

FAO/GEF PROJECT DOCUMENT

Project Title:	Reversing deforestation and degradation in high conservation value Chilgoza Pine Forests in Pakistan
FAO Project symbol:	GCP/PAK/091/GFF
GEF Project ID:	9516
Recipient Country(ies):	Pakistan
Executing partners:	Ministry of Climate Change
Expected EOD (Starting Date):	January 2018
Expected NTE (End Date):	December 2021
Contribution to FAO's Strategic Framework: (Indicate as appropriate)	<p>Strategic Objective/Organizational Outcome:</p> <p>Strategic Objective Two (SO2): Make agriculture, forestry and fisheries more productive and sustainable</p> <p>Outcome 2.1 Countries adopted practices to increase productivity sustainably while addressing climate change and environmental degradation in agriculture, forestry and fisheries</p> <p>Country Programming Framework 2012-2017: priority area no 2: support to Pakistan new growth strategy through sustainable agricultural economic growth</p> <p>Output: 2.2.2. Enhanced capacity of key value chain actors, for increased value addition in targeted agricultural growth areas along the commodity chains through promotion of public-private partnerships, new and improved post –harvest management technologies and practices (benefiting in particular small holders, women and youth)</p> <ul style="list-style-type: none"> • Regional Initiative/Priority Area: NO
Contribution to GEF TF Focal Area Strategic Objectives and Programs:	The Global Environment Facility (GEF)-funded project will contribute to the following GEF Focal Areas:
Contribution to Climate Change Adaptation Strategy Strategic Objectives (LDCF/SCCF projects):	<ul style="list-style-type: none"> • Biodiversity f-4 Program 9: Managing the Human-Biodiversity Interface • Climate Change Mitigation CCM-2 Program 4: Promote conservation and enhancement of carbon stock in forest and other land use, and support climate smart agriculture <p>Sustainable Forest Management SFM-3 Program 7</p>
Environmental and Social Risk Classification	low risk <input checked="" type="checkbox"/> moderate risk <input type="checkbox"/> high risk <input type="checkbox"/>

Gender Marker	G0 <input type="checkbox"/> G1 <input checked="" type="checkbox"/> G2a <input type="checkbox"/> G2b <input type="checkbox"/>
Financing Plan:	
GEF/LDCF/SCCF allocation:	3,978,440 USD
Co-financing:	
Government of Balochistan, Forestry and Wildlife Department	5,000,000 USD (cash) + 1,000,000 USD (in kind)
Government of Gilgit – Baltistan, Forestry, Wildlife and Environment Department	5,000,000 USD (cash) + 1,000,000 USD (in kind)
Government of Khyber Pakhtunkhwa, Forestry, Environment and Wildlife Department	5,000,000 USD (cash) + 1,000,000 USD (in kind)
Federal Administered Tribal Areas (FATA) Secretariat, Production and Livelihood Department	5,000,000 USD (cash) + 1,000,000 USD (in kind)
	24,000,000 USD
Sub-total co-financing:	27,978,440 USD
Total budget:	
Executive Summary	
<p>Chilgoza forests are occurring in the dry temperate zone of Pakistan. These forests grow between 2000 to 3350 meters above sea level in the Hindu-Kush Himalayan region of Pakistan. The chilgoza forests either occur in pure patches or mixed with other coniferous tree species like deodar, and blue pine. These forests hold tremendous importance from both ecological and economical perspective. Though the accurate value of this ecosystem is yet to be assessed, but this has high significance for its non-timber forest products including chilgoza nuts, medical plants, mushrooms, honey and biodiversity with positive contribution to the local livelihoods. However, these forests are under tremendous pressure due to the increased demand beyond their capacity. The main threats to the chilgoza ecosystem include unsustainable harvest, overgrazing, conversion to agriculture land natural disaster and climate change.</p> <p>The proposed project is a part of the “The Restoration Initiative “ with the objective of improved local livelihoods through increased productivity and enhanced services and functions of the chilgoza forests of Pakistan. The project will be operative in Sherani district of Balochistan, South-Waziristan Agency of FATA, Chitral district of Khyber Pakhtunkhwa and Diamer district of Gilgit-Baltistan. The component 1 of the project is related to strengthen regulatory and policy environment for integrated and sustainable management of chilgoza forest ecosystem. The component 2 is related to the implementation of chilgoza forest landscape conservation, restoration and value chain development at community level. The component 3 will be addressing matter related to strengthening local institutions for integrated and sustainable management of chilgoza forest ecosystem, while the component 4 is covering knowledge, partnership, monitoring and assessment of chilgoza forest ecosystem. The project will bring around 30,000 hectares areas of chilgoza forests under sustainable forest management through active participation of the local communities. This will also include 3600 hectares under Assisted Natural Regeneration and 800 hectare under agroforestry and farm forestry.</p> <p>The project, in addition to the local benefits, will also contribute to the global environmental benefits by mitigating estimated Greenhouse Gas emissions amount of 2,782,420 tCO₂eq (direct) and 7,724,809 tCO₂eq (consequential/indirect) in the considered biome and timeframe.</p>	

ACRONYMS

ADB	Asian Development Bank
ANR	Assisted Natural Regeneration
BD	Biodiversity
CFPCC	Chilgoza Forest Protection and Conservation Committee
EBA	Endemic Bird Area
Ex-Act	Ex-Ante Carbon Balance tool
FAO	Food and Agricultural Organisation
FATA	Federal Administered Tribal Areas
FCPF	Forest Carbon Partnership Facility
FLR	Forestry Landscape Restoration
FMP	Forest Management Plan
FPCC	Forest Protection and Conservation Committees
FR	Frontier Region
FSMP	Forestry Sector Management Plans
GB	Gilgit – Baltistan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEB	Global Environmental Benefits
GEF	Global Environmental Facility
GHG	Green House Gas
GIS	Geographical Information System
ha	Hectare
HRBA	Human Rights Based Approaches
IES	Incentives for Ecosystem Services
IPCC	Inter-governmental Panel on Climate Change
IUCN	International Union for Conservation of Natural Resources
KP	Khyber- Pakhtunkhwa
MOCC	Ministry of Climate Change
NOC	No Objection Certificate
NTFP	Non-Timber Forest Products
PES	Payment for Ecosystem Services
PFD	Programme Framework Document
PMU	Project Management Unit
PSC	Project Steering Committee
PTF	Project Task Force
REDD	Reducing Emissions from Deforestation and forest Degradation
ROAM	Restoration Opportunity Assessment Method
SDG	Sustainable Development Goals
SFM	Sustainable Forest Management
SMEDA	Small-Medium Enterprise Development Authorities
TRI	The Restoration Initiative
UNEP	UN Environment
USD	United States Dollar
WWF	World Wildlife Fund

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1 Section 1 – Project Rationale

1.1 Overview of the project context

1.1.1 Country overview

Pakistan is an agriculture country with a total geographical area of 79.1 million ha. The cultivated area is 22.4 million ha, while the forest area is 4.27 million ha. The total projected population of the country is 199 million. Agriculture is a high priority sector for the country and accounts for 20.88 % of Gross Domestic Product (GDP) and 43.5 % of employment. The sector has direct and indirect linkages with other sectors of the economy and play significant role in socio-economic development of the country. The agriculture sector has four sub sectors including crops, livestock, fisheries and forestry.

The climate of Pakistan is arid to semiarid, where approximately 60 % of the area receives less than 250 mm of rainfall per year, while the rest of the 24 % semiarid area receives between 250-500 mm. In the moist temperate ecological zones the rainfall is high. Pakistan is disaster prone and climate change affected country. According to the German Global Climate Risk Index 2016, Pakistan is 8th most effected country from climate change impacts, with 143 disastrous events from climate change since 1995 to 2014, 0.70% loss in per unit GDP, annually average 487 deaths due to climate change, and a total purchasing power parity loss of 3931.4 million USD. Adding to this, using the weighted average index of German watch CRI 2016 Pakistan is 5th most vulnerable country to climate change risks. In 2010 flood alone, 130,000 village houses were destroyed and over million acres of crops were destroyed directly affecting 2.5 million people and causing 367 deaths.

Due to Pakistan's geographical situation, it is anticipated that the temperature will increase much higher than global averages, making Pakistan's agriculture and forest sectors become more vulnerable to climate change. It is estimated that temperature for Pakistan will be +1.4 - 3.7°C by 2060 according to Global Circulation Models (Inter-governmental Panel on Climate Change (IPCC) 5th Assessment Report). It has been calculated from historical data from 1902 to 2002, that number of hot days and nights per year having temperature greater than 40 C in Pakistan have increased to 20-23 days.

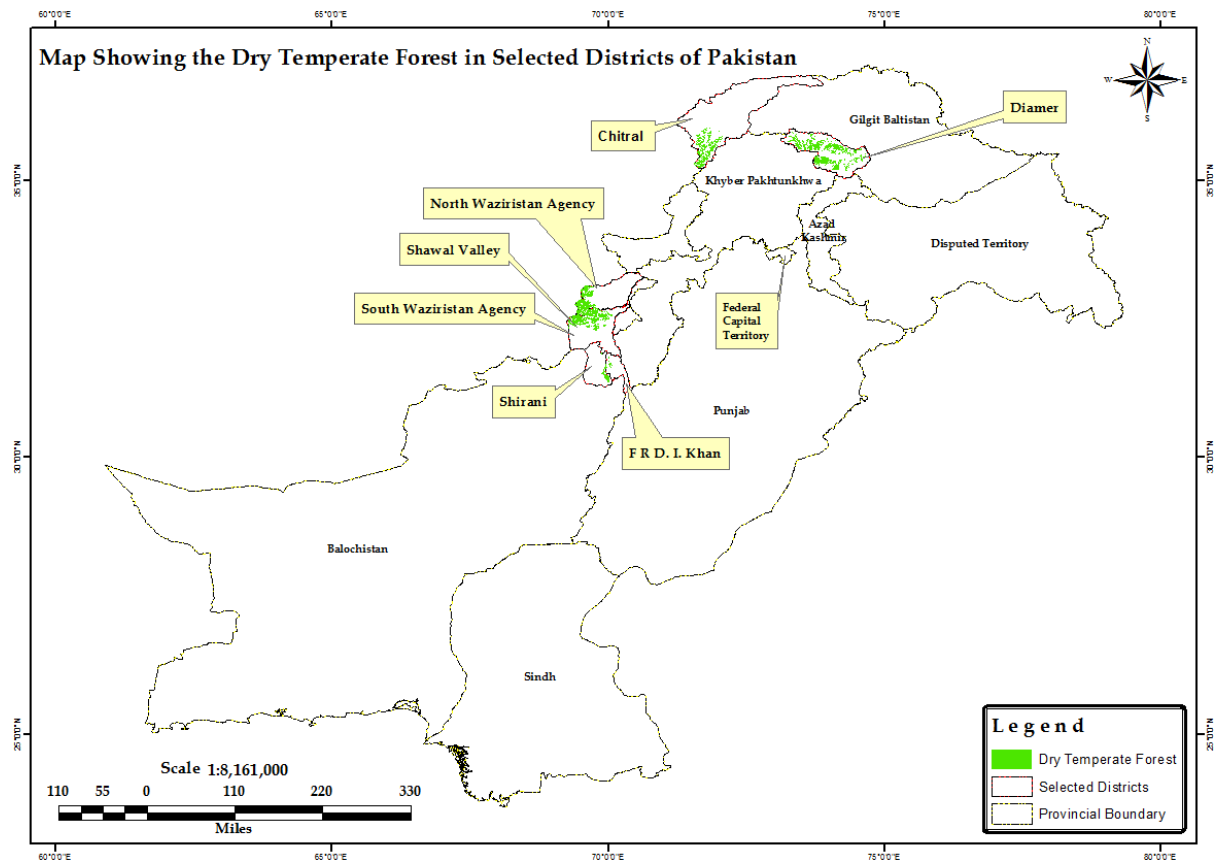
In order to address the key issues of climate changes in Pakistan, the Ministry of Climate Change was established in 2011. As a top priority, the Ministry formulated a Climate Change policy in 2012, which provides the key priority areas to be addressed during the implementation of the Policy. Further to the formulation of this Climate Change Policy, its framework for implementation has been developed keeping in view the current and future anticipated climate change threats to Pakistan's various sectors. A number of measures address both mitigation and adaptation options enhancing various ongoing efforts and initiating new activities (e.g. Adaptation Strategies, Mitigation Strategies, Clean Development Mechanism and Nationally Appropriate Mitigation Actions). To implement these multiple climate change options the Ministry is considering accessing the Green Climate Fund (GCF). Projects proposed for Pakistan's Second National Communication on Greenhouse Gases (GHG) emissions have been finalized

Forestry is one of the highly significant sub-sectors of agriculture providing multiple goods and ecosystems services. Due to the high population pressures, coupled with insufficient management and climate change factors, forestry resources are subjected to a high level of deforestation and degradation. In 2010, Food and Agricultural Organisation (FAO) reported that forest cover in Pakistan was only 2.2% (or 1.687 million ha), of which just 20.2% (340,000 ha) was primary forest. Various other national sources are providing different figures regarding Pakistan's total forest area. According to the Forestry Sector Master Plan (FSMP, 1992), Pakistan has 4.8% of its total land area under forests (with 95% natural forests and 5% plantations). Siddiqui (1996) estimated the total forest area of Pakistan as 4.2% (with about 97% natural forests and 3% plantations). Bukhari et al ¹ (2012) have estimated this total area under forests as 5.1% (96% natural forests and 4% plantations).

This relatively meagre forest resource is subjected to further degradation due to various pressures. The National Forest and Range Resource study reported that taking the Forestry Sector Master Plan (FSMP) survey of 1992 as a baseline, a total of 27 000 ha natural forests disappeared during the 10 years period

¹ Forestry Atlas of Pakistan

1990-2000. This figure corresponds to an annual decrease of 0.7 %. Similarly, Global Forest Resource Assessment has indicated the Pakistan Forest cover was 2.5, 2.1, and 1.7 million ha during the study years of 1990, 2000, and 2010 respectively. Similarly, the World Bank (2009) has reported the total forest cover of Pakistan is 2.2% of its total geographical area, which is close to the FAO estimation of 2010.



Map showing the dry temperate forest having *Chilgoza* forests in the project area

The existing forest resources are not sufficient for the fast-growing population’s demand for the various goods and services providing by Pakistan’s forested landscapes. According to estimates the current demand from the forestry resources is three times more than the existing forest resource can provide. The household sector is the largest consumer (81.8%) of fuel wood, followed by industrial fuel wood users (14.9%), and commercial users (3.3%). More than 58% forests of Pakistan are falling in category of protection forests, while only 41% are productive forests. The contribution of this sub-sector in agriculture is 14.49 % (Economic Survey of Pakistan 2016-2017) with main components of forestry, timber and fire wood. In addition, the forest and rangelands provide 60% of the total feed requirement for more than 81.2 million animal heads of Pakistan. In addition to this high pressure, the forestry resource is also affected by climate change, in particular in arid and semi-arid areas that are more sensitive to climate change due to the water stress.

Under Millennium Development Goals (Goal-7) Pakistan had committed to increase forest cover to 6% by the year 2015. This target was not achieved mainly due to financial constraints of federal and provincial governments. However, in the last few years, the focus on increasing forest cover is resulting into some mega afforestation projects such as Billion Tree Afforestation Project by Khyber Pakhtunkhwa project aiming at increasing the forest cover of the province to 22% from the current forest cover of 20%. The Federal Government recently has also launched a massive afforestation programme known as “Green Pakistan Programme”. However, due to financial constraints, the same momentum is less likely to be sustained. The main hopes for future financial resources mobilization for the forestry sector are now the GCF, GEF and other Reducing Emissions from Deforestation and forest

Degradation (REDD) plus options. To access these funds, bankable project proposals need to be developed but currently there is limited human capacity available.

1.1.2 Forests, forest ecosystems and forest ecosystem services

Pakistan has a total of nine forest types representing various ecosystems. These include, dry temperate, moist temperate, oak (*Quercus*), sub-tropical chir pine (*Pinus roxburghii*), sub-tropical broad leaves, tropical thorn, riverine, mangroves and plantations. The dry temperate forests cover an area of 1,278,974 ha which is the largest percentage compared to the other categories of forests. Dry temperate, broad evergreen forest and rangeland predominate in the Northern mountain districts and regions of Balochistan, Khyber Pakhtunkhwa, Federally Administered Tribal Areas (FATA), and Gilgit-Baltistan (GB). These are mountainous forests and contain 80% of the country's 300 endemic plant species, including rare species (e.g. *Saussurea lappa*, *Acorus calamus*), important Non-Timber Forest Products (NTFPs) (e.g. four different varieties of wild apricot, thyme, walnut) and other economically important species including deodar (*Cedrus deodara*), blue pine (*Pinus wallichina*), and the unique Chilgoza pine (*Pinus gerardiana*). The Chilgoza pine is considered as near threatened in the International Union for Conservation of Natural Resources (IUCN) Red List².

Due to its diverse landscape and ecological zones, Pakistan has rich and unique biodiversity. According to the Biodiversity Action Plan (1999), Pakistan has 174 species of mammals, 668 species of birds, over 177 species of reptiles, 198 species of freshwater fish, over 5,000 species of insects, about 5,721 species of plants and 191 species of plant parasitic nematodes and 19 amphibian species.

Globally threatened fauna inhabiting in or adjacent to Chilgoza forests include the rare and endangered snow leopard (*Panthera uncia*), Naur (*Pseudois nayaur*), Himalyan Lynx (*Lynx lynx isabellinus*), the Suleiman Markhor (*Capra falconeri jerdoni*), wolves (*Cannis lupus*), black bear (*Ursus thibetanus*), common leopard (*Panthera pardus*) and others. Pakistan's northern forests are listed on World Wildlife Fund's (WWF) Global 200 list, and its western edge is a recognized Endemic Bird Area (EBA) important to chukar partridge (*Alectoris chukar*), Peregrine falcon (*Falco peregrinus*) and Eurasian kestrel (*Falco tinanculus*).³

The Chilgoza forests are mainly occurring in the dry temperate zone of Pakistan, where there is less rainfall compared to the snowfall. Chilgoza trees⁴ grow between 2,000 m to 3,350 m above sea level in the Hindukush-Karakoram-Himalaya region of North Pakistan. While deodar and blue pine are valued almost exclusively for their timber, Chilgoza is valued for its nuts for which there is high local, national and international demand. This species' edible, oil-rich seeds are harvested in autumn and early winter. Trees that do not yield seeds are likely to be used for firewood and in light construction and carpentry. The value of Chilgoza timber is low, but it is estimated that a single standing Chilgoza pine tree can produce nuts worth Rs 4500 (\$44) per year which makes it an important income source for many poor households. In addition, Chilgoza forests yield important non-timber forest products (NTFPs) including medicinal plants, mushrooms, and honey, which supplement local incomes and nutrition.

Chilgoza pine forests hold tremendous importance from both ecological and socio-economic perspectives, occupying a critical niche spanning protection and productive landscape and rangeland management. While their value is not yet well assessed or captured, Chilgoza forests are also viewed as important for the maintenance and protection of vital ecosystem services (e.g. carbon storage, soil and flood protection, water recharge and regulation of downstream flows, essential to human consumption, irrigation and hydro power generation).

1.1.3 Links and contribution to The Restoration Initiative programme

This GEF project in Pakistan is an integral part of "The Restoration Initiative" (TRI): The program has been developed to make a significant global contribution to restoring ecosystem functioning and improving livelihoods through the restoration of priority degraded and deforested landscapes, in support of the Bonn Challenge, and in response to the expressed needs of the ten partner countries. Through the

² http://www.iucnredlist.org/details/classify/34189/0#end_uses

³ See: www.iucnredlist.org

⁴ Chilgoza pine trees themselves listed under IUCN "Near-Threatened" category

GEF programmatic approach, The Restoration Initiative (TRI) will create synergies, provide a wider array of tools and resources to national projects, and leverage key partnerships to yield cost savings and realize greater impact than possible under a fragmented project-by-project approach.

The Program consists of national projects supported by a Global Learning, Financing, and Partnerships project to develop and disseminate best-practices and tools, catalyse investment in restoration, expand the scope of countries and actors engaged in forest and landscape restoration, and realize benefits at scale. The Restoration Initiative has been developed through collaboration between and will be steered by GEF Agencies IUCN, FAO, and UNEP.

The four TRI programme components include: (i) Policy development and integration issues, (ii) Implementation of Restoration Programs and Complementary initiatives at local level, (iii) Institutions, Finance and Up-scaling options and (iv) Knowledge management, Partnerships, Monitoring and Assessment.

Based on this common framework the Chilgoza child project components are:

- 1 Strengthened regulatory and policy environment for integrated and sustainable management of Chilgoza forest ecosystems
- 2 Implementation of Chilgoza Forest Landscapes Conservation, Restoration and Value Chain Development options at community level
- 3 Strengthened local institutions for integrated and sustainable management of Chilgoza forest ecosystems
- 4 Knowledge, partnerships, monitoring and assessment for Chilgoza forest ecosystems

1.2 Current situation

The Chilgoza forests are situated in the dry temperate areas of Pakistan. These forests are mostly on the rugged mountains. Depending upon the site location, the accessibility in some area is an issue. These forests are either in pure stands, or as a mixed stands with other coniferous species. The ownership also varies across the four selected project sites. In Balochistan, FATA, and GB the sites are private forests/community forests with the management responsibility rest with the respective forest departments. At these sites, management plans do not exist, and the focus is on generating financial resources as well as fulfilling community needs for timber, fuel wood, and fodder. In Chitral, the forests are protected forests with the provincial government ownership, while the local people have user rights and privileges for utilizing the various products and services.

A few decades ago the Chilgoza nut market was not explored, therefor the consumption of the Chilgoza nut was only locally and some portion went to the national market. With the increased interest of the Chinese in the Chilgoza nuts, the prices went up and the local people were motivated to stop the cutting of trees and instead collect the seed for earning handsome revenue. Most of the pine nuts in European trade are sourced from China⁵. In addition to the many species of pine nut produced in China, Chinese processing plants also import un-shelled pine nuts from Korea and Russia, then process and re-export them as Chinese Pine Nuts.

The provincial forest department charge a nominal duty on the export of Chilgoza nuts to the other part of the country, in this way, the major portion of the income is retained by the local community and the traders. The local communities in all four sites have an agreed plan for the collection and utilization of the pine cones. The local community have fixed a time period for collecting the cones from the tree, which is generally from September 15-30 of each year. During this period, the local community members are allowed to collect the cones by using their own family members, and employment of labour from outside of the village is not allowed. The community also put certain conditions on the collection of the cones to avoid injury to the tree as well as to the surrounding forests. Women farmers are involved in the cone collection, transportation to the local market, cleaning and drying, and in some cases, extraction of seed from the cone.

⁵ <http://www.freeworld-trading.co.uk/product/pinenuts/>

For the collection of the cones, extraction of the nut, and subsequent cleaning, local women are intensively engaged. However, the marketing of the produce is mainly done by the male member of the family. The local traders purchase the cones and further transport to the main local markets where the outsider traders arrange the extraction of the seed. The outside traders then transport the seed to the main markets for roasting, and further processing. Final in bigger national markets, packing is done and sold mainly by Chinese traders. The Chinese traders, after refining and packing, sell the seeds at a higher price in international market including in Europe and the Middle East. It is worth-noting that the majority of the net profits go to outside traders, both national and international and a very small proportion is left to the local people/collectors and owners.

According to an estimate each project site has the potential to generate total revenue in billions of Rupees (millions of dollars) Chilgoza nuts trade in good seed year. This additional cash income contributes significantly to the local livelihoods. Rationalizing the role of the middle-men (outsider traders), the proportion of the net income to the local people will increase.

The site specific current situation of the Chilgoza forest and the nut production is provided below:

- In Balochistan, the world's largest pure stand of Chilgoza pine forests is found within the Suleiman Mountain Range, occupying an area of ca. 26,000 ha—with 0.7 million trees found here of various age groups, or a volume of 876,560 cubic meters. This project will target Shirani district of Balochistan. The main Chilgoza forests in this area include the: Qaisa Ghar; Kunday Qaisa; Narray Ghar; Obshta soka; Dolay; Zarghoon Zawar; Gardaw, and; Ponga. With a dry temperate climate suitable to Chilgoza, the area is an extension of the Hindu Kush, and so the topography is steep and rugged (with elevation ranges from 500 to 3441 meters). WWF Pakistan estimates (2012-2013) a total of 130,000 kg Chilgoza nuts were collected from this mountain range with estimated market value of Rs 117 million (1.15 million USD), with an estimated revenue of 8.85 USD per kg.
- In Chitral district of the Shishi Koh valley (Barir), Chilgoza trees of different age classes are spread across twenty-one (21) forest compartments. The estimated production across this area's 3,000 Chilgoza ha for cones in a 'bad-seed' year is around 4,000 kg (across total area) which generates Rs 4.8 million (46,000 USD). In a 'good seed' year this revenue will reach to Rs 6 million (57,000 USD). The Programme for Mountain Areas Conservation is involved in improving wool processing and marketing livestock products in Garam Chashma (Chitral). This area has yet to coherently address Chilgoza forest degradation, and local capacities for sustainable forest management are much needed. Estimated revenue is between 11.75 USD and 14.75 USD per kg.
- In South-Waziristan Agency (of FATA) and its adjacent Frontier Region (FR), Chilgoza pine forests occupy an area of approximately 95,647 ha. The main Chilgoza forests the project will address include the Shawal wazir area, Tare jawara, Shawange, Badar, Pheer ghar, Anghur aha, Birmal, Razghe, Shaghai, and Sholam. These are significant Chilgoza forest areas. The estimated revenue from the Chilgoza nuts from this area is more than Rs 427 million (4.1 M USD) annually. In the same way, there are big patches of Chilgoza forests in Shawal valley of North-Waziristan Agency as well. No landscape or significant forest restoration or protection baseline project has worked in this area.
- In Diamer district of Gilgit-Baltistan, the Chilgoza forests are found in Hodure, Khanbery, Goharabad, Chilas, Darel, Tangir, Botogaa, Thor, Khinar and Doshal valleys with a total estimated production of 224,000 bags of cone. These forests are situated in remote areas of the valleys with a total estimated area of 8,000 ha. The related local communities are the beneficiaries of the produce. These are community forests with overall management rests with the Forest department, while the local get the major portion of the amount generated.

The total estimated Chilgoza production during the period 2010 to 2014 was in range of 25,000 to 30,000 metric tons annually (Iqbal 1991). Applying average rate of US 20,000 per metric tons, the total revenue generated will be in tune of 600 million USD (120 million USD/year). This is handsome

revenue generated from the Chilgoza enterprise. During 2012, a total of 1461.1 tons of nuts were exported that brought an income of around 13.56 million USD, while during 2013 the volume of export was 1738 tons, generating around 20 million USD (Basit, 2016). Though the net revenue changes from site to site, but assuming that there are 30 cone producing trees per hectare and using a net 44 USD per tree, the total revenue will be 1320 USD per hectare.

Increasing population pressures and high local dependency on Chilgoza forests for food, fodder and fuel have caused land-use changes (i.e. deforestation and degradation) with important implications for both CO₂ emissions and sequestration. Chilgoza ecosystems are fragile and deforestation has been one of the major factors for the land turning into a non-reversible degraded state. Standing Chilgoza forests in mountain areas remain superior to other land uses (e.g. agriculture and rangeland) for minimizing topsoil and nutrient loss and in enhancing carbon sequestration (via tree, understory, debris and soil).

1.2.1 Main environmental threats

Threats to Chilgoza Pine Forests:

The Chilgoza forests provide a variety of goods and services for the local, national and international level. Locally, the Chilgoza forests provide timber, fuel wood, fodder, non-timber forest products (Chilgoza nuts, medical plants, mushrooms, and honey, bio-diversity), while at national level, the forests absorb and regulate water flow downstream for drinking, irrigation and hydropower generation purposes. Globally, these forests sequester carbon dioxide of 23 million tCO₂eq (carbon dioxide equivalent) over a period of 20 years, and contribute to GHG emission reduction. The forests are also important for national and global biodiversity conservation. By enhancing the productivity of goods and services, local livelihoods will also be improved. However, there are a number of threats which negatively affect the goods and services of the forests, including the frequent occurrence of natural disasters. The following key threats have been identified by consultation with the local community, private sector, and forest department staff besides visiting the project sites.

As with most forest types in Pakistan, Chilgoza forests are under threat from several sources, including:

1. ***Increased unsustainable harvest of Chilgoza pine trees and nuts:*** Since its independence in 1947, the population of Pakistan has increased more than five-fold. The current population growth rate is 2.6 % and its population is young (median age is 22.8 years), so a further increase is expected. Traditional harvesting rules at one time made it possible to respect trees and allow suitable portions of seed to reach the ground for the forest to regenerate. Increased population has led to higher demands for increasingly limited forest resources (timber, NTFPs, fuel wood and fodder) in the whole of the country, and especially in the mountain regions where community livelihood and household needs (e.g. building, food security and energy needs) heavily depend on forest and land resources at hand. For Chilgoza forests, poor harvest techniques and unsustainable rates of cone collection contribute to poor regeneration of both trees and nut yields. The overexploitation of Chilgoza for firewood is closely related to unsustainable harvest techniques, further increasing the risks to the Chilgoza pine as emphasised by IUCN's consideration of the Chilgoza as *near threatened* in the Red List.
2. ***Overgrazing by domestic livestock:*** With local population increases there has been a corresponding increase in the number of livestock which, without proper planning, has resulted in the degradation of adjacent rangeland ecosystem. Degraded pasture, the lack of livestock planning and available fodder has also compromised the natural regeneration of Chilgoza forests and impacted forest biodiversity. According to the projected figures of the national livestock census survey, there are 181.2 million heads of livestock and an estimated 60% of the forage requirements are met from the rangelands and pastures. This leads to the overgrazing and subsequent deterioration of the forestry resource. This phenomenon is more serious in the dry climate zones, where Chilgoza forests exist.
3. ***Conversion of pine forests for agricultural use*** has led in some areas to increased forest fragmentation. During the five last decades, improved road access has allowed intensive cash-arboriculture to develop in the valleys and to the detriment of better adapted and ecologically suitable standing Chilgoza forest and mountain rangeland.

