/ grading labor			42,275
Yr 7 & onwards	71,743	86,410	125,245

Market for Apricots from GB: The market for GB apricot has several segments. These include: (i). Fresh and dried apricots for local consumption, (ii). Fresh fruit market in the region or down country, (iii). Dried fruit market (value added) for exports and (iv). Market for kernel –seeds for oil and as dry-fruit. There is not much reliable data available on the quantities of these different markets. Some data collected by the IFAD team members suggests that the following percentages of apricot were marketed in 2012:

- Fresh fruits marketed 2,939MT or 3% of the total production
- Dried fruits 5,692 MT of dried or 34,152Mt of fresh representing 30% of the total Production

The above percentages are subject to verification. However it suggests that, 37% of the apricot production of the province is marketed at present within or outside the province. This percentage can be further increased by improving productivity of quality apricots, reducing post harvest losses and promoting the production of appropriate varieties. This confirms the huge potential of the sector to generate income which is yet to be exploited.

Key indicators of the present status of theApricot value chain in GB: The present status of the apricot value chain in GB is expressed as indicators of its present status. These indicators summarize the present picture of the value chain in quantitative and sometimes in qualitative terms. These are summarized below in Table 15.

Table 15: Key indicators of Apricot Value chain In GB

1. Districts of production that generate income to the farmers	All 7 districts in GB produce Apricot while districts of Skardu, Ghanche, Ghinzer , Hunza Nagar produce 90% of GB Production
2. Production – volume	114,000 MT (2009)
3. Value of production @RS 20-KG	PKRs 2,280MN or US \$ 22.8MN
4. Volume commercialized and value	PKRs 741. 8Mn US\$ 7.4MN
5. Export potential	Afghanistan, China, Malaysia , EU and ME , Japan
6. Local market and local consumption fresh and dry	Dried and Fresh Fruits and Kernels

7. Post-harvest losses	46 % Possibility to reduce through value addition and better harvesting techniques
8. Locally consumed –Fresh and Dried	21% at present
9. Potential for processing	30% at present –potential to increase exports and income
10. Potential for Fresh fruit Marketing	03% at present – potential to increase
11. Varieties	More than 50 varieties –many are not commercially useful– Need to introduce and limit appropriate varieties to increase value and income
12. Yields	6Mt /Ha - Potential to improve to 7Mt or more
13. Status and quality and quantity of Supply of apricots	Sustainable production available for processing , exports and local market
14. Potential income for women	High involvement of women in harvesting and value addition. Dominant role by women
15. Households connected with the value chain	Around 100,000 in GB region

Growth prospects: The apricot value chain in GB presents several possibilities of comparative advantages to be growth oriented sector in the province. The sector is largest fruit crop, having production of more than 114, 000MT providing livelihood income and food to more than 100,000 families. The sector offers an organic product which can be branded as product of GB. An export base already exists with Fair Trade and Organic certification that can be supported and expanded. A large quantity of the production is going waste at present and this can be drastically reduced if there is a systematic effort to link the producers with value added processors of the product. This is a product that has a high export potential in the form of dried fruits particularly in Asia and ME with some prospects in EU countries and, as dried fruit, also overcomes the basic issue of perishability that is a major constraint for distant areas like GB. This possibility would provide opportunities for new investments and employment mainly for women. In addition, apricot is also considered as a food security crop in the region particularly during the long severe winters and also it is a health food. In addition, apricot is an ideal raw material for high value added products such as jams, jellies, candies, apricot seed oil (for cosmetic products and high value cooking oil) and these value added products offer some of the potential areas for new investments in apricot in the region. Apricot processing units also can process or dry other fruits such as cherries, walnuts, pine nuts etc available in the same districts which can increase the profitability of investments and returns for the farmers and other actors engaged in apricot value chain.

9.4 Potato Value Chain Development

9.4.1. Global status of POTATO Production: Potatoes are one of the world’s largest locally consumed and internationally traded food commodities and it is a prime food security crop throughout the world. Global data on potatoes production varies in different sources. The FAO data (FAO STATS) records a global production of about 36.2million MT by some 165 countries in 2013. Bulk of this production comes from

Asia, mainly from China and India. The table 16 below captures the top 30 countries producing potatoes which represent 89% of the world potatoes production. Pakistan produces less than 1% of the world production where as it represents 1% of the top 30 countries of potato production.

Table 16. Production Quantity of Potatoes 2013 -1st 30 Countries

No.	Country	Production Quantity	%-world	% of 1st 30 countries
1	China	95,987,500.00	17.9	20%
2	China, mainland	95,941,500.00	17.89	20%
3	European Union	53,467,951.00	9.97	11%
4	India	45,343,600.00	8.46	9%
5	Russian Federation	30,199,126.00	5.63	6%
6	United States of America	19,843,919.00	3.7	4%
7	Bangladesh	8,603,000.00	1.6	2%
8	Central Asia	8,276,720.00	1.54	2%
9	France	6,975,000.00	1.3	1%
10	Netherlands	6,801,000.00	1.27	1%
11	Poland	6,334,200.00	1.18	1%
12	Belarus	5,913,706.00	1.1	1%
13	United Kingdom	5,580,000.00	1.04	1%
14	Iran (Islamic Republic of)	5,560,000.00	1.04	1%
15	Algeria	4,928,028.00	0.92	1%
16	Egypt	4,800,000.00	0.9	1%
17	Canada	4,620,000.00	0.86	1%
18	Peru	4,570,673.20	0.85	1%
19	Malawi	4,535,955.00	0.85	1%
20	Turkey	3,948,000.00	0.74	1%
21	Pakistan	3,802,200.00	0.71	1%
22	Brazil	3,553,772.00	0.66	1%
23	Belgium	3,479,600.00	0.65	1%
24	Kazakhstan	3,343,600.00	0.62	1%
25	Romania	3,289,722.00	0.61	1%
26	Nepal	2,690,421.00	0.5	1%
27	Japan	2,600,000.00	0.48	1%
28	South Africa	2,252,000.00	0.42	0%
Total		479,169,493.20	89.35	100%

Source: Compiled based on FAOSTATS for potato production 2013

Potatoes are cultivated annually on about 26.8 Million Hectares in 165 countries of which 88% is cultivated in top 28 countries. (Refer Annex 5 under Area cultivated and yields). China, mainland and Taiwan, and India occupy more than 55% of the area cultivated under potatoes among the top 28 Countries. Under area cultivated, Pakistan occupies 21st position with an area cultivated 174 400 Ha in 2013 (FAO data).

With regard to yield per hectare in global database, it varies from country to country. The range of yields in the top 28 Potato producing countries vary from 4.5MT Ha in Nigeria to 43+MT per Ha in France and Netherlands. China being the largest producer of potatoes in terms of volume and area under cultivation records about 17MT per ha, where as India gets an average yield of 22MT Ha. The average yield in Iran is 29MT ha, and Europe 30MTha. The FAO data for 2013 records 21.8MT Ha for Pakistan and some local sources records a lower rate than this. (Annex 5)

Potatoes Production in Gilgit Baltistan (GB) in Pakistan: The Table 17 below indicates the data on vegetable, cereals and fodder production area cultivated in 2009 in the GB province. Potatoes represents 46% of the production (134,000 MT) and 14 % of the farm land (21,213Ha) cultivated of the vegetables, cereals and fodder in GB. The updated data for 2014 is not available in detail and it is presumed the situation on the ground has not much changed since then. The potatoes are generally inter-cropped with other short term crops.

The Value of the potatoes production will depend on the prices in the market. Farm gate prices could vary and in the recent past, it is reported that price fluctuations varied from PKR 20 to PKR 50 or more per KG. Assuming an average price of Rs 35 per KG at farm gate, GB's value of annual production of potatoes at PKR 35 per KG or KPR 35,000 Per MT, will amount to PKR 4,690-Mn or US\$46.9Mn (at 100 PKR =I US\$). Therefore potatoes production brings a significant value to the province and it can be further increased through strategic assistance for the benefit of the agriculture population.

Table 17: **Production of Vegetables and cereals crops in Gilgit-Baltistan¹²**

Crop	Vegetables and Cereals/ fodder				
	Area - acres		Production - tons	%	Yield - kg/acre
Potato	21,313	14%	134,031	46%	6,289
Tomato	760	1%	6,455	2%	8,493
Peas	760	1%	2,121	1%	2,791
Capsicum	760	1%	977	0%	1,286
Onion	548	0%	5,381	2%	9,828
Others	668	0%	2,493	1%	3,735
Wheat	42,725	29%	36,835	13%	862
Maize	44,215	30%	47,010	16%	1,063
Barley	13,203	9%	10,123	3%	767
Buckwheat	2,420	2%	1,770	1%	731
Fodder	22,195	15%	42,478	15%	1,914
Total	149,565	100%	289,674	100%	

¹² Source – Working Papers –IFAD mission consultant –By Muhammad Asif Khan

9.4.3 **Productivity and Post Harvest Losses:** The yield in the production of potatoes in GB is estimated at about 6.2 MT per acre. This will be around 15 to 16 MT per hectare. This yield is not low compared with the national average which varies from 17MT per Ha to 21MT /Ha (FAO reports). However; there is still possibility of increasing these yields through further technical assistance and extension work in the value chain. The productivity can be further improved through providing access to quality certified seeds, best cultivation practices, better inputs management and promotion of commercial farming instead of prevailing mixed crop cultivation.

The post harvest losses in potatoes, unlike in other vegetables and fruit crops, are not significantly high. In case of GB the post harvest losses are considered to be around 8%. Generally, in potatoes, post harvest losses appear due to absence of proper storage facility, poor transport systems and duration of transport to end markets.

Table 18: Area, Production and Utilization of Cereals and vegetables in GB

District	Area	Seed Required (MT)	Production	Consumption (MT)	Marketed (MT)	Waste
	(Ha.)		(MT)			(MT)
Gilgit	959	1,772	14,330	1,372	11,625	1,333
Hunza Nagar	3,267	6,112	48,285	4,260	41,047	2,978
Ghizer	714	1,346	11,024	1,481	8,591	951
Skardu	1,541	3,012	25,901	2,300	21,796	1,805
Ghanche	984	1,927	15,237	2,833	10,640	1,763
Astore	931	1,779	17,027	4,110	11,589	1,328
Diamer	129	246	2,227	1,276	632	319
Total	8,526	16,193	134,031	17,632	105,921	10,479

In terms of income generation among vegetable and cereals and fodder, potato is the 2nd highest income earner after tomatoes. Potato at 15.72 MT per hectare, at PKR 37,500 per MT could earn PKR 589,500 per Ha where as tomatoes could earn PKR 846,400 per Ha at PKR 40,000 MT per ton with a yield of 21.16 MT per Ha. Onions are the 3rd highest income-earning crop (PKR 552,825) while Chinese cabbage (PKR 447,825/Ha) and capsicums (PKR 414,200/Ha) are other 4th and 5th income earning short term cash crops in the province. The table 3 below captures the data on estimates of income per hectare for main vegetables, cereals and fodder in GB Province.

Table 19: Yields and revenue generated in vegetables and cereals sectors in GB

	Yield	Price –Rs	Per MT	Gross returns per ha- PKR
	MT/Ha	per maund		
Wheat	2.16	1200	30,000	64,800
Maize	2.66	850	21,250	56,520
Barley	1.87	1000	25,000	46,750
Buckwheat	1.83	1200	30,000	54,900
Cultivated	5.12	1200	30,000	153,600
Potato	15.72	1500	37,500	589,500
Tomato	21.16	1600	40,000	846,400
Peas	3.16	1150	28,750	90,850
Cabbage	13.18	1050	26,250	345,975
Chinese	17.06	1050	26,250	447,825
Onion	24.57	900	22,500	552,825
Capsicum	8.72	1900	47,500	414,200

Source: Based on Data Compiled by IFAD TEAM member Mohammad Asif Khan

9.4.4 **Market for GB Potatoes:** Pakistan exports potatoes to Russia, SriLanka, Iran, Kuwait, Oman and Malaysia. The value of potato exports from Pakistan in 2012 was estimated at US\$ 10.11Mn and in 2013 it rose to US \$14.5Mn¹³. This data does not show the share of GB production in exports. However, exports are a high potential market for potatoes from Pakistan. Therefore, the potential for GB potatoes to be exported should not be excluded in the future development plans, especially in view of their organic production and definitive taste advantage. Particularly, being an off season product, the GB potatoes can be promoted as disease free, organic and good variety product available during the off season.

9.4.5 Key indicators of the actual status of the Potatoes value chain in GB are reflected in Table 20 below:

Table 20: Key indicators of Potato Value chain In GB

1) Districts of production that generate income to the farmers	- All 7 districts in GB produce potatoes and districts of Skardu, Ghanche, Ghizer, and Hunza Nagar contribute bulk of GB Production
2) Production – volume	- 134,000 MT (2009)
3) Value of production @RS 3750 /MT	- PKRs 4760Mn or US \$ 46.9 MN(based on 2009 Production)
4) Export potential	- Sri Lanka , Russia , Iran , Hong Kong ,ME
5) Local market and local consumption	- Fresh mainly for cooking and chips
6) Post-harvest losses	- 8 % Possibility to reduce through value

¹³ AKRSP –Potato Value chain Study in Gilgit Baltistan and Chitral –May 2014

	addition and better harvesting techniques
7) Commercialized Percentage of production	- 78% of production at present marketed
8) Potential for processing	- Small % for chips
9) Varieties	- Several available. Red skin varieties : Desiree, Cardinal, raja, Symphonia, Coroda and Bprna ” White skin varieties – Sante, Santana and Diamond, Specific varieties for Chips
10) Yields	- 17Mt /Ha - Potential to improve to 20Mt or more
11) Status and quality and quantity of Supply of Potatoes	- Already produce 134,000 MT and 78% commercialized
12) Potential income for women	- High involvement of women in cultivation and harvesting

9.4.6 **Opportunities:** The potatoes value chain in GB present significant opportunities to generate increased income for producers/farmers, and an avenue for new investments in the region. Three areas of economic interest for this value chain are:

- (i) Promoting the production of table potatoes originating from GB for the down country, when it's a lean period of production in rest of country, and eventually for the export market.
- (ii) Production of specific varieties of potatoes for the production of high quality chips in collaboration with established companies
- (iii) Production of basic seed of potatoes for own /provincial consumption for assured supply of quality seeds for enhanced production mainly by using already available tissue culture facilities and expertise in the province and already supported seed farmers through UAP

To achieve these objectives, the province posses a large production area and also potential to expand yields through better varieties and better seeds. The potatoes value chain as it is has an on- farm value of US 46.9Mn. This value can be increased through carefully selected strategic interventions to support the growth of the sector, These interventions could be:

- (i). Introduction of best agriculture practices to increase yields and providing access to better varieties of seedlings,
- (ii) Promoting linkages with established companies engaged in value added products such as chips.
- (iii) Facilitation for access to good quality certified basic seeds, through local production or through initially imported seed supplies
- (iv). Promoting establishment of local input supply dealerships with private sector and farmers organizations for easy access to quality inputs

The possibility of GB supplying to the Pakistan's exports of potatoes, particularly to the regional and Russian market should be studied in detail and if positive should be promoted. It is unlikely, at this stage , potatoes from GB can reach a larger global

markets such as EU and USA. This requires a thorough analysis of competitiveness of this product from Pakistan and particularly from GB market access conditions and different phytosanitary regulations.

9.4.7 **Major Issues/constraints:** The potatoes value chain has several key issues as identified in the course of interaction with key stakeholders. These include :

- (i) Non- availability of quality seeds for production of potatoes and lack of access to other quality inputs and technical advice
- (ii) Inadequate market linkages with markets and organized collection system
- (iii) Poor farm management that affects yields, post-harvest losses and Phytosanitary issues
- (iv) Inadequate infrastructure facilities – poor access roads, collection centers, and storage facilities in producing areas.

The main issue raised by the stakeholders is the access to quality seeds at affordable prices. The province needs about 16,000 MT of seeds annually. At present very few farmers have access to quality imported seeds. They use mainly their own production of last season which can be even 6th or 7th generation seeds. Pakistan needs more 400,000 Mt of seeds annually, but does not import/meet even 5 % of its requirements. The country depends on own production that is also used as seed particularly in Punjab Province. Therefore, facilitating access to seed of high quality is a key for the growth of this value chain in GB. The other area is access to quality inputs including fertilizer which are difficult to access due to lack of local dealerships for input supply companies. Farmer's organizations can offer one avenue for establishment of local collective dealerships for main inputs.

The farmers need to be assisted in use of best practices in agriculture. There is some extension facilitation done through the technical assistance projects such as UAP and AKRSP. In addition, the access roads are generally very poor in the production areas, and there is hardly any storage or grading or aggregation facilities or established marketing channels that could make GB potatoes costs competitive in the market place. While supporting to build infrastructure in rural economy, promoting extension services to famers to produce better quality products in increased volumes will increase the economic importance of the sector.

9.4.8 **Growth prospects:** The potatoes value chain in GB presents several possibilities and advantages to make it a growth oriented sector for smallholder benefit in the province. These advantages include:

- i. Potato production in GB is a key sector that has achieved positive results through technical assistance and extension services from different interveners of public and private sector donor assistance project over the last few years. Therefore, building on the experience in the field and scaling it up could provide quick results in the short term in terms of increased production, income to farmers and food security in the province.
- ii. There are also potatoes farmer interests groups (FEGs), contract farming experience, seed production units, and experience of working with corporate buyers that can be build upon and scaled up.

- iii. The production of table potatoes is a key cash crop for the farmers in GB having production of more than 134,000MT providing livelihood income and food to more than 122,000 families. Any expansion, growth or value addition has the potential to benefit almost half of the provincial population.
- iv. A large quantity of the production is already commercialized and mainly marketed in the down country districts and potential to supply for exports cannot be excluded. Bringing it to its true potential would result in immediate gains for the smallholder farmers.
- v. Potato production in GB is also considered as an off season production with promise of premium prices and cultivation in high altitudes is also reputed as disease free area ideal for potato seed production
- vi. This is a product that has also a potential for quick local value addition such as potato chips. This possibility would provide opportunities for new investments and employment mainly for women in production of new varieties appropriate for production of chips.
- vii. Potato production is also considered as a food security crop in the region of GB.
- viii. There is an existing scope and facilities for production of potato seeds using tissue culture facilities available in the province.
- ix. Finally, some buying companies (Pepcico, seed producers) and existing tissue culture labs (Ministry of Agriculture) have confirmed their interest to support and work with the farmers in GB to support the growth of potato value chain.

10. Financial plan and mode of financing: Total estimated cost of ETI is US\$ 120.15 million/Pak Rs. 12,315 million. Out of this amount, IFAD will contribute through a highly concessionary loan of US\$ 67.00 million or 56 % of the cost at 0.75% interest rate payable over 30 year period with 10 year grace period. Government of Pakistan will contribute 20 % or US\$ 23.63 million through its annual bock allocations for Gilgit-Baltistan PSDP. Beneficiaries will contribute 5% or US\$ 6.54 million in the shape of computed value of land for irrigation and roads right of way. Remaining financial gap of 19 % or US\$ 22.98 million will be met from co-financing obtained on terms similar to IFAD loan or less for which negotiations with potential co-financiers are at an advanced stage. Component-wise contribution of the financiers is reflected in the following Table 21:

(US\$ Million)

	IFAD		Cofinancing		Beneficiaries		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs										
A. Civil works	35.03	52%	13.29	58%	6.54	100%	14.26	60%	69.12	58%
B. Equipment & Materials	2.14	3%	0.14	1%	-	-	0.11	0%	2.39	2%
C. Trainings	3.67	5%	1.39	6%	-	-	2.17	9%	7.23	6%
D. Vehicles	0.25	0%	0.09	0%	-	-	0.42	2%	0.76	1%
E. Grants & Subsidies	14.53	22%	3.82	17%	-	-	-	0%	18.35	15%
F. Consultancy	0.19	0%	0.08	0%	-	-	0.09	0%	0.36	0%
G. Technical Assistance	0.95	1%	0.35	2%	-	-	0.56	2%	1.86	2%
Total Investment Costs	56.76	85%	19.16	83%	6.54	100%	17.61	75%	100.07	83%
II. Recurrent Costs		0%		0%				0%	-	0%
A. Salaries & Allowances	6.51	10%	2.43	11%	-	-	3.83	16%	12.77	11%
B. Operating costs	3.73	6%	1.39	6%	-	-	2.19	9%	7.31	6%
Total Recurrent Costs	10.24	15%	3.82	17%	-	-	6.02	25%	20.08	17%
Total PROJECT COSTS	67.00	56%	22.98	19%	6.54	5%	23.63	20%	120.15	100%

10.1 **Debt:** ETI will be financed through a highly concessionary loan from International Fund for Agriculture Development (IFAD), a co-financier, Government of Pakistan and beneficiaries. An amount of US\$ 67 million has been made available by IFAD in its current Country Programme Cycle for Pakistan. The interest rate for this loan will be 0.75% per annum and the loan will be payable over 30-year period with 10-year grace period. An additional loan of US\$ 22.98 million will be mobilized from a co-financier on same or better terms and conditions as of IFAD loan and negotiations for obtaining such loan are at an advanced stage. Government will contribute US\$ 23.63 million or 20% as its share to finance taxes, salaries, and part of operational costs. Beneficiaries will contribute US\$ 6.54 million largely in the shape of land for irrigation infrastructure.

