

Project Summary

Title of Proposal	The Project for Agri-food and Agro-industry Development Assistance in Pakistan
Country	The Islamic Republic of Pakistan
UNIDO Country Programme Cycle	UNIDO Pakistan Country Programme 2018 - 2022
Contribution to SDGs and global UNIDO priorities	<p>SDG 1: Creating new job opportunities and elevating people from poverty</p> <p>SDG 2: Contributing to improved food safety practices which improves domestic public health</p> <p>SDG 5: Promoting gender equality through the project and opportunity for women to work</p> <p>SDG 12: Aiming to reduce footprint of any industrial level activity by introducing environmental friendly production practices.</p> <p>SDG 17: Promoting partnership, especially among the public and private sector</p> <p>UNIDO's key SDG is no. 9: Introducing industrialized production and value-adding manufacturing practices</p>
Planned Duration	July 2019 – June 2023 (4 years)
Project Brief	<p>The Government of Japan and the Japan International Cooperation Agency (JICA) have been indicated their interests to the Government of Pakistan (GOP) and the United Nations Industrial Development Organization (UNIDO) to participate in a capacity building initiatives in the area of agri-food and agri-business development in selected provinces of Pakistan. UNIDO has successfully piloted similar value chain and agricultural extension services development initiatives within Pakistan as well as in other developing countries.</p> <p>Through close cooperation with the GOP, JICA and relevant provincial departments and competent authorities, UNIDO will pilot the enhancement of productive and compliance capacities of relevant</p>

	<p>actors in the cattle meat value chain within selected production areas / districts of Khyber Pakhtunkhwa (Peshawar, Abbottabad, Kohistan and D.I. Khan) and apple value chain in Balochistan (Killa Saifullah, Killa Abdullah, Pishin and Quetta). The project will simultaneously support the relevant governmental bodies to offer adequate services to the industry at a sustainably manner and ensure the sustainability the possibility to upscale best practices. In particular, UNIDO will provide technical support to improve the quality and safety, value addition and productivity, which in turn can contribute to better marketability, higher profit, and access to high-end markets.</p>
<p>Overall Results</p>	<ol style="list-style-type: none"> 1. In total 5,000 new jobs created for the industry (fresh producers, manufacturers/processors, e.g. slaughterhouse, butcher) 2. 5 food manufacturing / processing centers were upgraded based on food safety certifications. 3. Average of 10% sales price increased of the products through value addition 4. 5 new value added products introduced for cattle meat and apple. (Selection of value added product finalized during inception phase) 5. 2 new national high-end market accesses created. 6. 50, 000 beneficiaries of livelihood improvement through project activities for the rural farmers / workers 7. 1,200 beneficiaries of livelihood improvement through project activities for extension workers / officers / inspectors
<p>Specific Expected Results</p>	<p>Two sectorial policies / strategies revised/developed</p> <p>240 governmental staff trained on best practices along the value chain (production, processing and inspection).</p> <p>10,000 women and men farmers trained on code of practices</p> <p>2 value chain's compliance capacity developed</p> <p>5 code of practices developed in the field of food safety and productivity</p> <p>35 enterprises adopted best-practices (in compliance and productivity), including apple farmers and meat processors (butchers and slaughter houses)</p>
<p>Geographic Focus</p>	<p>2 provinces with specification focus in selected districts/regions</p> <p>- Balochistan province (districts: Killa Saifullah, Killa Abdullah, Pishin</p>

	and Quetta) - Khyber Pakhtunkwa province (districts: Peshawar, Abbottabad, Kohistan and D.I. Khan ¹)
Focus Population	Farmers and herders, particularly youth and women Food processing enterprises
Partners	Ministry of National Food Security and Research Livestock and Agriculture Departments in Khyber Pakhtunkhwa and Balochistan Food Safety and Halaal Food Authority in Khyber Pakhtunkhwa Japan International Cooperation Agency
Budget	USD 4,998,504
Date submitted	To be added at submission date to GoP
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¹ Due to its geographical location, D.I. Khan could target not only provincial market but also the Punjab market. The value chain analysis will also further investigate potentials markets.