4. ***Impacts of natural disasters and climate change:*** Pakistan is prone to natural disasters including major earthquake (2005) and flood (2010, 2011) events. The 2005 earthquake damaged 150 000 ha of forest in Azad Jammu and Kashmir, and 20 000 ha area in Khyber Pakhtunkhwa province. Additional damage was created as 1.7 million cubic meter timber/year was harvested for the reconstruction of damaged houses. Harvests of this magnitude have led to landslides causing additional destruction of Northern forest areas.

The change in the rainfall and weather patterns has also affected the composition of Chilgoza forest vegetation. While the country as a whole has seen ‘a 0.76°C rise in temperature during the last 40 years,’ mountainous areas such as ‘Gilgit-Baltistan and Chitral have seen an increase of 1.5°C during the same time period.’⁶ The loss of forests and benefits regulating (and creating) micro-climates is perceived to have contributed to drought and changing rainfall patterns, leading to increased desertification of already fragile upland Chilgoza ecosystems. There is a need for further scientific forest management that keeps view of the on-ground situation, changing weather pattern and global warming in site.

The increased population has put pressures on already dwindling forest resources, and this has been linked to high levels of poverty and limited alternative livelihood options in the country’s northern mountain region. Unregulated natural forest exploitation, non-existent and/or ad hoc planning, a lack of understanding of multiple forest benefits, and other threats including poverty and livelihood pressures have compromised remaining Chilgoza forest ecosystems.

1.2.2 Baseline initiatives

In the 1990s, there was significant investment in Pakistan’s forest development, and a number of donors contributed in this regard. The governments of Germany, Switzerland and the Netherlands supported projects in the forestry sector, and especially in Khyber Pakhtunkhwa province, where successful models were developed for integrated and collaborative natural resource management. In Punjab and several other provinces, the World Bank supported forest-focused initiatives, while Asian Development Bank (ADB) funded a Forestry Sector Project (loan) to promote social forestry in Khyber Pakhtunkhwa. Since the end of the 1990s, security problems and natural disasters shifted the attention of the Government of Pakistan and its development partners away from forest management, and Pakistan now lags behind in the development of sustainable forest management (SFM) and REDD+ compared to other countries in the region.

Nevertheless, in the last decade the Government of Pakistan did continue to undertake a number of projects aimed at strengthening environmental management of forests, including several that were active in one or more of the four provinces targeted by this proposed project and which constitute an important baseline.

These baseline projects include:

- Tarbela Watershed Management Project (2005-11), which focused on institutional strengthening of provincial Forest Departments through training and improved infrastructure and equipment; (Pakistan and WFP funds)
- Development of forestry sector resources in Pakistan project (2007-13), which focused on sequestering carbon and gaining carbon credits in the context of Clean Development Mechanism through mass scale afforestation programme (Government of Pakistan funds);
- Capacity building for REDD readiness in Pakistan project (2011-12), which addressed integrated watershed management, biodiversity conservation and slope stabilization through bio-engineering. (World Bank through Carbon Facility) 3.9 million USD.
- Billion Tree Tsunami Afforestation Project (2014-2018) by the Forest Department of Khyber Pakhtunkhwa, aiming to increase the forest cover from the current 20 % to 22 %.(Government of KP) Total cost 14 billion Rs (133 M USD).

⁶ <http://www.dawn.com/news/1098936>

- Green Pakistan Project (2016-2021) is focussing in increasing the forest cover by planting 100 million seedlings throughout the country. (Government of Pakistan)

This proposed GEF project has been and will continue to be informed by these national and provincial level initiatives to strengthen collaborative and joint forest management approaches that build the participation of local communities and the capacities of other forest stakeholders (e.g. protected areas, forest and livestock extension agents, biodiversity friendly enterprises) to engage in sustainable forest management and biodiversity conservation.

Initiatives addressing Sustainable Forest Management:

Pakistan's 11th Five Year People's Plan (2014-19) is likely to include substantial investments for programmes related to sustainable management of land and natural resources including forest management. The Green Pakistan Programme at Federal level and Billion Tree Tsunami Afforestation Project in Khyber Pakhtunkhwa are the prominent programme in forestry sector. In addition, the Provincial Forest Departments have Annual Development Plans (ADPs) with an estimated total annual budget of 2.5 billion Rs (25 M USD per year); provinces are expected to allocate between 10-25% of these funds for SFM activities, which would produce total baseline spending of between 10-25 million USD on SFM over the four years of the proposed project.

Additional baseline funding will come from the Forest Development Fund, which is focused on SFM and the strengthening of policy and regulatory frameworks. The current level of this fund is Rs 2 billion (19 M USD). In addition, WWF is currently working at a limited scale on the sustainable forest management of Chilgoza pine in an area of the Suleiman mountain range in Balochistan, and the Swiss Development Cooperation has provided initial investments in Chilgoza forests in Chitral district aimed at awareness raising, resource inventory, provision of market information, interest group formation, value addition and capacity building, and provision of alternative sources of energy. These baseline programmes will provide an important opportunity to increase the impact and potential for replication of the outputs of the proposed Chilgoza forest project funded by the GEF.

The Pakistan Army, as a part of its rehabilitation programme in the conflict affected areas of FATA, is currently establishing a Chilgoza processing unit at Wana. The expected quantity of Chilgoza is around 300 metric tons per years' worth Billions of Rupees. This will address the main issue of value chain development and value addition, and the local people besides engaging in the jobs will also get handsome portion of the revenue. The project will also be associated with this initiative.

Initiatives in Biodiversity Conservation:

Biodiversity conservation has gained significant support in both national and provincial programmes in Pakistan. The 11th Five Year People's Plan (2014-19) includes various integrated natural resource management projects and programmes aimed at the conservation of critical habitats and species in protected areas across the country. The wildlife departments of the four provinces targeted by the proposed project have initiated a number of important biodiversity projects.

Khyber Pakhtunkhwa has a number of projects, including Propagation and Multiplication of Endangered Species of Temperate Zone of Chitral (0.25 million USD), Strengthening Conservation and Development of Wildlife in Chitral, Dir and Swat (0.4 million USD), Conservation Education and Awareness campaign (0.5 million USD), Protection and Management of Game Reserves (0.37 million USD), Conservation and Management of Wildlife in central and northern divisions (0.4 million USD), and Management of National Parks (7.0 million USD). In addition, the Billion Tree Tsunami project noted above includes a biodiversity component in Chitral district.

Other BD-related programs include an ongoing community-managed snow leopard conservation and watershed management project in Chitral and Gilgit- Baltistan (3 million USD) and various BD-relevant projects and programmes in Chilgoza ecosystems in Balochistan, FATA and Gilgit-Baltistan.

The International Centre for Integrated Mountain Development (ICIMOD) has supported a number of Northern Mountain upland projects that have assessed and promoted the sustainable use of biodiversity,

including biodiversity assessments and working with local forest user groups to strengthen dialogue and programs for sustainable development focused on the poor and to introduce livelihood innovations to poor households.

Despite these various programs, most government budget allocations for BD conservation are limited to activities within protected areas and do not address the productive landscapes that are the focus of the proposed Chilgoza forest project.

Initiatives in Climate Change Mitigation and REDD+ Readiness:

FAO, through the UN Collaborative Programme on REDD+ (UN-REDD), has supported the Office of Inspector General of Forests (OIGF) to develop a national REDD+ Readiness Preparation Proposal (R-PP) and a National Forest Monitoring System Action Plan (NFMS AP). The R-PP was submitted to the World Bank's Forest Carbon Partnership Facility (FCPF) in November 2013, and on the basis of this document, Pakistan was admitted to the FCPF Programme, resulting in the signing of a grant agreement with the World Bank in June 2015 for a USD 3.6 million REDD+ Readiness programme.

This programme will support the implementation of the NFMS AP, the building of technical and institutional capacity at national and sub-national levels to develop and implement a national REDD+ strategy, and the identification of the issues related to drivers of deforestation and forest degradation that a national REDD+ strategy could potentially address. The Chilgoza forests are potentially one of the locations where efforts, through a national REDD+ strategy, to address deforestation, forest degradation and enhancement of forest carbon stocks may be effective. There is a good potential for inclusion of the Chilgoza forests in a REDD+ Readiness programme. Currently international firms have been engaged to undertake the envisaged assignment for the readiness phase, and will be able to finish the task by the end of 2017.

The present TRI child project will establish links with this REDD+ Readiness programme during the implementation phase. The Khyber Pakhtunkhwa Forest Department is undertaking a project entitled “*Development of Designated Forests Carbon Stock Assessment for REDD+ and Promotion of Carbon Credit Marketing in Khyber Pakhtunkhwa*” (\$0.4M from Jan 2013-Jan 2016) in Abbottabad, Mansehra and Swat Districts over areas of 10,000, 40,000 and 50,000 acres respectively. The project aims to develop forests and other renewable natural resources so as to meet the needs of local communities for timber, firewood and fodder production and also contribute to carbon sequestration, and this project will build upon the sustainable land use practices it has begun to develop.

As already mentioned, the Khyber Pakhtunkhwa Forest department is implementing a mega afforestation project: the “Billion Tree Tsunami Afforestation Project” for a total amount of Rs 14 billion (USD 133 M). This project will increase the forest cover to 22% from the current 20% %. This is a flagship project of the current government and there is great support for this initiative. The project has already been accepted by the Bonn Challenge. This will be a relevant project for carbon sequestration besides rehabilitation of degraded ecosystem and forest landscape.

The Pakistan Forest Institute is also working on “*Carbon Stock Assessment in Khyber Pakhtunkhwa Province*” (USD0.25 M) to establish carbon sequestration rates, prepare biomass maps and quantify emissions from deforestation and degradation. This GEF project will build upon these efforts to inform appropriate capacity developments for Chilgoza forest managers and other stakeholders for forest carbon accounting and REDD+.

The same way, the Khyber Pakhtunkhwa Forest Department is implementing a project for the REDD plus initiative. Under this project Khyber-Pakhtunkhwa (KP) REDD plus strategy has been formulated, and a number of trainings have been imparted for awareness raising and capacity building.

Initiatives working with Payments for Ecosystem Services (PES):

Although PES is relatively undeveloped in Pakistan, there are a few examples that the proposed project has been reviewed for possible models and lessons learned. For example, the territorial Forest Departments in Gilgit Baltistan, Khyber Pakhtunkhwa Province and in the Federal Administered

Territories, with support from IUCN and WWF, have piloted PES programs based on using revenues from hunting and forestry to fund local community conservation efforts. Several provinces using Indus river water for irrigation have established compensation mechanisms to pay upstream provinces and other territories to maintain water flows. This compensation is in the form of developmental projects in the upper catchment. Benefit sharing has also been introduced for the exploitation of non-state forests, but this has not yet been fully successful, due to constraints such as a ban on tree felling and ineffective benefit sharing models. The Forestry Development Funds is another option for the PES, where a part of the total revenue generated from the commercial harvesting of the forest is re-invested to restore the same cut over area or adjacent areas. However, despite the government interest with the exception of the valuation of few main products like timber and fuel wood, very little has been done for the valuation of non-tangible benefits of the ecosystem, which are of high value and significance for the general public. The departments lack the appropriate tools to evaluate the ecosystem services.

1.2.3 Remaining barriers to address environmental threats

The Chilgoza ecosystem is subjected to various threats and barriers, which are affecting the overall productivity, services and functions. Some of these barriers are related to the poverty and lack of livelihood opportunity in the rural forested areas. While there are other threats and barriers are due to the big gap between the supply and demand coupled with the lack of alternatives. The following main barriers were identified during various consultative processes undertaken during the PPG phase. There is great willingness and support for addressing these barriers. During the formulation of National Monitoring Action Plan by the Ministry of Climate Change (MOCC) with the support of FAO, there were detailed consultations in identification, and grouping of the barriers and drivers of deforestation. The main drivers include, demand of fuel wood, fodder and, timber, drought, grazing pressure and browsing, mining, conversion of forest land to agricultural land and infrastructure (roads and buildings), flood, landslides, forest fire, diseases...In this process, there was high level of agreement to resolve these barriers for sustainable forest management including the scientific management of Chilgoza forests.

Barriers to the sustainable management of Chilgoza Forests

This project aims to support national, regional and local Chilgoza conservation and sustainable forest management actions that support sustainable local livelihoods, protect and harness significant biodiversity and ecosystem values, reduce GHG emissions and enhance carbon sequestration. The overall project objective is “*to contribute to the restoration, protection and sustainable management of Chilgoza pine forests to provide global environment benefits and enhanced resilient socio-economic development*”. Despite significant baseline work (presented above), a number of barriers exist to achieving this objective. In summary, these include:

- Governance issues (land tenure, local community/farmer organizations involvement, etc.)
- Cross-sectoral challenges
- Limited understanding and insufficient information about REDD+ and PES
- Limited in-country capacity and extension support on Forestry Landscape Restoration (FLR)

Governance issues (land tenure, local community/farmer organizations involvement, etc.)

There is an urgent need to clarify and address land tenure and ownership issues, multiple stakeholder interests and needs, and the rights and responsibilities of these parties. Addressing these should be complimented by cross-sectoral planning (below) and reinvestment that provides incentives for local communities and stakeholders to engage in SFM, protection and FLR, as well as; provide an improved environment for the private sector to invest in sustainable/intact Chilgoza ecosystems and community biodiversity enterprises. Related to this, there is at present:

- *Lack of dedicated Chilgoza Forest Working Plans (Forest Management Plans).* In Pakistan, natural forests are typically managed through ‘Forest Working Plans’—however, coordinated Forest Working Plans do not yet exist for Chilgoza forest areas. Forest Working Plans are crucial to informing and strengthening sustainable forest management, and particularly as these detail forest resources, prioritize threats and interventions, and could help to define sustainable

off-take parameters, ecosystem, critical understory and biodiversity values and protection. Chilgoza Forest Working Plans are also viewed as critical to coalesce wider/integrated landscape level planning important to sustainable development, management of natural resources, ecosystem services and conservation linkages.

- *Land and ownership issues.* The majority of Chilgoza forests are community owned, and the ‘tragedy of the commons’ prevails with overexploitation of the resource and no re-investment for the rehabilitation of the resource. The major issue in the management of these forests is to initiate collaborative and integrated forest management. The related forest departments are required to facilitate and empower the local communities so that more ownership is created and the local people play their due role in forest conservation and management. As the local community do not have alternative energy sources, the project needs to address this issue by planting indigenous multiple fast growing tree species like Mulbary (*Morus Alaba*, *populs nigra*, *Accacia*, *platenus* (in lower elevation))
- *Limited accounting of multiple forest values and resource benefits.* The main focus of Chilgoza resource management is currently on direct products (e.g. pine nuts, timber, fuel wood, fodder and other non-timber forest products), while biodiversity, carbon storage and the other ecosystem services and functions remain undervalued or ignored. Timber values are continually emphasized over local subsistence and nutritional needs. The emphasis on the Chilgoza pine nuts has started in 2002 due to the higher prices offered by the Chinese market. Further, the major share of Chilgoza profits go to ‘middle men’ with only a small percentage returning to the local cone collectors. This skewed benefit sharing results in the low interest of forest owners, adjacent communities and seed collectors, which have real implications on forest values, protection and sustainable management. The inequitable distribution of benefits amongst the beneficiaries is a governance issue requiring addressing markets, production and protection, subsistence needs, and access (i.e. of collaborative management). This is important to consider where local communities currently view forest regulations as restrictive (not beneficial), and their confidence in government extension agents/departments to represent their forest interests is low. Forest Protection and Conservation Committees will be established by this TRI child project (Reversing deforestation and degradation in high conservation value Chilgoza Pine Forests in Pakistan) to help achieve equitable representation and distribution of forest benefits.
- *A failure to sufficiently incorporate gender considerations.* At present, the majority of the efforts in relation to Chilgoza forest and landscape restoration are gender blind. There is a need to promote a gender-responsive approach in these efforts. This entails developing methodologies and processes that will identify, reflect, and implement interventions to address gender gaps and overcome historical gender biases in policies and interventions. The project will address this issue by developing a gender strategy to guide the implementation phase.

Cross-sectoral challenges

Related to governance and tenure, the lack of relevant and cross-sectoral policies is also an issue undermining the protection and sustainable management of Chilgoza forests. In general, the objectives of forest and landscape policies, planning and frameworks should be carefully framed to account for multiple forest stakeholders and uses (e.g. protected areas, forest dependent households and communities in adjacent forest areas, commercial businesses and other stakeholders who influence/are influenced by forest ecosystems and resources). This would help to address the:

- *Poor natural resource coordination and planning.* Unsustainable, poorly coordinated and ad hoc forest and landscape management currently prevail. Chilgoza forests fall between both protection and production forests. As they involve more than one type of land use, institutional, legal and policy issues inhibit the effective implementation of successful protection and restoration programmes. As mentioned, Chilgoza forests are not managed under regular working plans (Forest Management Plans), and no data base is available establishing provincial or national forest inventories, sustainable harvest parameters, biodiversity, or carbon stocks, with the critical linkages to other land uses/demands yet considered.

- *Lack of landscape level planning and policy.* ‘Forestry’ is viewed primarily as a provincial matter, with respective provincial Forest Departments mandated to oversee and manage forest and related issues at that level. At a federal level, under the Office of the Inspector General of Forests, the Ministry of Climate Change has a key role in interprovincial coordination of regional forest departments as well as Pakistan’s implementation of various international treaties. Accordingly to the draft National Forest Policy 2016 an umbrella framework has been formulated to the Federal and Provincial Governments, Azad Jammu and Kashmir, FATA and territories for “the sustainable management of forests and allied natural resources, namely watersheds, rangelands, wildlife and associated biodiversity.” However, the draft policy is not yet approved, and significant confusion exists regarding decentralization (e.g. making the policy operational and responsibilities for planning, enforcing laws, policies and regulations). This is particularly true where the boundaries between different land uses are unclear (e.g., trees grown on agricultural land) and where different levels of government (national, provincial, territorial, etc.) become involved. Inter-sectoral and multi-level approaches to landscape use and forest resource management informed by adequate consultation across levels and sectors are required.

Inadequate mobilization of resources.

While there are existing and potential sources of finance available for forest protection and restoration of Chilgoza ecosystems, the models, information and partnerships needed to unlock those resources is yet present. In this regard, there is need to examine and pilot bridging of finance in support of SFM and biodiversity conservation.

- *Lack of biodiversity friendly value chain development and market linkages.* Local entrepreneurs have little understanding about either value addition or value chain development that would support biodiversity conservation.

In dry temperate Chilgoza Forest ecosystems, there is great scope of biodiversity, and yet proper attention has not yet been given to integrate biodiversity values into either markets or forest management. At present, local markets and forest planning are highly focused on singular species (e.g. pine nuts, timber) values, and not on multiple/significant ecosystem values. In this regard, there is also a lack of understanding and coordination between foresters and the wildlife managers. The foresters are typically focused on trees and economic values, and wildlife managers on conservation without considering sustainable use. This rift and the lack of community based, integrated and multiple use considerations limits both income and biodiversity conservation potentials.

Where awareness and demonstration are established by this project, local households will be incentivized to value biodiversity and ecosystem integrity as directly supporting their income and well-being. In few places of Gilgit-Baltistan, the local community are getting major share in the revenue generated from the sale of big animal hunting licence. This regulates the hunting (of wild goat and wild sheep) and keeps the interest of the local community to stop illegal poaching and hunting. This type of model is being replicated by the Wildlife departments elsewhere in the country. This is a good example of payment for ecosystem services.

- *Limited understanding, and insufficient information, about REDD+.* The concept of REDD+ is not widely understood in Pakistan, either at central or provincial levels.

The recent experience with development of a REDD+ Readiness Preparation Proposal for the World Bank's Forest Carbon Partnership Facility (FCPF), involving several multi-stakeholder consultations with the support of FAO (through the UN Collaborative Programme on REDD+ - UN-REDD), has mostly involved senior officials, academics and non-governmental organisation staff. At local level, some private sector initiatives, particularly in Khyber Pakhtunkhwa province, have led to confusion between REDD+ and the voluntary carbon

market, and misunderstandings of the concept and potential benefits of REDD+. This may lead to unrealistic expectations and potential risk of breakdown of trust between national, provincial and local stakeholders when REDD+ Readiness initiatives start in earnest. This barrier will be explored further during the implementation phase of the TRI child project

Limited in-country capacity and extension support. Despite a number of projects implemented and related to forest restoration, opportunities to scale those up have been limited due to insufficient technical support and capacity at national, provincial and local levels. Information dissemination, including of relevant research and guidelines for innovative solutions (and that may build upon projects and traditional knowledge that have worked) is also needed.

- *Lack of technical capacity and options supporting alternatives to timber, fuel wood collection and fodder; heavy demand on the forests.* Throughout the project area, there is lack of technical capacity and relevant/locally suitable options for substitution of timber, fuel wood and fodder. As a result, local people remain extremely dependent on natural forest resources to fulfil their needs. This has placed extra pressures on forest resources and caused local land and resource use conflicts.
- *Insufficient knowledge, tools and information result in the lack of a scientific basis supporting SFM:* The demand for tools to define and implement forest and landscape restoration is high where there is currently inadequate information about the status of Chilgoza forests, restoration potentials and associated benefits. Provincial Forestry Departments (under the coordination of the Ministry of Climate Change) have requested assistance that specifically improves the ‘scientific management’ of critically important Chilgoza pine forest ecosystems and their multiple values. Extension agents and local communities have had limited exposure to sustainable management principles and its advantages in the short and long term. For example, appropriate methods of cone extraction are not yet applied, with cone bearing branches cut and impacting longer-term crop health and production. Awareness of tangible and non-tangible SFM benefits and indicators and solutions of land and forest resource degradation are not yet developed or addressed in extension or local communities. Basic silvicultural conditions and requirements of the Chilgoza pine and ecosystem also need to be properly understood for SFM.
- Regarding important forestry institutions, the Pakistan Forest Institute was a key institute for forestry research and on the job training. However, under the 18th Constitutional amendment, this institute was transferred to Khyber Pakhtunkhwa Forest Department, and lost its national role covering the whole country. In addition, over the last decade the utility of this Institute has dropped as it has not kept up to speed with international discussions and the challenges of climate change, disaster risk reduction and payment for ecosystem services.
- *Insufficient awareness of replicable models.* Finally, there is a need to more thoroughly communicate the case for Chilgoza conservation and restoration based on sustainable traditional practices and the successes of baseline projects. As noted, provincial and district Forest Departments within this proposed TRI child project will also be supported to harness traditional knowledge and community mechanisms specific to the protection, maintenance, sustainable use and conservation of Chilgoza forest and their relationship to other land uses, benefits and resources.

1.3 The GEF Alternative

Proposed alternative scenario

The proposed project will address the above barriers by practical demonstration of innovative SFM plans and FLR practices which develops the capacities and required frameworks through a "learning-by-doing" approach in selected target forested landscapes that can be used for wider up-scaling.

SFM and FLR approaches will be based on assessments of ecosystem services and will build on capacities and concepts established during earlier project interventions both in Pakistan and, internationally, in other similar forested ecosystems.

1.3.1 Introduction

To address the environmental treats and the remaining barriers, identified above, the project will promote the means to reduce these through: strengthened policies, pilot initiatives to highlight new approaches to forest management and restoration options whilst enhancing local livelihoods, training of personnel and stakeholder awareness raising from community to decision makers.

Unlike the current strategy and approach of the forest department, where local communities have not been associated and involved in the Chilgoza ecosystem management, the project will encourage collaborative and integrated natural resource management.

The project was formulated to a consultative process. Initially consultative meetings were held with the Ministry of Climate Change, and explained the development of the full project document during the PPG Phase. Four consultative workshops at provincial levels were also organized from January to June 2017. Similarly, meetings were held with the concerned secretaries at provincial/regional level. In these meeting full presentation was given regarding the main focus of the project, the proposed sites, and the main activities to be undertaken. All the four secretaries fully endorsed the proposed objective and focus of the project. After these preliminary meetings, a series of consultative workshops were held at the provincial headquarter, except for FATA, where the workshop was held in Peshawar. In these workshops there was good participation from various key stakeholders including forest department, agriculture department and livestock department, local and international NGOs, international agencies, IUCN, UNDP, WWF and representative from community organizations, and local traders. The main topics of the consultative workshops included: the scope of the project, the project sites, the main bottlenecks in the sustainable management and value addition of the Chilgoza forests and the possible recommendations. In these workshops a few past projects were also identified which were implemented by WWF, IUCN, UNDP and SDC.

The local communities will be mandated under agreed terms of partnership to play their role in the natural resource conservation and management. The second approach will be to follow a catchment or valley base approach to the Chilgoza ecosystem. For the Chilgoza value chain development, various interest groups from the collection to the processing and subsequent marketing will be supported with a gender balance approach taking into consideration the respective role of both men and women in the Chilgoza value chain. .

The project will directly contribute to bring under sustainable management 34,400 ha through the promotion of innovative SFM practices and FLR options aiming at optimizing a well-balanced package of both economic, ecological and social services in the mountainous Chilgoza forested landscapes

This project will promote cost effective measures to directly sequester at least 2,782,420 million tCO₂eq over a period of 20 years or 4 tCO₂eq per hectare per year through targeted SFM, proper land-use planning and practices. This estimate initially includes:

- Carbon sequestration via innovative SFM plans (30,000 ha.)
- Assisted Natural Regeneration (including grazing exclusion options) on 3,600 ha on steep and degraded Chilgoza forest lands
- Agroforestry options targeting soil productivity, site stability and biomass production with local fast growing species (improving carbon sequestration) within selected forested sites (800 ha).

In addition, working with national and provincial partners, the project will also indirectly impact other Chilgoza forest landscapes through the replication and scaling up potential of the proposed innovative practices and through improved provincial and national partners (indirectly impacting a total of 98,247 ha of other Chilgoza forest ecosystems across the four provinces).

Based on this surface to be impacted (indirect and direct) by the project in the four provinces a total of 10,507,229 million tCO₂eq (2,782,420 + 7,724,809) will be sequestered over a period of 20 years through targeted SFM, proper land-use planning and restoration practices.

The project will also promote enhanced livelihood opportunities for local women and men. Through restoration of degraded Chilgoza ecosystem, the project will directly contribute to the Bonn Challenge.

Incremental reasoning

In the baseline scenario *without GEF resources*, Chilgoza forest ecosystems will continue to be over-exploited and degraded, resulting in the continued loss of globally significant species and habitats, degradation of soil and water resources, increased carbon emissions, and declining socio-economic conditions for local communities. Forest management will continue to focus primarily on unsustainable timber production and to be carried out in the absence of innovative SFM plans; local residents will remain uninvolved in forest protection, conservation and management and will have few incentives to reduce or eliminate unsustainable resource use practices (e.g. over-cutting and over-harvesting of forest resources; indiscriminate use of fire; over-grazing of rangelands and forest ecosystems); potential sustainable revenue-producing sources such as non-timber forest products, payments for ecosystem services and carbon financing mechanisms will remain undeveloped and any benefits from the use of forest ecosystems will be inequitably distributed and primarily captured by interests from outside of the Chilgoza forest landscapes. The Chilgoza forests are currently without a management plan formulated on sound management principles, which will lead to the deterioration of the forest resource base in the medium to long run. In addition, with the current scenario, the major portion of the profit will be captured by the middlemen and the local stakeholders will be receiving a negligible profit despite their hard work. The key function of the water recharging and sustainable water flow downstream for drinking, irrigation and hydro-power generation will also be badly affected by this continuous degradation process.

In the alternative scenario *with GEF resources*, GEF investment will be used to catalyse actions that will achieve significant global environmental benefits above and beyond the baseline of national action. Improved forest management and restoration capacities, policies and practices will result in reductions in forest ecosystem degradation, rehabilitation of areas of critical habitat, improved soil and water quality, increased carbon sequestration and decreases in GHG emissions, and sustainable socio-economic benefits that incentivise local stakeholders to support Chilgoza forest conservation and sustainable use over the long term.

The project will also help to develop the basis for activities with global benefits that can be replicated elsewhere in the country, including models for participatory community planning and management of forest ecosystems, and policy, regulatory and information frameworks necessary to implement PES and REDD+ schemes in Pakistan, as well as models for the implementation of such schemes. Furthermore, by participating in the parent TRI program, the project will contribute to the program's global awareness campaign, development of best practices and tools for forest and landscape restoration. Project activities to strengthen forest conservation and undertake forest restoration will reduce pressure to convert natural ecosystems / habitats and thus support GEF objectives in addressing biodiversity conservation, and its integration of carbon considerations into forest management, identification and monitoring of carbon stocks in forest landscapes, implementation of forest restoration, and reduced pressure to convert primary forests will support achievement of GEF objectives in addressing climate change. In this way, the project will contribute to the achievement of the CBD Aichi 2020 Biodiversity targets, including target 15 that aims to restore at least 15% of world degraded ecosystems by 2020; and to the goal of the UN Framework Convention on Climate Change of slowing, halting, and reversing forest cover and carbon loss.