11. Programme benefits and analysis: About 100,000 smallholder households, landless households with unemployed youth and women-headed households would be direct beneficiaries of programme interventions. Another 10,000 smallholders, daily wage workers, artisans, masons etc. will also derive direct and indirect benefits from programme interventions. Around 100 processors, value adders and other service providers along value chain shall also benefit. Main benefits will be derived from:

- An additional 50,000 acres of newly irrigated land, increasing the local irrigated area by around 30%.
- 400 km of roads will be improved, reducing transportation costs and enabling farmers to transport more quantities with better quality
- About US\$ 25 million injected into the rural economy through labour payments for irrigation development of which around US\$ 23 million shall be recovered and reinvested in the same villages for socio-economic development- in addition to labour employment generated in upgrading roads and food processing
- A range of capacity building and local processing, storage and value addition facilities supporting 220 Village Producer Groups
- Sustainable, market-oriented improvements in potato seeds and fruit plant production, processing and marketing systems.
- Capacity building of WMD, PWD, Agriculture Extension and Agriculture Research for better service delivery commensurate with the status of a provincial agency.
- Policy formulation and reform in critical areas of water management, roads O&M, land records and titling to ensure improved service delivery, better governance and sustainability

ETI will generate economic benefits for different stakeholders according to the activity they are engaged in and the nature of the project intervention. The benefits that would accrue to various project beneficiaries would be either incremental or additional. In the case of value chain development activities, benefits will accrue to existing farmers through increased productivity, better quality produce, reduced losses and better prices. These would be the result of technical assistance and grants to value chain actors. ETI would assist farmers and through skills enhancement in technical and managerial aspects, technological improvements, linkages development with supply chains including forward contracting, improving consolidation infrastructure

and better pre-harvest and post-harvest management. The project will also encourage economies of scale through group procurement and joint marketing. In addition, the Project would support the up-grading of rural roads network to reduce the transportation costs and hence enhance competitiveness of farmers and establish market linkages. In the case of improved access to market (through better rural roads) benefits would be in the form of lower marketing cost, reduced losses and increased volumes marketed. The irrigation infrastructure would enable farmers to produce additional volumes of agricultural produce strengthening commercialization of value chains.

Additional Benefits: The project will work with relevant institutions in the public sector (Water Management Department-WMD, Public Works Department-PWD, Agriculture Research, Agriculture Extension, Diamer Poverty Alleviation Programme-DPAP), private sector institutions and civil society organisation. The project will create capacity within the provincial government and its institutions with regard value chain development, project management and will upgrade infrastructure of selected institutions. The project will encourage mainstreaming of participatory development approaches in government decision making, participatory monitoring and capacity for social mobilization. ETI will also create capacity at the community level through the Marketing Support Organisations (MSO) and Community Associations (CAs) with regard to management, resource mobilization and initiating collective investments and enhancing capacity to undertake management of local development activities.

Increased Employment Opportunities: The proposed activities will generate additional employment (mainly daily-wage labor) opportunities primarily for the rural unskilled labor in the value chains, irrigation infrastructure, rural roads' up-gradation and land development. The direct transfer of cash and increased incomes would contribute in poverty reduction and enable them to invest in farming and other rural enterprises.

11.1 **Financial Analysis:**

Method and Approach: The ETI-GB will create impact in the form of increased income through value chains development. At the beneficiaries level the project interventions will generate positive benefits in the current farming and new area brought under cultivation. Financial analysis of the project has been conducted taking into account the likely impact of the project on the value chain operators notably farmers and aggregators. The financial analysis has been based on the existing cropping pattern for the value chain development activities as well as the new land developed under the project. For the road component, analysis takes into account the implicit benefit that would accrue to the population of the target district in the form of reduced transportation cost, reduced losses to produce that is marketed and time saving. The financial impact has been estimated and compared as "With Project-WP" and "Without Project – WOP" scenarios. The WOP scenario is income stream during the base year while the WP scenario is the income streams during the project year-1 and afterwards. The changes in income streams are assessed in relation to the project interventions taking into consideration project phasing.

The Cropping Pattern and Phasing: A number of cereal crops, fruit and vegetables are produced in the province. The cropping pattern of fruit in GB is given in the following Table 22:

Fruits	Fruit Bearing Trees	Non Fruit Bearing trees	Total	Area	Productio (T)	Plant density	Yield/ plant - kg
Apricot	1,876,116	1,095,819	2,971,935	12,921	114,286	19.81	60.9
Apple	566,088	330,413	896,500	3,898	19,539	5.98	34.5
Grapes	193,237	77,511	270,748	1,177	5,710	1.80	29.5
Cherry	174,685	124,767	299,452	1,302	2,386	2.00	13.7
Mulberry	194,640	113,484	308,124	1,355	9,617	2.05	49.4
Almond	147,928	125,209	273,137	1,188	1,629	1.82	11.0
Pomegranate	121,363	67,370	188,733	821	3,991	1.26	32.9
Peaches	95,541	23,921	119,462	519	3,204	0.80	33.5
Pears	58,207	34,359	92,566	402	2,434	0.62	41.8
Walnut	225,292	103,307	328,599	1,429	6,577	2.19	29.2
Total	3,653,098	2,096,158	5,749,257	25,012	169,373	38.33	

Source: Agriculture Department, GB

Cropping pattern of cereal crops and vegetables produced in GB is given in the following

Table 23:

Table 23: Cereals and Vegetable Production in GB

Fruits	Area	Ann. Production (000 Tons)	Yield - Kg/ Acre	% of Area
Potato	21,313	134,031	6,289	17%
Tomato	760	6,455	8,493	1%
Peas	1,678	2,121	1,264	1%
Onion	548	5,381	9,828	0%
Capsicum	278	977	3,521	0%
Other Vegetables	668	2,493	3,735	1%
Wheat	42,725	36,835	862	33%
Barley	13,203	10,123	767	10%
Maize	44,215	47,010	1,063	35%
Buck wheat	2,420	1,770	731	2%
Fodders	22,195	42,478	1,914	
	150,000	289,674		

Source: Agriculture Department, GB

A total of 50,000 acres of new land will be brought under cultivation under the ETI programme through the development of irrigation infrastructure and land development in four districts of GB. The irrigation infrastructure and subsequent land development will be undertaken in phases. Following table 24 shows phasing of the land development.

Table 24: Physical Phasing of New Land Brought Under Cultivation in Target Districts

		(a) District Wise Land Development – Acres				(b)
		Ghizer	Ganche	Astore	Diamer	
Year-1						
Year-2						
Year-3	10%	1,350	800	900	1,950	5,000
Year-4	30%	4,050	2,400	2,700	5,850	15,000
Year-5	30%	4,050	2,400	2,700	5,850	15,000
Year-6	20%	2,700	1,600	1,800	3,900	10,000
Year-7	10%	1,350	800	900	1,950	5,000
Total	100%					50,000

The programme will upgrade rural roads in four target districts. Two kinds of up-gradation will be carried out i.e. (i) up-gradation of tracks into jeep-able status; and, (ii) up-gradation of jeep-able roads to truck-able status. Phasing of the up-gradation of roads/tracks is given in the following table 25.

Table 25: Physical Phasing of Road-Up-gradation in Target Districts of GB

Road Up-gradation	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Jeepable to Truckable	Km		60	60	60	60	240
Existing Tracks to Jeepable	Km		40	40	40	40	160
Construction of Bridges	meters		50	50	60	60	220

Key Parameters: In order to undertake financial analysis of the ETI, the following parameters have been used:

- **Incremental benefits:** The financial analysis is carried out by working out the incremental benefits by comparing without project to with project scenario. Two sets of incremental benefits are considered in the analysis i.e. those accrued in the existing area as a result of the value chain development activities, those emerging from the new area brought under cultivation and those resulting from the improved road access.
- **Cropping Zones:** The agro-ecological conditions characterize GB into three distinct cropping zones i.e. double cropping, marginally double cropping and single cropping zones. An estimated 66% of the cultivated land falls in the single cropping zone. It is assumed that the same cropping pattern will be followed for the newly developed land.
- **Crop Intensity:** Given the cropping zones constraints, crop intensity is assumed to be 150% with regard to cereal and vegetables production. Fruit trees are in the form of scattered plantation having a very low plant density and it is likely that the same practice will continue.

- **Phasing of Benefits:** The financial analysis assume incremental benefits over the life of the project (7 years) and for eight subsequent years after the project completion. Phasing of new fruit plantation assumes full benefit at ninth year of the plantation while benefits from vegetables will be at the current level after three years while grown on the newly developed land. Benefits from the existing fruit plantation are assumed to increase as a result of increase in yields (resulting from increase in productivity and reduction in losses) and increase in prices (as a result of improvement in quality). Such increase is more pronounced in the apricot and potato value chains as these would be focused under the project. The total improvement in yield modeled is 25% in the case of potato and 30% in the case of apricot over the project life. Other crops are assumed to witness yield increase of up to 10-15% over the project life.

11.2.1 **The financial Cost:** The total project cost is USD 120.15 million of which USD 3.30 million are estimated as physical contingencies and USD13.34 estimated as price contingencies. The analysis take into account the recurrent cost and therefore include the total cost of the project as USD146.43 million which include base cost and recurrent cost of USD 26.28 million (from year 8 to year 15). The cost of project in PKR and USD is given in the following figure:

	(Pak Rs '000)					(US\$ Million)		
	Foreign	Local	Total	% Foreign Exchange	% Total Base Costs	Foreign	Local	Total
A. Economic Infrastructure								
1. Irrigation & Land Development	3,410,463	1,136,821	4,547,284	10	43	33.27	11.09	44.36
2. Farm to Market roads	1,503,675	501,289	2,004,964	15	19	14.67	4.89	19.56
Subtotal Economic Infrastructure Support Services/PPPP for Value chain Development	4,914,138	1,638,110	6,552,248	11	62	47.94	15.98	63.93
B. Development								
1. Vaue Chain Fund	1,559,651	519,884	2,079,535	4	20	15.22	5.07	20.29
2. Social Mobilization	309,563	102,846	412,409	3	4	3.02	1.00	4.02
3. Agri Extension	163,690	54,563	218,253	3	2	1.60	0.53	2.13
4. Agri Research	206,848	68,949	275,797	5	3	2.02	0.67	2.69
5. Land Titling & Record system	163,552	54,517	218,069	1	2	1.60	0.53	2.13
Subtotal Support Services/PPPP for Value chain Development	2,403,303	800,759	3,204,063	4	30	23.45	7.81	31.26
C. Programme Coordination Unit	640,069	213,356	853,425	3	8	6.24	2.08	8.33
Total BASELINE COSTS	7,957,511	2,652,226	10,609,737	8	100	77.63	25.88	103.50
Physical Contingencies	240,363	97,998	338,361	11	3	2.35	0.96	3.30
Price Contingencies	1,025,077	342,326	1,367,403	4	18	10.00	3.34	13.33
Total PROJECT COSTS	9,222,950	3,092,550	12,315,500	8	121	89.980	30.171	120.151

11.2.2 **Key Assumptions:** Following are the key assumptions used in the financial analysis of ETI;

- **Financial Prices:** The financial prices of inputs and products used in the analysis were gathered from local markets in GB, at farm and consultation with stakeholders including government departments. Date on wage rates were obtained from farmers,

enterprises and government line departments. In addition inputs required in farming such as seed, fruit plants, fertilizers, pesticides, machinery use, transportation and farm gate prices of outputs were obtained from farmers in different valleys. Average prices 2014 have been used in the financial analysis.

- **Wage Rates:** Much of the increased labor requirement will be met from the family labor however the prevailing wage rates in the area are used in the financial analysis. Instead of wage earning as part of farming, the household benefits are worked out in the form of net benefits from the farming activities rather than wages. However in the case of labor opportunities created in the infrastructure development, road construction and land development the ongoing wage rate (PKR. 450/day) is considered in the analysis.
- **Opportunity Cost of Capital:** The opportunity cost of capital of 13%¹⁴ is used in the financial analysis.
- **Benefits of rural roads:** There rural roads are expected to generate benefits for the rural population in terms of reduced transportation cost, time saving and reduction in losses. Since no traffic studies have been conducted, the analysis takes into account benefits to the end users rather than transporters in this analysis. Both inward and outward good transportation are taken in to consideration and at the same level. In addition, it is assumed that 50% of the losses will be reduced and the resultant produce will be marketed.

11.2.3 **Financial Analysis:** Different sets of analysis were undertaken for which crop budgets were used as a basis and aggregated at the project level and according to the type of interventions. For both WP and WOP scenarios same assumptions were used while calculating net benefits. The incremental benefits under the existing cropping patterns were worked on per acre basis and then developed into a farm household model which represents the same cropping pattern. Similarly for the newly developed lands, incremental benefits were determined assuming that farmer will adopt the same cropping pattern and improved practices.

Household level benefits and aggregation: The cropping pattern for each household was worked out under WP and WOP scenario and then aggregated at the project level accounting for the number of household to be benefited from the project interventions.

Financial returns: Based on the crop-budgets, financial returns were worked on a per acre basis for all the crops that are part of the existing cropping pattern. The incremental benefits were assumed to be higher in the case of targeted value chains of apricot and potatoes compared to other value chain.

The financial analysis using benefit to the farm households and other value chain actors exhibits feasibility of the proposed project, its scope and targets. Through the project, incremental increase in the income of rural households is expected to a significant extent. In addition to increased income, there will be increased labor opportunities through the project supported activities. The increased labor work can easily be accommodated given the current level of engagement of family labor. The financial return per household as a result of the project is estimated at USD. 321/household in the case of value chain development component, ranging from USD305 – 719/household in the case of irrigation and new land development

¹⁴ Interest Rate in Pakistan averaged 12.48 percent from 1992 until 2015 (Source: www.tradingeconomics.com/ State Bank of Pakistan)

intervention and ranging between USD 13 to USD201 in the case of rural roads up-gradation component. From the point of view of the financial benefits to beneficiary households, the project intervention is attractive.

11.2.4 **Financial Rate of Return:** The analysis of ETI shows the Financial Internal Rate of Return (FIRR) at 38.44%. At the component level, the FIRR for value chain development component is 45.8%, that of irrigation and land development 36.1% and of road up-gradation at 33%.

The Net Present Value (NPV) of ETI was noted to be USD 133.11 million. This shows the investment feasible at the project level.

11.2.5 **Sensitivity Analysis – Financial:** The sensitivity analysis was carried out under different project scenarios. The FIRR reduced from 38.44% to 20.3% in case the project benefits are delayed by three years. Moreover when project benefits are decreased by 20%, the FIRR reduces to 32.2%, reduced to 33.3% if project costs are enhanced by 20%, reduces to 27.5% in case project cost increase by 20% and benefits are reduced by 20%. In case of project benefit being delayed by five years, FIRR reduces to 14.1%. The sensitivity analysis shows that the project investment will remain feasible even if conditions changes as assumed.

11.3 Economic Analysis:

11.3.1 **Method and Approach:** Owing to the diversity of the project components, different methods are used to do the economic analysis. The major economic benefits that will ensue to the project beneficiaries are those entailed in the three major interventions i.e. new land development as a result of developing irrigation infrastructure, up-gradation of rural roads and value chain development. In addition to economic benefit at the beneficiary’s level, the project envisages capacity building and institutional strengthening impacts.

The economic analysis uses the export and import parity prices worked out for all the major inputs and outputs. The analysis also uses shadow wage rate factor of 0.6 for unskilled which gives a shadow wage rate of PKR. 270 per day. The net present value (NPV) and economic internal rates of return (EIRR) have been worked out using a discount rate of 13% and benefit span of 15 years including 7 years of project implementation period. Following are the conversion factors that have been used in the economic analysis:

Table 16: Conversion Factor for Conversion of Financial to Economic Prices

Input	Conversion Factor	Products	Conversion Factor
Urea	1.26	Wheat	2.16
DAP/Nitrophos	1.13	Maize	2.44
TSP	1.14	Apricot	0.96
MOP	0.81	Potato	0.98
Vehicle	0.55	Cherry	0.68
Labor	0.6	Others	0.95

11.3.2 **Economic Cost:** The economic analyses take into account the investment and incremental recurrent cost of the project. The analysis is carried out taking the economic prices of 2014 in constant terms. Price contingencies are excluded from the analysis while physical contingencies are included in the analysis. For the capital items, no residual values have been considered.

11.3.3 **Key Assumptions:** The benefit of the ETI is expected under the three project components. These include (i) value chain development; (ii) irrigation infrastructure and land development; and, (iii) improving market access through up-gradation of rural roads. The project will also strengthen the institutional capacity of the departments concerned which will enable the provide services to value chain and implement development project more effectively as an indirect benefit of the project. While these are to some degree considered in the farm budgeting, these indirect benefits of institutional capacity building are not comprehensively included in the economic analysis. Moreover, there would be additional social benefits of the program which are not included in the analysis as well. The major component and relevant economic benefits are briefly discussed in the following paragraphs.

Value Chain Development: ETI will provide assistance in value chain development with a focus on two value chains (apricot and potatoes) and other value chains subsequently targeted from MTR onwards. The target areas under value chain development component are all seven districts in GB. The economic benefits are expected to be generated as a result of the project efforts to promote a more optimal use of input, better practices, value addition and alternative (joint) ways of marketing and acquisition of inputs. Benefits that will be generated from this component include increased productivity, reduced losses and increased prices.

Irrigation infrastructure and land development: The project will undertake development of 50,000 acres of additional land by providing irrigation infrastructure and assistance for land development. A total of 1 acre of new land area will be available to beneficiary household for cultivation. The new land area will enable farmer to produce additional crops and fruit and will enhance family income. This component include recurrent cost of O&M which will be met and arranged through the 50% cost recovery planned to be undertaken by the communities benefiting from the schemes. For each acre of land developed a total of PKR. 27,070 will be generated in three years (PKR. 9,690 per crop or year).

Irrigation will provide additional land thus results in increased farm incomes. All the inputs and prices are valued at the farm gate import and export parity prices in 2014. The analysis determines the incremental costs and benefits per farm household as a result of the project intervention. Since the production will come from new areas, the without project scenario is zero and all the costs and benefits are treated as incremental only. The recurrent cost of the irrigation infrastructure (50% of the total recurrent cost) is assumed to be 4% - 5% of the total cost.

Improved Market Access through Road Up-gradation: The economic analysis for road up-gradation will adopt the indirect benefit analysis approach as there is no credible data available on the traffic volumes, and vehicle operating costs. The benefits included in the analysis include; (i) reduced transportation cost of produce from and to the project areas; (ii) reduced losses; and, (iii) time saving. Other social

benefits such as access to education, health and other services are not included in the analysis.

Following are the key assumption used in the economic analysis:

- (c) **Road Situation:** The project intervention will up-grade two types of roads i.e. tracks and jeep-able roads. Tracks will be widened and its surface will be improved to make these fit for using jeeps whereas jeep-able road would be widened and its surface will be improved to make these truck-able. A total of 400 km of new roads will be constructed as well as 220 meters of bridges. The conditions of these roads need up-gradation that will result into reduced transportation costs, reduced losses and save time.
- (d) **Transportation Cost:** Current cost of transportation in the area where roads up-gradation will take place is PKR. 6 per km which will be reduced by half thus saving PKR. 3 per kg of goods transported.
- (e) **Reduction in Losses:** In most cases losses are due to poor road access to markets and thus perishable products do not reach the market. In view of this, farmers usually do not market a significant quantity leaving it to be wasted at the farms. Due to improved access, 50% of the current level of wastages will be channelled to the market generating additional revenues for the farm households.
- (f) **Time Saving:** The up-gradation of rural roads will result in time saving of more than 50%. The analysis assumes that 30% of the population would be travelling 15 times per year, and would realize saving of 5 hours per trip (worked out on the basis of PKR. 450/day which is the ongoing daily wage rate).

11.3.4 **Economic Benefits:** The economic benefits to the households of the ETI project are attractive. The economic benefits of value chain development on are estimated at USD236 per household on average and for the irrigation and land development component in the range of USD280 and USD860 being lower in the first year and increasing subsequently. In the case of rural road up-gradation component, the average estimated economic benefit per beneficiary household is ranging between USD13 and USD216/beneficiary household. Given the level of economic benefit to each household, the proposed programme seems feasible and an economically viable investment.

11.3.5 **Economic Rate of Return:** The overall economic internal rate of return (EIRR) of the project is estimated at 30.5% for the base case. The component-wise EIRR are (i) 16.8% for the value chain development component; (ii) 38.1% for the irrigation and new land development; and, (iii) 34.6% for the road up-gradation component. The net present value (NPV) of the programme net benefit stream, discounted at 13%, was noted to be PKR. USD89.85 million.

11.3.6 **Sensitivity Analysis:** The sensitivity analysis was undertaken assuming different scenarios and its likely impact on the overall effect on economic viability of the project. The result of the analysis indicates that a delay in the programme implementation by three years reduced the EIRR by nearly half (from 30.5% to 16.2%). The reduction of incremental benefits by 20% reduces the EIRR to 25.3% while the increase in cost by 20% will reduce the EIRR to 26.2%. An increase in total

programme costs by 20% and a simultaneous decrease of 20% in economic benefits would reduce to EIRR to 21.2%. A delay in programme benefits by five years would reduce EIRR to 10.7%. The sensitivity analysis shows that the programme investment will remain viable in the assumed scenarios accept the delay of benefits by 5 years which is not very likely.

The analysis of economic benefits and cost undertaken at various discount rates shows that the project is feasible at a discount rate of up to 30%. The NPV becomes negative at a discount rate of 31%. However it is very unlikely that the discount rate will go as high as 31%.

Table 27: Sensitivity Analysis of NPV, BCR and NPW at Various Discount Rates

Discount Rates	Cost	Benefits	NPV	B/C R	NPW
10	80.01	211.4	131.4	2.64	1.64
14	69.62	149.58	80.0	2.15	1.15
18	61.42	108.32	46.9	1.76	0.76
20	57.94	92.92	35.0	1.60	0.60
22	54.79	80.10	25.3	1.46	0.46
31	43.71	43.46	(0.25)	0.99	-0.01

The programme is economically viable proposition and feasible under different sensitivities and therefore should be considered worth implementation.