Abbreviations

AHITI	-	Animal Husbandry In-service Training Institute
BU-LI	-	Budget line (UNIDO budgeting system for different type of services)
CoP	-	Code of Practice
CPEC	-	China Pakistan Economic Corridor
FAO	-	United Nations Food and Agriculture Organization
FPSDP	-	Federal Public Support Development Programme
FSHFA	-	Food Safety and Halal Food Authority
GDP	-	Gross domestic product
GoP	-	Government of Pakistan
JICA	-	Japan International Cooperation Agency
L&DD	-	Livestock and Dairy Development Department
KPK	-	Khyber-Pakhtunkhwa
MNFSR	-	Ministry of National Food Security and Research
MSME	-	Micro, Small and Medium Enterprise
NARC	-	National Agriculture Research Center
NWFP	-	North-West Frontier Province
SDG	-	Sustainable Development Goal
tons	-	T
TBC	-	To be confirmed
ToT	-	Training of Trainers
UNIDO	-	United Nations Industrial Development Organization
USDA	-	United States Department of Agriculture
USAID	-	United States Agency for International Development
VC	-	Value chain

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A. CONTEXT

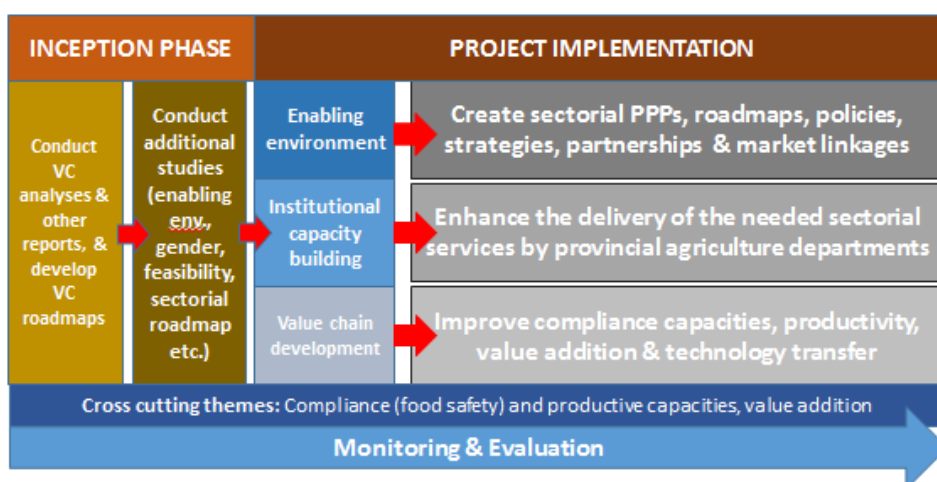
A.1 Project rational

Agriculture constitutes the largest sector of the Pakistani economy and the majority of the local population, directly or indirectly, dependent on it. The sector also contributes about 20 percent of the country's gross domestic product (GDP)² and accounts for half of employed labor force. However, the country's agricultural productivity is one of the lowest in the world, ranging between 29 and 52 percent. In addition high sectorial post-harvest losses cause large economic and environmental damage to local women and men farmers, not forgetting to mention the lack of understanding in the need of proper food safety and hygiene standards application. On the other hand, fertile soil, excellent geographical location, availability of rural labor force and adequate climate for agricultural production create a large potential of Pakistan.

The Government of Pakistan has requested UNIDO to develop a conceptual intervention approach, which aims to develop agricultural extension services of provincial agriculture department and simultaneously enhance obsolete practices of agri-food value chains. Subsequently, UNIDO has developed The Project for Agri-food and Agro-industry Development Assistance in Pakistan which supports the upgrade of the agriculture and livestock sector at a sustainable manner and in turn improves the livelihood of the stakeholders, particularly farmers and herders. The first such project was launched in Gilgit-Baltistan and upon successful commence, in other provinces of the country. In 2018, UNIDO was approached by the Government of Japan and the Japan International Cooperation Agency (JICA) to develop a project based on the aforementioned concept.