1.3.2 Project objectives, outcomes and outputs

The project's objective and outcomes are closely aligned with, and contribute to, the overarching programme as presented in the Programme Framework Document (PFD) (*'The Restoration Initiative (TRI): Fostering innovation and integration in support of the Bonn Challenge'*), as described in Section 1.1.3.

The *Development Objective*: Local livelihoods improved through the increased productivity and enhanced services and functions of the Chilgoza ecosystem in Pakistan.

The **Project Objective**: ‘To contribute to the restoration, protection and sustainable management of Chilgoza Pine forests to provide global environment benefits as well as enhanced resilience and livelihoods of local stakeholders in Pakistan.

This objective is expected to contribute to the GEF global environmental benefits, delivering the following project Global Environmental Benefits (GEB) targets:

- 34,400 ha of Chilgoza forest ecosystems sustainably managed/restored with a well balance package of goods/services provided to society directly
- 98,247 ha of Chilgoza forest ecosystems sustainably managed/restored through indirect impacts of the project on crop lands, rangelands and forest lands(7,724,809 million t CO₂ equivalent over a period of 20 years or 4 t CO₂eq per ha per year)
- CBD Aichi Targets (1, 5, 7, 11, 14, and 15)
- Contributing to national delivery of relevant Sustainable Development Goals (SDGs) (including 1 (poverty), 5 (gender), 6 (water), 13 (climate and 15 (life on land)

In addition, the projects activities will strengthen local communities’ socio-economic opportunities through the direct involvement in the project and facilitating improved livelihoods for 25,000 households worth an estimated 10 M USD per year. The main source of this income will be the chilgoza nuts, timber, fuelwood, fodder, non-timber forest products, and wildlife.

The project objective will be achieved through the achievement of the four project outcomes:

Outcome 1: National and provincial FLR policies and legal frameworks are strengthened and implemented with efforts aiming at maximizing the provision of the multiple goods and services provided by the Chilgoza forest ecosystems.

Outcome 2: Forest and Landscape Restoration and Sustainable Forest Management options, increasing livelihood based on goods and services provided by Chilgoza ecosystems, are demonstrated at district level in the four targeted provinces/regions.

Outcome 3: Chilgoza Forest Protection and Conservation Committees (FPCCs) operational, with strengthened capacities of provincial, district and local stakeholders to implement participatory Sustainable Forest Management.

Outcome 4: Stakeholders equipped with new knowledge related to forest and landscape restoration of Chilgoza forest ecosystems with strengthened private and public engagement through sharing of best practices, lessons and exchanges with both the other TRI national and the global projects.

The four components/outcomes of the TRI child project in Pakistan are inter-related and well aligned with the TRI thematic program objectives. This harmony will lead to complementarity with the global TRI child project as well as to other national child projects. In this way, the achievements of the project will contribute to the overall objective of the TRI programme.

The overall strategy of the project will be to focus on two main work packages:

- 1) Forest and Landscape Restoration through the promotion of sustainable forest management practices and multiple other options such as Assisted Natural Regeneration and Agroforestry practices. This will be achieved through the Chilgoza forest participatory inventory and an assessment of restoration options in order to prepare an integrated management plan for the four sites. In addition, awareness raising and capacity building of the local community for conservation, restoration and management of the Chilgoza ecosystem will be launched. A Chilgoza Forest Protection and Conservation Committees (CFPCC) will be established with the mandate to work closely with the forest department and private sector for the sustainable management and judicious utilization of the Chilgoza forests.
- 2) The second focus area will be the value chains development with a strong focus on the pine nuts value chain which present a high potential for increasing incomes for local stakeholders.

The project principle will be to involve the local stakeholders especially the community members and key Chilgoza interest groups in the whole development cycle starting from planning, implementation and monitoring. The Chilgoza forest protection and conservation committee will represent community organizations/local stakeholders and will work closely with the forest department and Chilgoza Pine Nuts traders.

Project implementation arrangements and oversight

During the inception phase two workshops will be organized (at the federal and provincial levels) presenting the project objectives, main components, implementation modalities, institutional set up, , workplans, flow of funds etc. The agreed work plan will be implemented by the FAO in close collaboration with the Divisional Forest Officer, and the related local communities through Chilgoza Forest Protection and Conservation Committees. The project will formally form a partnership with the CFPCC in association with the forest department. The committee will be trained in a number of aspects of the forest management. The project activities, the project will establish at MOCC level, a project steering committee, responsible for the oversight of monitoring the project. Provincial steering committees will also be established under the Secretary forests of each province/ region providing overall guidance and strategic support to the project under their respective areas. At district level, there will be a coordination committee under the respective Divisional Forest Officer. This will be the operation sort of committee with membership from the local communities and traders.

A Gender Mainstreaming strategy for the project will be adopted to ensure that project benefits accrue equitably to rural women and men. As some of the project areas are conservative, therefore a more cautious approach will be applied. In this regard, the project through its female staff will interact with the women and organized them into women organizations. FAO's gender standards will guide the actions of the project and a specific work plan will be established during the inception phase in partnership with the FAO Gender Officer within the Forestry Department.

Concrete measures to achieve this include:

- 1) Specific support to the establishment of women organizations which will provide a forum for discussion and dialogue on various matters pertaining to the TRI child project. The women organizations will depute few members to the Chilgoza forest protection and conservation committee to have say in the forest protection and overall management and will be represented in the project Steering Committee
- 2) These women's organizations will also receive targeted technical support on the following key issues:
 - a. As the women's interest groups play a vital role not only in the collection, cleaning and storing of the cones, but also in the marketing of the products, they will be trained in the value addition and value chain development of Pine Nuts.
 - b. As a major activity of the women's interest groups is also the collection of other non-timber forest products like mushrooms, medicinal plants and honey, they will receive technical and financial support for both the collection, the cleaning and storing of these multiple NTFPs. Necessary guidelines will be provided to the women's interest group on adopting the appropriate tools and methods in extraction of these various NTFPs. The women will be also given exposure visits to both local and national level markets, where the pine nuts and other non-timber forest products are processed and packed.
 - c. As women are key concerning fuel wood collection issues, the women's organizations will also be associated in establishing multipurpose fast growing trees plantations, which besides other products and services will be providing fuel wood, and thus reducing and diverting pressure from the natural forests. They will also play a key role in the use of the cooking efficient stoves to be promoted in order to decrease the pressure on Chilgoza forests.

Project Sites: The project activities will cover four key dry temperate Chilgoza forest sites in Balochistan (Suleiman mountain range), Khbyer Pakhtunkhwa (Shishi-valley of Chitral), South-

Waziristan (Suleiman mountain range) and Gilgit-Baltistan (Diamer district). A map showing the four project districts is included in Annex 9.

The project will directly target 34,400 hectares and impact ca. 25,000 household via Forest and Landscape Restoration principles. Working with National and Provincial partners, the project will also indirectly impact other Chilgoza forest areas through replication and scaling-up and strengthened capacity at provincial and national levels.

During implementation of the project, several recognized FLR tools/methods will be used.

The first tools will be the “Restoration Opportunities Assessment Methodology” (ROAM), which will be basically used for assessing forest landscape restoration priority hot spots at the sub-national level.

According to the ROAM guidelines this method will deliver six main products:

- A short-list of the most relevant and feasible restoration intervention types
- Identified priority areas for restoration with Assisted Natural Regeneration options
- Quantified costs and benefits of each intervention type
- Estimated values of additional carbon sequestered by these interventions types
- A diagnostic of the presence of key success factors and identification of strategies to address major policy, legal and institutional bottlenecks
- Analysis of the finance and restoring options for restoration

This is a new tool and will require necessary orientation and training of local partners.

The second tool will be the Ex-Ante Carbon balance tool (Ex-ACT). This is an appraisal system developed by FAO providing estimates of the impact of the agriculture development. This is also a new tool and will require necessary orientation and training before its application. This will also be used in the present TRI Child Project document

In addition to generate additional funding for the restoration of Chilgoza ecosystem, the concept of “Payment for Ecosystem Services” (PES) will be promoted. Payment for Ecosystem Services would be an excellent option to establish a new financial mechanism within Chilgoza valley, where the services providers upstream will be compensated by the beneficiaries of the services downstream for their efforts towards sustainable/integrated management of natural resources.

PES can be defined as voluntary contingent transaction between at least one seller and one buyer over a well-defined Environmental Services or a land use likely to secure that service. Generally PES is best suited for promoting natural resource conservation on private lands, but at the same time it can also be useful to community and public lands. Globally examples of both user-finance and government finance are available. The PES is an important tool for natural resource conservation and management, but its effectiveness threatened by four main parameters: including non-compliance with contractual conditions; poor selection of the PES providers; spatial demand spillovers most commonly known as leakage, and adverse self-selection, where people would have supplied the contracted PES services or activity even in the absence of payment. In GEF projects all efforts have to be made to regularly monitor the key indicators to reduce the occurrence of these threats.

PES is a new concept in Pakistan and, consequently, has not been yet properly recognized by the Forest department and local communities. Though the people who conserve the forest ecosystem always demand that they must be compensated for the protection and conservation of the ecosystem as it is at the cost of number of restrictions on them. The upstream and downstream relation is also a key concept towards the introduction of PES system. The same way, the Government also realizes the importance of the key services and functions of the ecosystem. Several current initiatives of the public sector are preparing the ground for the creation of PES schemes in Pakistan with : (i) Implementation of Developmental Projects in the Upper watersheds, (ii) Establishment of Forestry Development Fund (FDF), (iii) Involvement of local community in forest protection and conservation under the Billion Tree Afforestation Project, (iv) Rewarding local communities in regulating illegal hunting through controlled trophy hunting in Gilgit-Baltistan and (v) subsidized provision of fuel wood from the government and Ecotourism. The valuation of the multiple ecosystem services is a key prerequisite for

introducing sustainable PES schemes and providing appropriate Incentives for Ecosystem Services (IES) to local stakeholders. Consequently, capacity building and knowledge sharing actions will need to be addressed by the present TRI child project.

Major Challenges identified for an effective implementation of PES in Pakistan

In order to introduce and institutionalize PES concept of the following challenges and bottlenecks have to be addressed in Pakistan:

- **Low Understanding about the PES concept amongst the Key Stakeholders:** PES is a new concept, and till now there is less understanding and awareness amongst the key stakeholders including forestry department staff, local stakeholders and private sector. The same way, the upstream and downstream relationship is also not properly understood which is a major hurdle and challenge to introduce an effective PES schemes in the mountainous Chilgoza ecosystems.
- **Lack of Policy and Institutional Framework:** In order to institutionalize any PES schemes and to propose an appropriate level of IES there is a need (both at national and provincial levels) to have a well-designed Policy and Institutional Framework which is not the case at this stage in Pakistan and in the four selected provinces. There is a no provision in the existing legislations for PES, and thus the government/forest department is not under obligation to promote and incorporate this important mechanism in the departmental working. There is also lack of legal instrument for contractual arrangement between the services providers and the services receivers. Currently, there is no effective institutional arrangement to plan and implement payment of ecosystem services.
- **Lack of expertise and knowledge on available methods for the economic Valuation of Ecosystems Services:** This valuation of ecosystem services is important as it allows to estimate the actual value of the services under consideration as well as to determine the appropriate level of incentives to be proposed to service providers. In Pakistan, the valuation of major goods provided by ecosystems, like timber and fuel wood, is relatively well known, but there is a strong lack of data on other non-timber forest products value chains and all intangible environmental benefits provided by Chilgoza ecosystems such as carbon, biodiversity, provision of water etc.
- **Lack of Performance Based Incentive Payments:** The sustainability of any PES scheme (including REDD+) and IES system requires ‘‘performance based incentive payment’’ which is not yet well understood by key stakeholders especially the forest department staff and the related community organizations. An effective PES scheme can only be designed by involving relevant local stakeholders in decision making and payment processes.
- **Lack of Appropriate Benefit Sharing Mechanism:** For the implementation of the PES, it is important that a clear benefit sharing mechanism is in place for equitable distribution of benefits and revenue generated from the Payment of Ecosystem Services. One of the root-cause is the confused land tenure in a number of forestry ecosystems. Similarly the complex relationship between the resource owners and users groups makes the equitable distribution of benefits more difficult. The same time, there are informal and undocumented rules and regulations, where the users can get benefits from the products and services from a given ecosystem. The formalization of these customary rights and privileges may result into a conflict between the owners and users, with the possibility of losing these by the users. This situation is also similar for the equitable distribution of REDD plus benefits.
- **Lack of recognition of the multi-functionality of forested ecosystems in the Forestry and Wildlife Management Plans:** The Forestry Management Plans (working plans) are an important forestry document which entails all the information about a given forest ecosystem covering tree cover, species composition, condition of the crop, the degradation status, the availability of non-timber forest products and the biodiversity of the ecosystem. However, these management plans are generally too oriented on timber and/or pine nuts provision and not enough on the optimization of the multiple other benefits provided by the forested ecosystem. In this situation, the forest department staff is not able to promote adaptive/innovative multifunctional management options including possible PES schemes.

- **Lack of recognition of the multi-functionality of ecosystems in Protected Areas:** In the protected areas, where the biodiversity is abundant, the management and conservations efforts are mainly focused on mega fauna, where other diverse ecosystem services which could be enhanced through appropriate management measures are generally undermined, which is in contradiction of the multiple use concept of ecosystem management.
- **Lack of Capacity at all level to Formulate and Implement PES schemes:** The forest department is responsible for the management of forestry ecosystem in the respective provinces and regions of the country. Very little research has been carried on these aspects, how to develop and implement the PES schemes. The staff also lacks the capacity in framing the terms of partnership amongst the service providers around a given ecosystem services. The same way, only few pilot cases exist, which needs to be properly analyzed and lessons learnt for replication and large-scale application

1.3.2.1 Component 1: Strengthened regulatory and policy environment for integrated and sustainable management of Chilgoza forest ecosystems

The need to improve/adapt the existing legal / policy / institutional frameworks is discussed in section 1.2. Component 1 is focused on strengthening the enabling environment for the implementation of the project and its related objective and outcomes. The introduction of new concept and approaches requires the support of the policy makers.

In the Chilgoza TRI child project, there are several new concepts such as Payment for Ecosystem Services (PES) and Forest Landscape Restoration (FLR).

In the following section, a brief review of the relevant policy and regulatory frameworks has been undertaken in order to better identify possible existing barriers or options for creating enabling conditions for implementation of Forest and landscape restoration in Pakistan

At Federal level, there two main polices relevant to this include: the Climate Change Policy 2012 and the Draft Forest Policy 2017. The Climate Change Policy 2012, under its objective emphasizes to promote conservation of natural resources and long-term sustainability, while section 4 of the Policy is fully devoted to Forestry sub-sector. The scope of this part of the policy is to recommend adaptation measures to prepare Pakistan's forestry sector to withstand present and possible future impacts of climate change. To minimize the risks and vulnerability of forests and biological diversity from climate change, the Government of Pakistan, in collaboration with relevant entities shall take the necessary measures.

The important measures are informed by the following key areas: Awareness raising; Research; Reforms in governance; Enhancing adaptive capacity; Forest Management; Arresting soil erosion; Reducing Forest Fires; Disease Outbreaks and Other Damage; Biodiversity; and other Vulnerable system covering mountainous ecosystem; and rangeland and pastures. While the National Forest Policy 2016 mentions the expansion; protection and sustainable use of national forests; protected areas; natural habitats and watersheds for restoring ecological functions; improving livelihoods and human health in line with the national priorities and international agreements. In addition, all the objectives are promoting ecological, social and cultural functions of forests through sustainable management and use of forest produce including wood and non-wood forest products. The related clauses are; e) Inter-linking natural forests, protected areas, wetlands and wildlife habitats to reduce fragmentation f) Enhancing role and contribution of forests in reducing carbon emissions and enhancing forest carbon pools g) Facilitating implementation of international conventions and agreements related to Forestry, Wetlands, Biodiversity and Climate Change

At the Federal level, the policies are supportive of the project priority areas and proposed strategy for the Chilgoza forest conservation and management. In addition, REDD plus is also a key instrument which will be helpful in forest conservation and management of the natural forests and related resources.

The situation at province/region level is briefly described below:

The **Khyber Pakhtunkhwa** province is much advance compared to other provinces and regions in the forest policy and acts formulation. The provincial Forest Policy of 1999 clearly focuses on the multiple functions of the forestry resources, and there is great shift from the traditional way of managing forests for timber extraction only. The new policy highly values the various products, services and functions derived from the forestry ecosystem. The judicious utilization of non-timber forest products mainly medicinal plants and mushrooms is also a priority area. Similarly, the biodiversity conservation is a key focus area. The watershed values of the forests have also been given great priority due to their significance for water recharging, water flow regulation and sediment control. In addition, the ecotourism is also considered as one important options for increasing the interest of the local communities to better protect the high value ecosystems like Chilgoza forests. The policy also highlights and recognises the collaborative and holistic natural resource management and conservation concept.

Due to the prolonged ban on commercial timber harvesting in the country, the interest of the local community owners was dropped, as they lost the regular income generated from the sale of commercial tree harvesting. In order to boost up the moral and regain the interest of the forest owners, the Khyber Pakhtunkhwa Forest Department for the first time after the ban, introduced an alternative in the form of scientific forest management, which is based on sustainable forest management principles allowing limited timber harvesting based on the silviculture requirements of the forest tree species. Similarly, the Billion Tree Tsunami Afforestation Project is one of the key initiatives and a flagship programme of the Khyber Pakhtunkhwa (KP) government efforts to conserve and increase the forest cover in the province to 22 % from the current 20 %. In order to ensure the community participation in the natural resource conservation and management, the KP Forest department passed “The Khyber Pakhtunkhwa Forest Ordinance 2002 in line with the approved KP Forest Policy 1999. Similarly, the Department also formulated “Community Participation rules 2004” to empower the local community in forest management protection conservation and management. The approach and methodology adopted by the Chilgoza project is in-line with the government policies and prioritise as reflected in the forest policy, forest act, and rules and regulations and there is full conducive and supportive environment for the implementation of the project

In **Balochistan**, forests and allied resources are regulated through two legal instruments i.e. Forest Act, 1927, and Balochistan Forest Regulation, 1890. The Forest Act of 1927 is applicable in all those areas of the province which were previously governed by the Kalat State. While the Balochistan Forest Regulation 1890 is enforced in the areas which were previously part of the British Balochistan. Under both of these legal instruments viz. Forest Act of 1927 and Forest Regulation 1890, rules such as Quetta Reserve Tree Rules, Kalat Reserve Tree Rules, Mazri Control Rules have been framed to regulate the forest produce and non-timber forest produce. In addition to these legal instruments, for regulation of wildlife affairs in the province, The Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act, 2014 has been enacted in 2014. Rules under the Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act, 2014, have also been framed. Here it is pertinent to mentioned that except for the Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act, 2014, which is present in an updated format, no other law has been modified and revised to meet the modern era requirements. In order to cater for the modern era challenges and issues, a new act namely Balochistan Forest Act, 2017, has been drafted and is ready for submission to the Balochistan Law and Parliamentary Affairs Department for vetting and further processing by the Provincial Cabinet. . It is worth-mention that Forestry is a provincial subject and the provincial forest polices and Acts and regulation are followed, however at Federal level, there is National Forest Policy, which is mainly focusing on the coordination role of the Inspector General of Forest office.

At present, Balochistan does not have any policy for the forestry sector and allied resources. The entire natural resources including forests, rangelands, wildlife, livestock, irrigation and agriculture sectors, no policy exists. In view of this situation, the province is in need of a coherent policy for natural resource management. In the past, i.e. before the 18th Constitutional Amendment, the forestry sector in the province used to follow the guidelines provided in the Federal Forest Policy.

In the Balochistan province, though, the forest department is following the old forest act, 1927, but there is an attempt for new policy and legislation to ensure the multiple uses of the forests, and adopt a more people centred and holistic approaches to the natural resource conservation and management. The proposed Forest Act 2017 will replace the Pakistan Forest Act of 1927. The current trend for reshaping policy and legal reforms will be supportive and will positively influence on the project implementation to achieve the desired objectives.

In **South-Waziristan Agency** of FATA, there is currently no regular Forest Act and the forest protection and conservation is mainly through the local rules and regulations, as these forests belong to the local tribes, and the forest department only controls the export of the timber through permit issued by the political agent of the agency. The forest department is focusing on bringing more area under forests through large scale plantations. In order to be at par with the other provinces, a Forest and Rangeland Policy was formulated in 2015, which aims at collaborative and integrated natural resource management. This policy is in the draft form and requires the approval of the competent forum. However, the forest department has already started working on the integrated approach which is the key element of this policy, and has formulated and implementing INRM project, which involves community in the promotion and development of the natural forest resources.

The Federal Cabinet has approved the merger of the FATA in Khyber Pakhtunkhwa province within next five years. This merger will have positive impact on the natural resource management and conservation, as the KP forest policy, Acts and Rules and Regulations will be extended to include the FATA, however as a result of this decision, there will be less motivation within the FATA forest department to introduce new policy or legislation at this stage.

In **Diamer** district of Gilgit-Baltistan (GB), the forests are owned by the community and they are managed under Pakistan Forest Act 1927. In order to move to the advance system of forest management, efforts are underway to have GB Forest policy and related Forest Acts. Some of these documents are now in the draft form and are under the approval process. The new direction of the GB forest department is to follow the KP model and the revision follows this direction. Currently there is no major hindrance to the implementation of the TRI child project.

Based on the above information, this component is aiming to deliver the following outcome:

Outcome 1: National and provincial FLR policies and legal frameworks are strengthened and implemented with efforts aiming at maximizing the provision of the multiple goods and services provided by the Chilgoza forest ecosystems

Indicators and Targets proposed for Outcome 1 are included in the Project Results Framework (Annex1).The following outputs will contribute to this outcome:

Output 1.1: A replicable Sustainable Forest Management and Forest and Landscape Restoration framework is developed for Chilgoza forest ecosystems in the four selected districts using participatory inventory and mapping approaches (e.g. ROAM) addressing both forest economic issues, biodiversity conservation concerns and key current drivers of forest degradation.

The project will undertake detailed inventory and mapping activities of the high conservation value dry temperate Chilgoza forests (including both pure stands and areas where Chilgoza pine is dominant) at the four selected project sites in order to provide the baseline information necessary to establish/revise relevant forest management regulations / policies, to design forest management plans and to undertake forest conservation, restoration, and economic management activities.

The inventory and mapping processes will be undertaken in a participatory manner with local communities in order to increase their awareness of the variety of ecological, economic and other values of Chilgoza forests and of forest ecosystem processes and the drivers of forest ecosystem degradation. The inventory and mapping will include studies on: 1) timber resources; 2) non-timber forest products, in particular Chilgoza pine nuts but also including medicinal plants and other products, and including details on natural carrying capacities, collection practices, utilization methods, processing and

marketing, and the distribution of benefits; 3) biodiversity, including priority habitats and rare and endangered species and the key threats to these habitats and species; and 4) the key threats and root causes of deforestation and forest degradation in Chilgoza forest ecosystems.

The major concrete activities to be supported in order to achieve this output 1.1 are:

- 1.1.1 Collect available ecological information about the Chilgoza forest ecosystems in Pakistan with a focus on the four targeted districts;
- 1.1.2 Assess economic value of the good and services provided by Chilgoza forest ecosystems (including Pine Nuts incomes) with a focus on the four targeted districts;
- 1.1.3 Develop guidelines and build capacity of local stakeholders for participatory inventory and mapping of the Chilgoza pine forests using advance technologies and methodologies (e.g. Collect Earth Open Foris and Restoration Opportunities Assessment Methodology named ROAM) ;
- 1.1.4 Organize workshops for data collection, analysis and validation of SFM/FLR options and select priority sites for preparation of multifunctional Sustainable Forest Management plans of Chilgoza ecosystems;
- 1.1.5 Undertake resilience assessments of the selected priority sites and propose an appropriate innovative framework for multifunctional Sustainable Forest Management plans (including forest and landscape restoration options) of Chilgoza ecosystems.

Output 1.2: Policies and legal frameworks are strengthened to support integrated landscape approaches for the management of Chilgoza Pine ecosystems including biodiversity conservation priorities, management of multiple NTFPs and innovative financing mechanisms

The project will help to identify the required policy changes which will allow for more integrated, landscape-level approaches to the management of Chilgoza forest ecosystems, for example by integrating biodiversity conservation priorities into forest zoning and management processes, and by introducing policies that promote the co-management of forests as important sites for non-timber forest products harvesting. Changes to policies will target the National and Provincial Forest Policies, either at the formulation or revision stage. In addition, the project will work to incorporate recognition of the diverse ecosystem services / values of Chilgoza forest landscapes into economic development and resource management policies, in particular applicable provincial and district socio-economic development plans.

The major concrete activities to be supported in order to achieve this output 1.2 are:

- 1.2.1 Review existing polices in the four provinces/regions and identify the gaps and opportunities to sustainably manage Chilgoza Pine Forests;
- 1.2.2 Develop guidelines, adapted to the context of each province/region, for the implementation of these policies at grass-roots level;
- 1.2.3 Disseminate and raise awareness of existing policies and legal frameworks at local level;
- 1.2.4 Support FATA region for the formulation of a new forest policy building on the KP Forest Department experiences;
- 1.2.5 Propose an adapted regulation on harvest and management of NTFPs in particular for cones collection and pine nuts trade building on experiences of other TRI countries and multiple existing FAO guidelines/publications on NTFPs;
- 1.2.6 Develop strategic guidelines and incentives mechanisms for effective law enforcement at local level (through community participation) concerning sustainable management of wildlife and other key biodiversity resources.

Output 1.3: Policy and regulatory frameworks reviewed in order to promote/facilitate the use of innovative and sustainable financial mechanisms (e.g. Payment for Ecosystems Services and/or targeted funds at district level providing Incentives for Ecosystems Services) in Chilgoza forest landscapes

The project will support the development of policies and regulations that are needed to enable the use of sustainable financing mechanisms such as Payments for Environmental Services (PES), Incentives for Ecosystems Services and REDD+ in Chilgoza forest landscapes, which can generate sustainable forest management, carbon sequestration and biodiversity conservation benefits. At present, there is very limited experience in Pakistan in using PES mechanisms, and the project will investigate and support any regulatory or policy changes necessary to enable their use in the country (in support of proposed actions on PES under Output 2.6. Similarly, the project will engage with existing and developing REDD+ initiatives in Pakistan to ensure that policies and regulations are in place to support mechanisms that allow forest incomes generation through REDD+ (to upscale proposed actions under Output 2.7).

The major concrete activities to be supported in order to achieve this output 1.3 are:

- 1.3.1 Explore options and support the design phase of sustainable financial mechanisms for Chilgoza Forest landscapes at provincial level (Provincial Forest Funds);
- 1.3.2 Build capacity of stakeholders for both the design, capitalization and implementation phases of these provincial financial mechanisms;
- 1.3.3 Develop guidelines and build capacity of local stakeholders for both the design and implementation phases of Payments for Ecosystem Services schemes;
- 1.3.4 Develop the framework for innovative pilot local Chilgoza forests development funds at community level in the four selected districts;
- 1.3.5 Support an economic valuation study of the multiple benefits / environmental services provided by Chilgoza forests (including wildlife benefits/hunting incomes...);
- 1.3.6 Explore options for linking local stakeholders with existing financial institutions (small loans, etc.) in the four targeted districts.

1.3.2.2 Component 2: Implementation of Chilgoza Forest Landscapes Conservation, Restoration and Value Chain Development options at community level unity

As previously noted, the majority of Chilgoza forest landscapes in Pakistan do not have Forest Management Plans (FMPs), and thus planning and management activities are minimal and poorly coordinated. Therefore, the project will work with local forest management authorities and local communities to develop and implement four districts- level Forest Management Plans (FMPs) for the Chilgoza forest areas (totalling 132,647 ha.) in the provinces targeted by the project.

Under the FMPs, Chilgoza Pine Management and Utilization Plan will be prepared mainly focusing on Chilgoza management (collection, storage age and processing of pine nuts). The main objective of the plan will be to manage the Chilgoza ecosystem and develop the value addition and value chain development. The Management and Utilization plan will also specify and develop rules for cone collection with least damage to the crop, the appropriate season for cone collection. Necessary equipment for these operations will be provided with arrangement of training. This utilization plan will be simple enough to be managed by the local communities i.e. Forest Protection and Conservation Committees. Necessary template for the Chilgoza management and utilization plan will be developed by the project in consultation with the Forest department and other key stakeholders.

The FMPs will be 10-year plans whose development and implementation will be overseen by the relevant Forest department and Forest Protection and Conservation Committees (FPCC). The development of the FMPs will involve local communities, and to ensure their cooperation in FMP

implementation, participatory and collaborative natural resource management principles will be inbuilt into each FMP. Unlike traditional forest management plans in Pakistan, which focus overwhelmingly on commercial timber harvesting, these innovative FMPs will largely focus on the sustainable provision of multiples good (e.g. Chilgoza nuts, medicinal herbs and other NTFPs) and services (e.g. biodiversity conservation, carbon sequestration etc.).