11.3.7 Social benefits with indicators: ETI will be implemented through community centered participatory approach with gender and poverty aspects mainstreamed in all aspects of programme planning and implementation. The main social benefits envisaged under ETI are as following:

- i. Programme will establish 220 village producers organizations. Women will be encouraged to be members of all organizations and their management bodies while 20 exclusive women producer groups will be also established. Around 10% of all organization members are expected to be women
- ii. Of the 50,000 acres of new developed land, 5% will be allocated to women headed households
- iii. Youth will be given particular attention in construction and value chain development activities. 40 Youth Construction Teams will be established and provided training and equipment to participate in irrigation and road construction activities for gainful employment
- iv. Nutrition awareness and training will be an important part of community mobilization and organization activities with a aim to reduce malnutrition and stunting by 15% by end of programme period
- v. 45,000 households will come out of poverty by programme end
- vi. 50% of households and value chain operators in target districts will have increased their agriculture incomes by 25% leading to improved living standards and access to social services

11.4 Employment generation (direct and indirect): ETI will adopt a participatory and labour intensive approach to ensure generation of maximum local employment generation activities. The direct and indirect employment generation due

to ETI investments is estimated to be 6,948 million person/days during seven years of implementation with following breakup:

- 11.4.1 **Irrigation and Land Development:** 3 million person/days of skilled and unskilled wage opportunities during construction of irrigation channels and land development equivalent to 50,000 acres.
- 11.4.2 **Roads:** 3.6 million person/days of skilled and unskilled wage labour opportunities will be created during the construction of 400 km of roads and 1000 meters of bridges.
- 11.4.3 **Value Chain Development:** 348,000 person/days of wage labour opportunities will be created under the value chain development component including harvesting, hauling, sorting/grading, packaging, processing, transportation etc.
- 11.4.4 **Others:** ETI will also create number of long term employment opportunities for the educated and skilled men and women in GB region in the shape of incremental staff for the line departments, Value Chain Technical Assistance Team and PCU and RCUs' staff. Total number of such staff would be 183 with around 60% technical staff and 40% support staff.

11.5 Environmental impact: The potential environmental challenges and risks for ETI programme implementation can be summarized as following:

- a. There is insufficient detail and data on climate change challenges and risks in the programme area
- b. Development of a large new irrigated area of 50,000 acres would lead to extraction of water at the cost of lower riparians
- c. Flood irrigation practices on large new areas may lead to soil run-off and land deterioration
- d. Destabilization of slopes due to new Construction:
- e. Vulnerability of New Irrigation infrastructure to Flash-Floods/Glacier Movement:
- f. High intensity/market led Agriculture leading to use of harmful chemicals and pesticides:

Features Built in Programme Design to Address Risks: A number of safe guards have been built in the design and programme approach to mitigate/address the identified social and environmental risks. These features are:

- a. An IFAD grant funding for WWF will provide more accurate mapping of the potential climate related hazards in the four districts and the mapping will provide a sound basis for building in mitigation measures in the design of programme funded infrastructure, value chain development practices and educating programme beneficiaries and district and provincial governments.
- b. The total extraction of water for 50,000 acres of new land will be not more than 0.6 MAF during the year. This is a miniscule proportion of 103 MAF system flow calculated in Provincial Water Accord (1991) of Pakistan. That too for an area which is now giving up on thousands of hectares of land for the construction of new Diamer-Bhasha Dam that would be the largest water reservoir for the down-stream irrigation users in Pakistan.

- c. Provincial Government will be supported to develop and adopt a provincial water policy covering issues of water allocation rights, water usage including water efficiency, water user fees and management, irrigation schemes management etc. The policy will also cover introduction and gradual adoption of efficient irrigation practices and help government funnel resources and manpower for introduction and implementation of water efficient practices and technologies.
- d. Appropriate safeguard features will be built in the design and construction of the irrigation channels and roads along the slopes, including support structures like breast walls, retaining walls, use of HDP pipes in unstable zones, cross drainage etc. to reduce to minimum the possibilities of destabilizing the slopes and starting any slides. Engagement of independent consultants for irrigation and roads will ensure quality designs and construction.
- e. Irrigation off-take structures will be designed to mitigate the effects of flash-floods and glacial movement. Where appropriate, flexible structures, instead of rigid structures, will be provided to enable the community to adjust them each watering season as per ground conditions.
- f. GB is traditionally an area known for organic production and that's where it gets the most premium for its products. Programme will build on this strength and provide support to local marketing companies and groups of producers to obtain organic certification through adoption of full organic practices and thereby minimizing the chances of resort to chemical fertilizers and pesticides.

Programme Environmental Category: Based on the foregoing, ETI Programme is fit to be assigned a category "B" status as per IFAD ESRN Guidelines. No additional study in this regard is required at this stage

11.6 Impact of delays on project cost and viability: Please see economic and financial analysis for impact on programme benefit streams due to delays.

12. a) Implementation Schedule: ETI Programme is a seven year programme scheduled to start on 01 July 2015 and be completed on 30 June 2021. Main activities and milestones during implementation would be as following:

a.1) Pre-Start up Activities: Among pre-startup activities, a hazard mapping survey with mitigation measures will be completed in association with WFP through an IFAD grant. A GIS survey of priority valleys will be carried out to establish a digital basis for irrigated lands and roads development. A short term consultancy support will be provided to P&D Department for PC-I formulation to ensure that is completed and submitted to Planning Commission for approval prior to loan negotiation. A Programme Expediter will be engaged to assist the provincial government in completing formalities for PCU and VCTAT recruitments, procurement of initial set of vehicles and equipment, identification of buildings for PCU and RCU establishment and preparation of first year AWP/B. Retroactive financing equal to US\$ 0.5 million will be available under IFAD loan to meet costs of eligible activities in the pre-startup phase.

a.2) Annual Plans and Budgets: ETI implementation will be guided by Annual Plans and Budgets based on Programme Design Report and PC-I phasing. The Annual Work Plan and budget for year 1 will be prepared during the pre-start-up phase and, after approval of Programme Steering Committee, furnished to IFAD for concurrence.

a.3) Mid-Term Review: A Mid-term review of the programme will be carried out around July 2018 jointly by Government of GB, Government of Pakistan and IFAD to assess the programme progress, identify strengths and weaknesses and finalize priorities, strategy and plans for the rest of programme life.

a.4) Project Completion Review: PCU and Government of Gilgit Baltistan will carry out a programme completion review six months prior to programme completion date as per the TOR and outline prescribed in IFAD PCR Guidelines.

b) Result Based Monitoring (RBM) Indicators:

Summary of main outcome and results indicators is as in following matrix:

Development Goal and Objectives	Outcome Indicators
Goal: Improve incomes and reduce poverty and malnutrition in rural areas of Gilgit Baltistan region	<ul style="list-style-type: none"> - No of poor households reduced by 15% compared to 2014 baseline - Child malnutrition reduced by 10% from 2014 Baseline
Development Objective: Increased Agriculture incomes and employment for at least 100,000 rural households in the region	<ul style="list-style-type: none"> - At least 100,000 rural households benefitting - 50% of GB HHs have increased their agriculture income by 25% - Target HHs show increase in their household assets by 10% - 35% increase in sales value and volume by end of programme life in potato and apricot - 25% increase in agriculture production and productivity - 5,000 regular and 20,000 seasonal jobs created by private sector partners and investors
Outcome 1: 100,000 households increase their production, productivity and sales in key agriculture commodities	<ul style="list-style-type: none"> - 50,000 hhs have expanded their agriculture landholding by at least one acre through new irrigated land - 60,000 hhs increase their sales to private sector partners through collective contracts through FOs or to urban and peri-urban areas - Existing and new crop area is linked with main road network through 400 km of new roads - 70% of the farmers in each target valley are members of farmers association, including at least 1/3rd women members - Over 50% farmers engaged with FO marketing/ economic activities - Over 50% farmers trained in pre and post-harvest practices for selected value chains
Outcome 2: Sustained and community driven development approach established that is pro-poor and youth/gender and nutrition sensitive	<ul style="list-style-type: none"> - No of village social and economic development plans prepared with participation of poor and women and implemented - No of land titles provided for newly development land to women and poor/landless - Amount of funds recovered against 50% repayment modality

	<ul style="list-style-type: none"> - % of repayment funds invested in activities favouring women, poor and youth - No of youth groups established, trained and provided tool kits - No of youth groups engaged with land development - No of village members trained in productive activities, at least 50% women -
Outcome 3: Agri-business actors invest in local production, processing and value addition to improve marketing of local food products	<ul style="list-style-type: none"> - No of producer-buyer contracts established by FOs and working satisfactorily - Value of new investments by private sector in agriculture and livestock enterprises (target US\$ 30 million) - A Value Chain Support Fund established and expended on matching grant basis benefitting at least 150 enterprises and farmer associations - 220 village producer groups formed (10% women) and 20 valley level associations established and engaged in contractual relationship with private sector buyers - Incremental quantities and value exported compared to baseline
Outcome 4: Government and private agriculture services are sustainably improved and outreach expanded	<ul style="list-style-type: none"> - % of farmers served by agriculture services - Amount of potato seed, fruit planting material delivered with results (Target: 25,000 tons of potato seed 300,000 plants of improved varieties) - No of adaptive trial and training conducted with number of farmers covered (Target: 100) - Amount of seed (inbound and outbound) certified - Number of incremental staff recruited and number of inputs (agriculture, research, livestock) packages delivered with no of farmers covered
Outcome 5: Government formulates and enforces pro-poor agriculture policies	<ul style="list-style-type: none"> - Interim Land Title Regulation and Provincial Land Law promulgated by end of Programme Year 1 and 2 respectively - Provincial and district land record offices established by end of Year 1 - Land titles provided for newly developed land including women and landless (Target: 50,000) - Certified seed system functional and amount certified - Provincial water Policy formulated and applied - Provincial Roads Master Plan prepared and O&M system with source of funding notified - Rules for the operation of revolving funds established with Tissue Culture Labs, Agriculture Extension and Livestock Department developed and notified

13. Management structure and manpower requirements including specialized skills during implementation and operational phases: ETI implementation will follow a hybrid model whereby some programme specific institutions like a PCU and Regional Coordination Offices will be established while actual implementation of programme activities will be carried out by existing public sector departments, NGOs and private sector service providers. Being a newly established province, the selected partner departments have capacity limitation which shall be addressed through engagement of incremental staff on contract. Availability of qualified staff for PCU/RCUs and incremental staff for line departments will not be an issue due to availability of a large pool of trained and qualified staff as a result of number of DPAP, AKRSP and other donor-funded initiatives in the region over the last three decades.

13.1 Federal Level and Provincial Level: Economic Affairs Division (EAD) is the designated coordinating and executing agency at Federal level for all foreign development assistance. IFAD loan will be negotiated by EAD, together with the Ministry of Finance and Government of Gilgit-Baltistan representative. Joint Secretary WB/IFAD will be the designated focal person for all programme related loan signing and approval processes, coordination and periodic progress reviews at the federal level.

Being a multi-sector programme, and based on the past experience of similar multi-sector programmes financed by IFAD and other donor agencies, Planning & Development Department would be the implementing department for the programme. Planning and Development Department will perform this task through two key institutions; a Programme Steering Committee (PSC) at the provincial level and a Programme Coordination Unit at the implementation level.

13.2 Programme Steering Committee: Programme Steering Committee (PSC) will be established for provincial level coordination, policy directions, and regulatory activities, approval of AWP&Bs, progress review and overall programme oversight and accountability. GoGB will notify Programme Steering Committee (PSC) immediately after the loan approval by the IFAD Executive Board. PSC will be headed by the Chief Secretary and will consist of the following members:

- Secretary, Planning & Development
- Secretary, Finance Department
- Secretary, Agriculture Department
- Secretary, Public Works Department
- Heads of Social Mobilization Partner Agencies
- Head of the Value Chain Technical Assistance Team
- Representative of the Ministry of Kashmir Affairs and GB (JS level).
- Representative of the Ministry of Planning Development and Reforms
- Representatives of potential Private Sector Partner institutions (senior executive level)
- 3 Representatives of Farmers Organisations of which one will be woman (as and when formed).

Programme Coordinator will act as Secretary to the PSC. PSC will meet at least twice a year, once for annual review of the preceding year and approval of next year annual workplan and budget and once for the mid-year review. More meetings of PSC may be convened if situation so warrants.

The Programme will finance a position of Programme Officer and a Programme Assistant, to be based in P&D Department, to provide secretarial support to PSC in the conduct of its business and also pursuing programme's interests/issues at the provincial level and follow up on PSC decisions.

13.3 Programme Coordination Committee, headed by Programme Coordinator and one representative each from implementing partners, the Committee will be the main planning, coordination and review forum for the day to day implementation of

programme's approved AWP/Bs and strategies. The Committee will meet once every quarter to review progress of the previous quarter and approve plans for the next quarter and inter-alia decide on any emergent issues and challenges. The Committee may also have emergent ad-hoc meetings to decide on matters of immediate importance.

- 13.4 **Programme Coordination Unit (PCU):** An autonomous and fully empowered PCU will be established in Gilgit Town with its own dedicated office and full-time staff. While technically and for administrative reasons under Planning & Development Department, the PCU will totally independent in its day to day decision-making and answerable for its performance and realization of programme targets to the Programme Steering Committee. PCU will be responsible for formulating programme's implementation strategy, development of strategic guidelines, preparation of annual work plan and budget, procurement of goods and services, financial management and disbursements and overall implementation coordination of the Programme. Once the annual work plan and budget of ETI is approved by the PSC, the Programme Coordinator will have full financial and administrative authority to take all necessary actions to give effect to the plan without any further need for references to Finance or P&D Departments. In doing so, the Programme Coordinator will be guided by the key principles of economy, transparency and efficiency and IFAD Financing Agreement. A programme organogram is attached as Figure 'A', and structure of PCU, RCU and TOR for the key staff is attached as Annex 4.
- 13.5 **Regional Coordination Units (RCU)** will be established for Gilgit, Baltistan and Diamer regions to overcome the challenges of large spread of the programme, distances and travel challenges from Gilgit to other districts and effective coordination and monitoring. RCUs will be mainly responsible for implementation coordination at the village, valley and regional level, monitoring and facilitating, and strengthening linkages of implementing partners with the target village and valley level institutions. It will be a small unit with limited number of technical staff Technical staff to provide the important coordination, monitoring, trouble shooting and progress reporting support to PCU. RCU will work in close coordination with the social mobilization partner/NGO.
- 13.6 **Programme supervision.** The Programme will be directly supervised by IFAD through fielding of Implementation Support and Supervision Missions led by the IFAD and composed of various experts, consultants or other IFAD HQ staff whose profile will be determined on a case-by-case basis upon analysis of Programme specific needs at the time of each mission. At least two supervision missions will be organized each year to assess overall progress and performance, gaps and constraints, with particular attention on fiduciary aspects, private sector linkages, and identify the necessary implementation support requirements. Ideally, at least one Supervision Mission per year should be organized at the same time as the PSC meetings, so as to allow the IFAD to attend these meetings as an observer.
- 13.7 **Key Implementing Partners:** The key implementing partners in the Programme will be:

13.7.1 **Social Mobilization Partners:** There could be one or more partners in programme area depending on their capacity and comparative advantages and experience. SMPs will be engaged through a competitive bidding process. SMPs will be responsible for all social mobilization and farmer organization aspects and facilitation of linkages between the farmer groups, private sector and implementing agencies and VCTAT.

13.7.2 **Department of Agriculture (DoA):** Directorates of Extension, Research and Water Management of the Department of Agriculture will be responsible for implementation of Programme activities related to their mandates.

- (i) **Directorate of Extension:** Extension Directorate is headed by a Director and has seven district offices headed by Deputy Directors and field presence consisting of Assistant Directors and field assistants. Programme will assist the Directorate in recruitment of incremental staff to address current staffing gaps. The Directorate staff at provincial, district and field levels will be responsible for pre-harvest, post-harvest and crop management related training of the farmers for the identified value chains and also assist the farmer organizations in establishment of farmer operated nurseries for quality fruit plants. The soil-testing lab in Gilgit will also be made fully functional.
- (ii) **Directorate of Research** will be primarily responsible for effective management of its three tissue culture labs for production of quality seed for potato crop to enable farmers to produce 25,000 metric tons of certified seed potato, farmer training and monitoring for potato seed multiplication, coordination and linkages with private and public sector potato seed buyers, promotion of valley based storage and sorting facilities and introduction of better varieties of vegetables. Capacity for seed certification will be fully developed at Gilgit and Skardu offices of Federal Seed Certification Department. Necessary incremental staff will be provided to enable the Directorate to effectively fulfil its mandate under ETI.
- (iii) **Directorate of Water Management** will be responsible for the implementation of small to medium irrigation schemes for the development of new irrigated area. The Directorate will be primarily responsible for identification of potential lands for development and their ownership status, establishment of Scheme Management Teams for the implementation of schemes, design and cost estimation of the schemes, agreement on implementation and cost recovery mechanism for each scheme and future O&M arrangements of the schemes. In doing so, OFWM will work in close collaboration with the social mobilization partners. The department will engage additional incremental staff as per Programme requirements and equipment and vehicles and position them as per targets fixed for each district.

13.7.3 **GB Public Works Department:** GB Public Works Department will be responsible for implementation of large and complex irrigation schemes and upgrading of 400 kms of farm to market roads in association with the SMPs and WMD, establishment of basic design criteria, engagement of a consulting firm for the detailed design, cost estimation, tender documentation and construction supervision, procurement of machinery and equipment for O&M of roads, development of a provincial policy for road development and O&M, and establishment of a Roads O&M Fund and a system for its regular topping up. The roads will constructed only through prequalified contractors selected with the help of consultants.

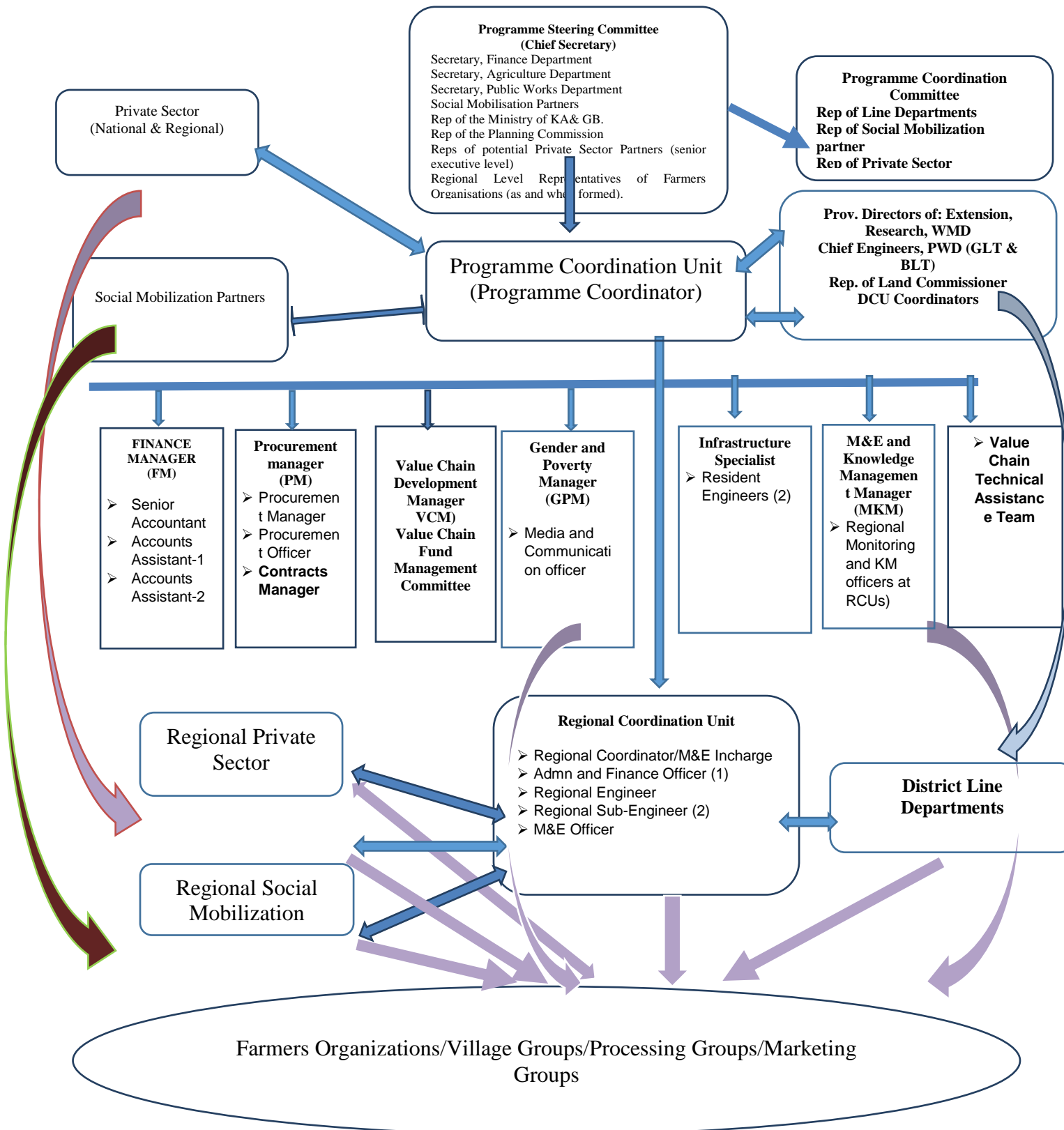
- 13.7.4 **Value Chain Technical Assistance Team (VCTAT):** Services of qualified personnel will be engaged for specialized long term and short term positions. VCTAT will be based in PCU and will work in close collaboration with other implementing partners, in particular extension and research agencies and social mobilization partners. It will assist each valley producers association in development of a business plan for its key products and their marketing, assist in linkages with down country buyers and formulation and execution of buyer-seller contracts, monitor the progress of business plan and take corrective measures where necessary, promote local entrepreneurship in value addition and processing and link promising ventures with Value Chain Fund and assist the applicants in meeting the conditions for the disbursement of Value Chain Funds. VCTAT will also identify policy and regulatory areas for government action.
- 13.7.5 **Value Chain Development Fund Management Committee:** The Value Chain Fund is aimed at meeting the financing needs of Village Producer Groups, Valley Producers Associations and individual entrepreneurs and product specific groups like Women Milk Marketing Groups. It will also be a facilitating instrument for providing any viability gap funding. The Fund will operate on matching-grant-basis and will provide funds equal to the funds raised by the group/association or individual. A Committee will be constituted within PCU to oversee the management of Value Chain Fund management and disbursement. The Committee will be headed by Programme Coordinator with heads of VCTAT, PCU Finance, Agriculture Extension, Agriculture Research, private/corporate sectors representatives and two representatives from Farmers Organizations as members. The Committee will meet once every month to consider matching grant requests from Farmers Groups/Associations and local entrepreneurs for value chain development of the commodities targeted by the Programme. The book-keeping for the fund will be the responsibility of PCU finance wing. The proposal vetting/scrutiny, district shares in the fund and ceilings for individual proposals and disbursement procedures will be detailed in PIM.
- 13.7.6 **Farmers Organizations (FOs):** All village/valley level Programme interventions particularly business development, agriculture extension, infrastructure, private sector linkages etc. will implemented through active involvement of organized farmers groups including women's organizations. Programme will promote a hierarchy of farmers groups and associations starting with Village Producers Groups that would be subsequently organized into Valley Producers Associations and subsequently district/regional associations for each commodity. While at village level such groups will have a simple agreement with the Programme/SMP for their operational mode and mutual responsibilities, at valley and district level these groups will have a formal structure with proper registration, bank account and bye-laws governing their operations. Programmes value chain related investments in a valley will start once the valley association has been formally registered, a business plan agreed with the assistance of VCTAT and a formal contract agreement signed with a down-country buyer for the given commodity or commodities. The Association will also become eligible for matching funds from Value Chain Fund only after these steps have been completed. Village Producer Groups and commodity specific value chain development groups will however be eligible once such groups have been organized,

have a business plan duly vetted and recommended by VCTAT and have raised their own matching resources.