UNIDO assistance will aim at supporting the enhancement of productive and compliance capacities of the cattle value chain in Khyber Pakhtunkhwa and apple value chain in Balochistan. The long-term goal of this intervention is to revitalize the livelihood of cattle meat value chain actors in KPK and apple value chain actors in Balochistan through the introduction of best practices. To improve obsolete practices in the aforementioned value chains and provinces, this project aims to pilot the enhancement of current practices through

Figure 1. UNIDO's intervention approach



² http://www.finance.gov.pk/survey/chapters_17/overview_2016-17.pdf

As per the developed concept in consultation with the Government of Pakistan, the Government of Japan and Japan International Cooperation Agency (JICA), UNIDO developed a **two phase approach**, commencing the project with an inception phase followed by the project implementation period. During the inception phase, **an in-depth analysis** of the selected value chains will be carried out. This phase will enable the **thorough understanding of the apple and cattle value chains and related gaps and opportunities** and in turn verify the intervention logical framework in this project document. Cross cutting themes applied by UNIDO in other technical assistance initiatives, such as, introduction of value addition and application of compliance and productive capacities will be taken into account to ensure competitiveness and potential economic growth of labour intensive value chains through higher sales income. The project implementation phase will be in charge of the **capacity building activities** verified under the inception phase of the project.

The *100 days plan* of the Government of Pakistan specifically contain two essential points related to agriculture, which are also going to be addressed by this project, 1) transform agriculture produce markets and incentivize value addition; and 2) revamp the livestock sector. With regard to the first point, the project aims to introduce value addition practices for the apple value chain in Balochistan. On the other hand, the project also focuses on the cattle value chain, as the most important one within the livestock sector in KPK, which is a strategic sector as per this document.

A.2 Background

The Government of Pakistan, namely the Ministry of National Food Security & Research of Pakistan has requested UNIDO's support in its efforts towards the improvement and development of the agricultural, livestock, the dairy and the fishery value chains in targeted provinces of Pakistan: first in Gilgit-Baltistan and in other provinces of the country, namely in KPK and Balochistan.

A fact-finding mission funded by UNIDO has been carried out in **May 2017**, to assess the current status of selected value chains for upgrading in Gilgit-Baltistan and KPK held discussion to engage partners in a potential project. The brief assessment has been carried out on the basis of available data, new data collection and interpretation, meetings with ministries' officials, universities, research and training centres, women and men farmers, processors, NGOs and other stakeholders; furthermore, the mission included visits to different sites and farms, which are considered representative of the analysis carried out during the fact-finding mission. Further consultations and debriefings were held with the Ministry of National Food Security and Research and Economic Affairs Division about the project approach and the selected value chains, while representative from KPK and Balochistan were able to provide their inputs to the concept note of the project and the selection of the value chains. As part of the aforementioned fact-finding missions, UNIDO had visited some facilities in KPK where some of the most urging needs were identified by the UNIDO team. In case of Balochistan, the project has invited the representatives of the Agriculture Department and received inputs on the required investments in order to upgrade the current practices in terms of compliance and value addition.

The proposed project concept on the Pakistan Agribusiness and Agro-initiative Development (PAAID)³ is the result of a consultative process among stakeholders from targeted representatives (including representatives from KPK and Balochistan) based on in-depth discussions on the current situation in agro-food sector. Accordingly, the proposed intervention approach takes into account the recommendations of a Task Force that was specifically constituted by the Ministry of National Food Security & Research to hold a series of meetings with private and public stakeholders.

As part of the project approval procedures in Pakistan, the **finalized concept note** was technically examined by the Planning Commission of Pakistan, the Apex entity established in Pakistan for the approval of development projects, which endorsed the proposal and, following, referred it to the Economic Affairs Division of Pakistan (EAD) for further project formulation by UNIDO and to seek required funds from donor / national resources. Afterwards, UNIDO was approached by the Japan International Cooperation Agency (JICA) and received indication for potential funding for KPK and Balochistan. Despite of the initial concept note, all parties also agreed to follow UNIDO's two phase approach developed for agri-business value chain development projects. As per the request of the Government of Japan and JICA, the selection of value chains along with the target districts should have taken place prior to the commence of the project. Consequently, UNIDO conducted an initial economic assessment in October and November 2018 to identify the most 'marketable' value chains based on a set of criteria. The outcome of this report was shared with the relevant agricultural departments of both provinces and afterwards UNIDO held consultations with all stakeholders to select the value chains covered by this intervention and to identify their needs. Based on the outcome of these meetings, the project document was formulated in close cooperation with all project stakeholders.