Each FMP will have an overview (with a description of the area, the status of the forestry resource and biodiversity, the socio-economic context and existing management systems) that will be derived from the results of Output 1.1. It will also have a description of goals and objectives for future forest management (including specific sub-plans on biodiversity conservation, NTFP development and other priority topics) and guidelines for the monitoring of forestry resources using technologies like Geographical Information System (GIS) and remote sensing. In addition, the FMPs will divide the forests into working circles (zones) for biodiversity conservation, commercial production etc. with the goal of applying a landscape level approach to Chilgoza forest ecosystems that balances ecological and socio-economic objectives. In the biodiversity conservation working circles, the management objective will be to protect the habitat of important / threatened flora and fauna, including wildlife species like the straight horn markhor (*Capra falconeri jerdoni*), snow leopard (*Uncia uncia*) and brown bear (*Ursus arctos isanellinus*).

In these areas, timber harvesting will be prohibited entirely, although access to Chilgoza nuts, medicinal plants and other NTFPs will be considered. In the commercial production working circles, selective cutting of trees will be allowed under specified rules. In the improvement working circles, areas that have been degraded due to overcutting of trees, overgrazing, poor regeneration, and soil erosion will be designated for restoration.

The component will deliver the following outcome:

Outcome 2: Forest and Landscape Restoration and Sustainable Forest Management options, increasing livelihood based on goods and services provided by Chilgoza ecosystems, are demonstrated at district level in the four targeted provinces/regions

Targets and indicators proposed for Outcome 2 are presented in the Project Results Matrix (Annex 1).

The following outputs will contribute to this outcome:

Output 2.1: Chilgoza Forest multifunctional Management Plans based on cross-sectoral approaches including restoration, biodiversity conservation and sustainable production / livelihood options are prepared and implemented in each selected district of the four provinces

The project will propose and prepare a range of multifunctional FMPs for implementation across the four provinces that will be based on cross-sectoral approaches including restoration, biodiversity conservation, sustainable production, etc.

The major concrete activities to be supported in order to achieve this output 2.1 are:

- 2.1.1 Review current sustainable management plans (building on existing ones in the four targeted provinces) and develop an innovative template addressing better the multiple goods and services provided by Chilgoza ecosystems
- 2.2.2 Support the preparation of one Sustainable Management Plans with restoration options in Chilgoza Pine Forest of each selected district with identification of specific sites with a high potential for Assisted Natural Regeneration and other interventions like Agroforestry and farm forestry
- 2.2.3 Identify better root causes of Chilgoza pine forests degradation in each management unit in selected district (literature review, capitalization of research and local consultations) and conduce a specific long term study on cones production for each age group of Chilgoza trees (both for good and bad seed year) in order to better estimate both the economic potential of

the pine nuts value chain and the impact of cone collection on natural regeneration of Chilgoza forests

- 2.2.4 Propose technical alternatives and incentives to better address the identified drivers of degradation such as fuelwood collection (e.g. distribution of fuel efficient stoves) or overgrazing (e.g. grazing exclusion negotiated with groups of herders or provision of alternative sources of fodders)

Output 2.2: Good practices for sustainable management of Chilgoza pine forests are promoted in the targeted districts of the four provinces with at least ten different forest communities

The major concrete activities to be supported in order to achieve this output 2.2 are:

- 2.2.1 Develop guidelines of good practices of ecological restoration based on the analysis of the available knowledge on Chilgoza ecosystems
- 2.2.2 Review best practices for community participation in natural resource management and conservation in Pakistan and other relevant similar areas.
- 2.2.3 Collate, summarize and document local knowledge of the ten targeted communities on management practices/systems of Chilgoza forests
- 2.2.4 Analyse customary laws/formal and informal user rights (usufruct) at community level in the four selected districts
- 2.2.5 Collect and analyse good practices for innovative Farm and Agroforestry options in Chilgoza ecosystems
- 2.2.6 Propose, test and build capacity at community level on these identified good practices in the four selected districts with a focus on options with a high potential positive impact on Chilgoza ecosystems (e.g. distribution of Fuel efficient stoves based on the previous successful experiences in Pakistan or provision of appropriate tools for cones collection, transportation, storage and process including extraction, roasting, grading, packing and labelling of Chilgoza pine nuts)
- 2.2.7 Promote these best practices for value chain development of Chilgoza pine nuts and other key non-timber forest products

Output 2.3: Assisted Natural Regeneration actions are implemented in Chilgoza forest ecosystems

The project will promote assisted natural regeneration of Chilgoza forest ecosystems through local communities, including both *wide-scale restoration* (in closed forest or open woodland systems) and *mosaic restoration* (in mixed areas of agriculture, forests, and other uses). Covering an area of 3,600 ha within the “improvement working circles” designated in the FMP for each of the four sites, the project will work with local communities to establish effective protection measures from overgrazing and fire, and increase stocking densities (from approximately 25% to 50%) through site rehabilitation and afforestation. Areas for assisted natural regeneration will be selected based on their potential to produce carbon sequestration benefits, and their importance as areas of previous and/or potential critical habitat for globally significant species. Once they are selected for regeneration, these forest areas will be prioritized under the FMPs as areas for monitoring and protection from human and grazing impacts. In addition, in those areas where critical habitat is being regenerated, the project will also work to restore ecosystem services important to biodiversity (e.g. provision of ecological niches; protection of riparian habitat; etc.). The project will follow the KP Billion Tree Afforestation Project approach for enhancing assisted natural regeneration through establishment of closures with the help of the local communities/Forest Protection and Conservation Committees.. Under this project more than 4000 critical and degraded sites have been selected for assisted natural regeneration through involvement of the local communities. The results of the closure for enhanced natural regeneration is encouraging as verified by a third-party monitoring.

The major concrete activities to be supported in order to achieve this output 2.3 are:

- 2.3.1 Identification of relevant sites for Assisted Natural Regeneration (ANR) using GIS and other relevant assessment methodology/tool (including participatory tools)
- 2.3.2 Negotiate grazing exclusion options with the help of local communities to encourage natural regeneration in Chilgoza ecosystems with, in particular, implementation of ANR based on grazing management plans at community level including protection through community watch and ward systems

Output 2.4: NTFPs are sustainably managed and producing increased incomes for local residents in the targeted Chilgoza forest landscapes, thereby increasing local participation and support for sustainable forest management

Recognizing the vital importance of Chilgoza pine nuts and other Non-Timber Forest Products as a source of livelihoods and nutrition for local communities that can reduce unsustainable resource uses and increase support for forest conservation, the project will work with local residents and businesses to develop collaborative natural resource agreements that address sustainable and profitable harvesting and marketing systems. Using the results of the inventory and mapping exercises under Output 1.1 and in line with the approach to promote multifunctional Forest Management Plans, the project will work with local stakeholders to establish sustainable and biodiversity friendly production, harvesting and management plans for NTFPs (pine nuts, medicinal plants, mushrooms, honey).

The project also will undertake studies to motivate local communities to engage in sustainable, ecologically complimentary NTFP production by demonstrating the economic advantages of NTFPs; for example, at least one previous study in Pakistan comparing the cutting of trees for timber and fuel wood against Chilgoza nut harvesting showed that the latter activity produces higher net revenues.

The project will seek to enhance the business and technical capacity of local residents involved in NTFP harvesting / production by establishing community based enterprises with approved business plans and by providing guidance and training to relevant institutions that can provide technical, financial and market advisory services to these enterprises. In addition, the project will support the establishment of sustainable harvesting agreements between such enterprises and the FPCCs, and it will support the creation of voluntary certification schemes to increase the demand and prices for biodiversity friendly Chilgoza nuts and other NTFPs.

The major concrete activities to be supported in order to achieve this output 2.4 are:

- 2.4.1 Conduct a baseline survey to better identify the multiple NTFPs of interest provided by Chilgoza pine forests (e.g. relevant NTFPs value chains economic studies and to current systems of management used by local stakeholders)
- 2.4.2 Based on the survey results (including market analysis), introduce sustainable collection practices and propose relevant options to develop these NTFP value chains in order to generate added value for local stakeholders (e.g. increase quality standards and support processing units at local level for both storage, roasting, grading/packaging or labelling these NTFPs)
- 2.4.3 Develop guidelines on sustainable management of key NTFPs

Output 2.5: Increased alternative livelihoods opportunities for local residents:

The project will seek to develop various alternative livelihoods opportunities for local residents that will decrease their dependence on unsustainable resource extraction activities in Chilgoza forest landscapes. In addition to the promotion of NTFPs under Output 2.4, the project will consider promoting ecotourism, handicrafts, beekeeping, and sustainable hunting of selected wildlife species (trophy hunting of wildlife will be based on practices developed by IUCN in the Gilgit-Baltistan area, which have greatly reduced unregulated hunting and increased local support for and participation in wildlife conservation and protection activities).

The major concrete activities to be supported in order to achieve this output 2.5 are:

- 2.5.1 Conduct and document successful experiences of alternative livelihoods programme based on natural resources conservation in Pakistan.
- 2.5.2 Develop a small grants framework for alternative livelihoods for local communities through establishment of a competitive endowment funds (local incentive fund) at community level to promote incomes generation sustainable options such as bee keeping , kitchen gardening, sustainable collection of medicinal plants and mushrooms, forest and fruit trees nurseries and promotion of ecotourism.

Output 2.6: Pilot programs in place for Payments for Ecosystem Services (PES)

Chilgoza forests are believed to provide a variety of important ecosystem services, including carbon storage, soil and flood protection, water recharge, regulation of downstream flows essential to human consumption, irrigation and hydro power generation, etc. However, at present, there is little data on the extent or economic value of ecosystem services in Chilgoza forest landscapes, and the project will seek to develop baseline data on these ecosystem values, as well as on the willingness / ability to pay for such services among local and downstream beneficiaries. The project will use the South-South Cooperation mechanism to learn from the experiences of PES elsewhere especially in the Mediterranean region, where pine nuts have a good value chain. The same way, the project will also seek the support of the TRI Global project to share experiences. The quality control aspects will be given highest priority so that the product finds good and rewarding international market like middle- east and European. Complete a little bit based on the list of actions with feasibility study in two pilot sites and the preparation of two bankable projects for future implementation of PES schemes in those two sites

The major concrete activities to be supported in order to achieve this output 2.6 are:

- 2.6.1 Conduct reviews and raise awareness about the PES concept and its related potential benefits in the four selected provinces/regions
- 2.6.2 Develop guidelines and build capacity of relevant stakeholders for future implementation of the PES concept in the four selected provinces/regions (e.g. study tours in landscapes with effective PES schemes, organization of dedicated capacity building events on PES concept and schemes etc....)
- 2.6.3 Conduct a feasibility study in two pilot landscapes with high potential for establishing PES schemes (to be identified with local partners in the selected provinces)
- 2.6.4 Prepare two bankable project proposals to support the implementation of the two PES schemes (based on results of the feasibility study mentioned in 2.6.3)

Output 2.7: Enhanced carbon sequestration in targeted Chilgoza forest ecosystems

As noted under Output 2.3, the project will generate carbon sequestration benefits through assisted forest regeneration at the four project sites. In addition, the project also will support climate change mitigation and the generation of additional carbon sequestration benefits by reducing forest loss at the selected sites by implementing sustainable practices, zoning, and increased protection. In order to contribute to development of a national REDD+ strategy, the project will monitor forest cover and biomass in Chilgoza forest landscapes (using the forest inventory data developed under Output 1.1). This should include planting of indigenous multipurpose fast trees growing species on 800 hectares area as agroforestry, farm forestry and plantations on degraded sites.

The major concrete activities to be supported in order to achieve this output 2.7 are:

- 2.7.1 Develop required baseline information on potential carbon benefits of SFM and FLR practices to be implemented in the context of Component 2

- 2.7.2 Promote assisted natural regeneration as a cost-effective option to enhance carbon sequestration in Chilgoza forest ecosystems
- 2.7.3 Encourage planting relevant associated tree species to increase resilience to climate change and carbon storage potential of the Chilgoza forest ecosystems
- 2.7.4 Monitor the carbon benefits of the proposed SFM and FLR practices in selected sites of Component 2

1.3.2.3 Component 3 Strengthened local institutions for integrated and sustainable management of Chilgoza forest ecosystems

The role of local institutions is crucial in the forest landscape conservation, restoration and sustainable management. In the past, the Forest Department was the only institutions responsible for the protection and management of the forests with little or no involvement of the primary stakeholders (e.g. local communities). However, with the passage of time especially in the last three decade, there has been increasing focus on collaborative and integrated natural resource management. For this purpose, the local communities have been organised in the community organizations (both men and women), Village Development Committees, Forest Protection Committee and Watershed Management Committees. Though the progress made so far is good, but these local institutions are weak and require awareness and orientation to the new emerging concepts like Forest and Landscape approach, Payment for Ecosystem Services, REDD Plus, Green House Gas Emissions and Integrated Natural Resource Management. These institutions including Forest Department and Pakistan Forest Institute are also weak in use of advance technology like GIS and Remote Sensing for land use planning and monitoring of SFM and FLR efforts. By enhancing and strengthening the capacities of these institutions, especially the Forest Protection and Conservation Committees (FPCC) and other targeted stakeholders, the replication of the proposed SFM and FLR approaches will be possible and will allow to address SFM and FLR needs at scale in other area of the Chilgoza forest ecosystems in the four provinces.

The component will deliver the following outcome:

Outcome 3: Chilgoza Forest Protection and Conservation Committees (FPCCs) operational, with strengthened capacities of provincial, district and local stakeholders to implement participatory Sustainable Forest Management

Indicators and targets proposed for Outcome 3 are presented in the Project Results Matrix (Annex 1).

The following outputs will contribute to this outcome:

Output 3.1 Chilgoza Forest Protection and Conservation Committees (FPCCs) are established and operational in the four selected sites to ensure local participation and long term ownership in forest protection, management and restoration activities proposed in the context of Component 2

Existing management of Chilgoza forest landscapes in Pakistan is constrained by a lack of functional coordination and partnership between Forest Departments and other relevant line agencies, local communities and private businesses. To address this issue, the project will work with local institutional and community stakeholders to establish Forest Protection and Conservation Committees (FPCCs), which will create a platform for inter-institutional and inter-sectoral coordination and jointly establish development and conservation goals and oversee protection activities at the selected Chilgoza forest sites. FPCCs will be established at the District or sub-District level (depending on area, population, land tenure, and other factors to be determined the project inception phase and confirmed at the first Project Steering Committee (PSC). The FPCC will include local government resource managers (e.g. departments of forests, agriculture, and livestock and local Small-Medium Enterprise Development Authorities (SMEDAs), local political and community leaders, and relevant private sector representatives and NGOs.

The FPCCs will use the results of the inventory and mapping activities under Output 1.1 to establish overall conservation goals for each site. Furthermore, under the authority of the FPCCs, partnership agreements will be signed with local communities to involve them directly in forest protection activities,

including participation in patrols and other forms of monitoring to control or eliminate the illicit cutting of trees, unauthorized livestock grazing and fuel wood collection, and indiscriminate use of fire. The enforcement of forest protection activities at the community level will include the use of Naghas (traditional prohibitions), which are broadly supported and socially endorsed rules and regulations for forest protection. FPCCs also will help to facilitate coordination and partnerships between local communities, private sector businesses, and SMEDAs in strengthening value chains for NTFPs such as Chilgoza pine nuts.

The major concrete activities to be supported in order to achieve this output 3.1 are:

- 3.1.1 Review existing committees in the four selected districts and assess their needs for capacity building on SFM / FLR principles and key related tools / methods
- 3.1.2 Facilitate the establishment of new FPCCs or strengthen existing ones in the four selected sites based on a capacity assessment analysis taking into consideration emerging needs relative to new integrated and sustainable management principles of Chilgoza forest ecosystems
- 3.1.3 Develop terms of partnerships for protection of forest, controlled grazing, biodiversity and sustainable use of non-timber forest products with targeted FPCCs

Output 3.2: Capacity is built for national and provincial forest managers in strategic development of inter-sectoral forest policies and programs

The project will provide various forms of training (technical courses, workshops, field training) to managers of forest and grazing land resources (especially those with responsibilities for Chilgoza forest ecosystems), as well as managers from other relevant natural resource management agencies, on integrated planning and management of forests and grazing land resources within a larger landscape context that takes account of water resources, infrastructure development programs, agricultural management, etc. In doing so, the project will enable natural resource planners and managers and their partners to recognize the economic, social and ecological drivers of impacts on forest ecosystems from across the landscape, and to account for those factors in developing policies and programs for forest management. This output will involve close links with the Global Child Project to organise capacity building exercises and share experiences.

The major concrete activities to be supported in order to achieve this output 3.2 are:

- 3.2.1 Assess the needs for capacity building for national and provincial forest managers
- 3.2.2 Organize identified priority capacity building events (with the support of the global child project)
- 3.2.3 Organize events / facilitate platforms for inter sectoral collaboration (inter sectoral platform etc...).

Output 3.3: Capacity is built/strengthened at provincial, district and local stakeholders on sustainable forest management practices

The project will ensure that stakeholders at all levels have familiarity with SFM practices. Training will be conducted through 'on the job' approaches on key tools (ROAM, PES, etc.) that will enable stakeholders to fully participate in SFM approaches

The major concrete activities to be supported in order to achieve this output 3.3 are:

- 3.3.1 Conduct training need assessment and develop capacity building plans
- 3.3.2 Conduct on job training on ROAM methodology for restoration opportunities assessment during the first year of the TRI project

3.3.3 Identification of key tools / methodology for SFM/ FLR of Chilgoza forests and organized training (with when needed the support of the global TRI child project)

3.3.4 Identify thematic priority areas (e.g. PES, ANR, SFM practices etc...) for capacity building workshops or exchanges of experiences (field visits, study tours etc...)

1.3.2.4 Knowledge, partnerships, monitoring and assessment for Chilgoza forest ecosystems

The Chilgoza Forest Ecosystem management requires the use of special approaches and tools. Moreover, the lessons learnt from other related projects and programme will also be very helpful. The project will use the Monitoring and Evaluation tools recognized by FAO. The use of advance tools for assessment especially the restoration aspects will be of great help. The project will undertake a number of activities to achieve that there is two way communication and feedback. In this regard, the TRI global project will be of great help. The south-south Cooperation will be a good means for building on each other experiences. The FAO Chilgoza project will be looking for the Mediterranean experiences using the South-South Cooperation through the required facilitation through the TRI global project.

The component will deliver the following outcome:

Outcome 4: Stakeholders equipped with new knowledge related to forest and landscape restoration of Chilgoza forest ecosystems with strengthened private and public engagement through sharing of best practices, lessons and exchanges with both the other TRI national and the global projects.

Indicators and targets proposed for Outcome 4 are presented in the Project Results Matrix (Annex 1).

The following outputs will contribute to these outcomes:

Output 4.1: Monitoring and evaluation framework is developed for the TRI project in Pakistan

The project will develop and implement participatory M&E frameworks across all pilot regions. The system will be GIS based to allow all stakeholders ready access. Capacity building events and documentation will be organised to ensure stakeholders are effectively engaged in this activity linked to the approach by the TRI partners through the Global Child project.

The major concrete activities to be supported in order to achieve this output 4.1 are:

4.1.1 Develop the participatory and GIS based M&E system (including capacity building actions on innovative tools such as Collect Earth Open Foris)

4.1.2 Build capacity in participatory M&E based on existing guidance documents on M&E proposed by TRI partners in the context of the global TRI child project

Output 4.2: Communication, awareness raising and knowledge management at the local, provincial, national and global levels on Chilgoza forest ecosystems

Building and maintaining political will for the required transformational changes to achieve forest and landscape restoration at scale will be paramount. The project will participate in and benefit from the development under the parent TRI programme of a global communications and awareness raising campaign that will raise awareness of the opportunities and challenges related to forest and landscape conservation and restoration. The project will work with the TRI programme to develop national components of the campaign, including the organizing of high profile events targeted to national decision-makers as well as field visits for journalists, the development of outreach and communications tools and packages of policy materials, and the release of timely media products.

The major concrete activities to be supported in order to achieve this output 4.2 are:

- 4.2.1 Develop the communication and awareness raising strategy and link it with the global initiatives proposed in the context of the TRI global project
- 4.2.2 Develop the knowledge management products including handbooks, fact sheets, newsletters, policy briefs, videos, documentary/story-telling products etc...
- 4.2.3 Disseminate the information to the key stakeholders on regular basis both through formal and informal fora/platforms / field visits/ study tours etc...
- 4.2.4 Prepare awareness raising strategy and relative documents such as leaflets, policy papers/briefs, and videos, story-telling on Chilgoza forest ecosystems
- 4.2.5 Arrange exposure visits with decision makers and journalists to successful sites

Output 4.3: Lessons sharing and aggregation of progress and experiences at local, regional (district/provincial), national and global levels

The project will participate in activities of the parent TRI Programme in sharing of expertise and opportunities at the South-South, regional, eco/sub-regional and international levels through experiential exchange such as exchange visits and events for sharing best practices (e.g. with the Mediterranean region regarding pine nut value chain, quality control, marketing, etc.) .

The project will assist Pakistan in contributing to the development of tools and approaches for restoration, such as the Restoration Opportunities Assessment Methodology, within the framework of the TRI Programme. In addition, the project will contribute to the tracking of indicators of measurable progress at the TRI Programme level, including indicators relevant to the Bonn Challenge Barometer (an IUCN initiative that will report on progress quantified in hectares and carbon sequestration potential); the FAO FLR Mechanism information platform and monitoring tools; and other mechanisms for consolidating reporting on sub-national and national implementation progress.

The major concrete activities to be supported in order to achieve this output 4.3 are:

- 4.3.1 Undertake Impact study and document the findings for wider circulation at local, national, regional and global level via TRI events, APFC sessions, Bonn Challenge / GPFLR meetings and other relevant fora (e.g. side events during international events/conferences).
- 4.3.2 At the end of the project capitalize/document all the best practices / approaches on the Chilgoza Forest Ecosystem

Output 4.4: Knowledge generation via targeted applied research actions on Sustainable Management of Chilgoza forest ecosystems

The project will support calls for young professionals or students (undertaking MSc or PhDs) to participated in targeted applied research on aspects of sustainable management of the Chilgoza forest ecosystems. This will assist with the sustainability of the long-term management by building capacity in the future potential management staff of Chilgoza forests. A list of potential projects will be developed with provincial / national research partners and the finalised list will be presented to the PSC for confirmation. Results from this research will be shared with all partners across the four provinces and included on the project website to aid dissemination.

The major concrete activities to be supported in order to achieve this output 4.4 are:

- 4.4.1 Study on observed dieback to understand better tree mortality issues in Chilgoza forests
- 4.4.2 Valuation of the key Chilgoza ecosystem products, services and functions
- 4.4.3 Study on the ecological characteristics of Chilgoza forest ecosystems
- 4.4.3 Develop carbon stock tables for Chilgoza forest ecosystems

4.4.4 Study yield / cone production of Chilgoza pine forests both in the good and bad seed years

1.3.3 Project assumptions

The key assumptions for the successful implementation of this project are:

- National and provincial/regional authorities and local communities are committed to work with the project and have interest in innovative approach of SFM (less focus on timber production and more on the provision of multiples goods and services) and new restoration practices (e.g. ANR and introduction of fast growing local species in relevant area to limit the pressure on Chilgoza tress)
- The forestry departments of each province are committed and contribute to the preparation of new Chilgoza forest management plans
- The FLR concept is recognized and appreciated by the forest departments of each province
- The forestry departments in each province are willing to involve the local community in forest ecosystem protection and conservation with special focus on women empowerment
- The best practices are well documented by the forestry departments of each targeted provinces and the TRI child project
- Experience sharing events are organized by the TRI global child project

1.3.4 Stakeholder consultation and engagement

In order to introduce the project and discuss the major components, four workshops were organized at Quetta, Peshawar, Chitral, and Gilgit. In these workshops, a variety of stakeholders including policy makers, department technical staff, NGOs, VDCs, Chilgoza traders participated. In these workshops, the project concept was presented. The participants appreciated the project as it was of high significance for the livelihoods of the local people, besides a number of global environmental benefits bot at local and international level. The participants were asked to list the key challenges and the possible solutions in the sustainable management of Chilgoza ecosystem and the related streamlining of the whole value chain development process. The participants identified a number of key challenges and possible solutions. The concept of payment for the ecosystem services was also introduced and the feedback of the participants was obtained. Generally, there was agreement for the concept, but before the introduction of the system the participants suggested to have complete analysis of the ecosystem services including the valuation. The terms of payment based on the solid data will be useful to promote the payment for ecosystem services. Secondly, they also emphasized on the reinvestment by the forest and other departments in these ecosystems and surrounding areas.

In addition to the consultative workshops, also held detailed meeting with the concerned secretary forests, and explain them, the rational, objective and scope of the project. The secretaries appreciate the initiative and confirmed their full support for the project, and also committed co-financing. They also confirm their department full support in the formulation of the project.

The draft project document was also shared and discussed with the number of stakeholders to get their feedback on the overall framework of the project.

Towards the end of the formulation process, a National Level Validation Workshop was conducted on August 29, and 30, 2017. The main purpose of the workshop was to confirm the baseline data, and have a common understanding on the project result frame and the main activities. The result framework has been revised based on the suggestions of the workshop participants.

1.3.4.1 Stakeholders

The project works closely with multiple Chilgoza landscape and forest resource stakeholders to develop sustainable and collaborative forest resource management. The table below summarizes some of the

key stakeholders and their roles in project preparation and implementation. The stakeholders were selected based on their stake in Chilgoza forest ecosystem management. At the federal government level, the Ministry of Climate Change, this is the counterpart Ministry. The Inspector General of Forests office within this ministry is looking after the forestry matters. At the Provincial/Regional level, the Forest Departments are responsible for the overall management of the Chilgoza ecosystem, and these departments will have a key role in the project implementation and monitoring. The local communities are the key stakeholders, who except Chitral own the Chilgoza Forests. From the private sector, the Chilgoza traders are the stakeholders. At policy and strategic level, the project will establish a steering committee entrusted with the overall management responsibilities, while at each province/region level, there will be provincial steering committee entrusted to oversee the smooth implementation of the project. The local communities will be organized in the form of Chilgoza Forest Protection and Conservation Committees (FPCC), which will be responsible for the protection and management of the resources and the value chain development.

The same way, the local and outsider Chilgoza traders will be the stakeholders responsible for the purchase, sale, quality control and access to the local and international markets.

1.3.4.2 Stakeholder engagement

The project preparation team engaged in robust public consultations at all levels throughout the preparation of the project. Technical and consultative workshops, focus groups, brainstorming consultation as well as semi-structured interviews were carried out at different stages of the project development. In the following table the categories of stakeholders and the related mandate and role has been provided.

Stakeholder	Mandate and Role in the Project
Ministry of Climate Change, Office of the Inspector General	The Ministry of Climate Change oversees inter-provincial coordination of forestry-related matters. It is also responsible for UN REDD and, in consultation with the provincial forest departments, prepares policy, strategy and action plan for sustainable forest management. The fulfilment of the international obligations on various treaties related to environment is also one of the main responsibilities of this Ministry. The Project Steering Committee will be constituted under the Ministry of Climate Change, with membership from the participating provincial/regional forest departments. The Ministry will also support institutional coordination contributing to inter-sectoral planning and actions reducing pressures from competing land uses in the wider landscape and lead institutional reforms for SFM planning, collaborative management and related measures advancing land tenure, Chilgoza ecosystem resource accountability, etc. Where possible, the Ministry will mainstream and operationalize project models and knowledge within national and provincial policy and planning.
Provincial/Regional Forest Departments	Provincial and Regional Forest departments guide day to day project management, and will ensure inter-agency coordination for SFM at the provincial level. The development and implementation of forestry management plans (and other developmental planning) is their responsibility, and they will lead this work alongside other departments to promote integrated provincial policy, planning and budget processes.
Village heads, leaders, district officials;	Will be capacitated to promote SFM and motivate household participation. They will also help to ensure that project and government training extension are aligned in implementation,

protected area management	and more generally facilitate collaboration and planning at the local level for conservation, carbon storage and SFM outputs.
Local small holder communities living in or around the Chilgoza forests	Local subsistence farmers are the main stakeholders of the project. As key target beneficiaries, local farmers/herders, their communities and interest groups will actively participate in Chilgoza conservation and restoration, as well as related livelihood, awareness and community-based activities. At this level, Chilgoza Forests Protection and Conservation Committees will be organised representing the various segments of the community. These committees will have the major role in the field level implementation of the project besides enforcing local rules and regulations for the protection and proper management of the Chilgoza forest landscape.
Local NGOs and civil society	Local civil society organizations have been and will continue to inform project formulation and help to facilitate the involvement of communities in this project.
Commercial businesses	Private sectors partners will be mobilized in the project to implement SFM, establish and promote sustainable harvest regimens, support NTFP processing and marketing with farmer cluster groups, etc.
International NGOs, donors.	Provide this project important baseline, finance, coordination and technical support.

1.3.4.3 Grievance mechanisms

FAO facilitates the resolution of concerns of beneficiaries/stakeholders of FAO projects and programs regarding alleged or potential violations of FAO's social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria, which apply to all FAO programmes and projects.