13.7.7 **Private Sector Partners:** Promotion of partnership with private sector will be a cornerstone of Programme approach and will be pursued through social mobilisation partners and Value Chain Technical assistance Team and partner government extension and research agencies. Partnerships will be pursued both with local private sector entities as well as down-country buyers. In addition to partnerships for sale of local products, other partnerships will also be developed for provision of services and inputs, marketing, contract farming, potential private sector service providers and processors and local transporters for provision of specialized transport for high value products/crops.

Figure 'A'

PROGRAMME MANAGEMENT STRUCTURE



- 14. Additional projects/decisions required to maximize socio-economic benefits from the proposed project:** GB is a newly created province and needs to address number of legal and regulatory gaps related to input and output quality assurance in agriculture sector, land laws and land titling systems, provincial irrigation water regulations etc. ETI programme make provisions for assisting the provincial government through technical assistance to address some of these legal and regulatory gaps that are directly related to programme investments.
- 15. Certified that the project proposal has been prepared on the basis of Instructions provided by the Planning Commission for the preparation of PC-I for production sector projects**

Prepared by _____
Name, Designation & Phone #

Checked by _____
Name, Designation & Phone #

Approved by _____
Name, Designation & Phone #

Annex 1

Value Chain Fund and Value Chain Technical Assistance Team

1. **Value Chain Fund:** A Value Chain Fund will be established within the PCU and will be used to provide matching grants to different actors along the value chain. The specific objective of this sub-component would be to develop producer-public-private alliances in the programme areas aimed at improving market linkages and value addition to local products. The fund will be available for valley producers associations, village producers groups, local and external private sector service providers for various segments of value chain, youth and women groups involved in processing and marketing aspects, existing processors, transporters, packagers etc. The main criteria for access will be formal registration, documentary proof of engagement in that particular activity and track record, a feasible proposal/business plan that demonstrates that the activity will directly contribute to adding value to any of the local produce or its access to better markets with better returns for farmers and region, and a proof of applicants own contribution/matching investment in the venture.

2. **Rationale for Matching Grants Option:** Considering all the institutional and other factors, and the past experience in other programmes within the country and elsewhere, financial support to local producers and other actors involved in value chains through a credit window does not appear to be very viable. A matching grants option is more doable in the given situation with the added advantage that it would bring in about equal or more amount of private sector investment into the existing and future value chains in the area. Once a critical mass of commercially oriented agriculture production and processing regime is established through the matching grants mechanism, it may open the window for the other financial institutions in the region to get actively engaged in credit financing for the sector on appropriate interest rates.

3. **Operating Principles:** The fund will be used only as a matching grant for viable business proposals/plans submitted by private and public sector entities clearly demonstrating that such a venture would directly contribute to the promotion, marketing, higher returns, employability, and profitability of a product emanating from GB. There would be a clear evidence of the formal existence of the applicant group or individual as a registered entity with a bank record and a business experience for the venture that s/he is proposing. Approved matching grant funds will be provided in instalments only when the applicant has invested his own share of funds. For procurement of equipment and machinery identified in the business proposal, PCU will establish the specifications for such equipment and the beneficiary entity will do the procurement itself as per those specifications through a competitive process. Upon satisfactory delivery of the equipment, payments for the matching grant component will be directly made to the supplier by the PCU. As a rule of thumb, the matching grant contribution from valley and village producers associations, local small entrepreneurs and processors will be kept on lower side (30-40%) and for the larger corporate sector applicants the requirement of matching funding would be comparatively higher (60-70% of the total investment). There would be definite caps on total amount of matching grant permissible for each type of applicant and each type of business. Detailed operational guidelines will be developed by PCU, with assistance from VCTAT and submit for IFAD concurrence.

4. **Eligible partners.** Programme funding would be channelled through partnerships with legal entities in the private sector who have already been successfully engaged with smallholders to increase output, productivity, quality and marketing and who are interested in scaling up those activities. The partners would need to have a demonstrated capacity to manage contracts and

activities of the scope and nature identified in the proposed partnership. It is anticipated that the majority of partnerships would involve identified farmer groups and any of the following:

- An agribusiness or private sector firm or association of firms engaged in the sector;
- A knowledge or service provider (private, public or civil society entity, such as University or NGO);
- Smallholder farmer cooperatives or associations;
- A multiple partnership involving more than two of the above, with one partner designated as the *lead*.

5. To be eligible, private entities would need to be legally registered in Pakistan/GB and demonstrate a history (minimum one year) of involvement in similar activities. To qualify as a lead partner, an entity must be eligible to sign legal contracts and receive funds. The lead partner must be a legally incorporated company or business group registered under the Securities & Exchange Commission or a cooperative society registered with the Cooperative Societies Act of Pakistan or a registered Association. The other partners and participants need not be legally registered or incorporated.

6. *Eligible activities.* Those eligible activities will be demand-driven, and based on agreed results which would be consistent with the specific objectives of the programme. Some of the indicative eligible activities include the following:

- a. *Production of improved planting material:* Development of new and expansion of existing farmer operated nurseries, and the establishment under technical control of Department of Agriculture, satellite nurseries and budwood gardens. These nurseries will be established and operated on purely commercial principles with no element of subsidies and Agriculture Extension would support the farmers in their marketing outreach and sale of plants to other farmer groups.
- b. *Sustainable and certified production systems.* Support to interested groups of farmers for producing certified or specialty products under internationally recognized sustainability schemes, including the provision of objective information to assist farmers to make informed decisions on whether certification is a sound option for them and, if so, what type of certification is the best solution. This includes support for knowledge providers and farmer groups or cooperatives that would build group capacity, and address certification requirements;
- c. *Post-harvest and processing.* Matching grants will be available to partners that make investments in improved processing, trading, and storage facilities for quality management, value addition, packaging, branding and aggregation and grading of the products;
- d. *Diversification of farming systems.* Partnerships to facilitate alternative crops and new technologies for the diversification of current production systems to more remunerative cropping systems.
- e. *Aggregation and Marketing of Fresh produce:* Collection, transport and marketing of fresh produce like milk and vegetables in the local markets to meet local commodity deficits and to process and products for down-country sale and marketing
- f. *By-product processing:* Processing of high value products like apricot kernel oil, pine-nut paste, Sea-buck thorn processing into multiple products etc.
- g. *Input Supplies:* Establishment of sale or processing units of various locally needed agriculture inputs like fertilizers, certified seeds, pesticides, animal, chicken and fish-feed, animal medicines and vaccines etc.

7. *Partnership arrangements.* Expected results and cost-sharing arrangements would be specified in the agreements between the programme and successful recipients. The PIM provides detailed guidelines on cost-sharing arrangements.

8. *Tentative Cost Sharing: (The cost sharing suggested in this section is very tentative and PCU and VCTAT are expected to firm up the criteria and matching grant shares and eligibilities at the start of programme after due consultations with all stakeholders.)* Cost sharing between ETI and recipients of matching grants will vary depending on the nature of business and its import for local value chain development, nature and type of recipient (business, corporate, farmer association, women groups etc.) relative assets of the recipient. Recipients who belong to the region and have lower revenues would receive a higher level of support. The main partners identified in the proposals would be classified into three levels:

- a. Partners with combined annual revenues in excess of Pak Rs 5 million will receive 40% support for eligible activities and expenditures under their proposals;
- b. Partners with combined annual revenues between Pak Rs. 1 million and 5 million will receive 60% support for eligible activities and expenditures under their proposals;
- c. Partners with combined annual revenues less than Pak Rs. 1 million will receive 70% support for eligible activities and expenditures under their proposals.

9. The maximum programme financing per Partnership would be USD 100,000. This would be revisited as the programme progresses to ensure optimal use of the funds.

10. *Partnership development.* The PCU would advertise and call for proposals for partnerships. The PCU, through its VCF Management Committee, would identify eligible proposals. If need be the VCTAT will assist the proponents in improving their proposals to meet the required standards. Financing of eligible proposals would be appraised by the VCTAT and placed before Fund Management Committee for approval. The PCU will also entertain any unsolicited proposals submitted by firms, groups and individuals or farmers associations/groups.

11. *Selection and ranking criteria.* Proposals should respond to eligible activities as defined in the call for proposals or general component guidelines. The selection and ranking criteria are defined in the PIM and include: (a) the financial and management capacity of the lead partner; (b) relevance in responding to the call for proposals and alignment with ETI objectives; (c) technical aspects, including feasibility of business plan, relevance to local needs and demands of value chains and farmers; (d) number of households to benefit from the activities; (e) expected benefits –social, economic and environmental; and (f) consideration given to smallholders in disadvantaged locations and to vulnerable groups (including women and young farmers).

12. The guidelines on cost sharing arrangements, ceiling level for partnerships, standard contractual formats and the rules for the implementation of this component (e.g. eligibility criteria, selection process, evaluation process, etc) will be further developed by PCU and VCTAT at the start of programme after consulting all stakeholders.

13. By the end of the programme, it is expected that up to 100 partnerships would be assisted and up to 60,000 smallholder farmers would directly and indirectly benefit from such matching grant partnerships. About 20 processing facilities would be established through programme support for value addition and reduction in wastage.

14. *Fund Management Committee,* headed by the Programme Coordinator with Finance Manager, Business Development Manager, Head of Social Mobilization Partner (s), two private sector members, two representatives of the farmer groups/associations and head of Value Chain Technical Assistance Team will manage the operation of the Fund and consideration and approval

of matching grant proposals. The Management Committee will meet once every sixty days (more often if need be) to consider the proposals and take decisions. All decisions will be minuted and outcome of every proposal will be communicated in written to the applicant individual/association.

15. *Value Chain Technical Assistance Team* will assist the PCU in developing systems, procedures, criteria and monitoring mechanisms for effective and transparent operation of the Fund. VC Manager in PCU will be the focal person for Value Chain Fund and VCTAT and will also act as the Secretariat for the Fund and maintain all related documentation, records of meetings and follow-up with approved matching grant recipients and advise PCU on the status of each matching grant and appropriate actions wherever required. VCTAT will assist the target groups and beneficiaries eligible for ETI support in developing their business proposals and operation of the businesses once the matching grant is approved. The financial record and accounting of the fund will be the responsibility of Finance Manager.

16. *Technical Support to Women, Youth and Small Entrepreneurs.* The SMPs, VCTAT and line agencies staff would assist those potential partners with lower capacity (such as women or youth, and farmers in more remote areas) in the preparation of their proposals and subsequent implementation once their proposals are approved. Assistance could extend to continued support in monitoring the implementation of the partnerships.

17. *Indicative Allocation of VCS Fund:* The Value Chain Support Fund will essentially be a flexible window for matching grants and primarily driven by demand and comparative importance of various aspects of different value chains. However, to ensure that different partners in a value chain get an equitable access to the funds, the PCU based VCF committee will develop detailed operating rules and allocation criteria for both farmers organizations and public and private sector entities at the start of the programme. Indicative procedures, processes and limits are articulated in draft PIM for further refinement.

18. **A Pilot under Credit Guarantee Scheme:** ETI will explore the possibility of doing a pilot in collaboration with DFID and State Bank of Pakistan with a view to establish sustainable options for formal finance in rural value chain enterprise development.

19. *Value Chain Technical Assistance Team:* The Value Chain Technical Assistance Team will be an integral part of PCU and will address the current challenge of absence of quality advice in the region and engaged private sector on developing win-win partnerships for various products/value chains in the region.

20. *Options Considered:* The design team considered number of options for the establishment of this expertise in the programme. One option was to engage individuals for various positions within PCU and they provide the technical support to farmer organizations, private sector and public sector for development of different value chains. The option was discarded in view of recruitment challenges for long-term positions in GB region and difficulty of moulding individuals from different backgrounds into an effective multi-disciplinary team. The second option is to engage a consulting firm through competitive process. The difficulty in this option is that there are hardly any local consulting firms with the experience and expertise in offering value chain development related services. Opting for this option may ultimately result in either very poor response or response from entities who are not exactly capable of delivering quality services. The third option is to engage an international organization with mandate and track record in supporting value chain development. In the GB context, such an organization is FAO which also happens to have a long history of working in the area and played an important role in introduction of high value crops which are now being tipped for value chain development. A challenge in this option is that the governments are not very keen to engage 'expensive' international agencies for loan funded activities. So unless an element of grant funding, from FAO's own sources or a

bilateral funding source, is secured for engaging FAO, the option may not find much interest in national approval bodies. The three available options need to be further pursued prior to and during appraisal to find a workable option.

21. *Composition and Duration:* The Value Chain Technical Assistance Team will be engaged for first three years of the programme on continuous basis and afterwards its services may be engaged on intermittent/need basis. VCTAT will be a multi-disciplinary team, with a designated Team Leader, covering various aspects of value chain development. The main disciplines covered by the team would include Fruit Value Chains Development, Vegetable Value Chain Development, Agri Products Processing, Agri products Economic and Financial Analysis, Small-holder Agriculture Marketing and Value Addition etc. The team will be based in PCU and will report to Programme Coordinator for its assigned tasks.

22. *Approach and Responsibilities:* VCTAT will be an integral part of PCU and will work in close coordination with all implementing partners. It will develop a comprehensive value chain development strategy, covering priority products, priority geographical areas for selection, value chain gap analysis, approach and strategy for engaging and organizing smallholders in value chain development, potential private sector partners to engage with, coordination at village/valley level between SMPs, line agencies and VCTAT, guidelines for effective use of Value Chain Fund including eligibility criteria and processing of proposals etc. The strategy will be developed in a consultative manner involving all implementing partners and will be presented to Programme Steering Committee for its endorsement. Successful implementation of strategy will be a key factor in performance assessment of VCTAT. VCTAT will provide hands-on support to producers associations and private sector in developing contract based buyer-seller relationships against agreed quality and price standards. The team will assist valley producers associations and related local entrepreneurs to develop feasible business plans and assist them in accessing value chain funds where required. At least 20 producer-buyer contractual relationships with corporate and other large industry and market players for key products like potato, tomato, apple, cherry, nuts and other niche products of the area will be established on long term basis. At least ten local processing and other service provision businesses will be developed/supported.

23. *Annual Plans and Budgets:* VCTAT will develop annual plans of activities for its areas of responsibility and attendant budgets and such plans will form part of programme AWP/B. The plans will be prepared on the basis of programme phasing for various activities and in close coordination with other implementing partners including SMPs.

24. *Performance Assessment and Retention:* The VCTAT will be subject to comprehensive performance assessment on annual basis to determine usefulness of its retention or need for adjustments in its composition including leadership. Apart from PCU's internal assessment of VCTAT, IFAD supervision mission's will specifically evaluate the performance and effectiveness of VCTAT and suggest improvements where needed.

25. **Value Chain Technical Assistance Team Composition and TOR:** The purpose to deploy a Value Chain Technical Assistance Team (VCTAT) is to create in house capacity in the ETI Programme to provide quality advice to all players involved in the development of value chains of priority products on on-going basis.

26. **Duration:** VCTAT will consist of long term experts as well as short-term experts engaged for a limited period for specific aspects of value chains. The long term experts will be for the full duration of the programme.

27. **Long-term Experts – Team Composition and TOR:** Long-term experts and their TOR is as following:

- (a) **Technical Lead Expert (TLE):** TLE will be engaged for full seven years of the programme. He will be overall responsible for the VCTAT performance as per TOR and agreed annual plans and phasing. He will also for developing a comprehensive strategy and plan for value chain development of priority products in consultation with other implementing agencies, private sector entities and farmer groups. He will deploy the component resources on the basis of agreed strategy and phasing. He will also assist the PCU in selection of other long and short-term expertise under the component. He will also be responsible for performance assessment of long and short-term experts working in the component and their further retention for the programme. He will report to Programme Coordinator.
- (b) **Value Chain Specialists:** Programme will engage four value chain specialists, one for each of the selected value chains. Initially two specialists will be engaged for Potato and Apricot. They will, under the guidance of TLE, develop comprehensive strategies and plans for the value chain assigned to them with measurable progress indicators in value and volume terms. They will primarily be responsible for engaging all relevant actors in contract based relationships from producer to end user.

28. **Short-Term Experts:** Programme will engage a number of short-term experts – some for short periods every year and others for one off delivery of specific services. These experts and their duration will be as following:

- a. **Capacity Building and Gender Specialist:** For one person month during year one to develop a gender strategy for the component and deliver related training to concerned staff of PCU and implementing agencies
- b. **Market Information Specialist:** For one person month during year one to assist the VCTAT in mapping the market information sources for the priority value chains and design and establish a system for market information sourcing by producers and other actors involved in the value chain to make knowledge based marketing decisions in respect of their crops and activities.
- c. **Value Chain Analysis Consultant:** For one person month during year 1 to assist the VCTAT in comprehensive analysis of the target value chains, identification of missing links and weaknesses and develop appropriate strategies for addressing the gaps.
- d. **Trainer for Value Chains:** For one person month during year one to develop training modules for value chain players.
- e. **Financial Analyst:** For two person month each year to prepare modules for financial analysis of value chains, carry out financial analysis of the projects selected by ETI for support and train VCTAT and other relevant partners in value chain's financial analysis.
- f. **Assistant Contract Manager:** One person month during year 1 to prepare draft contracts for different value chain segments and players for use during the programme implementation
- g. **Grant Support Fund Specialist:** For 6 person months during year 1 to prepare comprehensive guidelines, selection criteria, matching fund ceilings and conditions etc. for the deployment of matching funds from Value Chain Support Fund
- h. **Grant Product Designer:** One person month during year 1 to assist PCU and VCTAT in designing different grant funding products for promising projects within different value chains.

Annex 2

SOCIAL MOBILIZATION APPROACH AND PARTNER SELECTION PROCESS AND CRITERIA

1. **Approach:** ETI will be implemented through a participatory approach involving organization of farmers in village and valley level groups around identified products. A total of 220 village level organizations (including 20 women specific groups) will be established over programme life. A two track approach will be adopted to organizing farmer organizations around identified value chains. **Track 1** will be organizing the farmers of selected promising crops (potato, apricot, milk etc.) in a village and valley level producers associations in existing crop areas and from among previously established FEGs. This may include some existing groups already engaged in joint production and marketing activities but are facing challenges of production, productivity, quality and scales. Programme is expected to establish/sponsor/support around 10 groups in the year 1 which would also help kick-start the programme activities in the value chain realm. **Track 2**, will entail organizing farmer groups that will benefit from the land selected for irrigation development. The process will start with reaching an agreement with the farmers on organizing and accepting programme's terms and conditions for the development of irrigation system, levelling of land and crop production including the stipulation on equitable distribution of land among the community members including native of the village poor and women and repayment of 50% of scheme cost into community's own development fund for further investment in social and economic development activities. Along with irrigation development and needed road linkages, these beneficiary groups will be assisted in developing production and business plans for the newly developed land and become part of an existing valley producers association. In both cases, specific steps will be included in the process to identify the poorest households, the women-headed households and unemployed youth to ensure that get priority appropriate assistance through various programme activities included under different sub-components.

2. *Addressing of Nutritional Deficiencies:* Nutrition related activities will be mainstreamed into activities at the community level, particularly with the women and youth. A training need assessment will be conducted at the start of programme to assess the needs for nutrition related training and accordingly appropriate training materials will be sourced off the shelf or developed if need be. TOT will be conducted to train the SMP staff and extension agency staff in nutrition knowledge and skills. Training will be further imparted to male and female members of VPG/FEGs and youth as part of community training and mobilizations activities. Appropriate nutrition related information materials will be sourced or developed for distribution and dissemination.

3. ***Main inputs social mobilization sub-component will include:***

- i. Engagement of social mobilization partners through a competitive process.
- ii. **In the alternate**, establish in-house social mobilization and institution building capacity under PCU and DCUs (at district level) to manage all farmer organization and social mobilization related activities.
- iii. Development of a social mobilization and community interaction strategy on the basis of programme objectives in collaboration with PCU, line departments and private sector and deployment of appropriate number of male and female social organizers

- iv. Assistance to PCU based Stakeholder Committee for selection of priority valleys and crops on the basis of Baseline Survey and in close collaboration with Department of Agriculture (Extension & Research), VCTAT and PCU/DCU.
- v. Engagement with existing active production and marketing groups. Immediate priority crops include seed and table potato production, green peas, capsicum, apricot, apple, cherry and walnuts, milk production and marketing.
- vi. Training of SMPs staff in programme objectives and approach, coordination processes to engage with other implementing partners, reporting and accountability and deployment of trained staff
- vii. TOT training for selected male and female staff of SMP and extension agencies in nutrition and delivery of nutrition training at village level for male and female members.
- viii. Dialogue with the villages in selected valleys to establish 220 village producer groups, including women, around specific crops and preparation of village development needs/plan in economic and social sectors
- ix. Identification and engagement of special target groups including women, women-headed households, special needs individuals, landless and unemployed youth for targeted assistance as well as assurance that they get equitable priority benefit from programme funded activities.
- x. Phase formation of village producers associations in a manner to organize all target villages and most of the valley producers associations by end of year 3.
- xi. Establishment of 25-30 Valley Level Producers Associations, at least one in each valley, representing village producers groups and assisting them, in collaboration with TA team, in establishing formal structure, registration, business plan and opening of accounts etc.
- xii. 3-4 Regional Producers Associations formed once the Valley Associations are fully operational and working profitably.