A.3. Agriculture in Pakistan

GDP related to the Pakistani agriculture industry increased to 2,284,561 PKR Million in 2017 from 2,208,087 PKR Million in 2016. This averaged 2,027,915.33 PKR Million in GDP related agriculture between 2006 until 2017, reaching an all-time high of 2,284,561 PKR Million in 2017 according to the State Bank of Pakistan. In the fiscal year 2016-17, agriculture accounted for 19.53 percent of GDP⁴ and 42 percent⁵ of the total employment. This growth was also supported by government policies and increased agriculture credit disbursements. With regard to the former, several policies and strategies were developed during the past 5 years, as listed in the next chapter, which focused on agricultural production, economic growth and food security.

The Pakistani government is placing great attention to the constrains hindering the development of its agro-food sector, in order to raise better prospects in terms of employment creation, food security and elimination of malnutrition, economic growth and poverty reduction. Nevertheless, results attained to-date continue being insufficient to achieve the expected socio-economic results from the agro food sector. Many of these issues are inter-connected, affecting each other:

³ The title of the concept was changed to *The Project for Agri-food and Agro-industry Development Assistance in Pakistan* as per the request of JICA.

⁴ State Bank of Pakistan

⁵ International Labor Organization estimate

1. **High post-harvest losses:** 35-40 percent total post-harvest loss in the fruit and vegetable sector, originating from inadequate management of harvested crop (15-20 percent), 5-8 percent at harvesting and 10-12 percent loss in transportation⁶;

2. **Obsolete food safety practices and limited knowledge on the importance of adequate food safety practices:** About 90 percent of the domestic agri-food products are non-conforming with any food safety and hygiene requirements and general population considers food-borne illnesses as part of daily challenge;

3. **Access to required agricultural extension services:** According to a survey conducted by FAO, the extension agent to active rural population ratio was 1: 6,881. The number of Field Assistants and Veterinary Assistants in Khyber Pakhtunkhwa and Baluchistan are much lower than other provinces both qualitatively and quantitatively⁷. Most of the livestock farmers are not aware of best practices and are even unaware of where to get veterinary services from. All relevant institutions work in isolation and there is no coordination between the research and extension departments. There are also severe issues with the capacity and trainings of the agriculture extension officers and assistants. Consequently, improved inputs, new agriculture technologies, practices and strategies, knowledge transfer does not reach farmers and they just continue to apply inefficient traditional practices

4. **Limited investments and technology transfer:** The lack of financial resources and high costs, lack of machinery, lack of familiarity and adequate advice and preference for traditional practices are major constraints to accelerate the agriculture sector especially among small farmers. In less developed countries like Pakistan where savings are negligible, agricultural credit plays an essential part along with modern technology for increased productivity. Rural institutional lending also remains slow due to high risk of default, difficulty in access, limited information, inadequate collateral and institutional corruption and inefficiency⁸. Private investments are limited and require government regulations and backing in order to amplify the role of the private sector.

5. **Access to resources (water, electricity and financing):** Access to resources and rural infrastructure like electricity, water, roads, transport, storage facilities are inadequate to meet the requirement of growth of agriculture. Many rural areas have no metal-led road and electricity is only available to only ¼ of the rural population⁹. Agriculture uses 90percent of the countries water resources and with the annual per capita availability of water at 1,100 cubic meters. At 1,000 cubic meters countries begin to experience chronic water stress¹⁰. Pakistan's irrigation system is inefficient and poorly managed which could cause severe distress to the agriculture sector in the near future.

⁶ <https://agrihunt.com/articles/pak-agri-outlook/post-harvest-losses-in-fruits-and-vegetables-in-pakistan/>

⁷ http://ati.kp.gov.pk/page/extension_services_in_agriculture

⁸

https://www.researchgate.net/publication/286301729_Agricultural_Credit_in_Pakistan_Past_Trends_and_Future_Prospects

⁹ <http://ahsankhaneco.blogspot.com/2012/04/major-problems-of-agricultural-sector.html>