During the project inception phase, stakeholders will be briefed on the grievance mechanisms and the Environmental and Social Impact Assessment Framework (Annex 6).

1.3.4.4 Disclosure

Disclosure of relevant project information helps stakeholders to effectively participate. FAO will disclose information in a timely manner, before appraisal formally begins, that is accessible and culturally appropriate, placing due attention to the specific needs of community groups which may be affected by project implementation (such as literacy, gender, differences in language or accessibility of technical information or connectivity).

A project validation workshop was conducted during the PPG phase (7th and 8th September) in Islamabad involving a wide range of local stakeholders.

1.4 Lesson learned

During the project formulation, a full review of the related past and ongoing projects was done, and the key successful lessons learnt have been incorporated. A number of good lessons have been taken from the FAO Integrated and collaborative watershed management project in Khyber Pakhtunkhwa and Azad Jammu and Kashmir (AJK). This project was implemented after 2005 earthquake. The successful example of this project was the establishment of watershed management committees which had key role in priority setting and implementation of the project activities. Accordingly in the current project, the Chilgoza Forest Protection and Conservation Committees will be established.

The assisted natural regeneration by the Billion Tree Tsunami Afforestation Project was also a successful example, which has been incorporated in the Chilgoza project as well. Similarly the trophy

hunting for payment for ecosystem services is also a suitable way for initiating this tool, which will be useful for generating additional income for the local stakeholders and their interest in the sustainable forest management will enhance. There are several other projects, from which key lessons have been learnt and incorporated in the project document.

1.5 Alignment and strategic fit

1.5.1 Alignment with national and international goals and priorities

The project is consistent with the following Government of Pakistan priorities, plans and strategy:

- ***Pakistan 2025, one Nation and one Vision, 2014***: This is the high level and long term strategic document of Pakistan, where a comprehensive and integrated thinking has been developed. This document has provision that Pakistan is committed to fulfilling the obligations under international treaty including UNFCCC. The reduction in the GHG emission is directly linked with the carbon sequestration output.
- ***Pakistan's Intended Nationally Determined Contribution 2016***: Pakistan's response to the global warming and climate change challenges has been closely aligned with the strategy for sustainable development, environmental protection, sustainable development goals and objectives of the convention on climate change. The Framework for the implementation of the Climate Change Policy (2014-2030) is also important reference document. According to the 2015 Green House Gas Emission estimates, the total emissions are 405 million tons CO₂ equivalent, and the government intends to bring it down to 1630 MT Co-Equivalent. The land use change and forestry will be maintained at 29 million MT CO₂ equivalent. This project will bring an estimated reduction of 1.7 million MT CO₂ equivalent.
- ***National Forest Policy (Draft, 2015)***. The policy is concerned with managing challenges to Pakistan's forests, watersheds, rangelands, wildlife, biodiversity and their habitats. This policy aims to eliminate fundamental causes of the depletion of the country's forest natural resources, and project interventions are being designed to support its key recommendations to: strengthen active multiple forest stakeholder participation; cross-sectoral planning and approaches that address competing forest use, the development of forest buffer zones and sustainable livelihoods; encourage public-private partnerships for better management of forest resources; the development of approaches incorporating the important role of forestry in climate change mitigation; establishment of SFM criteria and indicators for unique mountain forest ecosystems, and; a redefinition of local rights, roles and responsibilities of the various stakeholders and promoting clear land tenure arrangements. The project is developed at the request of Provincial Forestry Departments, and directly supports the policy's recognition of the need to preserve representative ecosystems (i.e. Chilgoza pine forests) and to protect them through special projects, legislation and the active participation of local communities.
- ***National Biodiversity Strategy and Action Plan (NBSAP)***. The current plan was developed in 2000, and while it was useful for establishing new protected areas and limited mainstreaming, much has changed since that time. The project's main executing partner, the Government of Pakistan Office of the Inspector general Forests' (OIGF) Climate Change Division, through its Biodiversity Directorate, is currently focusing on implementing a ***Strategic Plan and Aichi Biodiversity Targets 2011-2020***. The process for updating national BSAP and regional BSAPs has been initiated and completed. Priorities emerging from the Fifth National Report and that the project has been designed to support include the development of coordination and implementation mechanisms at provincial and regional levels that mainstream biodiversity conservation into natural resource (i.e. forest, agriculture, mining, water) sectors. In this regard, the project places special emphasis on mainstreaming biodiversity into development plans, incorporating protected area networks and sustainable production systems into ecosystem-based climate adaptation and resilience planning. The project's district, provincial and regional level knowledge and awareness raising, capacity building and integrated sustainable forest management planning are also important in this regard and to achieving Aichi Targets (e.g. 1, 5, 7, 11, 14, and 15).

- **National Climate Change Policy (2012).** The project directly assists Pakistan’s aim to build climate resilient development and climate change mainstreaming into economically and socially vulnerable sectors. This project specifically supports the policy’s focus to: integrate cost effective climate change mitigation in forestry; strengthen inter-ministerial and inter-provincial decision making and coordination mechanisms for climate change; minimize the risks and intensity of extreme events on vulnerable communities; facilitate effective use of opportunities (e.g. economic) encouraging public-private sector investment in adaptation and mitigation, and overall; promoting conservation of natural resources and long term sustainability. (The National Climate Change Policy directly mentions support to both the National Forest Policy and National Rangeland Policy).
- **National Rangeland Policy (Draft, 2010).** This GEF project will ensure close coordination among forest and livestock departments for efficient management of forest-rangeland interface; ensure building and protection of Chilgoza forest barriers to safeguard against the erosion of pastures and rangelands’ topsoil, particularly at higher altitudes; through landscape planning, designate alternative pastures and passages ensuring low ecosystem impact and, overall; assist implementation of appropriate rangeland management systems based on ecological principles and that recognize and protect the multiple values of Chilgoza forests, ecosystems and biodiversity and. Intended Nationally determined contributions (INDCs).
- The project is also developed to support and inform implementation of: **Pakistan’s National Sustainable Development Strategy, 2010** (which promotes a ‘green action’ agenda); **Pakistan Poverty Reduction Strategy Paper, 2008-2010** (supporting the institutionalization of results based monitoring and evaluation), **Medium-term and Annual Frameworks for Economic Growth** and related sectoral strategy and polices emphasizing the development of sustainable and integrated development.
- Of direct relevance to sustainable Chilgoza forest ecosystems, consistencies are also noted at **Provincial, Regional and district levels** and with priorities for decentralized implementation, and the operationalization of SFM, sustainable livelihoods and NTFP development, biodiversity conservation and reforestation at local levels (e.g. the Forest Policy of Khyber Pakhtunhwa, the Rangeland Policy of Gilgit-Baltistan, the ‘Green Growth Initiative’ of Khyber Pakhtunhwa which guides the Billion Tree Tsunami Afforestation project, etc.).

The project will also assist Pakistan through alignment with CBD Aichi Targets (particularly Targets 5, 14 and 15), the UNFCCC REDD+ and contributes to the Bonn Challenge target and to SDGs (including SDG 1 (poverty), 5 (gender), 6 (water), 13 (climate and 15 (life on land)).

1.5.2 Alignment with GEF Focal Areas

The project components address GEF focal areas to deliver Global Environment Benefits (GEBs) in Climate Change Mitigation (**CCM 2**), Biodiversity Conservation (**BD 4**), and Sustainable Forest Management (**SFM 3**). A summary of the primary linkages between the project and Global Environmental Benefits is provided in the table below.

Table: Key relationship of Project Components with GEF GEBs and Focal Area

Global Environment Benefits of Project	GEF-6 Focal Area	Expected Focal Area Outcome	Relationship to Project Component
Strengthened forest conservation and management	BD 4 Program 9	Increased area of production landscapes and seascapes that integrate	• Component 1: National and provincial policies strengthened to support integrated conservation, cross sector sustainable management of biodiversity.

Global Environment Benefits of Project	GEF-6 Focal Area	Expected Focal Area Outcome	Relationship to Project Component
reduces pressure to degrade or convert critical habitats		conservation and sustainable use of biodiversity into management.	<ul style="list-style-type: none"> • Component 2: 30,000 ha of Chilgoza forest under multifunctional SFM plans and 3,600 ha of Chilgoza forest restored through assisted natural regeneration, generating both carbon sequestration and biodiversity conservation benefits. Globally significant biodiversity under sustainable forest management practices (132,647 ha). • Component 3: Local institutions and stakeholders trained for improved SFM and biodiversity conservation issues. • Component 4: BD lessons sharing at local, national and global levels.
Stabilizing and reducing GHG emissions through conserving and enhancing forest carbon stocks through reduced forest degradation and assisted forest regeneration	CCM 2 Program 4	Outcome B: Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation.	<ul style="list-style-type: none"> • Component 1: National and provincial policies strengthened to support Chilgoza SFM and landscape carbon storage. • Component 2: Reduced GHG emissions directly from forest degradation of at least 2,782,420 tCO₂eq over a period of 20 years • Component 3: Local institutions and stakeholders trained for improved SFM and forest protection. • Component 4: CCM lessons sharing. • All components: reduced GHG emissions indirectly from forest degradation of at least 7,724,809 tCO₂ over a period of 20 years
Restored Forest Ecosystems: Reverse the loss of ecosystem services within degraded forest landscapes	SFM 3 Program 7	Integrated landscape restoration plans to maintain forest ecosystem services are implemented at appropriate scales by government, private sector and local community actors.	<ul style="list-style-type: none"> • Component 1: National and provincial policies strengthened to support Chilgoza SFM plans, addressing drivers of deforestation, and multiple goods and services. • Component 2: Sustainable integrated forest and conservation farming model applied to 34,400 ha generating positive benefits for at least 25,000 households. • Component 3: Capacities of provincial, district and local stakeholders, including at least 200 forest managers / extension staff, as well as local residents and businesses, strengthened for participatory SFM • Component 4: SFM lessons sharing.

The proposed project is well aligned with FAO Pakistan Country Programming Framework (CPF) and global FAO Strategic Objectives as presented below.

The priority areas for FAO's collaboration with Pakistan have been closely aligned to those agreed by the Federal and Provincial Governments. The CPF Pakistan, which has been prepared through its own extensive stakeholder consultations, covers the period 2013 to 2017 and CPF priority areas are also consistent with FAO's strategic objectives and regional initiatives.

Under the current FAO Pakistan CPF the proposed project represents key elements of CPF Priority Area 2, as presented in the table below:

Pakistan FAO Country Programming Framework Priority Areas	Project contribution
<p>CPF 2. Support to Pakistan New Growth Strategy through Sustainable Agricultural Economic Growth</p> <p>2.2.2. Enhanced capacity of key value chain actors, for increased value addition in targeted agricultural growth areas along the commodity chains through promotion of public-private partnerships, new and improved post-harvest management technologies and practices (benefiting in particular small holders, women and youth)</p>	100 %

Additionally, the issues addressed in the project significantly contribute to the realization of the global FAO Strategic Objectives (SO), in particular SO 2, as is further elaborated in the table below:

FAO Strategic Objectives	Project contribution
<p>SO 2: Make agriculture, forestry and fisheries more productive and sustainable</p> <p>Outcome 2.1 Countries adopt practices to increase productivity sustainably while addressing climate change and environmental degradation in agriculture, forestry and fisheries</p>	100 %

2 Section 2 – Innovation, Potential for Scaling-up and Sustainability

2.1 Innovation

The project establishes much needed site-specific and integrated landscape approaches to the sustainable management of (all) Pakistan’s Chilgoza pine ecosystems. The project will fill critical planning and knowledge gaps underpinning policy and planning at national, regional and local levels, introducing collaborative, cross-sectoral planning (Forestry Management Plan) to capture multiple benefits, values and stakeholders of Chilgoza forest ecosystems. This project prioritizes SFM site-based and landscape level interventions and restoration to create i) an enabling environment for investment in forest and landscape restoration ii) and through the projects’ collaborative approaches, incentives and models, to catalyze community (and private sector) engagement in biodiversity conservation, SFM and carbon sequestration. Forest restoration and sustainable harvest of non-timber forest products alongside biodiversity conservation will generate additional food, fodder and income for the local people, further increasing their interests in forest protection and conservation. The introduction of REDD and other PES potentials are new initiatives to Pakistan, and the project will define and model approaches that promote inclusive growth and poverty reduction that improves SFM and economic opportunity. Project efforts defining and operationalizing collaborative management will further enhance local ownership, and be underscored by improved/sustainable access and benefit sharing.

The collaborative and integrated natural resource management based on the multiple use basis is an innovative approach. Due to its usefulness, there is great chances of replication and up scaling. The introduction of the concept for Payment for Ecosystem Services provide an additional source of funding, which all the provincial government would like to replicate to reduce pressure on their meagre financial resources. FAO Pakistan has the specific advantages of implementing projects on integrated and collaborative natural resource management with promising results. For example, the FAO integrated watershed management project was initially for 5 catchments, but the provincial forest department replicated the concept in 17 watersheds with their own funding. Such examples will help in the innovations proposed in this project as well.

Specifically, the project will assist with the development and implementation of innovative SFM plans:

- Addressing multiple goods and services through Output 2.1 (for example);
- Facilitate new financing instruments and IES proposed in the four districts through Outputs 2.2 – 2.5.
- Implement capacity building on innovative tools and funds for targeted applied studies on the Chilgoza forests through Output 4.4.

2.2 Potential for scaling-up

The project initially targets its work on 34 400 ha of Chilgoza forest, but the enabling environment and mechanisms developed by the project establish national and provincial strategies for managing more than 132,647 Chilgoza hectares. There are also important areas of rangelands linked to Chilgoza forests that will be addressed by the project's integrated spatial planning. Additionally, by creating policy and financial incentives for biodiversity friendly Chilgoza production, the project increases both sustainability quality and the potential for scale-up. The project will establish farmer to farm contact through exposure visits to successful sites as an effective way for up-scaling and replication. The project will also inform wider provincial and national natural resource management planning in Pakistan, and importantly contribute to the impact of the TRI restoration initiative by sharing project challenges, successful approaches and models, awareness and communications.

The project innovative technical parameters like model management plan, ROAM techniques, and Forest Landscape Restoration and financial instrument like Payment for Ecosystem Services, and Valuation of various Chilgoza ecosystem products, services and functions will be greatly appreciated and will be applied and replicated in other ecosystems.

2.3 Sustainability

2.3.1 Environmental sustainability

The project strengthens ownership by creating a transparent enabling environment and capacity for SFM, biodiversity conservation and carbon maintenance/enhancement at institutional and household levels. Alongside cross-sectoral planning, this project will define and fulfil SFM roles and responsibilities in a more efficient and effective way. In addition to improved management of Chilgoza forests themselves, sustainability of outcomes will be strengthened by new business models based on functioning ecosystem service products and functions to support the financial sustainability of SFM, biodiversity conservation and carbon storage investment. Through these actions the project supports environmental sustainability by both ensuring effective use of resources, and contributing to conserving, protecting and enhancing natural ecosystems while supporting effective and sustainable livelihood strengthening of local communities.

All the interventions of the project will work towards creating an enabling environment to maintain healthy ecosystems, promoting socio-economic development through the sustainable use of natural resources thereby reducing the pressure on natural ecosystems, and protecting areas of high conservation value. Environment benefits will include increased carbon storage, reduced erosion, increased soil fertility, decreased pressure on forest resources, and increased biodiversity. The interventions of the project will be developed in a participatory manner to create ownership of the project by local communities and local authorities. This is the primary element to promote the maintenance of the project outputs in the long term. Institutional and technical capacity building of community structures will further increase communities' ability to benefit sustainably from the interventions. As part of the project interventions, all the required frameworks and processes will therefore be established to enable the environment benefits generated by the project to be maintained in the long term.

2.3.2 Gender Equality

A project specific gender mainstreaming strategy will be developed during the inception phase and will guide the execution of the whole project, in accordance with FAO's gender standards. Specific details

of the strategy are described in Section 1.3.3 and will include support to the establishment (or strengthening) and capacity development of women's groups on a wide range of issues that will also assist with supporting the socio-economic interest of the regions and the conservation of the Chilgoza forests.

The project setting is by and large rural, remote and mountainous. The recognition and compensation of women's work is--at present--not according to what they actually contribute. In this proposed GEF project, both men and women are viewed as key stakeholders. By identifying and addressing barriers to participation faced by women, this project will aim to raise levels of participation of women in forest decision-making and management, mainstreaming gender concerns across the project to ensure women receive an equitable share of the benefits of restoration and conservation. As livelihood assets may be supported through the clarification of land use rights, women's rights to livelihoods will also be supported. All told, the project will address gender empowerment through interventions narrowing gender disparities, and through improved (equal) access to forest benefits, economic, knowledge and financial resources.

The project will also help to highlight and strengthen workload and benefit balances. By example, at present, the collection, drying and storage of Chilgoza nuts and NTFPs is often managed by or undertaken by women. Women's involvement in marketing is limited to the locale, and men usually undertake any marketing outside the village. The project will ensure that decisions regarding forest resources are transparent, and women will be organized and targeted for training in value chain development. Women are also involved in fuel wood and fodder collection. Agroforestry production areas have been proposed, which will reduce their work load as the fuel wood and fodder will be available in close proximity of their houses. Women will also be organized by the project into women's organizations for the protection and conservation of Chilgoza pine forest resources.

The project aims to fully mainstream women's critical role in priority setting, forest protection and conservation, and that they receive equitable benefits from the sustainable use of Chilgoza forest resources. Within the project and partners' control, in any case where women are under-represented (e.g. on proposed Forest committees, or in enterprise development), separate women's organizations will be established to enhance their voice, rights and benefits. In addition to these structures, various livelihood interest groups will also be formed around Chilgozas, mushrooms, and medicinal plants, and in which women will be largely represented.

2.4 Indigenous people

The selected project sites do not hold any population of indigenous people as these are commonly defined.

2.5 Human rights based approaches (HRBA). Including right to food, decent work accountability to affected populations

The project recognises the importance of forestry resources to local communities for food, income and fuel, in addition to the global benefits of carbon sequestration that are delivered by the forests. The project will promote community involvement in the development of management plans to protect the forests whilst enabling local exploitation of the mainly non-timber products to sustain livelihoods and socio-economic growth.

2.6 Capacity development

Capacity development is a key theme of this project, promoted through Component 3 (*local institutions supported by capacitated stakeholders for Chilgoza SFM*) at the regional and national levels. This project also benefits from close links with the global child project aimed at collecting, collating and disseminating best practices across the TRI projects globally. Capacity development is planned at all levels of stakeholders involved in the governance, management, protection and exploitation of the forest resources. From communities (including NGOs, Civil Society Organisations etc.) and, local and provincial administration. The project aims to establish Chilgoza Forest Protection and Conservation

Committees with strengthened capacities to implement participatory SFM practices through a range of targeted training activities specific to roles and functions involved in the overall communities and forest management. Capacity building of the forest department staff in the use of advance tools like ROAM, and Ex-Act Carbon balance will be also useful. Secondly the Forest Department staff has limited knowledge and working experiences in the Chilgoza value addition and value chain development. The district and fields staff will be trained in these two aspects. Similarly the staff will also require technical support for the preparation of the Chilgoza Management and Utilization Plan. This support will be provided by the project. The department staff and the local communities will also be trained in cone collection from the trees using the appropriate tools provided by the project. The proper extraction, storage and processing techniques will also be introduced.

3 Section 3 – Institutional and Implementation Arrangements

3.1 Institutional arrangements

The Ministry of Climate Change (MOCC) will be the institutional anchor of the proposed project. At the decentralized level, the Provincial and Regional Forest departments will be the main executing partners which will guide day to day project management, and will ensure inter-agency coordination at the provincial level.

The FAO will be the GEF agency responsible for monitoring and providing technical backstopping during project implementation. FAO's role and responsibilities are described below.

3.1.1 Roles and responsibilities of main institutions

The main bodies involved in the governance and management of this project include:

- The Ministry of Climate Change (MOCC);
- Project Steering Committee (NPSC);
- Project Management Unit (PMU)
- Provincial Project Management Committees (4);
- (Project) District level Management and Implementation Units (PMIU) (4)
- FAO providing overall project assurance

Ministry of Climate Change

The MOCC will chair the Project Steering Committee and support and monitor project implementation through the project management unit. The Project Coordinator will ensure timely and verifiable attainment of project objectives and results (outcomes, output and impact) and maintain vision and direction. Both MOCC and PMU will support and provide input for the implementation of project activities, coordinating overall project delivery with and through the provincial departments responsible for the field implementation.

Project Steering Committee (PSC)

The Project Steering Committee (PSC) will be established under the chair of the Secretary MOCC and The PSC will comprise of the following:

Secretary Ministry of Climate Change as a Chair

Members:

- Inspector General of Forests, Ministry of Climate Change
- Secretary of Forests, Government of Balochistan, Forestry and Wildlife Department;
- Secretary of Forests, Gilgit – Baltistan, Forestry, Wildlife and Environment Department;
- Secretary of Forests Khyber Pakhtunkhwa Forestry, Environment and Wildlife Department;
- Secretary of Production and Livelihood Department, FATA Secretariat;
- Representatives of local communities/villages

- Representatives of international/local NGOs, civil society groups, including women's interest groups;
- FAO Representative
- National Project Coordinator, as Secretary of the National Project Steering Committee.

The PSC will be the main decision making body and responsible for oversight. The PSC will direct the Project Co-ordinator/ PMU, and will be responsible for the approval of all work plans, budgets (and budget adjustments), approval of outputs (technical, press, etc.), adherence to Project Results Framework, etc. The PMU will be act as the secretariat of the PSC.

Project Management Unit (PMU)

The Project Management Unit (PMU) will be headed by a National Project Coordinator and support staff. The PMU in collaboration with MOCC and FAO will have overall management and administrative responsibility for coordination with the Provincial Management Committees, and the provincial Implementation Units. The PMU will assist the provincial forest departments and project management and implementation unit in managing operational activities, preparation of work plan, budget, reporting to the donor and MOCC on quarterly and annual basis. The Project Coordinator will be responsible for the recruitment of staff, consultants for the project and supervising their work, and financial management to ensure that the project produces the results indicated in the project document. As requested by the Government, the physical location of the PMU will be decided at project inception, during the first PSC meeting.

Provincial Management Committees at Provincial level (4)

These committees will be established at the provincial levels with the mandate to coordinate engagement of relevant provincial stakeholders. These committees will be headed by the Secretary Forests with members from the Forest Department (Chief Conservator of Forests), Chief Conservator of Wildlife, Representatives from Planning and Development and Finance Departments, and the National Project Coordinator . The committee will support project implementation, and oversee annual work plan and budget, Undertake progress review. The committee will also ensure the project consistency and synergies with other ongoing developmental projects and initiatives in the provinces.

Project Implementation Units at District level (PMIU) (4)

In each of the target districts, Project Implementation Units will be established in the districts Forest Offices. The designated district level project focal points will have the overall responsibility of the project implementation. The members of the unit will comprise the concerned DFO, DFO Wildlife, the representative of the Forest Conservation and Protection Committees, and local NGO. The implementation unit will be responsible for day to day operation of the project. The district level project focal points will directly report to the National Project Coordinator. The Implementation Units will be established at Zhob, Wana, Chitral and Chilas respectively for the Provinces of Balochistan, South-waziristan FATA, Khyber Pakhtunkhwa and Gilgit-Baltistan to help the smooth implementation of the project.

FAO's role in the project governance structure (implementation and direct support service provider)

Project Assurance

As the GEF implementing agency for the project, FAO will:

- Administrate funds from the GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;

- Conduct at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

As requested by the national operational partners, FAO will provide direct support services, including procurement and contracting services, fully embedded in the PMC of the project and will involve the deployment of a part time operations and procurement specialist. This is in addition to its role as GEF Agency. The direct project services would follow FAO policies on the recovery of direct project costs related to GEF funded projects.

FAO's roles in internal organization

The roles and responsibilities of FAO staff are regulated by the *FAO Guide to the Project Cycle, Quality for Results, 2015*, Annex 4: Roles and Responsibilities of the Project Task Force Members, and its updates.

The FAO Representative in Pakistan will be the **Budget Holder** (BH) and will be responsible for the management of GEF resources. As a first step in the implementation of the project, the FAO Representation in Pakistan will establish an interdisciplinary Project Task Force (PTF) within FAO, to guide the implementation of the project.

The PTF is a management and consultative body that integrate the necessary technical qualifications from the FAO relevant units to support the project. The PTF is composed of a Budget Holder, a Lead Technical Officer (LTO), the Funding Liaison Officer (FLO) and one or more technical officers based in FAO Headquarters (HQ Technical Officer).

In consultation with the LTO, the FAO Representative in Pakistan will be responsible for timely operational, administrative and financial management of the GEF project resources, including in particular: (1) the acquisition of goods and contracting of services for the activities of the project, according to FAO's rules and procedures, in accordance with the approved AWP/B; (2) process the payments corresponding to delivery of goods, services and technical products in consultation with the PSC; (3) provide six-monthly financial reports including a statement of project expenditures to the PSC; and (4) at least once a year, or more frequently if required, prepare budget revisions for submission to the FAO-GEF Coordination Unit through the Field Programme Management Information System (FPMIS) of FAO.

The FAO Representative in Pakistan, in accordance with the PTF, will give its non-objection to the AWP/Bs submitted by the PMU as well as the Project Progress Reports (PPRs). PPRs may be commented by the PTF and should be approved by the LTO before being uploaded by the BH in FPMIS.

The **Lead Technical Officer (LTO)** for the project will be the Forestry Officer of the FLR Mechanism based at headquarters and the Forestry Officer leading FLR within the FAO Regional Office for Asia and the Pacific (FAO RAP). The role of the LTO is central to FAO's comparative advantage for projects. The LTO will oversee and carry out technical backstopping to the project implementation. The LTO will support the BH in the implementation and monitoring of the AWP/Bs, including work plan and budget revisions. The LTO is responsible and accountable for providing or obtaining technical clearance of technical inputs and services procured by the Organization.

In addition, the LTO will provide technical backstopping to the PT to ensure the delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical support from PTF to respond to requests from the PSC. The LTO will be responsible for:

- Review and give no-objection to TORs for consultancies and contracts to be performed under the project, and to CVs and technical proposals short-listed by the PMU for key project positions, goods, minor works, and services to be financed by GEF resources;
- Supported by the FAO Representation in Pakistan, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;

- Assist with review and provision of technical comments to draft technical products/reports during project execution;
- Review and approve project progress reports submitted by the NPC, in cooperation with the BH;
- Support the FAO Representative in examining, reviewing and giving no-objection to AWP/B submitted by the NPC, for their approval by the PSC;
- Ensure the technical quality of the six-monthly Project Progress Reports (PPRs). The PPRs will be prepared by the NPC, with inputs from the PT. The BH will submit the PPR to the FAO/GEF Coordination Unit for comments, and the LTO for technical clearance. The PPRs will be submitted to the PSC for approval twice a year. The BH will upload the approved PPR to FPMIS.
- Supervise the preparation and ensure the technical quality of the annual PIR. The PIR will be drafted by the NPC, with inputs from the PT. The PIR will be submitted to the BH and the FAO-GEF Coordination Unit for approval and finalization. The FAO/GEF Coordination Unit will submit the PIRs to the GEF Secretariat and the GEF Evaluation Office, as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that the NPC and the PT have provided information on the co-financing provided during the year for inclusion in the PIR;
- Conduct annual (or as needed) supervision missions;
- Review the TORs for the mid-term review, participate in the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation; and
- Review the TORs for the final evaluation; participate in the mission including the final workshop with all key project stakeholders, development and follow-up to recommendations on how to insure sustainability of project outputs and results after the end of the project.

The FAO-GEF Coordination Unit will act as **Funding Liaison Officer (FLO)**. The FAO/GEF Coordination Unit will review the PPRs and financial reports, and will review and approve budget revisions based on the approved Project Budget and AWP/Bs. This FAO/GEF Coordination Unit will review and provide a rating in the annual PIR(s) and will undertake supervision missions as necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the FAO GEF Coordination Unit. The FAO GEF Coordination Unit may also participate in the mid-term review and final evaluation, and in the development of corrective actions in the project implementation strategy if needed to mitigate eventual risks affecting the timely and effective implementation of the project. The FAO GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

The FAO Financial Division will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

3.2 Co-ordination with other initiatives

The project will facilitate learning from experiences and good practices from other programmes and projects in Pakistan, as well as from other countries by linking partners to international programmes on SFM, REDD+ and PES. The project has been designed to fit with Pakistan's UN-REDD Readiness Project (R-PP) that will deliver many of the enabling mechanisms at federal and provincial level required for successful implementation of SFM on the ground. The project also will learn from, coordinate with, and build on the work of other initiatives in biodiversity conservation, sustainable forest management, and climate change mitigation as described in the baseline.

In addition, the project will learn from and/or coordinate with the following ongoing or recently completed GEF-funded projects:

- The currently operational GEF-UNDP-Government of Pakistan “*Sustainable forest management to secure multiple benefits in Pakistan's high conservation value forests*” project,

which is designed to promote sustainable forest management in Pakistan's West Himalayan forests to support biodiversity conservation, mitigation of climate change and securing of forest ecosystem services. This project is focused on coniferous and scrub forests in the western part of the Himalayan mountains of Pakistan, which does not include any significant Chilgoza forest ecosystems. The proposed Chilgoza project will seek to share strategic approaches, information and data, and lessons learned with this project in areas such as Integrated landscape level forest planning; approaches to addressing land tenure issues; ecosystem valuation; and development of PES and REDD+ approaches.