4. Selection Criteria and Guiding Principles:

Selection Criteria: A RSP/NGO will be selected through competitive process following IFAD procurement guidelines for social mobilization activities of ETI. A selection committee will be constituted with the approval of PSC to conduct the process including TOR, advertisement, proposal evaluation and recommendations for the government and IFAD. TOR and final selection and agreement will be subject to IFAD No Objection. Following are the suggested key elements of criteria for the selection of a social mobilization partner (SMP)/NGO for the four target districts. PCU may further refine them in terms of criteria and allocation of marks for various aspects :

Experience & capacity (50 marks)

- i. Overall experience in similar projects in partnership with government and foreign funding agencies (10)
- ii. Size of existing portfolio of projects with amount (10)
- iii. Total number of community organizations formed and total number of active Cos within target districts, province and outside(10)
- iv. Total number of professional staff in employment (10)
- v. Number of vehicles and offices within and outside province (10)

Presence in the project area (50)

- vi. Number of ETI target districts currently being covered through active presence and programmes (20)
- vii. Number of active COs in the covered districts (10)

- viii. Number of offices in the target districts (10)
- ix. Number of professional social mobilization, engineering and other technical staff in the target districts ((10)

Technical Proposal (70 marks)

- x. Understanding of the task and approach (10)
- xi. Quality of methodology proposed to undertake the task (20)
- xii. Qualification, quality and efficacy of staff proposed (20)
- xiii. Value addition in terms of additional assistance to the farmer Organizations (10)
- xiv. Methodology proposed for effective coordination with programme implementation bodies (10)

Financial Proposal (30 marks)

- xv. Appropriateness of proposed salary and non-salary budget for social mobilization and other related activities as compared to other competitors

5. **Selection Process:** PCU will get the detailed TOR and selection processed approved from PSC and advertise the same for the invitation of applications from interested social mobilization organizations. A Committee will be constituted with the approval of PSC to evaluate the technical and financial proposals and select the best candidate. The final selection will be subject to prior review of IFAD and approval of PSC.

6. **Pointers for Evaluation of proposals:** The evaluation committee should keep the following in view while evaluating the proposals:

- a. Preference should be given to organizations with ongoing programme in large part of the target area to take advantage of their existing village level knowledge and contacts and savings in terms of establishment.
- b. Post programme sustainability of the organization within the programme districts should be given weightage. The organizations likely to continue should be preferred.
- c. Selection of different partners for different districts could be considered in case one SMP has considerable advantage in one or more of the target districts but not all
- d. For proposals from organizations with existing presence in the project area, the organization should be paid only for the incremental work load of their staff and not for the entire establishment
- e. No new vehicles or equipment should be considered for such organizations; instead they should be paid a lumpsum operational budget

Annex 2 - Attachment 1

I. Draft CONTRACT FOR SMP/NGO SERVICES

BETWEEN

The Programme Coordinator, Economic Transformation Initiative, P&D Department, GB, acting on behalf of the Government of GB, and ????? SMP/NGO, agree to the following contract together with the ??? appendices attached hereto:

Whereas:

The Programme has selected through a competitive process the ??SMP for provision of specific community mobilization and development related services (hereinafter called the Services) necessary for the effective implementation of ETI in 4 Districts of GB (Diamer, Astore, Ghizer and Ghanche).

??SMP has agreed to provide the Services on the terms and conditions set forth in this contract.

Now, therefore, the parties hereto hereby agree as follows:

Article 1 Services

- 1.1 SMP shall perform the services under this contract in accordance with the terms of reference set forth in appendix – A, and in accordance with the attached Appendices which are integral part of the contract.
- 1.2 SMP will commence the services as soon as possible but not later than fifteen days after signing the contract.

Article 2

Responsibilities of SMP

- 2.1 SMP shall be responsible to the PCU for the services as specified in the attached Terms of Reference as Appendices – A, B, and C and for other requirements under the loan/financing agreement between IFAD and Government of Pakistan. The terms and conditions set out in the agreement are to be applied inter alia in conjunction with the following documents:
 - a. Loan/Financing Agreement between the GoP and IFAD,
 - b. Approved PC-1 Form of LAMP
 - c. Project Design Report of IFAD
 - d. Project Implementation ManualIn case of any contradiction in provisions of any two documents, the loan agreement shall be the final reference.
- 2.2 The SMP shall draw up its work plan for first year, in consultation with DCUs, and submit the same to the PCU within one month of signing the contract. Thereafter, the SMP shall provide draft quarterly and annual work-plans, formulated in collaboration with DCUs, for discussions and agreement with PMU at least one month and two months respectively before their effectiveness.

- 2.3 SMP shall establish a District Office in each of the four target districts and deploy appropriate number of suitable male and female staff to effectively carry out activities assigned to it under this contract. Such office locations, name of District program Manager and staff names and designations will be duly notified to the PCU and respective DCU, not later than one month of the signing of this contract.
- 2.4 SMP shall assign its specified representatives for the PSC, PCU Coordination Meetings and DCU Coordination meetings.
- 2.5 SMP shall carry out programme specified mobilization activities in villages and valleys prioritized by the PCU in consultation with all implementing agencies and use and deploy programme resources only in such valleys and villages.
- 2.8 SMP shall mainstream gender aspects in project activities and work proactively in terms of gender sensitization
- 2.9 The SMP shall provide quarterly and annual progress reports as per format prescribed by PCU
- 2.10 The SMP shall maintain financial accounts and render financial reports in such form and frequency as prescribed by PCU Finance Manager and visiting IFAD supervision missions. SMP shall provide annual audit reports of its accounts carried out by 'A' class chartered accountant firm.

Article 3

Responsibilities of the Programme

- 3.1 The total amount for the contracted services to be made available to the SMP under this Agreement shall be Rs.??? millions for carrying out its contracted responsibilities. This amount shall cover SMP's salary and operational costs related to services rendered for ETI implementation. The amount shall be paid as advance on quarterly basis against each year approved annual budget for salary and operational cost. Funds for next quarter will be released on rendering of at least 70% of expenditure account for the previous advance.
- 3.2 In addition, the programme will provide funding for the any additional specific activities assigned to SMP for implementation and all other training activities assigned to SMP on the basis of approved schemes, costs agreed and phasing.
- 3.3 PCU shall ensure timely provision of all agreed operational and investment funds.
- 3.4 PCU shall ensure conducive working environment for the SMP including effective and efficient implementation of corresponding activities assigned to the DCUs and implementing agencies.
- 3.5 PCU and DCUs will ensure effective and regular communication with SMP counterparts and inform them timely of any changes in working conditions or project components that may have any impact on SMP working environment.

Article 4

Duration of Agreement

- 4.1 The agreement will become effective from the date first advance disbursement is made to SMP.
- 4.2 This Agreement shall remain valid for seven (7) years or till the closing of the programme (whichever is later) from the date of its signing unless otherwise modified, altered, or amended at any time by mutual consent of the parties in writing. It may be terminated at any time by giving not less than sixty (60) days prior written notice from either party and after settling the accounts but not before showing due cause by the Programme Coordinator of such notice which is endorsed by the donor agency or its representative.
- 4.3 If any of the following events shall have happened and be continuing, the PCU may by 60 (sixty) days prior written notice to the SMP suspend in whole or in part payments due thereafter to the SMP under the contract:
- 4.3.1 IFAD shall have suspended disbursements from the Loan;
- 4.3.2 A default shall have occurred on the part of the SMP in the execution of the contract;
- 4.3.3 Any other conditions which shall have arisen, and which in the opinion of the PCU and agreed by SMP and IFAD, interferes, or threatens to interfere, with the successful carrying out of the Project or the accomplishment of the purposes of the contract.
- 4.4 If any of the following events shall have happened and be continuing, the PCU may by written communiqués to the SMP terminate the contract:
- 4.4.1 Any of the conditions referred to in section 4.3 continuing for a period of 60 (sixty) days after suspension of payments under the contract; the Loan Agreement shall have been terminated.

Article 5

Other Relevant Conditions

- 5.1 The SMP indemnifies and protects the Programme against any claims from third parties or members of the SMP's staff relating to loss or damage to property or injury or death caused by actions or negligence of the SMP whilst undertaking the works and services specified in this Agreement.
- 5.2 The SMP shall, at its own cost and expense, upon request of the PCU, re-perform the services in the event of outputs referred in Appendix-A which are not accepted by the PCU.
- 5.3 All reports and relevant data such as maps, diagrams, plans, statistics and supporting records or materials compiled or prepared in the course of the services shall be confidential and shall be the joint property of ETI and SMP. The SMP agrees to deliver all these materials to the PCU during and upon completion of this contract, respectively. SMP may retain a copy of such data but shall not use the same for the purposes unrelated to this contract without prior written approval of the PCU. However, sharing of progress reports with other development agencies will not require prior permission.
- 5.4 All leaflets, brochures, sign boards, advertisement printed matter etc. related to ETI activities performed by SMP shall have the logo of the Programme and Government of the GB in addition to SMP except training material and instructions.

- 5.5 It shall be an output based agreement. SMP shall maintain its accounts and get them audited on its own, as per companies' ordinance 1984, and provide a copy of the annual audited report to PCU and IFAD, whenever required.
- 5.6 The SMP shall enable programme and IFAD representatives to inspect sites, works, property and equipment, and the goods financed out of the proceeds of the loan and relevant records and documents.
- 5.7 If the two parties are unable to amicably settle any dispute arising out of or in connection with this Agreement within 10 days of the occurrence of the dispute, they shall seek an amicable settlement through Chief Secretary, Government of Gilgit-Baltistan, whose decision shall be binding on both parties.
- 5.8 In case the SMP is obstructed in the commencement or completion of its work by any Force Majeure agreed to be as such by both parties, (riot, insurrection, war, blockage, civil commotion, epidemics, act of public authorities, natural calamities, or other abnormal conditions) time for completion of the works will be extended to accommodate the lost time on account of the Force Majeure.
- 5.9 In the event that the circumstances causing Force Majeure shall continue for a period of more than one hundred and twenty days then either party shall have the right to terminate the Agreement and the amount payable shall be limited to that corresponding to the works and services completed prior to Force Majeure taking effect or as may otherwise be mutually agreed. The SMP shall immediately advise the PCU in writing of any circumstances causing Force Majeure.

Article 6

In witness whereof, the parties thereto have hereunder subscribed their names and put their signature as agreed.

Signature:.....

Name: -----,
Programme Coordinator, Economic Transformation Initiative, Gilgit-Baltistan

Signature:

Name:
Chief Executive Officer, SMP

Signature:

Name: -----,
Secretary,
Planning &Development Department, Government of Gilgit-Baltistan

Witnesses:

- 1.
- 2.

Annex 2 - Attachment 2

TERMS OF REFERENCES (TORs) for SMP

1. Economic Transformation Initiative (ETI) is an initiative of Government of Gilgit-Baltistan to improve incomes of the smallholder farmers in Gilgit-Baltistan through strategic investments in value chain development of main agriculture products of the region. The programme will be implemented over a span of 7 years commencing from 01 July 2015. A SMP/NGO is to be contracted to implement the community mobilization and organization component of the programme in four districts/200 villages. Main activities include community mobilization, training, facilitation of interface with value chain technical assistance team, irrigation development agencies and road improvement agencies. It would also call for facilitation in village development planning, irrigation development and recovery of 50% of irrigation investment cost and its reinvestment in village development priorities. The assignment also calls for facilitation in conducting farmer training in value chain development, field days, selection of poor women, youth and landless for participation in programme generated benefits.

The detailed activities, unit cost and performance indicators will be agreed with SMP on receipt of work plan within a month after signing an agreement. However, SMP will carry out the following main tasks:-

a) Support social mobilization process in the programme area.

Assign staff for social mobilization process in target villages and valleys as per agreed phasing and establish Village production Groups in target villages. The detail of process is given at Appendix-C. The SMP will accomplish the following essential deliverables:-

- ✓ Village wise profile containing baseline information regarding prevailing poverty incidence, available opportunities, and prioritized need assessment by the community.
- ✓ Development plan at village level with focus on smallholder farmers including women and youth including identification of priority social and economic development needs
- ✓ Trainings and activities under taken for the administration, strengthening and maturity of village producer group.
- ✓ Identification of land and beneficiaries for the development of new irrigated areas and facilitation in securing water source and right of way
- ✓ Development and implementation of Gender action plan to ensure the equitable and full participation of women in programme activities.

b) Engaging the Village with VCTAT and Facilitation of Development Plan formulation for key products for value chain development:

Identify the product for value chain development and engage the village with VCTAT for development of a Value Chain plan. Facilitate all other actions identified in the plan and ensure adherence by the village

c) Identification of land for irrigation development:

Identify the cultivable waste lands available for irrigation development in the village/valley, identify the beneficiaries, educate beneficiaries on programme's terms and

conditions, link up beneficiaries with the concerned implementing agency for design and cost estimation, facilitate dialogue with the community for agreement on programme terms and conditions including equitable distribution of developed land, 50% cost recovery for reinvestment in the village, scheme O&M.

d) Support to other programme components wherever Village/Community participation is involved

- ✓ SMP will work in close collaboration with the DCUs and other implementing agencies and render assistance in other activities involving communities.
- ✓ SMP will assist DCUs and PWD in identifying sites, beneficiaries etc. and help in securing land access/right of way for road upgrading component
- ✓ Support DCUs and VCTAT in promoting private sector marketing and support services linkages with the communities
- ✓ Facilitate extension and research related activities at the community level including potato seed multiplication, product certification, establishment of privately operated fruit nurseries, seed storage facilities

2. The SMP Management and Staffing Requirements

The SMP will assign regional programme support staff at programme level and field units at district level, staffing it with experienced personnel

The SMP will be responsible for supplying group members with technical information related to programme support and benefits and will help to arrange for such inputs to be provided by the appropriate specialist technical agencies. Groups will ultimately be expected to be able to make such arrangements on their own as a consequence of the SMPs training.

The SMP during second last year of the project implementation shall submit a detailed plan on its future strategy in order to ensure sustainability of various activities after the programme completion.

Annex 2 - Attachment 3

PAYMENT PROCEDURE

Total cost of the contract	Rs. ????	millions
✓ Social mobilization	Rs. ?????	millions
✓ Training and capacity Building	Rs. ????	millions

2. Regular Payments: SMP will prepare annual plans and budgets for the activities assigned to it in close consultation with DCUs. These plans and budgets will be approved by PSC as part of overall programme budget and will be subject to IFAD ‘No objection’. Advance Quarterly payments will be made by PCU for social mobilization related salary and operational expenditure. Training and capacity building costs shall be paid as per agreed quarterly targets and unit costs again as advance for the quarter and rendering expenditure account at the end of quarter.

3. Conditions & Procedure for Release of Installments:

- 3.1 SMP will prepare annual and quarterly work plans that will be used for monitoring as well as measurement of progress by the PCU. These work plans will clearly specify the various outputs and targets, to be assessed for payment. Performance indicators given at appendix – B will also help in this regards. The annual plan will form part of programme’s consolidated plan and submitted to PSC for approval.
- 3.2 Every quarterly report of the SMP will clearly present the measurement of current progress along with cumulative achievement. These reports on receipt at PCU will be subject to field verification by the M&E staff.
- 3.3 The payment for SMP services will not be based on the costs of the inputs procured or provided by the SMP; it will rather be contingent on the timely and satisfactory completion of a number of specified outputs in a given period as specified in the AWP/B prepared each year by the SMP.
- 3.4 The first quarter shall begin on the date when cheque for first advance is issued to the SMP.
- 3.5 SMP shall open separate accounts for receiving funds for ETI assigned activities.
- 3.6 Each installment shall be released on submission of previous quarter physical and financial reports by the SMP to PCU

Annex 2 - Attachment 4

COMMUNITY MOBILIZATION PROCESS AND IMPLEMENTATION

The RSP will use the tried and tested principles of social mobilization to organize ETI's target communities into functional and responsible grass-root farmer organizations. Typical community mobilization process and project implementation will go through following stages:

- 1- **Selection of target Valleys and Villages:** Based on programme selection criteria, SMP will assist the DCUs and PCU in selection of priority valleys and villages keeping in view potential for value chain development, relative number of poor and potential for additional irrigation development.
- 2- **Formation of Village Producer Groups and Need Assessment:** Initiate dialogue with the target villages for formation of village producer groups, identify poor households and landless for priority targeting, establish village baseline and poverty ranking/status, explain programme objectives and purpose, assist VPG in electing office bearers and enter into mutually responsible agreement for programme activities .
- 3- **Village Development Plan:** Based on identified needs and in line with programme provisions and objectives, establish a village development plan covering both programme related needs and other social and economic development needs. This would include value chain development needs, extension support, irrigation development, road linkages, market linkage development and formation of marketing groups etc. Identify inputs required from other programme partners and facilitate their interaction with VPG and delivery of inputs.
- 4- **Implementation:** Prepare an implementation plan in consultation with VPG and other partners in order to have clear timelines and responsibilities and coordinated implementation. Assist other implementing agencies in survey and cost estimation designs preparation for all identified infrastructure.
- 5- **VPG capacity Building for operations and Infrastructure O&M:** Assist VPGs and implementing agencies in community capacity building activities for infrastructure O&M and management of value chain related infrastructure and facilities.
- 6- **Activists/Managers Conferences:** Organize regular Activists/Managers Conferences and Workshops at district/sub-district level involving implementing agencies staff, private sector and other relevant actors enabling the VPG' Managers and other partners to share their experiences of value chain development initiatives, emerging issues and challenges and way forward.
- 7- **Post Programme sustainability of CO:** During implementation, concurrently develop a post-programme sustainability strategy for the VPGs. The strategy should be finalized by 5th year of the programme implementation.

Annex 3

ETI DETAILED COST TABLES

Islamic Republic of Pakistan
Economic Transformation Initiative Gilgit-Baltistan
PC-1

Economic Transformation Initiative Gilgit-Baltistan																		Parameters (in %)								
Table 1.1. Irrigation & Land Development																		Phy. Cont. Rate	For. Exch.	Gross Tax Rate						
Detailed Costs																										
	Unit	Quantities								Unit Cost (US\$)	Base Cost (US\$ Million)								2015	2016	2017	2018	2019	2020	2021	Total
		2015	2016	2017	2018	2019	2020	2021	Total		2015	2016	2017	2018	2019	2020	2021	Total								
I. Investment Costs																										
A. Works																										
1. Design & Supervision Consultancy																										
Mapping of Cultivable lands through GIS	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	0.0	0.0					
Design & Supervision Consultancy /a	schemes	5	-	-	-	-	-	-	5	10,000	0.05	-	-	-	-	-	-	0.05	5.0	10.0	17.0					
Lift Irrigation pilots	No	2	2	3	-	-	-	-	7	50,000	0.10	0.10	0.15	-	-	-	-	0.35	5.0	10.0	17.0					
Provincial Water Policy & O&M Regulatoric	LS	0.5	0.5	-	-	-	-	-	1	100,000	0.05	0.05	-	-	-	-	-	0.10	5.0	10.0	17.0					
Subtotal Design & Supervision Consu											0.20	0.15	0.15	-	-	-	-	0.50								
2. Construction																										
Construction/ Rehab. of channels	acres	2,500	12,500	17,500	17,500	-	-	-	50,000	570	1.43	7.13	9.98	9.98	-	-	-	28.50	5.0	10.0	17.0					
Land levelling/ De-stoning etc	acres	-	10,000	10,000	10,000	10,000	10,000	-	50,000	100	-	1.00	1.00	1.00	1.00	1.00	-	5.00	0.0	10.0	0.0					
Cost of land /b	acres	19	56	56	56	-	-	-	187	40,000	0.76	2.24	2.24	2.24	-	-	-	7.48	5.0	10.0	17.0					
Subtotal Construction											2.19	10.37	13.22	13.22	1.00	1.00	-	40.98								
Subtotal Works											2.39	10.52	13.37	13.22	1.00	1.00	-	41.48								
B. Equipment & Materials /c																										
Desktop Computer w ith Printer	No	5	-	-	-	-	-	-	5	800	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0					
Laptops/ Note Books	No	5	-	-	-	-	-	-	5	700	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0					
Multimedia projector	No	5	-	-	-	-	-	-	5	750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0					
Digital Cameras	No	5	-	-	-	-	-	-	5	500	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0					
Subtotal Equipment & Materials											0.01	-	-	-	-	-	-	0.01								
C. Vehicles for WMD																										
Pick up 2500 CC	No	4	-	-	-	-	-	-	4	22,000	0.09	-	-	-	-	-	-	0.09	5.0	50.0	45.0					
Car 1300 CC	No	1	-	-	-	-	-	-	1	23,000	0.02	-	-	-	-	-	-	0.02	5.0	50.0	45.0					
Motorcycles 125 CC	No	10	-	-	-	-	-	-	10	1,300	0.01	-	-	-	-	-	-	0.01	5.0	50.0	45.0					
Subtotal Vehicles for WMD											0.12	-	-	-	-	-	-	0.12								
D. Trainings																										
Youth Construction teams /d	groups	40	-	-	-	-	-	-	40	8,500	0.34	-	-	-	-	-	-	0.34	5.0	3.0	0.0					
Farmer training in Scheme construction /e	groups	12	22	22	22	22	-	-	100	200	0.00	0.00	0.00	0.00	0.00	-	-	0.02	5.0	3.0	0.0					
Staff training	NO	30	30	30	-	-	-	-	90	1,000	0.03	0.03	0.03	-	-	-	-	0.09	5.0	3.0	0.0					
Subtotal Trainings											0.37	0.03	0.03	0.00	0.00	-	-	0.45								
Total Investment Costs											2.90	10.55	13.40	13.22	1.00	1.00	-	42.07								
II. Recurrent Costs																										
A. Salaries & Allowances																										
Deputy Director Irrigation -BS-18	years	1	1	1	1	1	1	1	7	10,800	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08	0.0	1.0	0.0					
Assistant Director Finance/Admin (BS-17)	years	1	1	1	1	1	1	1	7	8,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0					
Design Engineer (BS-17)	years	1	1	1	1	1	1	1	7	8,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0					
Assistant Engineer -BS-17	years	5	5	5	5	5	5	5	35	8,400	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.0	1.0	0.0					
Assistant Accounts Officer -BS-17	years	1	1	1	1	1	1	1	7	8,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0					
Computer Operator (BS-16)	years	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0					
Assistant (BS-14)	years	5	5	5	5	5	5	5	35	5,400	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.0	1.0	0.0					
Sub-Engineer -BS-11	years	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	0.0	1.0	0.0					
Assistant Quantity Surveyor -BS-11	years	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	0.0	1.0	0.0					
Drivers	years	5	5	5	5	5	5	5	35	1,800	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0					
Rodman -BS-2	years	5	5	5	5	5	5	5	35	2,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.0	1.0	0.0					
Naib Qasid/ Chow kidar -BS-1	years	5	5	5	5	5	5	5	35	1,800	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0					
TA/DA /f	office	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0					
Subtotal Salaries & Allowances											0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.72								
B. Operating costs																										
POL & Vehicle O&M/g	No	5	5	5	5	5	5	5	35	4,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14	5.0	0.0	17.0					
Equipment & O&M	LS	5	5	5	5	5	5	5	35	3,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	5.0	0.0	17.0					
Consumables/ Office Supplies	offices	5	5	5	5	5	5	5	35	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.12	5.0	0.0	17.0					
Office running cost	office	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0					
Subtotal Operating costs											0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.58								
Total Recurrent Costs											0.33	0.33	0.33	0.33	0.33	0.33	0.33	2.30								
Total											3.22	10.88	13.73	13.55	1.33	1.33	0.33	44.36								