- The GEF-UNDP- Government of Pakistan “*Market and Mountain Project*,” which is working in two districts of Khyber Pakhtunkhwa and a few districts in Gilgit-Baltistan and is focused primarily on NTFPs, voluntary certification and community biodiversity enterprises (the project does not address the significant wider landscape and SFM issues specific to Chilgoza forests). The proposed Chilgoza forest project will seek to coordinate with the Market and Mountain project by sharing lessons learned on linking mountain forest management with community livelihoods.
- The GEF-UNDP- Government of Pakistan “*Mountain Area Conservation Project (MACP)*,” which targeted collaborative biodiversity management approaches and community conservation of natural resources (e.g. Developing community benefits from trophy hunting) and developed important SFM land use pilots and multiple land use planning experiences. The proposed project will build on these experiences but apply them to new geographic areas (the MACP did not work in important Chilgoza forest areas) and link them to provincial and national level forest policy frameworks.
- The GEF-World Bank- Government of Pakistan “*Protected Area Management Program*,” which targeted two national parks in Northern Pakistan. The proposed GEF project will seek to use lessons learned from this project on forest protection, though it will take a wider landscape approach, addressing land use, assisted regeneration and protection bridging protected areas and productive landscapes to target buffer zone restoration gaps and buffer zone community livelihood needs.

Current Investment – Co-Financing

- *Provincial Forest Departments (Balochistan, Khyber Pakhtunkhwa, FATA and Gilgit-Baltistan)*: US\$ 20 million of in-kind funding to support multiple project implementation activities related to the improved forest planning, monitoring, sustainable forest management, rehabilitation of degraded forests and rangeland management, forest restoration, biodiversity conservation and forest based entrepreneurship development.
- *Billion Tree Tsunami Afforestation Project*: The primary objective of this project with a budget of RS22 Billion (approx. US\$210 million) for 2016-2019, is to increase forest cover by 2% and bring 1.5 million hectares of forest under proper management (including community-based activities that promote NTFPs, such as Chilgoza pine nuts). In Khyber Pakhtunkhwa province, the project is expected to establish forest plant nurseries; establish forest plantations in buffer zones; undertake afforestation to close forest gaps; and capacity building of persons in forestry related fields.

3.3 Risk management

3.3.1 Significant risks facing the project

Project risks have been identified and analyzed during the preparation phase and mitigation measures have been incorporated into the design of the project. The Project Steering Committee will be responsible for the management of such risks as well as the effective implementation of mitigation measures. The PSC will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies as needed, and to identify and manage any new risks that were not identified during project development, in collaboration with project partners. The main risks, their

ranking and mitigation measures are presented in the following table as well as in Annex 4 in more details

Risk	Rating	Preventive Measures
Accessibility to remote project sites (e.g. as well as security in places like South-Waziristan).	Medium	<ul style="list-style-type: none"> • The project is to be implemented by the Forest Department, which has an extensive and ongoing outreach programme in FATA. • FAO has successfully implemented a number of projects in FATA-- including North and South-Waziristan (e.g. in relief and early recovery)—and will build upon those respected networks and programmes. • Local NGOs also have access to the area, and will contribute in the smooth implementation of the project • Forestry and Agriculture activities are much sought after by remote local communities, are largely viewed as non-controversial, and continue to be well received even in the active conflict zones. • The Political Administration and FATA Secretariat support this project and have agreed to facilitate its implementation.
Limited technical implementation capacities (e.g. of Forest Department), limited abilities in project contract management, finance.	Low	<ul style="list-style-type: none"> • Project implementation activities will include targeted capacity building and training to government institutions and partners, extension departments, communities and other forest stakeholders. • Implementation will involve targeted FAO Forest technical department and TRI services, and which may be supported by performance-based incentives.
Reluctance of beneficiaries of forest ecosystem services to pay for/protect forests.	Low	<ul style="list-style-type: none"> • Mitigating forest destruction, protecting forest ecosystem flows, and building the resilience and sustainability of communities is central to the project. • The project will create a comprehensive methodology for evaluating ecosystem services, analyzing potential ‘buyers/sellers’ of services as well assist in negotiating trade-offs.
Local households are risk adverse, resist shifts from timber to biodiversity conservation/sustainable use	Low	<ul style="list-style-type: none"> • The project targets mobilization of community participation, and emphasizes participatory approaches. Ongoing consultation with households and their representation will also help mitigate risk. Improved economic benefits of community-based forestry and productivity gains promoted by the project will provide additional incentives. • As regards reforestation, the choice and placement of species will be determined with community inputs and sound-scientific advice to balance social, economic and environment requirements (e.g. food security, income, watershed integrity, biodiversity connectivity).
Natural disaster, extreme weather fluctuations (drought, floods, landslides).	Medium	<ul style="list-style-type: none"> • In addition to project interventions targeting mitigation of upland ecosystem risks, protection of ecological flows and building community resilience and sustainability, the project will create assessment, awareness and capacity which could be used to leverage disaster preparedness planning.
Pest reduce success rate	Low	<ul style="list-style-type: none"> • The Pakistan Forest Institute which is in charge of monitoring pest and implement response in case of pest case, is one of the partner of this project. Pest monitoring will be one of their task.

International consultants (e.g. MTE/TE) not receiving a No Objection Certificate (NOC) from the government to undertake missions to pilot sites	Medium	<ul style="list-style-type: none"> • The NOCs for the international consultants will be received in time if the request with required documents is sent well in time. • The NOC issuing authority is briefed periodically on the importance of the project and the need for the travel of international consultants.
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3.3.2 Environmental and social risks

The project actively promotes Forest and Landscape Restoration, which have direct and indirect positive impacts on the environment, but also on the communities through more resilient and diversified livelihoods and sources of income.

As per the Project Environmental and Social Screening (Annex 5 presents the Environmental and Social Risk screening result), the project falls into category Low of FAO's environmental and social risk classification's system. Therefore, the project is believed not to produce negative environmental nor social impacts and an Environmental and Social Analysis or Impact Assessment is not required by FAO at this stage. Indeed, environmental and social analyses in selected project intervention areas carried during project PPG phase informed the identification of project activities.

3.4 Financial management

3.4.1 Financial planning

The GEF project budget is presented in Annex 3.

The co-financing contributions to each component are shown in the standard FAO template below.

Co-financing contributions to each component in the four selected regions/provinces

Component	GEF USD	Co-financing USD					Total USD
		Balochistan	Gilgit - Baltistann	Khyber Pakhtunkhwa	FATA	Total Co- financing	
Component 1:	754,388	1,137,714	1,137,715	1,137,714	1,137,715	4,550,858	5,305,246
Component 2:	2,100,827	3,168,318	3,168,318	3,168,318	3,168,318	12,673,272	14,774,099
Component 3	404,388	609,869	609,869	609,869	609,870	2,439,477	2,843,865
Component 4	529,387	798,385	798,385	798,385	798,381	3,193,536	3,722,923
Project Management	189,450	285,714	285,713	285,714	285,716	1,142,857	1,332,307
Total	3,978,440	6,000,000	6,000,000	6,000,000	6,000,000	24,000,000	27,978,440

3.4.2 Financial management and reporting

Financial Records. FAO shall maintain a separate account in United States dollars for the project's GEF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the project in accordance with its regulations, rules and directives.

Financial Reports. The BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

1. Details of project expenditures on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the project document, as at 30 June and 31 December each year.
2. Final accounts on completion of the project on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the project document.
3. A final statement of account in line with FAO Oracle project budget codes, reflecting actual final expenditures under the project, when all obligations have been liquidated.

The BH will submit the above financial reports for review and monitoring by the LTO and the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Budget Revisions. Semi-annual budget revisions will be prepared by the BH in accordance with FAO standard guidelines and procedures.

Responsibility for Cost Overruns. The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 % over and above the annual amount foreseen in the project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 % flexibility should be discussed with the GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed to be a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

Savings in one budget sub-line may not be applied to overruns of more than 20 % in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the GEF Coordination Unit upon presentation of the request. In such a case, a revision to the project document amending the budget will be prepared by the BH.

Under no circumstances can expenditures exceed the approved total project budget or be approved beyond the NTE date of the project. **Any over-expenditure is the responsibility of the BH.**

Audit. The project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO

Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

Procurement. Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a “Best Value for Money” basis. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects will follow FAO’s rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). *Manual Section 502:* “Procurement of Goods, Works and Services” establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Procurement Not Governed by Manual Section 502. *Manual Section 507* establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits.

As per the guidance in FAO’s Project Cycle Guide, the BH will draw up an annual procurement plan for major items, which will be the basis of requests for procurement actions during implementation. The first procurement plan will be prepared at the time of project start-up, if not sooner, in close consultation with the CTA/NPC and LTU. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

The procurement plan shall be updated every 12 months and submitted to FAO BH and LTO for clearance, together with the AWP/B and annual financial statement of expenditures report for the next instalment of funds. The BH, in close collaboration with the CTA/NPC, the LTO and the Budget and Operations Officer will procure the equipment and services provided for in the detailed budget in Appendix 3, in line with the AWO and Budget and in accordance with FAO’s rules and regulations.

4 Monitoring, Reporting and Evaluation

4.1 Oversight

Project oversight will be carried out by the Project Steering Committee (PSC), the FAO GEF Coordination Unit and relevant Technical Units in HQ. Oversight will ensure that: (i) project outputs are produced in accordance with the project results framework and leading to the achievement of project outcomes; (ii) project outcomes are leading to the achievement of the project objective; (iii) risks are continuously identified and monitored and appropriate mitigation strategies are applied; and (iv) agreed project global environmental benefits/adaptation benefits are being delivered.

The FAO GEF Unit and HQ Technical Units will provide oversight of GEF financed activities, outputs and outcomes largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions.

4.2 Monitoring

Project monitoring will be carried out by the Project Management Unit (PMU) and the FAO budget holder. Project performance will be monitored using the project results matrix, including indicators (baseline and targets) and annual work plans and budgets. At inception the results matrix will be reviewed to finalize identification of: i) outputs ii) indicators; and iii) missing baseline information and targets. A detailed M&E plan, which builds on the results matrix and defines specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc.) will also be developed during project inception by the M&E specialist.

4.3 Reporting

Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing reports; and (vii) Terminal Report. In addition, assessment of the GEF Monitoring Evaluation Tracking Tools against the baseline (completed during project preparation) will be required at midterm and final project evaluation.

Project Inception Report. It is recommended that the PMU prepare a draft project inception report in consultation with the LTO, Budget Holder and other project partners. Elements of this report should be discussed during the Project Inception Workshop and the report subsequently finalized. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan. The draft inception report will be circulated to the PSC for review and comments before its finalization, no later than one month after project start-up. The report should be cleared by the FAO BH, LTO and the FAO GEF Coordination Unit and uploaded in FPMIS by the BH.

Results-based Annual Work Plan and Budget (AWP/B). The draft of the first AWP/B will be prepared by the PMU in consultation with the FAO Project Task Force and reviewed at the project Inception Workshop. The Inception Workshop (IW) inputs will be incorporated and the PMU will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the PMU will organize a project progress review and planning meeting for its review. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the GEF Coordination Unit for comments/clearance prior to uploading in FPMIS by the BH. The AWP/B must be linked to the project's Results Framework indicators so that the project's work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The AWP/B should be approved by the Project Steering Committee and uploaded on the FPMIS by the BH.

Project Progress Reports (PPR): PPRs will be prepared by the PMU based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework (Annex 1). The purpose of the PPR is to identify constraints, problems or bottlenecks that impede timely implementation and to take appropriate remedial action in a timely manner. They will also report on projects risks and implementation of the risk mitigation plan. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR, in consultation with the PMU, LTO and the FLO. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner.

Annual Project Implementation Review (PIR): The BH (in collaboration with the PMU and the LTO) will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the TCI GEF Funding Liaison Officer (FLO) for review and approval **no later than end June of each year**. The FAO GEF Coordination Unit will submit the PIR to the GEF Secretariat and GEF Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. PIRs will be uploaded on the FPMIS by the TCI GEF Coordination Unit.

Key milestones for the PIR process:

- **Early June:** the LTOs submit the draft PIRs (after consultations with BHs, project teams) to the GEF Coordination Unit (faogef@fao.org , copying respective GEF Unit officer) for initial review;
- **Mid-June:** GEF Unit responsible officers review main elements of PIR and discuss with LTO;
- **Early August:** GEF Coordination Unit prepares and finalizes the FAO Summary Tables and sends to the GEF Secretariat;

- **September/October:** PIRs are finalized. PIRs carefully and thoroughly reviewed by the GEF Coordination Unit and discussed with the LTOs for final review and clearance;
- **November:** the GEF Coordination Unit submits the final PIR reports -cleared by the LTU and approved by the GEF Unit- to the GEF Secretariat and the GEF Independent Evaluation Office.

Technical Reports: Technical reports will be prepared by national, international consultants (partner organizations under LOAs) as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the PMU to the BH who will share it with the LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of said report. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to project partners and the Project Steering Committee as appropriate.

Co-financing Reports: The BH, with support from the PMU, will be responsible for collecting the required information and reporting on co-financing as indicated in the Project Document/CEO Request. The PMU will compile the information received from the executing partners and transmit it in a timely manner to the LTO and BH. The report, which covers the period 1 July (previous year) through 30 June (current year), is to be submitted on or before 10 July of each year and will be incorporated into the annual PIR. The format and tables to report on co-financing can be found in the PIR.

GEF Tracking Tools: Following the GEF policies and procedures, the relevant tracking tools for full sized projects will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term review/evaluation; and (iii) with the project's terminal evaluation or final completion report. The TT will be uploaded in FPMIS by the GEF Unit. The TT are developed by the Project Design Specialist, in close collaboration with the FAO Project Task Force. They are filled in by the PMU and made available for the mid-term review and again for the final evaluation. A TRI specific TT has been developed and will be utilised for this project for CCM, BD and SFM focal areas.

Terminal Report: Within two months before the end date of the project, and one month before the Final Evaluation, the PMU will submit to the BH and LTO a draft Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results.

4.4 Evaluation

For full-sized projects, a Mid-Term Review/Evaluation will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Mid-term Reviews are encouraged for medium sized projects. Findings and recommendations of this review/evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the mid-term review/evaluation in consultation with the project partners.

The evaluation will, *inter alia*:

- (i) review the effectiveness, efficiency and timeliness of project implementation;
- (ii) analyze effectiveness of partnership arrangements;
- (iii) identify issues requiring decisions and remedial actions;
- (iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and

- (v) highlight technical achievements and lessons learned derived from project design, implementation and management.

It is recommended that an independent Final Evaluation (FE) be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

4.5 M&E plan

Type of M&E Activity	Responsible Parties	Time-frame	Budget (USD)
Inception Workshop	PMU in consultation with LTO, [counterpart], FAO	Within 2 months of project start	10,000
Project Inception Report	PMU in consultation with the FAO Project Task Force, FAO-GEF	Within 1 month of project start	Project staff time
Project monitoring M&E specialist	Short Term Consultant	1 month after Start-up	10,000
Supervision visits	FAO	Mid-term	Project staff time
Project Progress Reports (PPR)	-PMU based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework -	No later than one month after the end of each six-monthly reporting period (30 June and 31 December)	Project staff time
Project Implementation Review report (PIR)	LTO in collaboration with the PMU	30 th June of each reporting year	Project staff time
Co-financing Reports	PMU	30 June, of each reporting year	Project staff time
Technical reports	Project staff and consultants, with peer review as appropriate	As appropriate	Project time + consultant costs
Mid-term Review/Evaluation	External consultant, FAO Office of Evaluation in consultation with PMU, GEF Coordination Unit and other partners.	Mid-point of project	30,000
Final evaluation	External consultant, FAO Office of Evaluation in consultation with PMU, GEF Coordination Unit and other partner	3 months prior to terminal review meeting	40,000
Terminal Report	PMU	2 months before project end	6,600

Type of M&E Activity	Responsible Parties	Time-frame	Budget (USD)
Total Budget			96,600 plus staff time

4.6 Communication

A communications plan incorporating all modes and stakeholders will be developed during the project inception phase and submitted to the first PSC for approval. This will guide the full implementation of the project to include communication with national/provincial stakeholders, with global community (both through the global child project and more widely), etc. The importance of good communications is implicit throughout the project and is explicit with Component 4 (addressing knowledge management and partnerships).

Annexes

- Annex 1: Results Matrix
- Annex 2: Work plan
- Annex 3: Budget
- Annex 4: Risk log
- Annex 5: Risk Classification Certification Form & Environmental and Social Safeguards Checklist
- Annex 6: Terms of Reference for Key personnel
- Annex 7: Methodological basis of carbon benefits quantification
- Annex 8: Linkages between this TRI child project and the TRI program

ANNEX 1: RESULTS MATRIX

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
<p>Development objective: Local livelihoods improved through the increased productivity and enhanced services and functions of the Chilgoza ecosystem in Pakistan.</p>						
<p>Project Objective</p> <p>To contribute to the restoration, protection and sustainable management of Chilgoza pine forests to provide global environmental benefits as well as enhance resilience and livelihoods of local stakeholders in Pakistan.</p>	<p>(i) # of hectares of Chilgoza pine forests managed through appropriate “Sustainable Management Plans” maximizing the provisions of goods and services to local communities</p> <p>(ii) # of hectares to be restored through Assisted Natural Regeneration or plantation of local fast growing species in degraded Chilgoza ecosystems</p> <p>(iii) Tons of CO₂ sequestered through the four improved SFM plans (calculated for the 30,000 hectares)</p>	<p>Low. Exact figure to be established during inception phase</p> <p>0</p> <p>0</p>	<p>Four pilot Forests Management Plans, maximizing the provision of multiple benefits, developed in the four selected districts (one plan in each district)</p> <p>2,200 hectares under restoration practices (including 1 800 hectares with ANR)</p> <p>Mid-term milestones after two/three years are not relevant for CO₂</p> <p>Milestone after 5 years at the end of the project implementation could be considered as one mid-</p>	<p>(i) 30 000 hectares of Chilgoza pine forests sustainably managed and providing an optimal balance of goods and services</p> <p>(ii) 4,400 hectares under restoration (including 3 600 hectares with ANR)</p> <p>(iii) Results from EX-ACT Analysis: 1,928,168 tCO₂eq sequestered from the 30,000 ha under new SFM plans</p>	<p>Project progress reports and Sustainable Management Plans to be prepared, approved and implemented in each districts by 2021</p> <p>Monitoring system of both the forestry departments at district/provincial levels and project M&E framework</p> <p>Project Steering Committee minutes/reports</p> <p>Application of EX-ACT tool</p>	<p>National and provincial/regional authorities and local communities are committed to work with the project and have interest in innovative approach of SFM (less focus on timber production and more on the provision of multiples goods and services) and new restoration practices (e.g. ANR and introduction of fast growing local species in relevant area to limit the pressure on Chilgoza tress)</p>

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
	(iv) Tons of CO2 sequestered through specific restoration practices (calculated for 5 600 hectares) (v) Economic benefits to local communities delivered by SFM/FLR practices	0 0; detailed baseline to be established during inception phase	term milestone and the tons of CO2 after 20 years should be the targets 20 USD (10 Million US \$ per year in the four selected provinces/regions)	(iv) 854,252 tCO2eq sequestered from the 4,400 ha under restoration practices (ANR, local species plantation etc...) (v) 40 USD (10 Million US \$ per year in the four selected provinces/regions)	Economic indicators within the project M&E framework (e.g. incomes provided by Chilgoza Pine Nuts)	
Component 1: Strengthened regulatory and policy environment for integrated and sustainable management of Chilgoza forest ecosystems						
Outcome 1: National and provincial FLR policies and legal frameworks are strengthened and implemented with efforts aiming at maximizing the provision of the multiple goods and services provided by the Chilgoza forest ecosystems	(i) # and type of relevant FLR -related policies/ legislation / plans with enhanced BD identified / supported by the Child Project and progress ⁷ towards adoption (Scale 1 to 4).	0	2 participatory plans with enhanced BD by the mid of the project (Scale – 2 – on-target))	(i) 4 participatory plans with enhanced BD developed by end of project (scale – 4 – completed)	Chilgoza forest Management Plans Project progress reports Monitoring reports	The forestry departments of each province are committed and contribute to the preparation of new Chilgoza forest management plans
	(ii) # of FLR assessments conducted	0	4 FLR assessment initiated	(ii) 4 FLR assessments completed (for each pilot site)	Project Steering Committee minutes/reports	The FLR concept is recognized and appreciated by the forest departments of each province
		0	Approximately 200 people providing input to policy		Gender disaggregated	

⁷ (1) Above expectations; (2) On target; (3) Below Expectations; (4) Completed

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
	(iii) # of women and men providing input to policy planning		planning with 40% women	(iii) Approx. 400 per year (with 40 percent women)	participation tracking data	
<p>Output 1.1: A replicable Sustainable Forest Management and Forest and Landscape Restoration framework is developed for Chilgoza forest ecosystems in the four selected districts using participatory inventory and mapping approaches (e.g. ROAM) addressing both forest economic issues, biodiversity conservation concerns and key current drivers of forest degradation.</p> <p>Output 1.2: Policies and legal frameworks are strengthened to support integrated landscape approaches for the management of Chilgoza Pine ecosystems including biodiversity conservation priorities, management of multiple NTFPs and innovative financing mechanisms</p> <p>Output 1.3: Policy and regulatory frameworks reviewed in order to promote/facilitate the use of innovative and sustainable financial mechanisms (e.g. Payment for Ecosystems Services and/or targeted funds at district level providing Incentives for Ecosystems Services) in Chilgoza forest landscapes</p>						
<p>Component 2: Implementation of Chilgoza Forest Landscapes Conservation, Restoration and Value Chain Development options at community level</p>						
<p>Outcome 2: Forest and Landscape Restoration and Sustainable Forest Management options. increasing livelihood based on goods and services provided by Chilgoza ecosystems, are demonstrated at district level in the four targeted provinces/regions</p>	<p>(i) # of ha under restoration in the landscape, stratified by land management practices and actors such as communities, farmers, private enterprises, etc., and progress on restoration and sustainable forest management efforts.</p> <p>(ii) # of ha of land under improved management practices</p>	<p>0 (to be refined during the inception phase)</p> <p>0</p>	<p>32,200: (30,000 ha initiated under sustainable forest management plans by mid-term involving communities and private enterprises + 2,200 hectares under restoration practices (including 1 800 hectares with ANR))</p> <p>>400hectares under improved management (agroforestry) integrating sustainable use aspects</p>	<p>(i) 34,400: (30,000 ha under sustainable forest management plans involving communities and private enterprises + 4,400 ha under restoration (including 3 600 ha with ANR))</p> <p>(ii) >800 ha by the end of the project in 2022</p>	<p>Chilgoza Forest Management Plans</p> <p>Project progress reports</p> <p>Monitoring reports</p> <p>Project Steering Committee minutes/reports</p> <p>Project progress reports</p>	<p>The forestry departments in each province are willing to involve the local community in forest ecosystem protection and conservation with special focus on women empowerment</p>

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
	(e.g. agroforestry and farm forestry)					
	(iii) # of households engaged in restoration programs at different levels	0	By mid-point over 10,000 households engaged in restoration practices	(iii) >50,000 households with 40 percent women by the end of the TRI project	Project progress reports	
	(iv) # of households directly benefiting from project activities	0	By mid-term, anticipate that >5,000 households involved in TRI activities.	(iv) >25,000 households by the end of the project with 50 percent women	Gender disaggregated tracking report	
	(v) # of small grants instruments set up to support alternative livelihoods	0	4 Small grants instruments in place at district level to support alternative livelihoods (around 60 small grants given out)	(v) 4 Small grants instruments in place at provincial level to support alternative livelihoods (around 120 small grants given out)	Progress reports Monitoring reports	
	(vi) # of bankable projects developed & submitted on PES	0	Feasibility study for establishment of PES schemes is launched in at least two landscapes	(vi) At least two bankable projects developed by the end of TRI project	Scorecard matrix for status of bankable projects	
	(vii) tCO ₂ eq emissions avoided/sequestered in TRI target landscapes as a direct result of TRI interventions.		Mid-term milestones after two/three years are not relevant for CO ₂ Milestone after 5 years at the end of the project implementation could be considered as one mid-term milestone and the tons of CO ₂ after 20 years should be the targets	(vii) 1,928,168 tCO ₂ eq will be sequestered within the 30,000 hectares under SFM plans + 854,252 tCO ₂ eq will be sequestered	Progress reports Monitoring reports Application of EX-ACT tool	

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
				within the 4,400 ha under restoration practices (ANR, local species plantations)		
<p>Output 2.1: Chilgoza Forest multifunctional Management Plans based on cross-sectoral approaches including restoration, biodiversity conservation and sustainable production / livelihood options are prepared and implemented in one management unit (villages or watersheds depending on the provincial regulation) of each selected district of the four provinces</p> <p>Output 2.2: Good practices for sustainable management of Chilgoza pine forests are promoted in the targeted districts of the four provinces with at least ten different forest communities</p> <p>Output 2.3: Assisted Natural Regeneration actions are implemented in Chilgoza forest ecosystems</p> <p>Output 2.4: NTFPs are sustainably managed and producing increased incomes for local stakeholders through promotion of value chain development in the targeted Chilgoza forest landscapes</p> <p>Output 2.5: Alternative livelihoods opportunities are increased for local residents</p> <p>Output 2.6. An enabling environment is created for future implementation of PES schemes in Chilgoza ecosystems (Payment for Ecosystem Services)</p> <p>Output 2.7: Carbon sequestration is enhanced in targeted Chilgoza forest ecosystems</p>						
Component 3: Strengthened local institutions for integrated and sustainable management of Chilgoza forest ecosystems						
Outcome 3: Chilgoza Forest Protection and Conservation Committees (FPCCs) operational, with strengthened capacities of provincial, district and local stakeholders to implement participatory Sustainable Forest Management	(i) # of cross-sectoral mechanisms and other relevant frameworks established and/or strengthened to facilitate coordinated national and sub-national actions on restoration and SFM (ii) Evidence of increased knowledge	0 0	At least one cross-sectoral mechanism is initiated in each of the 4 provinces/regions At least 5 capacity building events involving	(i) 4: at least one cross-sectoral mechanism is operational in each of the 4 provinces (ii) At least 10 capacity building	Minutes of FPCCs meetings Progress reports Monitoring reports Project Steering Committee minutes	

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
	and capacity both at local, district or provincial levels to plan and implement restoration and SFM (iii) # of operational FPCCs (iv) # of provincial, district and local stakeholders trained in the four selected provinces	0 (FPCCs capacity assessment need to be done during the inception phase of TRI) 0 (Capacity assessment needs to be done during the inception phase of TRI)	both men and women is organized by mid-term of the TRI project (2020) FPCCs needs are assessed and a capacity building plan is implemented with the support of TRI Capacity assessment needs are assessed and a capacity building plan is under implementation with the support of TRI	events involving both men and women is organized by the end of the TRI project (2022) (iii) 8 operational FPCCs (at least two in each of the four selected districts) (iv) 2700 stakeholders (200 staff 2500 local community members and Chilgoza traders)	Gender disaggregated participation tracking data Minutes of the eight FPCCs meetings Progress reports Monitoring reports Project Steering Committee minutes Gender disaggregated participation tracking data	
<p>Output 3.1: Chilgoza Forest Protection and Conservation Committees (FPCCs) are established and operational in the four selected sites to ensure local participation and long term ownership in forest protection, management and restoration activities proposed in the context of Component 2</p> <p>Output 3.2: Capacity is built for national and provincial forest managers in strategic development of inter-sectoral forest policies and programs</p> <p>Output 3.3: Capacity is built/strengthened at provincial, district and local stakeholders on sustainable forest management practices</p>						
Component 4 Knowledge, partnerships, monitoring and assessment for Chilgoza forest ecosystems						
Outcome 4: Stakeholders equipped with new knowledge related to forest and landscape restoration of Chilgoza forest ecosystems	(i) Participation in TRI Annual Knowledge Sharing events, Restoration Finance events and relevant TRI-sponsored South-	0	2 TRI events attended by mid-term (2020)	(i) 4TRI events attended by end of the project (2022)	Progress reports	The best practices are well documented by the forestry departments of each targeted

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
with strengthened private and public engagement through sharing of best practices, lessons and exchanges with both the other TRI national and the global projects.	South exchanges that address restoration and SFM issues.					provinces and the TRI child project
	(ii) # of Monitoring system established : Child project monitoring system established and providing relevant information to managers both at national, provincial and district levels	0	5: Four monitoring systems (one for each pilot district) feeding to one comprehensive system	(ii) 5: Four monitoring systems (one for each pilot district) feeding to one comprehensive system	Monitoring reports Project Steering Committee minutes/reports	Experience sharing events are organized by the TRI global project
	(iii) # of TRI knowledge products developed, disseminated and accessed through relevant knowledge platforms both at provincial, national and global levels	0	At least five knowledge products developed on relevant issues for SFM / FLR of Chilgoza forest ecosystems	(iii) At least ten products including: ecosystem assessment reports, guidelines for PES, guidelines for Gender, leaflets, newsletters, case studies, etc.by the end of TRI project	Knowledge products published on relevant knowledge platforms both at provincial, national and global levels	
	(iv) # of sharing knowledge events/tools on forest landscape information between districts at provincial level and between provinces in Pakistan	0 (Limited information shared at present both between districts at provincial level and between provinces in Pakistan)	1 (Project website and information system operational)	(iv) 11 (1 website + 10 information sharing events involving more than 400 stakeholder representatives at local and national levels (technical	Progress reports Monitoring reports Project Steering Committee minutes/reports	