/a Consultancy for initial 5 schemes to establish design, quality, process & material parameters for WMD

/b 5.47 km per channel, 10 ft wide, @ Rs 4 million per acre

/c for Head office & 4 Field offices

/d Training & equipment for land levelling & scheme construction, each group of 10 youth

/e 10 member Scheme management group for each scheme

/f includes vehicle POL, O&M, Utilities & Office consumables

/g includes POL for Motor cycles

Pakistan
Economic Transformation Initiative Gilgit-Baltistan (ETI)
Table 1.2. Farm to Market roads

Parameters (in %)

Detailed Costs	Unit	Quantities					Total	Unit Cost (US\$)	Base Cost (US\$ Million)								Phy. Cont. Rate	For. Exch.	Gross Tax Rate
		2015	2018	2019	2020	2021			2015	2016	2017	2018	2019	2020	2021	Total			
I. Investment Costs																			
A. Works																			
1. Design & Supervision Consultancy																			
GIS Mapping & Baseline Survey /a Consultancy for Survey Design & Supervision	Nil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	0.0	0.0
Provincial Road Master Plan & O&M Policy	Km	100	100	-	-	-	400	1,650	0.17	0.17	0.17	0.17	-	-	-	0.66	5.0	10.0	17.0
	1000 LS	0.5	-	-	-	-	1	800/LS	0.40	0.40	-	-	-	-	-	0.80	5.0	10.0	17.0
Subtotal Design & Supervision Consultancy									0.57	0.57	0.17	0.17	-	-	-	1.46			
2. Construction																			
Construction of existing Jeepable roads to Truckable roads	km	-	60	60	-	-	240	32,000	-	1.92	1.92	1.92	1.92	-	-	7.68	5.0	10.0	17.0
Construction of existing tracks to Jeepable roads	km	-	40	40	-	-	160	31,000	-	1.24	1.24	1.24	1.24	-	-	4.96	5.0	10.0	17.0
Construction of Bridges /b	meters	-	60	60	-	-	220	10,000	-	0.50	0.50	0.60	0.60	-	-	2.20	5.0	10.0	17.0
Subtotal Construction									-	3.66	3.66	3.76	3.76	-	-	14.84			
Subtotal Works									0.57	4.23	3.83	3.93	3.76	-	-	16.30			
B. Equipment & Materials																			
1. Office Equipment & Materials /c	LS	1	-	-	-	-	1	75,000	0.08	-	-	-	-	-	-	0.08	5.0	10.0	17.0
C. Vehicles																			
Single Cabin 2500 CC	No	5	-	-	-	-	5	22,000	0.11	-	-	-	-	-	-	0.11	5.0	50.0	45.0
Road Maintenance Machinery Pool	LS	-	1	1	1	-	4	625,000	-	-	0.63	0.63	0.63	0.63	-	2.50	4.5	50.0	45.0
Subtotal Vehicles									0.11	-	0.63	0.63	0.63	0.63	-	2.61			
Total Investment Costs									0.75	4.23	4.45	4.55	4.39	0.63	-	18.99			
II. Recurrent Costs																			
A. Operating costs																			
Vehicle O&M	No	5	5	5	5	5	35	4,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14	5.0	0.0	17.0
Equipment & O&M	LS	5	5	5	5	5	35	3,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	5.0	0.0	17.0
Consumables/ Office Supplies	offices	5	5	5	5	5	35	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.12	5.0	0.0	17.0
Office running cost	office	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0	
Total Recurrent Costs									0.08	0.08	0.08	0.08	0.08	0.08	0.58				
Total									0.83	4.31	4.53	4.63	4.47	0.71	0.08	19.56			

to be conducted prior to Project start through a separate Grant

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\b 22 sq. meter wide each Bridge
\c Survey & Office equipment including field offices

Economic Transformation Initiative Gilgit-Baltistan (ETI)																		
Table 2.1. Value Chains																		
Detailed Costs	Unit	Quantities								Unit Cost			Base Cost (US\$ Million)					
		2015	2016	2017	2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total
I. Investment Costs																		
A. Grants & Subsidies - Value Chain Fund																		
1. On-Farm Grants /a	No	250	600	600	600	600	300	-	2,950	2,500	0.63	1.50	1.50	1.50	1.50	0.75	-	7.38
2. Off-farm Grants /b	No	50	100	100	100	75	75	-	500	5,000	0.25	0.50	0.50	0.50	0.38	0.38	-	2.50
3. Trade Promotion Grants /c	No	25	50	50	50	50	50	-	275	5,000	0.13	0.25	0.25	0.25	0.25	0.25	-	1.38
4. Service improvement Grants /d	No	10	15	15	15	15	15	15	100	5,000	0.05	0.08	0.08	0.08	0.08	0.08	0.08	0.50
5. Non-Farm Grants																		
for packaging, transport, input supply, seeds, etc	No	2	5	10	15	8	-	-	40	30,000	0.06	0.15	0.30	0.45	0.24	-	-	1.20
for Dairy, Fruits (Cherry, Nuts), Apiculture etc. /e	No	5	10	15	10	5	-	-	45	25,000	0.13	0.25	0.38	0.25	0.13	-	-	1.13
Innovative initiatives by farmers & Entrepreneur	No	5	10	10	10	10	-	-	45	15,000	0.08	0.15	0.15	0.15	0.15	-	-	0.68
Collecting/ Branding/ Sorting Centres /g	No	3	3	3	3	-	-	-	12	75,000	0.53	0.53	0.53	0.53	-	-	-	2.10
Miscellaneous /h	LS	1	-	-	-	-	-	-	1	50,000	0.05	-	-	-	-	-	-	0.05
Subtotal Non-Farm Grants											0.84	1.08	1.35	1.38	0.52	-	-	5.15
Subtotal Grants & Subsidies - Value Chain Fund											1.89	3.40	3.68	3.70	2.72	1.45	0.08	16.90
B. Equipment & Materials																		
Furniture & Fixture	Sets	1	-	-	-	-	-	-	1	15,000	0.02	-	-	-	-	-	-	0.02
Desktop Computers with printers	No	2	-	-	-	-	-	-	2	800	0.00	-	-	-	-	-	-	0.00
Notebooks	No	4	-	-	-	-	-	-	4	700	0.00	-	-	-	-	-	-	0.00
Digital camera	No	1	-	-	-	-	-	-	1	500	0.00	-	-	-	-	-	-	0.00
Air Conditioner	No	3	-	-	-	-	-	-	3	750	0.00	-	-	-	-	-	-	0.00
Misc.	LS	1	-	-	-	-	-	-	1	3,000	0.00	-	-	-	-	-	-	0.00
Subtotal Equipment & Materials											0.03	-	-	-	-	-	-	0.03
C. Vehicles																		
vehicles - double cabin	No	2	-	-	-	-	-	-	2	39,000	0.08	-	-	-	-	-	-	0.08
Cars- 1000 CC	No	2	-	-	-	-	-	-	2	13,000	0.03	-	-	-	-	-	-	0.03
Subtotal Vehicles											0.10	-	-	-	-	-	-	0.10
D. Trainings																		
1. Trainings																		
Trainer for VC staff and VC stake holder represent	month	1	1	-	1	-	-	-	3	10,000	0.01	0.01	-	0.01	-	-	-	0.03
Trainer for VC staff and VC stake holder represent	month	1	1	1	1	1	1	1	7	1,500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Training of Trainers /i	persons	50	125	125	125	-	-	-	425	1,000	0.05	0.13	0.13	0.13	-	-	-	0.43
Training of Farmers in Value Chain /j	farmers	1,000	4,500	10,500	19,000	-	-	-	35,000	10	0.01	0.05	0.11	0.19	-	-	-	0.35
Exposure visits for farmers /k	persons	-	10	10	10	10	10	-	40	5,000	-	0.05	0.05	0.05	0.05	-	-	0.20
Value Chain Appraisal Panel Meetings	No	5	5	5	5	5	-	-	25	6,000	0.03	0.03	0.03	0.03	0.03	-	-	0.15
Subtotal Trainings											0.10	0.26	0.31	0.41	0.08	0.00	0.00	1.17
Total Investment Costs											2.12	3.66	3.99	4.11	2.80	1.45	0.08	18.19

Table 2.1. Value Chains - continued																			
		Quantities								Unit Cost				Base Cost (US\$ Million)					
	Unit	2015	2016	2017	2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total	
II. Recurrent Costs																			
A. Salaries & Allowances																			
1. Value Chain staff																			
	Technical Lead	No	1	1	1	1	1	1	1	7	42,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.29
	Value Chain Specialist	No	4	4	4	4	4	4	4	28	27,000	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.76
	Capacity Building/ Gender Specialist	No	1	-	-	-	-	-	-	1	18,000	0.02	-	-	-	-	-	-	0.02
	Market Information Specialist	No	1	-	-	-	-	-	-	1	18,000	0.02	-	-	-	-	-	-	0.02
	Consultant for VC analysis	No	1	-	-	-	-	-	-	1	18,000	0.02	-	-	-	-	-	-	0.02
	Implementation Trainer for Value Chains	No	1	-	-	-	-	-	-	1	18,000	0.02	-	-	-	-	-	-	0.02
	Technical Experts for VC - short terms /l	months	10	10	10	10	10	10	10	70	2,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14
	Financial Analyst	No	2	2	2	2	2	2	2	14	18,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25
	Assistant Contract Manager	No	1	-	-	-	-	-	-	1	12,000	0.01	-	-	-	-	-	-	0.01
	Grant Support Fund Specialist	months	6	-	-	-	-	-	-	6	1,000	0.01	-	-	-	-	-	-	0.01
	Grant Product designer	No	1	-	-	-	-	-	-	1	12,000	0.01	-	-	-	-	-	-	0.01
	Subtotal Value Chain staff											0.31	0.21	0.21	0.21	0.21	0.21	0.21	1.54
B. Operating costs																			
	Vehicle O&M/m	No	4	4	4	4	4	4	4	28	4,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11
	Equipment & O&M	LS	5	5	5	5	5	5	5	35	3,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11
	Consumables/ Office Supplies	offices	5	5	5	5	5	5	5	35	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.12
	Office running cost	office	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21
	Subtotal Operating costs											0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.55
	Total Recurrent Costs											0.39	0.28	0.28	0.28	0.28	0.28	0.28	2.09
	Total											2.50	3.95	4.27	4.39	3.08	1.74	0.36	20.29
<p>\a average unit cost w ith maximum value of US\$ 5,000. Guarantee contribution no less than 30%.</p> <p>\b average unit cost w ith maximum value of US\$ 10,000. Guarantee contribution no less than 50%.</p> <p>\c average unit cost w ith maximum value of US\$ 10,000. Guarantee contribution no less than 50%.</p> <p>\d average unit cost w ith maximum value of US\$ 10,000. Guarantee contribution no less than 50%.</p> <p>\e in all districts</p> <p>\f improved technology/ competitiveness of VC, Branding, new packaging, value added products etc</p> <p>\g 1000 Sq. meter covered place, w ith amenities</p> <p>\h for packaging, transport, input supply, seeds, etc</p> <p>\i TOTs from all the 7 districts of GB, to be trained over 4 year period</p> <p>\j 20 farmers to be trained by every TOT (accumulated No)</p> <p>\k 7 day visit to importing countries</p> <p>\l various</p> <p>\m includes POL for Motor cycles</p>																			

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Economic Transformation Initiative Gilgit-Baltistan (ETI)																			Parameters (in %)		
Table 2.2. Social Mobilization																			Phy.		
Detailed Costs																			Cont.	For.	Gross
	Unit	Quantities								Unit Cost (US\$)	Base Cost (US\$ Million)							Total	Rate	Exch.	Tax Rate
		2015	2016	2017	2018	2019	2020	2021	Total		2015	2016	2017	2018	2019	2020	2021				
I. Investment Costs																					
A. Trainings																					
1. Farmer Organizations																					
Village Producer Organizations - Male	No	26	40	40	40	40	14	-	200	12,500	0.33	0.50	0.50	0.50	0.50	0.18	-	2.50	0.0	3.0	0.0
Village Producer Organizations - Female	No	3	4	4	4	4	1	-	20	12,500	0.04	0.05	0.05	0.05	0.05	0.01	-	0.25	0.0	3.0	0.0
Subtotal Farmer Organizations											0.36	0.55	0.55	0.55	0.55	0.19	-	2.75			
2. Valley Marketing Associations																					
Potato Marketing Associations	No	2	4	4	-	-	-	-	10	5,000	0.01	0.02	0.02	-	-	-	-	0.05	5.0	3.0	0.0
Apricot Marketing Organizations	No	2	2	1	1	1	-	-	7	5,000	0.01	0.01	0.01	0.01	0.01	-	-	0.04	5.0	3.0	0.0
Dry Fruit Associations	No	1	1	1	1	-	-	-	4	5,000	0.01	0.01	0.01	0.01	-	-	-	0.02	5.0	3.0	0.0
Other Fruits Associations - Cherry, Apple, Nuts etc	No	1	1	1	1	1	-	-	5	5,000	0.01	0.01	0.01	0.01	0.01	-	-	0.03	5.0	3.0	0.0
Vegetables Associations- Tomato, Capsicum, Green peas etc	No	1	1	1	1	-	-	-	4	5,000	0.01	0.01	0.01	0.01	-	-	-	0.02	5.0	3.0	0.0
Subtotal Valley Marketing Associations											0.04	0.05	0.04	0.02	0.01	-	-	0.15			
3. Regional Producer Associations	No	-	-	-	1	1	1	1	4	5,000	-	-	-	0.01	0.01	0.01	0.01	0.02	5.0	3.0	0.0
4. Training in Nutrition																					
Master Trainers for TOTs for Nutrition	No	7	-	-	-	-	-	-	7	20,000	0.14	-	-	-	-	-	-	0.14	5.0	3.0	0.0
Training in Nutrition of SMP & Extension staff	No	15	40	40	40	15	-	-	150	50	0.00	0.00	0.00	0.00	0.00	-	-	0.01	5.0	3.0	0.0
Training of VPG Members in Nutrition	Person days	200	450	450	450	450	-	-	2,000	50	0.01	0.02	0.02	0.02	0.02	-	-	0.10	5.0	3.0	0.0
Nutrition Extension Material	sumpur	1	-	-	-	-	-	-	1	20,000	0.02	-	-	-	-	-	-	0.02	5.0	3.0	0.0
Subtotal Training in Nutrition											0.17	0.02	0.02	0.02	0.02	-	-	0.27			
5. Other trainings																					
Village/Valley Producer Groups	No	50	50	50	50	50	-	-	250	1,000	0.05	0.05	0.05	0.05	0.05	-	-	0.25	5.0	3.0	0.0
Regional Associations	No	-	1	1	1	1	-	-	4	3,000	-	0.00	0.00	0.00	0.00	-	-	0.01	5.0	3.0	0.0
Annual Conferences	No	6	6	6	6	6	6	-	36	14,000	0.08	0.08	0.08	0.08	0.08	0.08	-	0.50	5.0	3.0	0.0
Training for Social Mobilization staff	No	150	150	-	-	-	-	-	300	200	0.03	0.03	-	-	-	-	-	0.06	5.0	3.0	0.0
Subtotal Other trainings											0.16	0.17	0.14	0.14	0.14	0.08	-	0.83			
Total											0.73	0.79	0.75	0.74	0.73	0.28	0.01	4.01			

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Table 2.3. Agri. Extension																			Phy.		Su
Detailed Costs																			Cont.	For.	Gross
	Unit	2015	2016	2017	Quantities					Unit Cost		Base Cost (US\$ Million)							Rate	Exch.	ax Rate
					2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total			
I. Investment Costs																					
A. Construction																					
1. installation of plastic tunnels for Seedl	No	12	13	-	-	-	-	-	25	1,000	0.01	0.01	-	-	-	-	-	0.03	5.0	10.0	17.0
2. Establishment of Private Nurseries - Tr	No	12	13	-	-	-	-	-	25	1,000	0.01	0.01	-	-	-	-	-	0.03	5.0	10.0	17.0
Subtotal Construction											0.02	0.03	-	-	-	-	-	0.05			
B. Equipment & Materials																					
Desktop Computer with Printer	No	5	-	-	-	-	-	-	5	800	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Laptops/ Note Books	No	5	-	-	-	-	-	-	5	700	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Multimedia projector	No	2	-	-	-	-	-	-	2	750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Digital Cameras	No	5	-	-	-	-	-	-	5	500	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Spray machines - Wheel Borrow	No	15	-	-	-	-	-	-	15	1,000	0.02	-	-	-	-	-	-	0.02	5.0	10.0	17.0
Fogging machines	No	6	-	-	-	-	-	-	6	3,000	0.02	-	-	-	-	-	-	0.02	5.0	10.0	17.0
Equipment for Human Resource Center	LS	30	-	-	-	-	-	-	30	1,000	0.03	-	-	-	-	-	-	0.03	5.0	10.0	17.0
Introduction of improved germ plasm/c	No	20	20	10	-	-	-	-	50	1,000	0.02	0.02	0.01	-	-	-	-	0.05	5.0	10.0	17.0
Subtotal Equipment & Materials											0.09	0.02	0.01	-	-	-	-	0.12			
C. Vehicles																					
Single cabin - 2500 CC	No	2	-	-	-	-	-	-	2	22,000	0.04	-	-	-	-	-	-	0.04	5.0	50.0	45.0
Car - 1300 CC	No	1	-	-	-	-	-	-	1	23,000	0.02	-	-	-	-	-	-	0.02	5.0	50.0	45.0
Motor cycles 125 CC/d	No	7	-	-	-	-	-	-	7	1,300	0.01	-	-	-	-	-	-	0.01	5.0	50.0	45.0
Subtotal Vehicles											0.08	-	-	-	-	-	-	0.08			
D. Trainings																					
Soil survey, sampling & analysis training	p/days	100	100	100	100	-	-	-	400	40	0.00	0.00	0.00	0.00	-	-	-	0.02	5.0	3.0	0.0
Technical training for Agri. staff	p/days	15	15	15	15	-	-	-	60	70	0.00	0.00	0.00	0.00	-	-	-	0.00	5.0	3.0	0.0
Exposure visits Agri. staff - local	persons	10	10	10	10	-	-	-	40	300	0.00	0.00	0.00	0.00	-	-	-	0.01	5.0	3.0	0.0
Training of Trainers	persons	6	6	6	-	-	-	-	18	1,000	0.01	0.01	0.01	-	-	-	-	0.02	5.0	3.0	0.0
Production & post-harvesting training for	persons	100	200	200	200	200	-	-	900	40	0.00	0.01	0.01	0.01	0.01	-	-	0.04	5.0	3.0	0.0
Production & post-harvesting training for	persons	50	150	150	150	150	-	-	650	40	0.00	0.01	0.01	0.01	0.01	-	-	0.03	5.0	3.0	0.0
Farmer Field days - male	LS	8	8	8	8	8	-	-	40	2,000	0.02	0.02	0.02	0.02	0.02	-	-	0.08	5.0	3.0	0.0
Farmer Field days - females /g	LS	8	8	8	8	8	-	-	40	2,000	0.02	0.02	0.02	0.02	0.02	-	-	0.08	5.0	3.0	0.0
Subtotal Trainings											0.05	0.06	0.06	0.05	0.05	-	-	0.27			
Total Investment Costs											0.25	0.11	0.07	0.05	0.05	-	-	0.52			

Table 2.3. Agri. Extension - continued																				Phy.										
	Unit	Quantities								Unit Cost		Base Cost (US\$ Million)								Cont.	For.	Gross								
		2015	2016	2017	2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total	Rate	Exch.	ax Rate									
II. Recurrent Costs																														
A. Salary & Allowances																														
Agri. Officers - BS 17	years	5	5	5	5	5	5	5	5	35	8,400	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.0	1.0	0.0								
Computer operator -BS 16	years	1	1	1	1	1	1	1	1	7	6,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0								
Agri. Technical Associates - BS 14	years	5	5	5	5	5	5	5	5	35	5,400	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.0	1.0	0.0								
Account Assistants - BS 14	years	1	1	1	1	1	1	1	1	7	5,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0								
Field Assistants - BS 6	years	5	5	5	5	5	5	5	5	35	4,200	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.15	0.0	1.0	0.0								
Drivers -BS 4	years	1	1	1	1	1	1	1	1	7	3,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.0	1.0	0.0								
Mali -BS 1	years	5	5	5	5	5	5	5	5	35	1,800	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0								
Chow kidar - BS 1	years	2	2	2	2	2	2	2	2	14	1,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.0	1.0	0.0								
TA/DA /h	offices	5	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0								
Subtotal Salary & Allowances																														
B. Operating cost																														
POL & Vehicle O&M/i	No	5	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	5.0	0.0	17.0								
Equipment O&M	LS	5	5	5	5	5	5	5	5	35	3,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	5.0	0.0	17.0								
Consumables/ Office supplies	office	5	5	5	5	5	5	5	5	35	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.12	5.0	0.0	17.0								
Office maintenance	LS	5	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	5.0	0.0	17.0								
Subtotal Operating cost																														
Total Recurrent Costs																														
Total																														
/a entire Project period																														
/b entire Project period																														
/c entire Project period																														
/d on Lease/ Purchase basis																														
/e 2 day training by TOTs																														
/f 2 day training by TOTs																														
/h 7 District + 1 Head Office, for notified staff seconded to ETI																														
/i includes POL for Motorcycles																														

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Table 2.4. Agri. Research, Tissue Culture/ Labs																		Phy.	For.	Gross	
Detailed Costs																		Cont.	Exch.	ax Rat	
	Unit	Quantities								Unit Cost (US\$)	Base Cost (US\$ Million)							Rate	Rate	Rate	
		2015	2016	2017	2018	2019	2020	2021	Total		2015	2016	2017	2018	2019	2020	2021				Total
I. Investment Costs																					
A. Construction																					
1. Installation of Greenhouse	No	4	-	-	-	-	-	-	4	30,000	0.12	-	-	-	-	-	-	0.12	5.0	10.0	17.0
2. Aphid proof Screen houses	Units	7	-	-	-	-	-	-	7	8,000	0.06	-	-	-	-	-	-	0.06	5.0	10.0	17.0
3. Plastic & Mesh for existing Green/ Screen ho	LS	1	-	-	-	-	-	-	1	40,000	0.04	-	-	-	-	-	-	0.04	5.0	10.0	17.0
4. Construction of 50 mt capacity Seed stores	No	2	2	3	-	-	-	-	7	30,000	0.06	0.06	0.09	-	-	-	-	0.21	5.0	10.0	17.0
Subtotal Construction											0.28	0.06	0.09	-	-	-	-	0.43			
B. Equipment & Materials																					
Desktop Computer with Printer	No	2	-	-	-	-	-	-	2	800	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Laptops/ Note Books	No	2	-	-	-	-	-	-	2	700	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Multimedia projector	No	2	-	-	-	-	-	-	2	750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Digital Cameras	No	1	-	-	-	-	-	-	1	500	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0
Equipment, Machinery & Chemicals for TCL	C Labs	3	-	-	-	-	-	-	3	15,000	0.05	-	-	-	-	-	-	0.05	5.0	10.0	17.0
Adaptive trials	No	20	20	20	20	20	-	-	100	180	0.00	0.00	0.00	0.00	0.00	-	-	0.02	5.0	10.0	17.0
Subtotal Equipment & Materials											0.05	0.00	0.00	0.00	0.00	-	-	0.07			
C. Vehicles																					
Single cabin - 2500 CC	No	1	-	-	-	-	-	-	1	22,000	0.02	-	-	-	-	-	-	0.02	5.0	50.0	45.0
Car - 1300 CC	No	1	-	-	-	-	-	-	1	23,000	0.02	-	-	-	-	-	-	0.02	5.0	50.0	45.0
Car - 1000 CC	No	1	-	-	-	-	-	-	1	13,000	0.01	-	-	-	-	-	-	0.01	5.0	50.0	45.0
Petrol Jeep (4x4) - 1300 CC	No	2	-	-	-	-	-	-	2	22,000	0.04	-	-	-	-	-	-	0.04	5.0	50.0	45.0
Motor cycles 125 CC /a	No	6	-	-	-	-	-	-	6	1,300	0.01	-	-	-	-	-	-	0.01	5.0	50.0	45.0
Subtotal Vehicles											0.11	-	-	-	-	-	-	0.11			
D. Training																					
Scientists & Support staff training	p/days	75	75	75	-	-	-	-	225	300	0.02	0.02	0.02	-	-	-	-	0.07	5.0	3.0	0.0
Contract Grower training	p/days	500	500	1,000	1,000	1,000	-	-	4,000	10	0.01	0.01	0.01	0.01	0.01	-	-	0.04	5.0	3.0	0.0
Subtotal Training											0.03	0.03	0.03	0.01	0.01	-	-	0.11			
E. Grants																					
Revolving fund for Seed multiplication /b	LS	5	6	4	4	4	-	-	23	12,500	0.06	0.08	0.05	0.05	0.05	-	-	0.29	0.0	5.0	0.0
Total Investment Costs											0.53	0.17	0.18	0.06	0.06	-	-	1.00			
II. Recurrent Costs																					
A. Salary & Allowances																					
Scientific Officer/Agri. Officers - BS 17	years	5	5	5	5	5	5	5	35	8,400	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.0	1.0	0.0
Seed Certification Officer - BS 17	years	1	1	1	1	1	1	1	7	8,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.0	1.0	0.0
Office Assistant - BS 14	years	1	1	1	1	1	1	1	7	5,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0
Lab Assistant - BS 6	years	1	2	2	2	2	2	2	13	4,200	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.0	1.0	0.0
Field Assistants BS 6	years	2	4	4	4	4	4	4	26	4,200	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.0	1.0	0.0
Driver -BS 1	years	2	2	2	2	2	2	2	14	3,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0
Mali Green House	years	10	10	10	10	10	10	10	70	1,800	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.0	1.0	0.0
TA/DA	office	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	0.0	1.0	0.0
Subtotal Salary & Allowances											0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.90			
B. Operating costs																					
POL & Vehicle O&M/c	No	5	5	5	5	5	5	5	35	4,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14	5.0	0.0	17.0
Transportation charges for inputs/ Outputs	Stations	5	5	5	5	5	5	5	35	4,200	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.15	5.0	0.0	17.0
Daily paid Labour	p/days	2,000	2,000	2,000	2,000	2,000	2,000	2,000	14,000	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	5.0	0.0	17.0
Equipment O&M	office	5	5	5	5	5	5	5	35	3,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	5.0	0.0	17.0
Office running costs	Office	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0
Consumables/ Office supplies	office	5	5	5	5	5	5	5	35	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.12	5.0	0.0	17.0
Subtotal Operating costs											0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.79			
Total Recurrent Costs											0.23	0.24	0.24	0.24	0.24	0.24	0.24	1.69			
Total											0.76	0.41	0.42	0.31	0.31	0.24	0.24	2.69			

va on Lease/ Purchase basis

vb to be released in instalments as per annual requirements, considering TCL production

vc including Federal Seed Certification office. Also ncludes POL for Motor cycles

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Table 2.5. Land Titling & Record system																			Phy.																				
Detailed Costs																			Cont.	For.	Gross																		
	Unit	Quantities								Unit Cost		Base Cost (US\$ Million)							Rate	Exch.	ax Rate																		
		2015	2016	2017	2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total																					
I. Investment Costs																																							
A. Design & Supervision Consultancy																																							
1. Consultancy/T.A for New Legislation & Rules	LS	1	-	-	-	-	-	-	1	20,000	0.02	-	-	-	-	-	-	0.02	5.0	3.0	10.0																		
B. Equipment & Materials																																							
Servers. Computing equipment & Software	No	1	-	-	-	-	-	-	1	00,000	0.10	-	-	-	-	-	-	0.10	5.0	10.0	17.0																		
Furniture & fixture for Provincial & District offices	No	1	-	-	-	-	-	-	1	50,000	0.05	-	-	-	-	-	-	0.05	5.0	10.0	17.0																		
Subtotal Equipment & Materials																			0.15	-	-	-	-	-	-	0.15													
C. Trainings																																							
1. Staff training	LS	-	1	-	-	-	-	-	1	25,000	-	0.03	-	-	-	-	-	0.03	5.0	3.0	0.0																		
Total Investment Costs																			0.17	0.03	-	-	-	-	-	0.20													
II. Recurrent Costs																																							
A. Salary & Allowances																																							
Provincial Cell Incharge	No	1	1	1	1	1	1	1	7	35,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25	0.0	1.0	0.0																		
District Cell Incharge - BS 17	years	5	5	5	5	5	5	5	35	22,500	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.0	1.0	0.0																		
Data Entry Operator - BS 14	years	5	5	5	5	5	5	5	35	12,500	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.44	0.0	1.0	0.0																		
TA/DA	office	5	-	-	-	-	-	-	5	5,000	0.03	-	-	-	-	-	-	0.03	0.0	1.0	0.0																		
Subtotal Salary & Allowances																			0.24	0.21	0.21	0.21	0.21	0.21	0.21	1.50													
B. Operating costs																																							
Equipment O&M	office	5	5	5	5	5	5	5	35	5,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.18	5.0	0.0	17.0																		
Office running costs	office	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0																		
Misc	office	5	5	5	5	5	5	5	35	1,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	5.0	0.0	17.0																		
Subtotal Operating costs																			0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.44													
Total Recurrent Costs																			0.30	0.27	0.27	0.27	0.27	0.27	0.27	1.93													
Total																			0.47	0.30	0.27	0.27	0.27	0.27	0.27	2.13													

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Table 3. Programme Coordination Unit																			Phy.										
Detailed Costs																			Cont.	For.	Gross								
Unit	2015	2016	2017	Quantities					Unit Cost		Base Cost (US\$ Million)							Total	Rate	Exch.	ax Rat								
				2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021													
I. Investment Costs																													
A. Consultancies																													
Baseline Survey	No	1	-	-	-	-	-	-	1 75,000	0.08	-	-	-	-	-	-	-	0.08	5.0	3.0	10.0								
Adhoc Studies	No	-	1	1	-	1	-	1	4 50,000	-	0.05	0.05	-	0.05	-	0.05	0.20	5.0	3.0	10.0									
Subtotal Consultancies																			0.08	0.05	0.05	-	0.05	-	0.05	0.28			
B. Equipment & Materials																													
Furniture & Fixture for PCU	Sets	1	-	-	-	-	-	-	1 25,000	0.03	-	-	-	-	-	-	0.03	5.0	10.0	17.0									
Furniture & Fixture for RCUs	Sets	3	-	-	-	-	-	-	3 15,000	0.05	-	-	-	-	-	-	0.05	5.0	10.0	17.0									
Scanner /a	No	4	-	-	-	-	-	-	4 250	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Desktop Computers /b	No	4	-	-	-	-	-	-	4 800	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Notebooks /c	No	6	-	-	-	-	-	-	6 700	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Laser Printer /d	No	4	-	-	-	-	-	-	4 300	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Netw ork printer /e	No	4	-	-	-	-	-	-	4 750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Multimedia projector /f	No	4	-	-	-	-	-	-	4 750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Telephone Exchange /g	No	4	-	-	-	-	-	-	4 750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Digital camera /h	No	4	-	-	-	-	-	-	4 700	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Air Conditioner /i	No	4	-	-	-	-	-	-	4 750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Generators - 20 KVA /j	No	4	-	-	-	-	-	-	4 2,000	0.01	-	-	-	-	-	-	0.01	5.0	10.0	17.0									
Refrigerators /k	No	4	-	-	-	-	-	-	4 750	0.00	-	-	-	-	-	-	0.00	5.0	10.0	17.0									
Accounting softw are /l	No	1	-	-	-	-	-	-	1 15,000	0.02	-	-	-	-	-	-	0.02	5.0	10.0	17.0									
Misc. /m	LS	1	-	-	-	-	-	-	1 20,000	0.02	-	-	-	-	-	-	0.02	5.0	10.0	17.0									
Subtotal Equipment & Materials																			0.14	-	-	-	-	-	-	0.14			
C. Vehicles & Equipment																													
vehicles - double cabin	No	2	-	-	-	-	-	-	2 39,000	0.08	-	-	-	-	-	-	0.08	5.0	50.0	45.0									
Cars- 1000 CC	No	6	-	-	-	-	-	-	6 13,000	0.08	-	-	-	-	-	-	0.08	5.0	50.0	45.0									
Petrol Jeep 4x4 - 1300 CC	No	5	-	-	-	-	-	-	5 23,000	0.12	-	-	-	-	-	-	0.12	5.0	50.0	45.0									
Motor cycles 125 CC	No	10	-	-	-	-	-	-	10 1,300	0.01	-	-	-	-	-	-	0.01	5.0	50.0	45.0									
Subtotal Vehicles & Equipment																			0.28	-	-	-	-	-	-	0.28			
D. Trainings																													
PCU/RCUs staff training	p/days	100	100	100	-	-	-	-	300 500	0.05	0.05	0.05	-	-	-	-	0.15	5.0	3.0	0.0									
Total Investment Costs																			0.55	0.10	0.10	-	0.05	-	0.05	0.85			
II. Recurrent Costs																													
A. Salary & allowances - PC Unit																													
1. PCU																													
Programme Coordinator	years	1	1	1	1	1	1	1	7 42,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.0	1.0	0.0									
Deputy Programme Coordinator /n	years	1	1	1	1	1	1	1	7 30,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0									
Admn Officer	years	1	1	1	1	1	1	1	7 18,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.0	1.0	0.0									
Admn Assistant	years	1	1	1	1	1	1	1	7 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0									
Finance Manager	years	1	1	1	1	1	1	1	7 30,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0									
Accounts officer	years	2	2	2	2	2	2	2	14 18,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25	0.0	1.0	0.0									
Account Assistants	years	2	2	2	2	2	2	2	14 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.0	1.0	0.0									
Contracts Manager	years	1	1	1	1	1	1	1	7 22,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.16	0.0	1.0	0.0									
Procurement Officer	years	1	1	1	1	1	1	1	7 30,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0									
Procurement Assistant	years	1	1	1	1	1	1	1	7 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0									
Value Chain Fund Officer	years	1	1	1	1	1	1	1	7 18,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.0	1.0	0.0									
Value Chain Fund Assistant	years	1	1	1	1	1	1	1	7 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0									
Gender & Poverty Manager	years	1	1	1	1	1	1	1	7 30,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0									
GPM Assistant	years	1	1	1	1	1	1	1	7 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0									
Communication & Media Officer	years	1	1	1	1	1	1	1	7 18,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.0	1.0	0.0									
Statistical Assistant	years	1	1	1	1	1	1	1	7 5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0									

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Table 3. Programme Coordination Unit - continued																					
Unit	Quantities								Unit Cost		Base Cost (US\$ Million)							Phy. Cont. Rate	For. Exch.	Gross Tax Rat.	
	2015	2016	2017	2018	2019	2020	2021	Total	(US\$)	2015	2016	2017	2018	2019	2020	2021	Total				
M&E Assistant	years	1	1	1	1	1	1	1	7	5,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.0	1.0	0.0
Infrastructure Specialist	years	1	1	1	1	1	1	1	7	30,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	0.0	1.0	0.0
Resident Engineers	years	2	2	2	2	2	2	2	14	18,000	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25	0.0	1.0	0.0
Assistant to Proj. Coordinator	years	1	1	1	1	1	1	1	7	15,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.0	1.0	0.0
Assistants/ Computer Operators	years	3	3	3	3	3	3	3	21	5,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.0	1.0	0.0
Drivers	years	6	6	6	6	6	6	6	42	3,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.15	0.0	1.0	0.0
Naib Qasids/ Chaukidars	years	4	4	4	4	4	4	4	28	3,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.0	1.0	0.0
Security	years	3	3	3	3	3	3	3	21	2,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.0	1.0	0.0
Subtotal PCU											0.45	0.45	0.45	0.45	0.45	0.45	0.45	3.17			
2. RCUs																					
Regional Coordinators /o	years	3	3	3	3	3	3	3	21	27,500	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.58	0.0	1.0	0.0
Admn & Finance Officers	years	3	3	3	3	3	3	3	21	15,000	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.32	0.0	1.0	0.0
Assistants to Regional Coordinators	years	3	3	3	3	3	3	3	21	15,000	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.32	0.0	1.0	0.0
Admn. & Finance Assistant	years	3	3	3	3	3	3	3	21	5,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.0	1.0	0.0
M&E Assistant	years	3	3	3	3	3	3	3	21	5,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.11	0.0	1.0	0.0
Drivers	years	3	3	3	3	3	3	3	21	3,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.0	1.0	0.0
Naib Qasids	years	3	3	3	3	3	3	3	21	3,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.0	1.0	0.0
Security Guards	years	6	6	6	6	6	6	6	42	2,400	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.0	1.0	0.0
TA/DA for PCU staff	office	1	1	1	1	1	1	1	7	10,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.0	1.0	0.0
TA/DA for DCU staff	years	3	3	3	3	3	3	3	21	7,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.15	0.0	1.0	0.0
Subtotal RCUs											0.27	0.27	0.27	0.27	0.27	0.27	0.27	1.89			
3. RCU ETI Cell																					
Programme Officer	years	1	1	1	1	1	1	1	7	22,500	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.16	0.0	1.0	0.0
Programme Assistant - BS 14	years	1	1	1	1	1	1	1	7	12,500	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09	0.0	1.0	0.0
Subtotal RCU ETI Cell											0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.25			
Subtotal Salary & allowances - PC Unit											0.76	0.76	0.76	0.76	0.76	0.76	0.76	5.30			
B. Operating costs																					
POL & Vehicle O&M - PCU /p	No	5	5	5	5	5	5	5	35	6,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0
Vehicle O&M -RCUs /q	No	8	8	8	8	8	8	8	56	4,000	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.22	5.0	0.0	17.0
Communication aw areness & Sensitization	LS	1	1	1	1	1	1	1	7	50,000	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.35	3.0	0.0	17.0
Stationery & Equipment /r	LS	1	1	1	1	1	1	1	7	7,000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	5.0	0.0	17.0
Equipment O&M	LS	4	4	4	4	4	4	4	28	7,500	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.21	5.0	0.0	17.0
Office rent for PCU	LS	1	1	1	1	1	1	1	7	18,000	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	5.0	0.0	17.0
Office rent for RCUs	years	3	3	3	3	3	3	3	21	48,000	0.14	0.14	0.14	0.14	0.14	0.14	0.14	1.01	5.0	0.0	17.0
Subtotal Operating costs											0.31	0.31	0.31	0.31	0.31	0.31	0.31	2.18			
Total Recurrent Costs											1.07	1.07	1.07	1.07	1.07	1.07	1.07	7.48			
Total											1.62	1.17	1.17	1.07	1.12	1.07	1.12	8.33			
va 3 for RCUs																					
vb 3 for RCUs																					
vc 3 for RCUs																					
vd 3 for RCUs																					
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vh 3 for RCUs																					
vi 3 for RCUs																					
vj 3 for RCUs																					
vk 3 for RCUs																					
vl Copy of this w ill also be used at RCUs																					
vm 50% for RCUs																					
vn responsible to look after M&E aspects																					
vo will be responsible to look after M&E aspects at Regional level																					
vp includes POL for Motor cycles																					
vq includes POL for Motor cycles																					
vr includes \$ 4500 for RCUs																					

Annex 4

ETI PROGRAMME MANAGEMENT STRUCTURE AND TOR

I. Programme Coordination Unit, ETI

A **Programme Coordination Unit (PCU)** will be established within the Planning and Development Department of the Government of GB. The PCU will be based in Gilgit with three Regional Coordination Units (RCUs) located at Gilgit, Skardu and Diamer. The PCU will be responsible for overall management, implementation coordination, financing, procurements, monitoring, knowledge management and evaluation. All PCU staff will be recruited through competitive process and both public and private sector qualified candidates with appropriate experience will be eligible for selection through a high powered selection committee notified by the provincial government. Selection against key positions will be based on written test and interview and subject to IFAD concurrence. All positions will be open to male and female candidates and female candidates will be encouraged to apply. Apart from suitability, a candidate's commitment to stay in the programme for at least three years would be a primary consideration.

The PCU Staff will consist of the following:

- **Programme Coordinator(PC)**
 - Deputy Programme Coordinator/M&E Coordinator
 - Knowledge Management Officer
 - Communication And Media Officer
 - Statistical Assistant
 - M&E Assistant
 - Admin Officer (1)
 - Admin Assistant (1)
- **Finance Manager (FM),**
 - Accounts Officer (1)
 - Account Officer (1)
 - Account Assistants (2)
- **Procurement Manager (PM)**
 - Procurement Officer
 - Assistant Procurement Manager
- **Contracts Manager (CM)**
- **Value Chain Development Manager (VCM)**
 - Value Chain Fund Officer
 - Value Chain Fund Assistant
- **Infrastructure Specialist**
 - Resident Engineers (1)

Support staff for PCU will include:

Assistant to PC	1
Assistants/Computer Operators	3
Drivers	6
Nab Qasid/Chowkidars	4
Security	(Outsourced)

II. REGIONAL COORDINATION UNITS

Three Regional Coordination Units (RCU) will be established for field level coordination, management and monitoring of programme activities. **One RCU office will be established in Gilgit** for Gilgit, Hunza Nagar and Ghizar districts, **one in Skardu** for Skardu and Ganche districts and **One in Diamer** for Diamer and Astor districts. Gilgit office will be established within the PCU. The RCU will be headed by Regional Coordinator who will also act as M&E and Knowledge Management Incharge and will include essential staff related to main areas of programme operations and management

The Regional Staff for three offices will Include:

- Regional Coordinator (3)
- Admin & Finance Officer (3)
- Regional Engineer (3)

Support Staff for RCUs:

- Assistant to Reg Coord (3)
- Admn & Finance Assistant (3)
- M&E Assistant (3)
- Assistants/Computer Operators (2)
- Drivers (4)
- Naib Qasid (3)
- Security (Outsourced)

III. Terms of Reference of Key PCU and RCU Staff

1. Programme Coordinator (PC)

The PC will be responsible for the overall management and coordination of the programme activities. These include the provision of strategic guidance for programme implementation, principle accounting officer for the programme and overall coordination and team-building. S/he will also be Secretary to the Programme Steering Committee (PSC), which is chaired by the Chief Secretary of GB Province.