Results Chain	Indicators	Baseline	Mid-term milestone	Target	Means of Verification (MOV)	Assumptions
				days on Chilgoza)forest ecosystems)		
<p>Output 4.1: Monitoring and evaluation framework is developed for the TRI child project in Pakistan</p> <p>Output 4.2: Communication, awareness raising and knowledge management at the local, provincial, national and global levels on Chilgoza forest ecosystems</p> <p>Output 4.3: Lessons sharing and aggregation of progress and experiences at local, regional (district/provincial), national and global levels</p> <p>Output 4.4. Knowledge generation via targeted applied research actions on Sustainable Management of Chilgoza forest ecosystems</p>						

ANNEX 2: WORKPLAN

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PROJECT START UP	Recruit PMU members of PMU team																
	Orient PMU members																
	National Inception workshop																
	Local level inception workshops																
	LOA among participating agencies																
Capacity development	Appointing training expert																
	Validation of identified gaps																
Gender mainstreaming	Development of gender mainstreaming strategy including specific actions for each activity																
	Monitoring and follow-up of gender mainstreaming effectiveness																
Monitoring and evaluation	Baseline study: Review of logical framework and indicators																
	Generation of missing baseline data for indicators																
	Monitoring of progress in meeting targets																
	Internal review and organisation of indicator data																
	Mid-term review																
	Final evaluation																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
PROJECT CLOSURE	Negotiation of details of exit/sustainability strategy																	
	Review/feedback workshop																	
	Administrative closure																	
Output 1.1: A replicable Sustainable Forest Management and Forest and Landscape Restoration framework is developed for Chilgoza forest ecosystems in the four selected districts using participatory inventory and mapping approaches (e.g. ROAM) addressing both forest economic issues, biodiversity conservation concerns and key current drivers of forest degradation.	1.1.1. Collect available ecological information on Chilgoza ecosystem in Pakistan with a focus on the four targeted districts																	
	1.1.2 Assess economic value of the good and services provided by Chilgoza ecosystems (including Pine Nuts incomes) with a focus on the four targeted districts																	
	1.1.3 Develop guidelines and build capacity of local stakeholders for participatory inventory and mapping of the Chilgoza pine forests																	
	1.1.4 Organize workshops for data collection, analysis and validation of SFM/FLR options and select priority sites for preparation of multifunctional SFM plans																	
	1.1.5 Undertake resilience assessments of the selected priority sites and propose an appropriate innovative framework for multifunctional SFM plans (including FLR options) of Chilgoza ecosystems																	

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 1.2: Policies and legal frameworks are strengthened to support integrated landscape approaches for the management of Chilgoza Pine ecosystems including biodiversity conservation priorities, management of multiple NTFPs and innovative financing mechanisms	1.2.1 Review existing polices in the four provinces/regions																
	1.2.2 Develop guidelines, adapted to the context of each province/region																
	1.2.3 Disseminate and raise awareness of existing policies and legal frameworks at local level																
	1.2.4 Support FATA region for the formulation of a new forest policy building on the KP Forest Department experiences																
	1.2.5 Propose an adapted regulation on harvest and management of NTFPs in particular for cones collection and pine nuts trade (building on experiences of other TRI countries and multiple existing FAO guidelines)																
	1.2.6 Develop strategic guidelines and incentives mechanisms for effective law enforcement at local level (through community participation) concerning sustainable management of wildlife and other key biodiversity resources																
Output 1.3: Policy and regulatory frameworks reviewed in order to	1.3.1 Explore options and support the design phase of sustainable financial																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
promote/facilitate the use of innovative and sustainable financial mechanisms (e.g. Payment for Ecosystems Services and/or targeted funds at district level providing Incentives for Ecosystems Services) in Chilgoza forest landscapes	mechanisms for Chilgoza Forest landscapes at provincial level (Provincial Forest Funds)																
	1.3.2 Build capacity of stakeholders for both the design, capitalization and implementation phases of these provincial financial mechanisms.																
	1.3.3 Develop guidelines and build capacity of local stakeholders for both the design and implementation phases of PES schemes																
	1.3.4 Develop the framework for innovative pilot local Chilgoza forests development funds at community level in the four selected districts																
	1.3.5 Support an economic valuation study of the multiple benefits provided by Chilgoza forests																
	1.3.6 Explore options for linking local stakeholders with existing financial institutions (small loans, etc...) in the four targeted districts of Pakistan																
Output 2.1: Chilgoza Forest multifunctional Management Plans based on cross-sectoral approaches including	2.1.1 Review current sustainable management plans (building on existing ones) and develop an innovative template																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
restoration, biodiversity conservation and sustainable production / livelihood options are prepared and implemented in one management unit (villages or watersheds depending on the provincial regulation) of each selected district of the four provinces	addressing better the multiple goods and services provided by Chilgoza ecosystems																
	2.1.2 Support the preparation of one Sustainable Management Plans with restoration options in Chilgoza Pine Forest of each selected district with identification of specific sites with a high potential for Assisted Natural Regeneration and other interventions like Agroforestry and farm forestry																
	2.1.3 Identify better root causes of Chilgoza pine forests degradation in each management unit in selected district and conduce a specific long term study on cones production for each age group of Chilgoza trees																
	2.1.4. Propose technical alternatives and incentives to better address the identified drivers of degradation																
Output 2.2: Good practices for sustainable management of Chilgoza pine forests are promoted in the targeted districts of the four provinces with at least ten different forest communities	2.2.1 Develop guidelines of good practices of ecological restoration based on available knowledge on Chilgoza ecosystems																
	2.2.2 Review best practices for community participation in natural resource																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	management and conservation in Pakistan																
	2.2.3 Collate, summarize and document local knowledge of the ten targeted communities on management practices																
	2.2.4 Analyse customary laws/formal and informal user rights (usufruct...) at community level in the four selected districts																
	2.2.5 Collect and analyse good practices for innovative Farm and Agroforestry options																
	2.2.6. Propose, test and build capacity at community level on these identified good practices in the four selected districts with a focus on options with a high positive impact on Chilgoza ecosystems																
	2.2.7 Promote these best practices for value chain development of Chilgoza pine nuts and other key non-timber forest products																
Output 2.3: Assisted Natural Regeneration actions are implemented in Chilgoza forest ecosystems	2.3.1 Identification of relevant sites for Assisted Natural Regeneration using GIS and assessment tool/ methodology (including participatory tools)																
	2.3.2 Negotiate grazing exclusion options to encourage natural																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	regeneration in Chilgoza ecosystems with implementation of ANR based on grazing management plans																
Output 2.4: NTFPs are sustainably managed and producing increased incomes for local stakeholders through promotion of value chain development in the targeted Chilgoza forest landscapes	2.4.1 Conduct a baseline survey to better identify the multiple NTFPs of interest provided by Chilgoza pine forests (e.g. relevant NTFPs value chains economic studies etc...)																
	2.4.2 Based on the survey results (including market analysis), introduce sustainable collection practices and propose relevant options to develop these NTFP value chains in order to generate added value for local stakeholders																
	2.4.3 Develop guidelines on sustainable management of key NTFPs																
Output 2.5: Alternative livelihoods opportunities are increased for local residents	2.5.1 Conduct and document successful experiences of alternative livelihoods programme based on natural resources conservation in Pakistan.																
	2.5.2 Develop a small grants framework for alternative livelihoods for local communities through establishment of a competitive endowment funds (local incentive fund)																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	at community level to promote incomes generation based on sustainable options																
Output 2.6. An enabling environment is created for future implementation of PES schemes in Chilgoza ecosystems (Payment for Ecosystem Services)	2.6.1 Conduct reviews and raise awareness about the PES concept and its related potential benefits in the four provinces/regions																
	2.6.2 Develop guidelines and build capacity of relevant stakeholders for future implementation of the PES concept in the four provinces/regions																
	2.6.3 Conduct a feasibility study in two pilot landscapes with high potential for establishing PES schemes																
	2.6.4 Prepare two bankable project proposals to support implementation of the two PES schemes																
Output 2.7: Carbon sequestration is enhanced in targeted Chilgoza forest ecosystems	2.7.1 Develop required baseline information on potential carbon benefits of SFM and FLR practices to be implemented in the context of Component 2																
	2.7.2 Promote assisted natural regeneration as a cost-effective option to enhance carbon sequestration in Chilgoza forest ecosystems																
	2.7.3 Encourage planting relevant associated tree species to increase resilience to CC and carbon																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	storage potential of the Chilgoza forest ecosystems																
	2.7.4 Monitor the carbon benefits of the proposed SFM and FLR practices in selected sites																
Output 3.1: Chilgoza Forest Protection and Conservation Committees (FPCCs) are established and operational in the four selected sites to ensure local participation and long term ownership in forest protection, management and restoration activities proposed in the context of Component 2	3.1.1 Review existing committees in the four selected districts and assess their needs for capacity building on SFM / FLR																
	3.1.2 Facilitate the establishment of new FPCCs or strengthen existing ones																
	3.1.3 Develop terms of partnerships for protection of forest, controlled grazing, biodiversity and sustainable use of non-timber forest products with targeted FPCCs																
Output 3.2: Capacity is built for national and provincial forest managers in strategic development of inter-sectoral forest policies and programs	3.2.1 Assess the needs for capacity building for national and provincial forest managers																
	3.2.2 Organize identified priority capacity building events (with when needed the support of the global TRI child project)																
	3.2.3 Organize events / facilitate platforms for inter sectoral collaboration (inter sectoral platform etc...).																
Output 3.3: Capacity is built/strengthened at provincial, district and	3.3.1 Conduct training need assessment and develop capacity building plans																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
local stakeholders on sustainable forest management practices	3.3.2 Conduct on job training on ROAM methodology for restoration opportunities assessment during the first year of the TRI project																
	3.3.3 Identification of key tools / methodology for SFM/ FLR of Chilgoza forests and organized training (with when needed the support of the global TRI child project)																
	3.3.4 Identify thematic priority areas (e.g. PES, ANR, SFM practices etc...) for capacity building workshops or exchanges of experiences (field visits, study tours etc...)																
Output 4.1: Monitoring and evaluation framework is developed for the TRI child project in Pakistan	4.1.1 Develop the participatory and GIS based M&E system (including capacity building actions on innovative tools such as Collect Earth Open Foris)																
	4.1.2 Build capacity in participatory M&E based on existing guidance documents on M&E proposed by TRI partners in the context of the global TRI child project																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 4.2: Communication, awareness raising and knowledge management at the local, provincial, national and global levels on Chilgoza forest ecosystems	4.2.1 Develop the communication and awareness raising strategy and link it with the global initiatives proposed in the context of the TRI																
	4.2.2 Develop the knowledge management products including handbooks, fact sheets, newsletters, policy briefs, videos, documentary/story-telling products etc...																
	4.2.3 Disseminate the information to the key stakeholders on regular basis both through formal and informal fora/platforms / field visits/ study tours																
	4.2.4 Prepare awareness raising strategy and relative documents such as leaflets, policy papers/briefs, videos, story-telling on Chilgoza forest ecosystems																
	4.2.5 Arrange exposure visits with decision makers and journalists to successful sites in the four provinces																

OUTPUTS	ACTIVITIES	Year 1				Year 2				Year 3				Year 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 4.3: Lessons sharing and aggregation of progress and experiences at local, regional (district/provincial), national and global levels	4.3.1 Undertake Impact study and document the findings for wider circulation at local, national, regional and global level via TRI events, APFC sessions, Bonn Challenge / GPFLR meetings and other relevant fora																
	4.3.2 At the end of project capitalize / document all the best practices / approaches on the Chilgoza Forest Ecosystem																
Output 4.4. Knowledge generation via targeted applied research actions on Sustainable Management of Chilgoza forest ecosystems	4.4.1 Study on observed dieback to understand better tree mortality issues in Chilgoza forests																
	4.4.2 Valuation of the key Chilgoza ecosystem products, services and functions																
	4.4.3 Study on the ecological characteristics of Chilgoza forest ecosystems																
	4.4.4 Develop carbon stock tables for Chilgoza forest ecosystems																
	4.4.5 Study yield / cone production of Chilgoza pine forests both in the good and bad seed years																

ANNEX 3: BUDGET



Pakistan child FSP_
8March2018.xlsx

Annex 4: Risk log

Risk	Rating	Preventive Measures
Accessibility to remote project sites (e.g. as well as security in places like South-Waziristan).	Medium	<ul style="list-style-type: none"> • The project is to be implemented by the Forest Department, which has an extensive and ongoing outreach programme in FATA. • FAO has successfully implemented a number of projects in FATA-- including North and South-Waziristan (e.g. in relief and early recovery)—and will build upon those respected networks and programmes. • Local NGOs also have access to the area, and will contribute in the smooth implementation of the project • Forestry and Agriculture activities are much sought after by remote local communities, are largely viewed as non-controversial, and continue to be well received even in the active conflict zones. • The Political Administration and FATA Secretariat support this project and have agreed to facilitate its implementation.
Limited technical implementation capacities (e.g. of Forest Department), limited abilities in project contract management, finance.	Low	<ul style="list-style-type: none"> • Project implementation activities will include targeted capacity building and training to government institutions and partners, extension departments, communities and other forest stakeholders. • Implementation will involve targeted FAO Forest technical department and TRI services, and which may be supported by performance-based incentives.
Reluctance of beneficiaries of forest ecosystem services to pay for/protect forests.	Low	<ul style="list-style-type: none"> • Mitigating forest destruction, protecting forest ecosystem flows, and building the resilience and sustainability of communities is central to the project. • The project will create a comprehensive methodology for evaluating ecosystem services, analyzing potential ‘buyers/sellers’ of services as well assist in negotiating trade-offs.
Local households are risk adverse, resist shifts from timber to biodiversity conservation/sustainable use	Low	<ul style="list-style-type: none"> • The project targets mobilization of community participation, and emphasizes participatory approaches. Ongoing consultation with households and their representation will also help mitigate risk. Improved economic benefits of community-based forestry and productivity gains promoted by the project will provide additional incentives. • As regards reforestation, the choice and placement of species will be determined with community inputs and sound-scientific advice to balance social, economic and environment requirements (e.g. food security, income, watershed integrity, biodiversity connectivity).
Natural disaster, extreme weather fluctuations (drought, floods, landslides).	Medium	<ul style="list-style-type: none"> • In addition to project interventions targeting mitigation of upland ecosystem risks, protection of ecological flows and building community resilience and sustainability, the project will create assessment, awareness and capacity which could be used to leverage disaster preparedness planning.
Pest reduce success rate	Low	<ul style="list-style-type: none"> • The Pakistan Forest Institute which is in charge of monitoring pest and implement response in case of pest case, is one of the partner of this project. Pest monitoring will be one of their task.

<p>International consultants (e.g. MTE/TE) not receiving NOC from government to undertake missions to pilot sites</p>	<p>Medium</p>	<ul style="list-style-type: none"> • The NOCs for the international consultants will be received in time if the request with required documents is sent well in time. • The NOC issuing authority is briefed periodically on the importance of the project and the need for the travel of international consultants.
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Annex 5: Risk Classification Form & ESS Checklist

After completing the Environmental and Social (E&S) Screening Checklist, the Lead Technical Officer (LTO) completes and certifies this Certification Form and attached the E&S Screening Checklist to this form.

Project symbol: 9264

Project title: Reversing deforestation and degradation in high conservation value Chilghoza Forests in Pakistan

A. RISK CLASSIFICATION

Low Moderate High

1. Record key risk impacts from the E&S Screening Checklist

A. _____ C. _____
B. _____ D. _____

2. Has the project site and surrounding area been visited by the compiler of this form?

Yes No

B. STAKEHOLDER CONSULTATION/ENGAGEMENT

Identification of Stakeholder(s)	Date	Participants	Location
Ministry of Climate Change, Government of Pakistan	May, 2016	Secretary Ministry of Climate Change	Islamabad
Provincial Forest Departments, Balochistan, Khyber Pakhtunkhwa, FATA and Gilgit-Baltistan	June 2016	Secretaries/Chief Conservator of the Forest Departments	Islamabad/Provincial Headquarters

1. Summarize key risks and impacts identified from the stakeholder engagement

- A. Limited technical implementation capacity C. Reluctance of beneficiaries of forests ecosystem services to pay for/protect forests
- B. Local households are risk adverse, resist shift from timber to biodiversity conservation/sustainable use

2. Have any of the stakeholders raised concerns about the project?

No key stakeholder has raised any concerned about the project

1 Project Cycle Annexes 13 May 2015

The LTO confirms the information above

Date 22 July 2016



PROJECT ENVIRONMENTAL AND SOCIAL SCREENING (ESS) CHECKLIST -For Risk Classification use during Project Identification

For each question only 1 of 4 boxes must be checked: Not Applicable (N/A), No, Yes or Unknown⁸.

Would the project, if implemented?	Not Applicable	No	Yes	Unknown
I. FAO VISION/STRATEGIC OBJECTIVES				
Be in line with FAO's vision?			X	
Be supportive of FAO's strategic objectives?			X	
II. FAO KEY PRINCIPLES FOR SUSTAINABILITY IN FOOD AND AGRICULTURE				
Improve efficiency in the use of resources?			X	
Conserve, protect and enhance natural resources?			X	
Protect and improve rural livelihoods and social well-being?			X	
Enhance resilience of people, communities and ecosystems?			X	
Include responsible and effective governance mechanisms?			X	
ESS 1 NATURAL RESOURCES MANAGEMENT				
❖ Management of water resources and small dams				
Include an irrigation scheme that is more than 20 hectares or withdraws more than 1000 m ³ /day of water?	X			
Include an irrigation scheme that is more than 100 hectares or withdraws more than 5000 m ³ /day of water?	X			
Include an existing irrigation scheme?	X			
Include an area known or expected to have water quality problems?	X			
Include usage of non-conventional sources of water (i.e. wastewater)?	X			
Include a dam that is more than 5 m. in height?	X			
Include a dam that is more than 15 m. in height?	X			
Include measures that build resilience to climate change?			X	
❖ Tenure				
Negatively affect the legitimate tenure rights of individuals, communities or others ⁹ ?				
ESS 2 BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS				
Make reasonable and feasible effort to avoid practices that could have a negative impact on biodiversity, including agricultural biodiversity and genetic resources?			X	
Have biosafety provisions in place?			X	

⁸ "Show stopper" questions are marked in red colour. If any issues are identified in answering these questions then the project is no longer a low risk project and needs to be brought to the attention of relevant technical divisions and the ESM unit.

⁹ In accordance with Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)
<http://www.fao.org/docrep/016/i2801e/i2801e.pdf>

Respect access and benefit-sharing measures in force?			X	
Safeguard the relationships between biological and cultural diversity?			X	
❖ Protected areas, buffer zones and natural habitats				
Be located such that it poses no risk or impact to protected areas, critical habitats and ecosystem functions?			X	
ESS 3 PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE				
❖ Planted forests				
Have a credible forest certification scheme, national forest programmes or equivalent or use the Voluntary Guidelines on Planted Forests (or an equivalent for indigenous forests)?			X	
ESS 4 ANIMAL - LIVESTOCK AND AQUATIC- GENETIC RESOURCES FOR FOOD AND AGRICULTURE				
Involve the procurement or provision of pesticides?			X	
❖ Aquatic genetic resources				
Adhere (Aligned) to the FAO Code of Conduct for Responsible Fisheries (CCRF) and its related negotiated instruments?	X			
Be aligned, where applicable, with FAO's strategic policies established in the FAO Technical Guidelines for Responsible Fisheries (including aquaculture)?	X			
❖ Livestock genetic resources				
Be aligned with the Livestock Sector Strategy including the animal disease, public health and land degradation provisions?	X			
ESS 5 PEST AND PESTICIDES MANAGEMENT				
Involve the procurement or provision of pesticides?	X			
Result in increased use of pesticides through expansion or intensification of production systems?	X			
Require the disposal of pesticides or pesticide contaminated materials?	X			
ESS 6 INVOLUNTARY RESETTLEMENT AND DISPLACEMENT				
Avoid the physical and economic displacement of people?			X	
ESS 7 DECENT WORK				
Adhere to FAO's guidance on decent rural employment, promoting more and better employment opportunities and working conditions in rural areas and avoiding practices that could increase workers' vulnerability?			X	
Respect the fundamental principles and rights at work and support the effective implementation of other international labour standards, in particular those that are relevant to the agri-food sector?			X	
ESS 8 GENDER EQUALITY				
Have the needs, priorities and constraints of both women and men been taken into consideration?			X	
Promote women's and men's equitable access to and control over productive resources and services?			X	
Foster their equal participation in institutions and decision-making processes?			X	
ESS 9 INDIGENOUS PEOPLES AND CULTURAL HERITAGE				

Are there any indigenous communities in the project area?		X		
Are project activities likely to have adverse effects on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (tangible and intangible)?		X		
Are indigenous communities outside the project area likely to be affected by the project?		X		
Designed to be sensitive to cultural heritage issues?			X	

Annex 6: Terms of Reference for Key Personnel

Terms of Reference of National Project Coordinator (Technical & Operations) (NPC)

The NPC will be contracted by the FAO Pakistan for duration of project implementation period to lead the Project Management Unit (PMU) and the implementation of the project based on the international technical and project management practices. The NPC will work closely with FAO officers and the Ministry of Climate Change (MOCC). The NPC reports to the Budget Holder and Assistant Representative Programme on administrative issues and to the Lead Technical Officer (LTO) on technical issues.

- Develop and supervise the implementation of consolidated annual work programme and budget (AWPB);
- Lead and manage the PMU to ensure the proper implementation of the project in accordance with FAO rules and regulations, and the approved AWPB;
- Work closely with the project counterparts, namely the Ministry of Climate Change (MOCC) and the Provincial Forest Departments, to ensure smooth implementation of the project;
- Provide technical and operational guidance to the provincial coordinators;
- Provide technical advice to ensure that the appropriate approaches are followed during project implementation (participatory and integrated approaches, multi-stakeholder participation, gender, etc.);
- Monitor and maintain records of commitments and actual expenditures based on the approved AWPB and in compliance with the FAO and GEF policies and procedures/ Undertake day-to-day management of the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
- Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
- Develop and implement the M&E framework and assist in the set-up and implementation of the project M&E systems at provincial and PMU levels;
- Act as Secretary of the Project Steering Committee;
- Prepare and submit quarterly and annual progress reports, reviews and performance implementation reviews;
- Lead assessment and monitoring of project activities and facilitate external review (mid-term) and final evaluation;
- Collect and prepare success stories and lessons learned from the project and share with the TRI global team for mutual learning of the child projects;
- Work closely with the TRI global project team and participate in the global events of mutual learning and sharing experiences.

Qualification and Skills

- Advanced degree in forestry, natural resources management or other related fields
- A minimum of 10 years of experience in planning, development and implementation of forestry and natural resource management projects
- Proven capacity to work and establish working relationships with governmental and non-governmental representatives in Pakistan
- Multi-disciplinary team development and management experiences
- Working knowledge in English and local languages

Terms of Reference for Provincial Level Coordinators (Technical & Operations) (one for each target province)

The FAO Focal Point will be contracted by the FAO Pakistan for a duration of project implementation period in each of the project target provinces and will be responsible for day to day management of

the project activities with close coordination with respective provincial forest department. The PPC will work closely with FAO officers and reports to the National Project Coordinator.

- Develop and supervise the implementation of provincial annual work programme and budget (AWPB)
- Ensure smooth implementation of the project activities by close working with the forest department as per approved AWPB, through operational and administrative procedures according to FAO rules and standards;
- Coordinate the project operational arrangements through contractual agreements with key project partners;
- Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreements with relevant project partners;
- Provide technical and operational guidance to the forest department staff and the local community organizations, including the preparation of management plan and Chilgoza utilization plan, value addition and value chain development
- Facilitate the forest department and other partners in undertaking baseline studies, valuation studies, assessment of opportunities for restoration
- Identify training need assessment both for the forest department as well as community organizations, and develop training programme
- Contribute to the development of PES on pilot basis
- Develop partnership with the local community organizations for facilitating assisted natural regeneration
- Prepare guidelines for women involvement in the project especially in the decision making
- Facilitate and guide the forest department staff in formation of Chilgoza conservation and forest protection committees
- Design participatory and web-based M&E reporting system accessible to the project team and partners
- Monitor and maintain records of commitments and actual expenditures based on the approved AWPB and in compliance with the FAO and GEF policies and procedures/ Undertake day-to-day management of the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
- Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
- Prepare periodic progress report and other project documents

Qualification and Skills

- Advanced degree in forestry, natural resources management or other related fields
- A minimum of 10 years of experience in planning, development and implementation of forestry and natural resource management projects
- Proven capacity to work and establish working relationships with governmental and non-governmental representatives in Pakistan
- Multi-disciplinary team development and management experiences
- Working knowledge in English and local languages

Terms of Reference for an Operations and Procurement Specialist

- Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreements with relevant project partners;
- Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards;
- Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the PC;
- Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
- Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
- Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
- Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required.

Annex 7: METHODOLOGICAL BASIS OF CARBON BENEFITS QUANTIFICATION

The project will implement the following forest management interventions in four project target areas that are considered to generate carbon sequestration benefits. Forest Management Plans will be developed and implemented over 34,400 ha as follow:

- 1) **Sustainable forest management:** The project will contribute to the sustainable management of 30,000 ha of moderately degraded Chilgoza forests in the target areas. No exploitation of wood stocks will be allowed under this management activity, and the collection of timber, non-timber forest products and use of fire should be subject to strict rules. The main monitoring activity to be implemented under the forest protection intervention is forest surveillance to avoid illegal exploitation by local authorities and communities. Based on the Forest Management Plans, the target areas will be divided into zones: biodiversity conservation, commercial production, and improvement with an aim of applying landscape level approach to the Chilgoza forest ecosystems that balances ecological and socio-economic objectives.
- 2) **Forest restoration and regeneration:** Based on the Forest Management Plans which will be developed by the local forest management authorities and communities, this intervention will cover 3,600 ha of Chilgoza forest, deserving maximum conservation given their high environmental and economic value, within the four project sites. The project aims to rehabilitate and afforest the target areas through assisted natural regeneration and to increase the stocking densities from approximately 25% to 50% for carbon stock capacity enhancement. These areas will also be monitored and protected through establishment of closures by the local communities and authorities.

In addition,

- 3) **Agro-forestry:** Based on the Forest Management Plans, the project will establish 800 ha of diverse agro-forestry sites in degraded areas to fulfil the environmental, social and

productive objectives. The agro-forestry sites will act as buffer zones for the Chilgoza forest stands. In consultation with the local communities, the project will assist in selecting and planning multipurpose, fast-growing tree species and complementary agriculture crops that will provide alternative energy sources, supplement nutrition, and improve soil and water retention capacities while reducing the unsustainable use of Chilgoza forest.

The carbon benefits from the project are estimated in terms of lifetime direct as well as consequential GHG emissions avoided over the default time horizon of 20 years under the IPCC guideline and the guidance of the GEF Tracking Tools. For this project, the durations of implementation phase and the capitalization phase are defined as 5 years and 15 years, respectively. The carbon benefits are calculated using EX-Ante Carbon Balance Tool (EX-ACT).

Direct lifetime GHG emission avoided

In the GEF Tracking Tool for Climate Change Mitigation projects, direct lifetime GHG emissions avoided are the emissions reductions attributable to the investments made during the project's supervised implementation period, totalled over the respective lifetime of the investments. The following variables and assumptions are used for the calculation. The EX-ACT results file is available separately.

Variable	Value	Unit	Note
Lifetime length for direct GHG emission avoided	20	years	5 year implementation phase plus 15 year capitalization phase
Continent	Asia (Indian subcontinent)	-	EX-ACT default type
Climate and Moisture regime	Cool temperate, Dry	-	EX-ACT data
Dominant Regional Soil Type	High Activity Clay (HAC) Soils	-	EX-ACT data
Area for GHG emissions calculation in EX-ACT	34,400	ha	Project target total
Target benefit area for sustainable forest management	30,000	ha	Project target
Target benefit area for assisted regeneration and reforestation in degraded forests	3,600	ha	Project target
Target benefit area of existing degraded land for agro-forestry	800	ha	Project target
Estimated historic average of annual deforestation and degradation rate (baseline)	0.75	%	Based on Pakistan Forestry Outlook Study 2009 (FAO, Ministry of Environment Pakistan)
Type of vegetation of Chilgoza pine tree forest	Temperate mountains systems	-	EX-ACT default type (Forest Zone 3) as a generic carbon density
Above-ground carbon stock based on the growth rates of the Chilgoza forests (regeneration/restoration)	0.24	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Below-ground carbon stock based on the growth rates of the Chilgoza forests (regeneration/restoration)	0.62	tC/ha	EX-ACT default value
Above-ground carbon stock based on the degradation level of the Chilgoza forests (forest protection)	54.53	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Below-ground carbon stock based on the degradation level of the Chilgoza forests (forest protection)	5.15	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Carbon stock in biomass/soil	0/50	tC/ha	EX-ACT default value

Initial degradation level (% of biomass lost) of the Chilgoza forests	Moderate	-	Tier 2: degradation level at 32% (EX-ACT default 40%)
Chilgoza forests degradation level without project	Moderate	-	Tier 2: degradation level at 32% (EX-ACT default 40%)
Chilgoza forests degradation level with project	Low	-	Tier 2: degradation level at 16% (EX-ACT default 20%)
Above/below-ground carbon stock based on the growth rates of agroforestry	2.1/0	tC/ha/yr	EX-ACT default value
Rates of soil C sequestration	0.15	tCO ₂ /ha/yr	EX-ACT default value

The estimated values of direct lifetime GHG emission avoided during 20 years (5 years of implementation phase and 15 years of capitalization phase) are as follows:

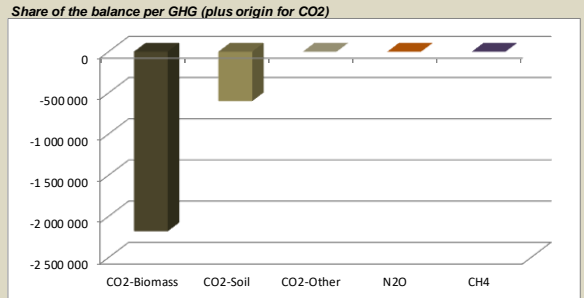
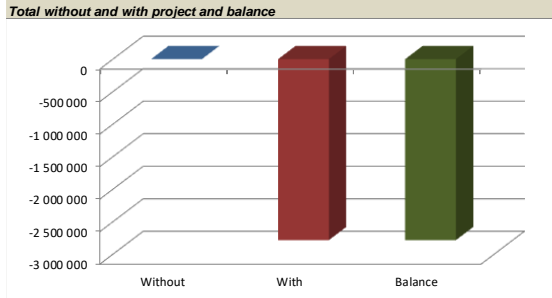
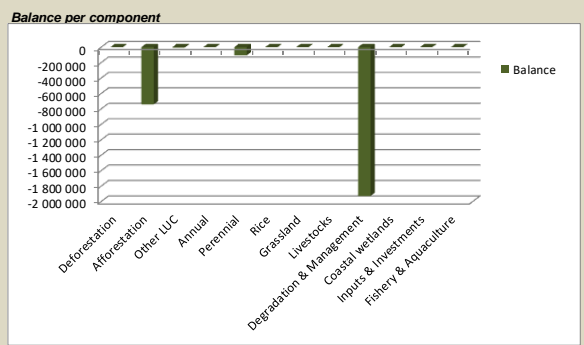
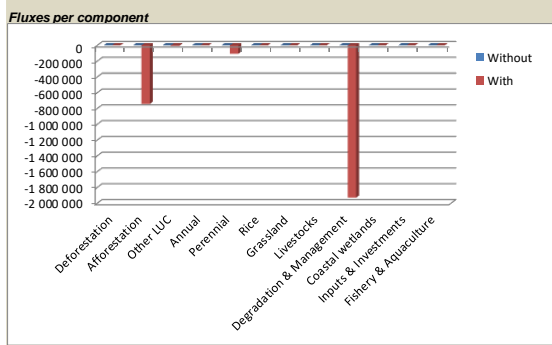
Management regime	Target benefit area (ha)	Direct lifetime GHG emission avoided (tCO ₂ eq)
Sustainable Forest Management	30,000	1,928,168
Restoration/regeneration	3,600	741,272
Agroforestry	800	112,980
TOTAL	34,400	2,782,420

The direct lifetime GHG emission mitigation potential from the project is estimated as **2,782,420 tCO₂eq**, which is equivalent to about **4.0 tCO₂eq per hectare per year** in the considered biome and time frame.

Table below provides the details of the direct lifetime GHG fluxes as calculated with the EX-ACT during 20 years of project lifetime:

Project Name	Reversing Deforestation in	Climate	Cool Temperate (Dry)	Duration of the Project (Years)	20
Continent	Asia (Indian subcontinent)	Regional Soil Type	HAC Soils	Total area (ha)	34400

Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			
	Without	With	Balance	All GHG in tCO2eq					Without	With	Balance	
	All GHG in tCO2eq			CO2	Biomass	Soil	Other	N2O	CH4			
Land use changes												
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	-741 272	-741 272	-527 597	-213 675	0	0	0	0	0	-37 064	-37 064
Other LUC	0	-6 160	-6 160	-6 160	0	0	0	0	0	0	-308	-308
Agriculture												
Annual	0	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	-106 820	-106 820	-104 720	-2 100	0	0	0	0	0	-5 341	-5 341
Rice	0	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks												
Grassland	0	0	0	0	0	0	0	0	0	0	0	0
Livestocks	0	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management												
Coastal wetlands	0	-1 928 168	-1 928 168	-1 543 168	-385 000	0	0	0	0	0	-96 408	-96 408
Inputs & Investments	0	0	0	0	0	0	0	0	0	0	0	0
Fishery & Aquaculture	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	-2 782 420	-2 782 420	-2 181 645	-600 775	0	0	0	0	0	-139 121	-139 121
Per hectare	0	-81	-81	-63.4	-17.5	0.0	0.0	0.0	0.0	0.0	-4.0	-4.0
Per hectare per year	0.0	-4.0	-4.0	-3.2	-0.9	0.0	0.0	0.0	0.0	0.0	-4.0	-4.0



Evolutions of land use / category (hectares - ha)			Initial State	Without project	With project
Forest/Plantation			30 000	30 000	33 600
Agriculture	Annual		0	0	0
	Perennial		0	0	800
	Rice		0	0	0
Grassland			0	0	0
Other lands	Degraded		1 800	1 800	0
	Other		2 600	2 600	0
Wetlands			0	0	0
Total area (ha)			34 400	34 400	34 400

Uncertainty level		% of uncertainty
Gross fluxes		
Without	0	
With	-2 782 420	22.8
Net balance	-2 782 420	22.8

[Detailed matrices of changes](#)

Consequential (indirect) lifetime GHG emission avoided

According to the Guidelines for Greenhouse Gas Emissions Accounting and Reporting for GEF Projects (GEF/C.48/Inf.09, 7 May 2015), indirect emissions reductions have been re-defined as “consequential emissions”. Consequential GHG emission reductions are those projected emissions that could result from a broader adoption of the outcomes of a GEF project plus longer-term emission reductions from behavioural changes. Broader adoption of a GEF project proceeds through several processes including sustaining, mainstreaming, replication, scaling-up and market change. consequential emission reductions are typically achieved after the project closure and occur outside of the project logical framework (Result Matrix).

To date there is little reliable baseline information of the project sites, both qualitative and quantitative, available to calculate the consequential lifetime GHG emissions avoided. During the early implementation period, the project will conduct necessary baseline surveys.

Based on the initial consultations with the target provinces, the consequential potential is assumed to replicate the project activities, such as forest protection, restoration and agroforestry production, in the entire Chilgoza forests among four provinces. Based on this assumption, the total coverage of consequential potential benefit area for the carbon calculation is 98,247 ha.

For the estimation of consequential lifetime GHG emission avoided during 17 years (2 years of implementation phase and 15 years of capitalization phase), the following variables and assumptions are used for the calculation. The EX-ACT results file is available separately.

Variable	Value	Unit	Note
Lifetime length for direct GHG emission avoided	20	years	5 year implementation phase plus 15 year capitalization phase
Continent	Asia (Indian subcontinent)	-	EX-ACT default type
Climate and Moisture regime	Cool temperate, Dry	-	EX-ACT data
Dominant Regional Soil Type	High Activity Clay (HAC) Soils	-	EX-ACT data
Area for GHG emissions calculation in EX-ACT	98,247	ha	Project target total
Target benefit area for sustainable forest management	85,681	ha	Project target
Target benefit area for assisted regeneration and reforestation in degraded forests	10,282	ha	Project target
Target benefit area of existing degraded land for agro-forestry	2,285	ha	Project target
Estimated historic average of annual deforestation and degradation rate (baseline)	0.75	%	Based on Pakistan Forestry Outlook Study 2009 (FAO, Ministry of Environment Pakistan)
Type of vegetation of Chilgoza pine tree forest	Temperate mountains systems	-	EX-ACT default type (Forest Zone 3) as a generic carbon density
Above-ground carbon stock based on the growth rates of the Chilgoza forests (regeneration/restoration)	0.24	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Below-ground carbon stock based on the growth rates of the Chilgoza forests (regeneration/restoration)	0.62	tC/ha	EX-ACT default value

Above-ground carbon stock based on the degradation level of the Chilgoza forests (forest protection)	54.53	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Below-ground carbon stock based on the degradation level of the Chilgoza forests (forest protection)	5.15	tC/ha	Tier 2: based on a literature review on the growth rate of <i>pinus gerardiana</i> forest stands in Pakistan
Carbon stock in biomass/soil	0/50	tC/ha	EX-ACT default value
Initial degradation level (% of biomass lost) of the Chilgoza forests	Moderate	-	Tier 2: degradation level at 32% (EX-ACT default 40%)
Chilgoza forests degradation level without project	Moderate	-	Tier 2: degradation level at 32% (EX-ACT default 40%)
Chilgoza forests degradation level with project	Low	-	Tier 2: degradation level at 16% (EX-ACT default 20%)
Above/below-ground carbon stock based on the growth rates of agroforestry	2.1/0	tC/ha/yr	EX-ACT default value
Rates of soil C sequestration	0.15	tCO ₂ /ha/yr	EX-ACT default value

The estimated values of lifetime consequential GHG emission avoided during 17 years (2 years of implementation phase and 15 years of capitalization phase) are as follows:

Management Regime	Target benefit area (ha)	Lifetime Consequential GHG emission avoided (tCO ₂ eq)
Sustainable Forest Management	85,681	5,412,633
Restoration/regeneration	10,282	2,016,407
Agroforestry	2,285	295,769
TOTAL	98,247	7,724,809

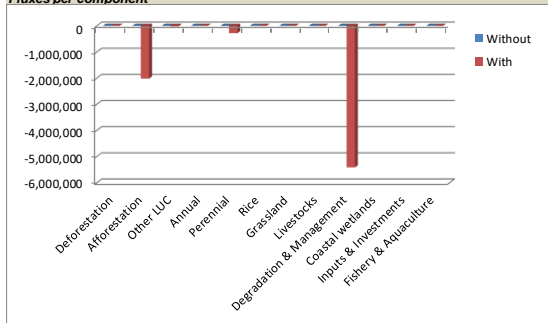
The consequential GHG emission mitigation potential from the project is estimated as **7,724,809 tCO₂eq**, which is equivalent to about **4.6 tCO₂eq per hectare per year** in the considered biome and timeframe.

Table below provides the details of the consequential GHG fluxes as calculated with the EX-ACT during 17 years of project lifetime:

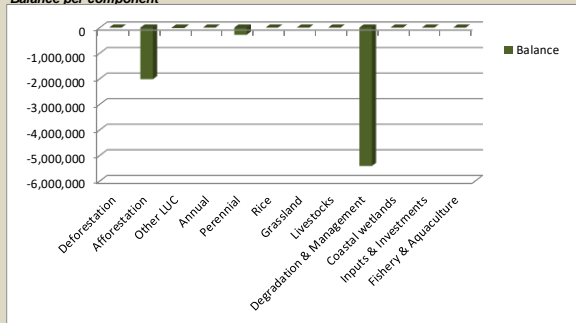
Project Name	Reversing Deforestation in	Climate	Cool Temperate (Dry)	Duration of the Project (Years)	17
Continent	Asia (Indian subcontinent)	Regional Soil Type	HAC Soils	Total area (ha)	98247

Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			
	Without	With	Balance	All GHG in tCO2eq			N ₂ O	CH ₄	Without	With	Balance	
	All GHG in tCO2eq			CO ₂	Soil	Other						
Positive = source / negative = sink												
Land use changes												
Deforestation	0	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	-2,016,407	-2,016,407	-1,458,455	-557,952	0	0	0	0	-118,612	-118,612	-118,612
Other LUC	0	-17,593	-17,593	-17,593	0	0	0	0	0	-1,035	-1,035	-1,035
Agriculture												
Annual	0	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	-278,176	-278,176	-272,693	-5,484	0	0	0	0	-16,363	-16,363	-16,363
Rice	0	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks												
Grassland	0	0	0	0	0	0	0	0	0	0	0	0
Livestocks	0	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management												
Coastal wetlands	0	-5,412,633	-5,412,633	-4,407,315	-1,005,318	0	0	0	0	-318,390	-318,390	-318,390
Inputs & Investments	0	0	0	0	0	0	0	0	0	0	0	0
Fishery & Aquaculture	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	-7,724,809	-7,724,809	-6,156,056	-1,568,753	0	0	0	0	-454,401	-454,401	-454,401
Per hectare	0	-79	-79	-62.7	-16.0	0.0	0.0	0.0	0.0	-4.6	-4.6	-4.6
Per hectare per year	0.0	-4.6	-4.6	-3.7	-0.9	0.0	0.0	0.0	0.0	-4.6	-4.6	-4.6

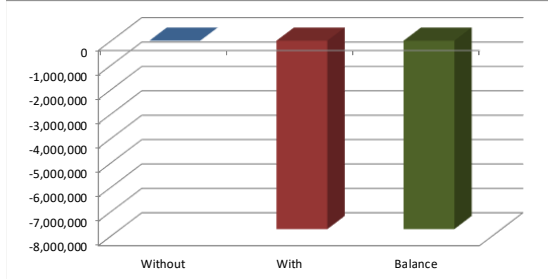
Fluxes per component



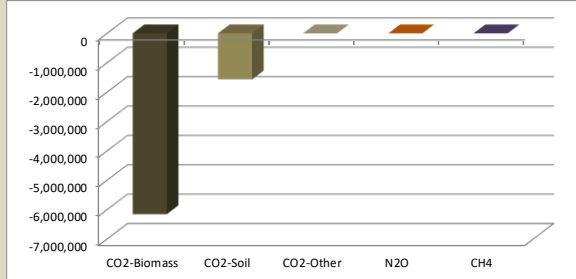
Balance per component



Total without and with project and balance



Share of the balance per GHG (plus origin for CO2)



Evolutions of land use / category (hectares - ha)

		Initial State	Without project	With project
Forest/Plantation		85,681	85,681	95,962
Agriculture	Annual	0	0	0
	Perennial	0	0	2,285
	Rice	0	0	0
Grassland		0	0	0
Other lands	Degraded	5,141	5,141	0
	Other	7,426	7,426	0
Wetlands		0	0	0
Total area (ha)		98,247	98,247	98,247

Uncertainty level

	% of uncertainty
Gross fluxes	
Without	0
With	22.6
Net balance	22.6

[Detailed matrices of changes](#)

Annex 8: Linkages between this TRI child project and the TRI program

The project is one of 12 child projects of The Restoration Initiative (TRI), a GEF-supported program to contribute to the restoration and maintenance of critical landscapes to provide global environmental benefits and enhanced resilient economic development and livelihoods, in support of the Bonn Challenge. TRI is designed and led by three GEF Agencies – IUCN (lead agency), FAO and UN Environment – in partnership with TRI countries.”

The TRI program is comprised of 11 national child projects in 10 Asian and African countries, and is supported by a Global Learning, Finance, and Partnerships project (Global Child). The Global Child project will be responsible for facilitating overall coordination, monitoring, and adaptive management of the TRI Program, while at the same time providing key support along each of the four program components.”

The design of the “Reversing deforestation and degradation in high conservation value Chilgoza Pine Forests in Pakistan” project includes mechanisms to ensure cross-fertilization between the Project, other TRI child projects, and the overall TRI program. Mechanisms include:

- Participation in annual TRI knowledge sharing workshops;
- Exchange and study visits with other TRI countries;
- Project anticipates receiving and integrating support from the Global Child project. This includes benefiting from provision of:
 - o international experts and trainings on FLR- and TRI-relevant topics;
 - o establishment and participation in TRI Community of Practice groups (via online and other groups) facilitated by the Global Child project;
 - o support for identification and integration of policies that are supportive of FLR, including through partnership with the Global Child project in developing and utilizing relevant and high-value case studies and policy briefs;
 - o support for mobilization of FLR finance, including help in developing bankable FLR investment proposals;
 - o enrollment of Project stakeholders in a TRI course on FLR Finance to be developed by the Global Child project in partnership with Yale University, and made available beginning in 2018;
- The Project will develop knowledge products on in-country FLR practices, experiences, and achievements, for sharing with other TRI child projects, including through annual TRI knowledge sharing workshops;
- Project team member(s) will take part in regular calls with the TRI Program Coordinator, to allow all NCPs and Global Child team members to hear first-hand from all projects on relevant updates and emerging opportunities. Those opportunities include linkages between the Global Child and NCPs. They may also include linkages between Child projects themselves and/or linkages between Child projects and relevant external initiatives;
- The Project will be responsive to any guidance received from the TRI Program Advisory Committee and the TRI Global Coordination Unit of the Global Child (see TRI Program institutional structure below);
- The Project will make use of Global Child provided standardized means (including standardized templates, and processes) for capturing and documenting lessons learned;
- The Project will make use of the Harmonized TRI Tracking Tool for reporting to the GEF, to facilitate comparability and utility of aggregated M&E data;”

TRI Program Institutional Structure and Linkages.

The TRI Program will be strengthened by the establishment and operation of a TRI Program Advisory Committee (PAC), supported by the TRI Global Child. The PAC will be comprised of representatives

from the three TRI Partner Agencies, the GEF, as well as representatives from some or all of the TRI countries (TBD), and relevant external experts. The PAC will provide oversight and recommendations over the course of TRI implementation, to capitalize on emerging opportunities, facilitate linkages to existing and relevant restoration initiatives, and provide recommendations to address any implementation bottlenecks as they arise.

Recommendations provided by the PAC are of an advisory nature only – TRI child projects are not bound to follow the advice of the PAC. However, experience has demonstrated the value that an advisory body, with substantial expertise and experience and a unique vantage point and perspective, can bring to a program. It is therefore anticipated that TRI Child projects will incorporate recommendations of the PAC into their work plans and operations.

Specific functions of the PAC shall include:

- Provide overall strategic policy and management direction to the Program and Child projects;
- Review progress of previously agreed Program work plans;
- Review key milestones and points for review;
- Discuss process forward, and any proposed changes to plans and main activities;
- Facilitate linkages between the TRI Program and other relevant FLR initiatives where appropriate;
- Provide technical and substantive input to the TRI Annual Knowledge Sharing workshop where appropriate;”

The TRI Program will also be strengthened by the establishment and operation of a TRI Global Coordination Unit (GCU), housed within the Global Child project. Specific functions of the GCU shall include:

- Lead the focus on optimizing integration and capture of synergies among child projects;
- Develop and implement a TRI Monitoring and Evaluation (M&E) System for the TRI Program with effective linkages to all 12 child projects, based on the TRI Theory of Change, the results matrices in the project documents of all 12 TRI child projects, the TRI M&E Framework, as well as additional monitoring elements that may be required to achieve value for money assessments and other desired assessments, to ensure the systematic monitoring of the implementation of the TRI Program;
- Develop and implement a TRI Global Communications and Outreach Strategy supporting achievement of TRI communications objectives;
- Develop and implement a TRI Partnership Strategy supporting effective engagement and partnership with external programs, projects, institutions, and potential donors/investors, that help foster achievement of TRI objectives, both at the Program- and child project-levels, and participation in appropriate external fora on behalf of the TRI Program;
- Organize and participate in monthly working group meetings with TRI child project managers, to hear first-hand from all projects on relevant updates and emerging opportunities.;
- Organize and participate in biannual meetings of the Program Advisory Committee;
- Provision of secretarial services to the Program Advisory Committee;
- Preparation of biannual Program Progress Reports for the Program Advisory Committee;
- Coordinate adequate response to all specific issues and concerns raised by the Program Advisory Committee;”

“Figure 1 shows the institutional structure and reporting linkages between TRI program constituents. Additional reporting by Child projects to the GCU is not anticipated but opportunities will be offered by the GCU to the countries to participate in studies on TRI Program efficacy, such as Value for Money studies during the final years of TRI implementation.”

Figure 1. TRI Program institutional structure.

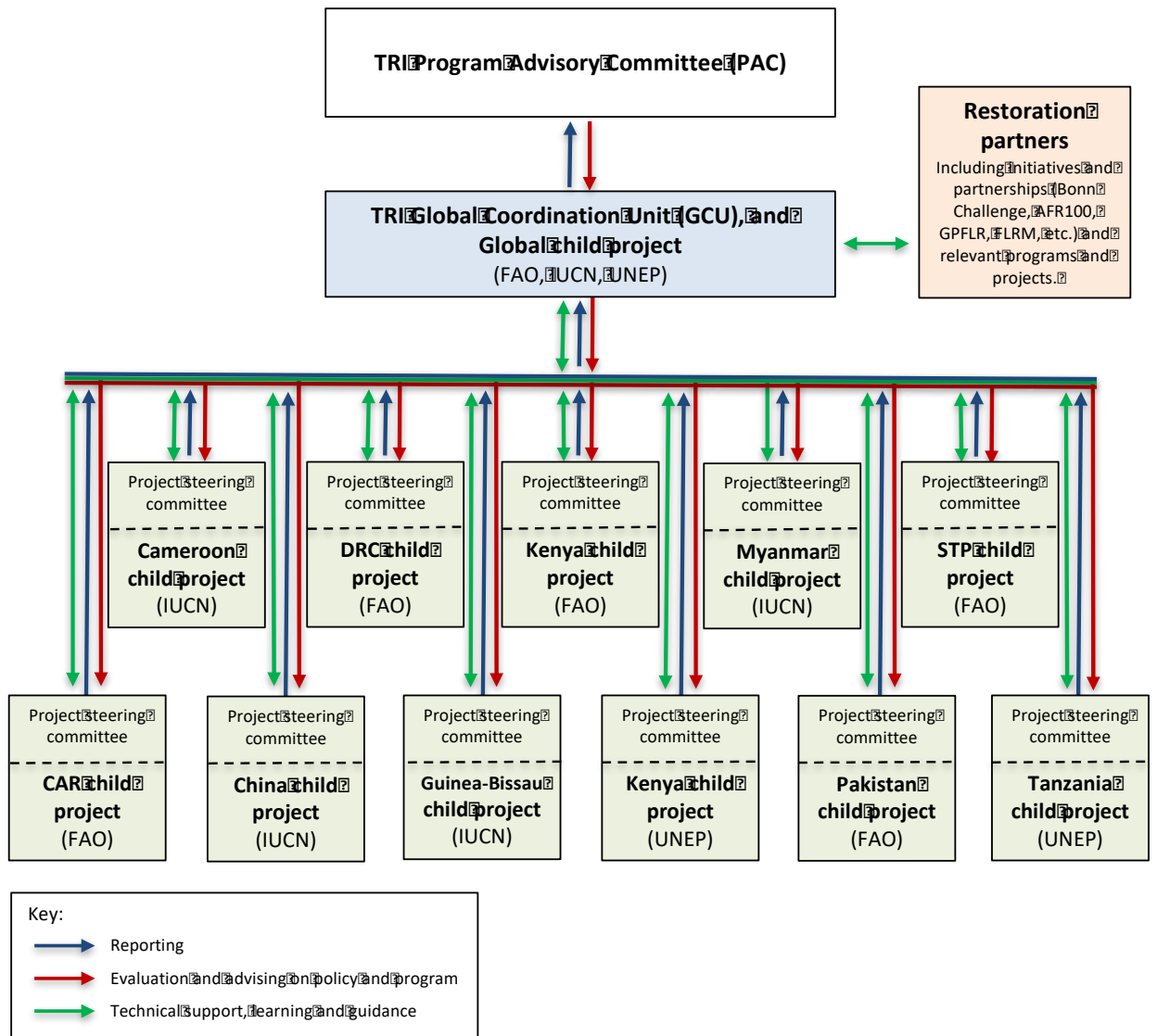
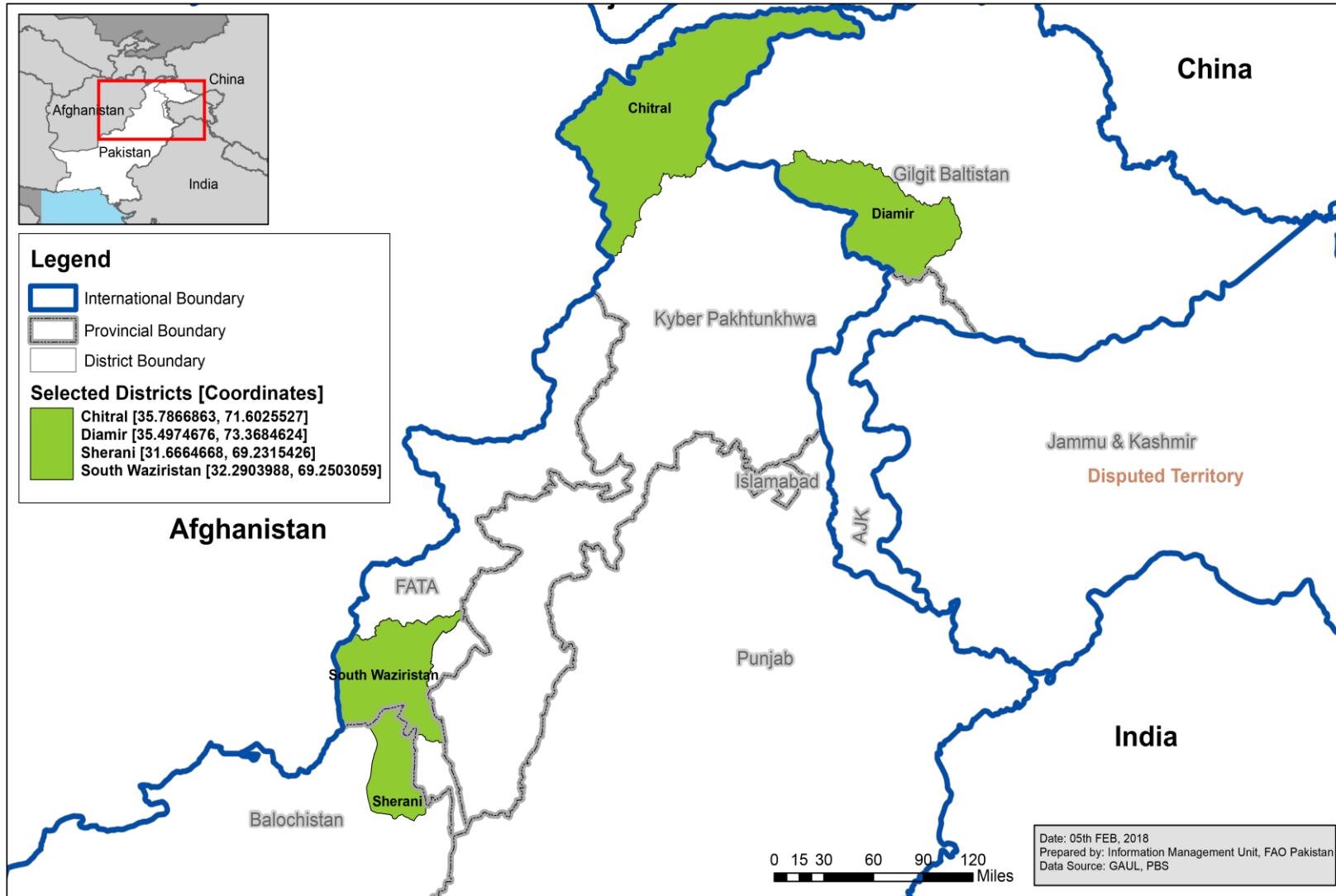


Table Detailing Alignment of Child Project with TRI Program

Table 1. Child Project Alignment with TRI Program

Criteria	Child project design features aligned with criteria
Project interventions are designed/informed by forest landscape restoration best practices and are in line with support for the Bonn Challenge	Yes, all the project interventions are aligned the FLRM best practices to support the Bonn Challenge
Project strategy employs TRI strategic approach, and includes work under each of the four TRI Programmatic components	Yes, this project follows the PFD framework and has activities under each of the 4 components of the PFD. The only difference with the PFD structure is that the “financial sustainability activities” have been inserted under Component 1 and 2 as it made more sense for local stakeholders to have them there than in Component 3.
Project anticipates making use of supports from TRI Global Learning, Finance, and Partnership project (the Global Child project)	Yes, as described in the ProDoc, the projects is planning to make use of the technical assistance offered by the GCP and will participate to the different forms of knowledge gathering and dissemination offered.
Project anticipates making contributions to the capture and dissemination of knowledge, for the benefit of all TRI child projects	Yes, as described in the ProDoc, the project will actively capture knowledge to disseminate it in country and more broadly.
Project design recognizes institutional linkages with the Global Child project, including with TRI Program Advisory Committee, for adaptive management.	Yes
Project includes a planned activity and dedicated funding for participation in Annual TRI Knowledge-Sharing workshops	Yes
Project funding and anticipated global environmental benefits are in-line with estimates made at the time of PFD submission/approval	Project funding and anticipated global environmental benefits are in-line with estimates made at the time of PFD submission/approval.
Other (including any additional support for partnership and knowledge sharing activities with TRI partners)	This project has been developed as being part of a program both benefitting and contributing to it. Several of its features have been developed having this idea in mind.

Annex 9: Selected districts of Pakistan for “Chilgoza GEF Project”



Annex 10: Request for FAO to provide direct support services