Responsibilities

- I. Timely establishment of PCU including completion of recruitments, account opening and operation and management of PCU in an effective and efficient manner;
- II. Establishment of sound management systems within the programme for planning, coordination, reporting, financial management, M&E and trouble-shooting in line with IFAD financing agreement and programme documents
- III. Develop an effective media management and communication strategy for the programme and efficient dissemination of all programme purposes and activities within and outside programme area.
- IV. Be responsible for the overall management of the programme and of the PCU and DCU staff
- V. Lead the preparation of the annual work plan and budget (AWPB) and associated Procurement Plan and ensure its timely submission to relevant forums and approvals;
- VI. Ensure the effective and efficient utilization of programme funds and other resources according to the AWPB and Procurement Plan through supervision and monitoring;
- VII. Ensure that progress, audit and other reports are produced and submitted to the appropriate parties on a timely basis;
- VIII. Ensure effective targeting of the poor and the vulnerable in target villages/valleys and mainstreaming of gender in the programme, achievement of gender impacts as planned, and identifying and managing any gender-related risks;
- IX. Ensure the timely dissemination of programme experience and results to relevant stakeholders within the learning community;
- X. Ensure effective linkages, liaison and networking with other implementation partners and service providers either working in the programme area or potentially concerned with programme activities and with other relevant interventions;
- XI. Establish effective fora for public-private sector interaction and promotion of private sector linkages with the provincial, district and valley level levels farmers or any other beneficiary groups.
- XII. Represent the programme at relevant functions and meetings;
- XIII. Implement the decisions of the PSC; and
- XIV. Perform any other duty relevant to the programme as may be assigned by the PSC.

Qualifications

- I. A highly qualified person with ample knowledge of implementing foreign/loan funded projects/programmes and multi sector coordination to be selected on competitive basis.
- II. Master's degree or higher qualification in Agriculture, Economics, public administration, Business Studies, or other relevant field;
- III. At least 10-15 years' experience at management level preferably relating to projects/programmes with focus in agricultural production, marketing or business development;
- IV. Demonstrated recent experience in planning and implementing a large rural development programme/programme aiming at reducing rural poverty with particular focus on increasing the competitiveness and inclusiveness of value chains, including agricultural value chains;
- V. Demonstrated Experience in ability to liaise with a wide range and levels of organizations Government, Donors, private sector, NGOs, and community institutions.
- VI. Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to programme activities;
- VII. Commitment to serve in challenging areas
- VIII. Strong communications skills (oral, written, presentation); and

2. Finance Manager (FM)

Reporting to the Programme Coordinator, the FM shall lead the coordination of the overall financial functions.

FM will be assisted by Two Accounts Officer and two Account Assistants

Responsibilities

- I. Develop and put into operation the programme financial management system in accordance with the IFAD Guideline;
- II. Manage programme funds effectively and efficiently, ensuring that programme accounts, disbursements and replenishment procedures are executed in accordance with the provisions of the Financing Agreement and the relevant financial guidelines of Government.
- III. Conduct training of implementation partners' and service providers' staff to ensure that they carry out financial reporting and procurement in accordance with multilateral donor guidelines;
- IV. Ensure accurate costing for the AWPB;
- V. Prepare regular financial progress reports;
- VI. Prepare annual financial reports for internal and external auditing in compliance with the provisions of the Financing Agreement. and any specific IFAD reporting requirements;
- VII. Assist the PC in preparing the Completion Report and in conducting programme completion and financing closing activities as per the Financing Agreement;
- VIII. Undertake any other duty assigned by the PC.

Qualifications:

- I. Finance Manager will be a BS-18 or equivalent officer selected from open market on competitive basis.
- II. Degree in Commerce, Finance or Business Administration;

- III. At least 8 years' experience at management level in financial management of government-donors funded development programmes;
- IV. Experience in financial management/accounting in a government ministry/department and donor-funded programmes.
- V. Computer literate, especially in specialized accounting packages;
- VI. Good working knowledge of accounting, policies and procedures;
- VII. Good working knowledge on financial control;
- VIII. Strong management and communication skills.

3. Value Chain Development Manager (VCM)

Reporting to the PC, the VCM shall coordinate the programme activities for value chain development and support. He will be assisted in his tasks by a Value Chain Fund Officer (also coordinator for Value Chain Fund) and a Value Chain Fund Assistant. VCM will be the PCU counterpart and focal person for the Value Chain Technical Assistance Team.

Responsibilities

- I. Under the guidance of the Programme Coordinator and together with the Technical Assistance Team and other stakeholder particularly private sector representative, carry out Value Chain analysis of each of the programme districts to identify constraints and opportunities.
- II. Based on the value chain analysis, and in collaboration with VCTAT prepare, valley/union council, district and provincial level Value Chain strategy and action plan.
- III. Identify, plan and implement capacity building of farmer's organisation for entrepreneurial and business skills.
- IV. Facilitate linkages between business model stakeholders including private sector processors, distributors, local promoters and farmer organisations.
- V. Facilitate and Promote contract farming ventures between private sector and farmers organisations.
- VI. Promote women's access to markets
- VII. Guide stakeholders on the identification, planning, implementation, monitoring and evaluation of value chain support activities.
- VIII. Ensure adequate synergies between the programme components particularly with VCTAT for Value Chain Development Fund.
- IX. Monitor the development of innovative business models and, in collaboration with the Knowledge Management and Communication Officer and the Planning and Monitoring Manager, ensure related knowledge management, including the identification of policy lessons, and participate in developing the Programme Learning System;
- X. Guide the preparation and implementation of the various value chain related studies;
- XI. Contribute to the preparation of the AWPB and progress reports;
- XII. Undertake any other duty assigned by the PC.

Qualifications

- I. VCM will be a BS-18 officer or equivalent hired from private sector.

- II. Master's degree in Agriculture, Agribusiness, Rural Development or a related discipline from a recognized university.
- III. At least 8 years working experience in a similar field, 3 of which in senior management position;
- IV. Demonstrated professional experience in Identification and development of guidelines for specific value chains, Managing the consultative process during the identification of specific value chains, Developing specific analysis on bottlenecks affecting development of value chains and Conducting Training need assessment for the promotion of specific value chains

4. Procurement Manager (PM)

Reporting to the PC, PM will be assisted by One Procurement Officer and One Procurement Assistant

Responsibilities

- I. Develop and put into operation the programme procurement system and procedures;
- II. Ensure that all procurement of goods and services are in compliance with the provisions of the Financing Agreement and IFAD procurement guidelines;
- III. Ensure administrative management of service provider and other procurement contracts;
- IV. Ensure proper use and conservation of programme assets;
- V. Preparation of annual programme procurement plans in collaboration with other members of the PCU and implementing partners, and submitting same for approval by the IFAD and PSC along with the AWPB;
- VI. Prepare regular procurement progress reports;
- VII. Coordination of procurement of programme works, goods and services at the central level and assist/supervise decentralised procurement as appropriate;
- VIII. Ensuring the preparation and advertisement of TORs and tender and contract documents for specific procurements according to GOP and Donor-funded procedures;
- IX. Participation in relevant tender committee meetings at the Lead Agency and assisting with the preparation of committee reports;
- X. Review and advise on tender evaluation reports prepared by the Counties and other implementing agencies and making necessary follow-up;
- XI. Maintaining high quality procurement files and contract registers for review by supervision missions and auditors;
- XII. Preparation of regular financial and procurement progress reports;
- XIII. Undertake any other duty assigned by the PC.

Qualification

- I. PM will be a BS-18 or equivalent officer or a private sector candidate with appropriate experience in administration and procurements of goods and services and will be recruited on competitive basis.
- II. Master's degree in administration or related field.
- III. At least 8 years' experience at senior management level in administration with at least three years' experience with procurement of civil works, goods and services for GoP/donor funded programmes;
- IV. Comprehensive knowledge of Public Procurement Regulations/PMRA rules is a must

V. Strong computer and communications skills (oral, written, presentational);

5. Contracts Manager

Reporting to PC and acting in close coordination with the Procurement Manager, the Contracts Manager will be responsible for the following:

- i. Develop and implement contract management and monitoring system for all contracts for goods and services and civil works
- ii. Monitor the progress of all contracts from signing to final delivery to ensure timeliness and quality
- iii. Identify and bring to the notice of Programme Coordinator and Procurement Manager any deviations in terms of quality or timeliness in any of the contracts
- iv. Assist the PCU and Implementing Agencies in contract management processes
- v. Maintain Contracts register in such form and detail so as to enable effective management and monitoring of all contracts
- vi. Prepare monthly and quarterly contracts progress reports for the information of Programme Coordinators and line departments staff

6. Deputy Programme Coordinator/M&E and Knowledge Management Manager (KMM)

Act as Programme Coordinator in absence of programme coordinator. Reporting to the PC and working very closely with the other managers the MKM will coordinate the establishment and operation of M&E system and an integrated programme Learning and Communication and Strategy System. The system will link five functions: output and outcome M&E, IFAD Results and Impact management System (RIMS), M&E, learning and adaptation for continuous improvement of performance; internal (PCU) and external (stakeholders) communication; innovation and experimentation; and information management.

MKM will be assisted by three Divisional Monitoring Officers placed at DCUs, One KM officer and One Communication Officer and two assistants.

Responsibilities

- i. Development and implementation of the programme M&E and Learning and Communication System and Strategy;
- ii. Develop associated Management Information System for managing data and information for overall monitoring, and for the collection and analysis of data on programme achievements and impact, based on a set of gender disaggregated indicators in line with the programme logical framework and stakeholders' information needs;
- iii. Organization and supervision of focused baseline surveys at the beginning of the programme;
- iv. Coordinating the preparation and monitoring the implementation of the AWPB;
- v. Ensuring that all participating institutions keep records on their activities and feed this information into the Programme Learning System;
- vi. Developing a simple reporting system for the monitoring of programme activities and preparing regular reports on implementation progress, performance and impact of operations;
- vii. Set up term of reference and conduct studies to assess the impact of the programme

- viii. Organization of training on M&E for members of the PCU, implementing partners and counties, and providing technical backstopping to implementing agencies for preparing the AWPBs and for compliance with reporting requirements;
- ix. Develop and implement processes and guidelines for systematic capture of knowledge, good practices and innovation, and the sharing and use of same to improve programme implementation, including in the development of the AWPB;
- x. Support advocacy efforts through providing evidence of programme impact gathered through the M&E system;
- xi. Provide assistance/guidance in implementing the Programme Learning System;
- xii. Coordinate surveys and case studies to assess achievements and outcomes of KCEP activities;
- xiii. Develop a multi-stakeholder communication strategy along the seasonal performance of the programme including a portal for web-based feedback of beneficiaries, private sector partners and county administrations
- xiv. Coordinate the dissemination of the findings from the impact assessment studies.
- xv. Foster partnerships for broader knowledge-sharing and learning;
- xvi. Oversee communication support to awareness raising and sensitisation of programme participants;
- xvii. Contribute to the preparation of the AWPB and progress reports;
- xviii. Undertake any other duty assigned by the PC.

Qualifications

MKM will be hired from private sector

- i. Master's degree in Economics, Agricultural Economics, Rural Development, Communications or other relevant field.
- ii. At least 8 years relevant work experience, in M&E, knowledge management and communication;
- iii. Demonstrated professional experience in Developing and implementing comprehensive M&E and communication and visibility plans, Developing website whose purpose is to document the programme profile and the periodic reporting to results and to provide a forum for stakeholders feedback during the implementation period, Writing reports, articles and or pamphlets depicting programme interventions and results;
- iv. Proficiency in the use of databases, modern information and communication technology (ICT) in development, and other computer applications;
- v. Demonstrated skills in quantitative and qualitative analysis and data management;
- vi. Demonstrated experience in designing and implementing successful communication and knowledge management strategies for sustainable development, or in planning and implementing strategies at management level;
- vii. Experience in analysing complex programmes or policies;
- viii. Strong computer and communications skills (oral, written, presentation);

7. Infrastructure Specialist (IS)

Reporting to the PC, the IS will oversee the implementation of the civil works related interventions of the programme. S/he will be a BS equivalent officer hired from private sector on competitive basis.

IDM will be assisted by Two Resident Engineers at PCU (BS 17 equivalent) at PCU and three Regional Infrastructure Development Officer placed at RCU.

Responsibilities

- i. IS will be responsible for review of infrastructure design and cost, supervision and monitoring of the programme Infrastructure activities.
- ii. Ensure that the design team/contractors have carried out environmental assessment of the programme infrastructure activities.
- iii. Prepare on a timely basis monthly, quarterly and annual progress reports highlighting work plans, progress, key issues, achievements and corrective actions taken.
- iv. Review the tender documents for the studies, supervision and construction
- v. Monitor the work of consultants, contractors and departments including bidding and qualification processes report on quality, efficiency and progress to the PC;
- vi. Contribute to the preparation of the AWPB and progress reports;
- vii. Provide assistance for detailed design and supervision of any community level infrastructure.
- viii. Undertake any other duty assigned by the PC.

Qualifications

- I. IS will be equivalent of BS 18/Executive Engineer level and will be recruited from private sector
- II. Bachelors' degree in Civil Engineering from a recognized institution.
- III. At least 8 years relevant work experience in irrigation, farm to market road and community based infrastructure.

8. Regional Programme Coordinator /M&E Incharge (RPC)

The RPC will report to PC and will be responsible for the overall management, coordination and monitoring of programme activities at the regional level.

Responsibilities

- I. Establishment of systems for planning, coordination, reporting, financial management, M&E and trouble-shooting at the district level
- II. Be responsible for the overall management and coordination of the programme activities in the district and of the RCU staff
- III. preparation of the divisional annual work plan and budget (AWPB) and associated Procurement Plan;
- IV. Ensure the effective utilization of programme funds and other resources according to the AWPB through supervision and monitoring;

- V. Ensure mainstreaming of gender in the programme, achievement of gender impacts as planned, and identifying and managing any gender-related risks;
- VI. Ensure the timely dissemination of programme experience and results to relevant stakeholders within the learning community;
- VII. Ensure adequate linkages, liaison and networking with other implementation partners and service providers either working in the district or potentially concerned with programme activities and with other relevant interventions;
- VIII. Establish effective fora for public-private sector interaction and promotion of private sector linkages with the district and valley level farmers or any other beneficiary groups.
- IX. Represent the programme at relevant functions and meetings;
- X. Perform any other duty relevant to the programme as may be assigned by the PC.

Qualifications

- I. A BS-18 officer or equivalent. Candidate from Private sector will be eligible to apply.
- II. Master's degree or higher qualification in Agriculture, Economics, Business Studies, or other relevant field;
- III. At least 8 years' experience at senior management level preferably relating to programmes/programmes with focus in agricultural production, marketing or business development;
- IV. Demonstrated recent experience in planning and implementing of rural development programme/programme aiming at reducing rural poverty with particular focus on increasing the competitiveness and inclusiveness of value chains, including agricultural value chains;
- V. Demonstrated Experience in ability to liaise with a wide range and levels of organizations (Government, Donors, private sector, NGOs, and community institutions).
- VI. Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to programme activities;
- VII. Strong communications skills (oral, written, presentation).

Islamic Republic of Pakistan
Economic Transformation Initiative Gilgit-Baltistan
PC-1

Table 1.1. Irrigation & Land Development																		
Detailed Costs	Unit	Quantities								Unit Cost (PKR)	Base Cost (PKR Million)							
		2015	2016	2017	2018	2019	2020	2021	Total		2015	2016	2017	2018	2019	2020	2021	Total
I. Investment Costs																		
A. Works																		
1. Design & Supervision Consultancy																		
Mapping of Cultivable lands through GIS	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Design & Supervision Cosultancy /a	schemes	5	-	-	-	-	-	-	-	5	1,025,000	5.13	-	-	-	-	5.13	
Lift Irrigation pilots	No	2	2	3	-	-	-	-	-	7	5,125,000	10.25	10.25	15.38	-	-	35.88	
Provincial Water Policy & O&M Regulations	LS	0.5	0.5	-	-	-	-	-	-	1	10,250,000	5.13	5.13	-	-	-	10.25	
Subtotal Design & Supervision Consultancy												20.50	15.38	15.38			51.25	
2. Construction																		
Construction/ Rehab. of channels	acres	2,500	12,500	17,500	17,500	-	-	-	-	50,000	58,425	146.06	730.31	1,022.44	1,022.44	-	-	2,921.25
Land levelling/ De-stoning etc	acres	-	10,000	10,000	10,000	10,000	10,000	-	-	50,000	10,250	-	102.50	102.50	102.50	102.50	-	512.50
Cost of land /b	acres	19	56	56	56	-	-	-	-	187	4,100,000	77.90	229.60	229.60	229.60	-	-	766.70
Subtotal Construction												223.96	1,062.41	1,354.54	1,354.54	102.50	102.50	4,200.45
Subtotal Works												244.46	1,077.79	1,369.91	1,354.54	102.50	102.50	4,251.70
B. Equipment & Materials /c																		
Desktop Computer with Printer	No	5	-	-	-	-	-	-	-	5	82,000	0.41	-	-	-	-	-	0.41
Laptops/ Note Books	No	5	-	-	-	-	-	-	-	5	71,750	0.36	-	-	-	-	-	0.36
Multimedia projector	No	5	-	-	-	-	-	-	-	5	76,875	0.38	-	-	-	-	-	0.38
Digital Cameras	No	5	-	-	-	-	-	-	-	5	51,250	0.26	-	-	-	-	-	0.26
Subtotal Equipment & Materials												1.41						1.41
C. Vehicles for WMD																		
Pick up 2500 CC	No	4	-	-	-	-	-	-	-	4	2,255,000	9.02	-	-	-	-	-	9.02
Car 1300 CC	No	1	-	-	-	-	-	-	-	1	2,357,500	2.36	-	-	-	-	-	2.36
Motorcycles 125 CC	No	10	-	-	-	-	-	-	-	10	133,250	1.33	-	-	-	-	-	1.33
Subtotal Vehicles for WMD												12.71						12.71
D. Trainings																		
Youth Construction teams /d	groups	40	-	-	-	-	-	-	-	40	871,250	34.85	-	-	-	-	-	34.85
Farmer training in Scheme construction /e	groups	12	22	22	22	22	22	-	-	100	20,500	0.25	0.45	0.45	0.45	0.45	-	2.05
Staff training	NO	30	30	30	-	-	-	-	-	90	102,500	3.08	3.08	3.08	-	-	-	9.23
Subtotal Trainings												38.17	3.53	3.53	0.45	0.45		46.13
Total Investment Costs												296.75	1,081.31	1,373.44	1,354.99	102.95	102.50	4,311.94
II. Recurrent Costs																		
A. Salaries & Allowances																		
Deputy Director Irrigation -BS-18	years	1	1	1	1	1	1	1	1	7	1,107,000	1.11	1.11	1.11	1.11	1.11	1.11	7.75
Assistant Director Finance/Admin (BS-17)	years	1	1	1	1	1	1	1	1	7	861,000	0.86	0.86	0.86	0.86	0.86	0.86	6.03
Design Engineer (BS-17)	years	1	1	1	1	1	1	1	1	7	861,000	0.86	0.86	0.86	0.86	0.86	0.86	6.03
Assistant Engineer -BS-17	years	5	5	5	5	5	5	5	5	35	861,000	4.31	4.31	4.31	4.31	4.31	4.31	30.14
Assistant Accounts Officer -BS-17	years	1	1	1	1	1	1	1	1	7	861,000	0.86	0.86	0.86	0.86	0.86	0.86	6.03
Computer Operator (BS-16)	years	5	5	5	5	5	5	5	5	35	615,000	3.08	3.08	3.08	3.08	3.08	3.08	21.53
Assistant (BS-14)	years	5	5	5	5	5	5	5	5	35	553,500	2.77	2.77	2.77	2.77	2.77	2.77	19.37
Sub-Engineer -BS-11	years	5	5	5	5	5	5	5	5	35	512,500	2.56	2.56	2.56	2.56	2.56	2.56	17.94
Assistant Quantity Surveyor -BS-11	years	5	5	5	5	5	5	5	5	35	512,500	2.56	2.56	2.56	2.56	2.56	2.56	17.94
Drivers	years	5	5	5	5	5	5	5	5	35	184,500	0.92	0.92	0.92	0.92	0.92	0.92	6.46
Rodman -BS-2	years	5	5	5	5	5	5	5	5	35	256,250	1.28	1.28	1.28	1.28	1.28	1.28	8.97
Naib Qasid/ Chow kidar -BS-1	years	5	5	5	5	5	5	5	5	35	184,500	0.92	0.92	0.92	0.92	0.92	0.92	6.46
TA/DA /f	office	5	5	5	5	5	5	5	5	35	615,000	3.08	3.08	3.08	3.08	3.08	3.08	21.53
Subtotal Salaries & Allowances												25.16	25.16	25.16	25.16	25.16	25.16	176.15
B. Operating costs																		
POL & Vehicle O&M/g	No	5	5	5	5	5	5	5	5	35	410,000	2.05	2.05	2.05	2.05	2.05	2.05	14.35
Equipment & O&M	LS	5	5	5	5	5	5	5	5	35	307,500	1.54	1.54	1.54	1.54	1.54	1.54	10.76
Consumables/ Office Supplies	offices	5	5	5	5	5	5	5	5	35	358,750	1.79	1.79	1.79	1.79	1.79	1.79	12.56
Office running cost	office	5	5	5	5	5	5	5	5	35	615,000	3.08	3.08	3.08	3.08	3.08	3.08	21.53
Subtotal Operating costs												8.46	8.46	8.46	8.46	8.46	8.46	59.19
Total Recurrent Costs												33.62	33.62	33.62	33.62	33.62	33.62	235.34
Total												330.37	1,114.93	1,407.06	1,388.61	136.57	136.12	4,547.28

^a Consultancy for initial 5 schemes to establish design, quality, process & material parameters for WMD
^b 5.47 km per channel, 10 ft wide, @ Rs 4 million per acre
^c for Head office & 4 Field offices
^d Training & equipment for land levelling & scheme construction, each group of 10 youth
^e 10 member Scheme management group for each scheme
^f includes vehicle POL, O&M, Utilities & Office consumables
^g includes POL for Motor cycles