¹⁰ <http://www.fao.org/pakistan/fao-in-pakistan/pakistan-at-a-glance/en/>

A.3.1. Host country strategy

The GoP adopted a long-term strategy for development in 2014, which aims at transforming Pakistan into an upper middle-income country by 2025 and a top 10 global economy by 2047. This vision focuses on macroeconomic stability, building on the idea of promoting inclusive growth, and envisaging a hunger-free Pakistan through the adoption of cost-effective and innovative strategies. Most of the goals of this Vision 2025 are being implemented through the Federal Public Sector Development Programme (FPSDP). Meanwhile, the GoP also developed the 11th Five Year Plan (2013–2018) for the implementation of Vision 2025. The plan aims at improving agricultural productivity, profitability, competitiveness and environmental safety on a sustainable basis. Its main objective is to achieve a stable growth rate during the plan period in order to ensure national food security, reduce rural poverty, and support the overall growth of the country. Additionally, in order to accelerate agricultural growth and meet food security needs, the government, in collaboration with FAO, has formulated the Pakistan Agriculture Research Council's Business Plan (2013–18), which aims at improving the enabling environment for the national research system.¹¹

Recently, the new Government of Pakistan has presented its *First 100 Days Plan of Action* which among almost all SDGs, it also focuses on improved agriculture as well as industrial development, mainly in case of the latter aiming to create jobs and increase income of the Pakistani people. The plan of action also aim to improve agriculture growth on 'emergency basis', ensure that the farmer benefit from the profit of its produce, and develop modern farming and better loan programs to farmers.

In May 2018, the Ministry of National Food Security and Agriculture launched its first National Food Security Policy which outlined the following strategic goals:

- i. Alleviate poverty, eradicate hunger and malnutrition;
- ii. Promote Sustainable food production systems (crop, livestock and fisheries)
- iii. Make agriculture more productive, profitable, climate resilient and competitive.

This new national policy also emphasized the importance of the livestock as a rapidly growing sector and central to the livelihood of its rural people. It also indicates the issue of low efficiency in the dairy sector and increasing demand due to demographic changes. The key challenges to the livestock sector are: a) expansion of federal and provincial capacity for livestock sector development; b) promotion of meat as profitable business for local consumption and exports; c) low capacity of national programs on highly infectious and economically important animal diseases; d) inadequate compliance to national and international standards for quality and hygiene; e) prevalence of zoonotic diseases due to close proximity of human and animals; f) lack of incentives for generation of quality export surpluses; g) low quality and contaminated feed; h) culling of dry animals and calves under per-urban dairy farming system; and i) inadequate legal framework for export standards and consumers' trust. The project will also address some of these challenges, particularly in terms of compliance and productivity, through the introduction of adequate practices at farm and processing level. This document covers the different needs and challenges of fruits and vegetable production when it comes to agricultural inputs,

¹¹ Food and Agriculture Organization of the United Nations (FAO) Country Fact Sheet on Food and Agriculture Policy Trends. August 2016

mechanization and quality compliance. This is also linked to the introduction of addressing food safety regulations for meat and fruits indicated under the chapter Quality Compliance and Standards.

In 2015, the GoP announced its five-year Strategic Trade Policy Framework (STPF) 2018-23, which proposes the export target to be around US\$ 46 billion for the targeted period. In addition the Government is formulating the Trade Related Investment Policy Framework (TRIPF) 2018-23 which will be integrated in the STPF.

Under the World Bank Group (2015-2019) Country Partnership Strategy (CPS), the Planning Minister, in the five-year plan for Pakistan, is focusing on indigenous / home-grown drivers for jobs and growth to minimize dependence on external factors. The initial set of priorities include raising own revenues for investments, improving investment climate for private sector, value chains for industry and agriculture products, and improving regional linkages for trade. The energy security, infrastructure upgrade, and building social capital remain key support areas for this agenda.

At provincial level, KPK Provincial Government has developed its Agriculture Policy – A Ten Years Perspective (2015-2025) through the assistance of United Nations Food and Agriculture Organization (FAO) in 2012 which outlines the following goals:

- enhance sector productivity and competitiveness by activities such as improving the supply chain, technology dissemination and trade promotion;
- address food security and incomes needs of the vulnerable sections of the population and targeted actions are needed to improve food security, reduce poverty and enhance the role of women; and
- Improve national resource management, adaptation to climate change and disaster risk management.

In addition, the Government of Khyber Pakhtunkhwa has recently approved its Livestock Policy which sets the vision, goal and objectives for the sector. The vision of the sector is “a competitive, responsive, compliant and sustainable livestock sector supplying safe and affordable food of animal origin to domestic and international markets. Based on this the goal of the policy is to “improve livestock efficiency and production for the benefit of livestock producers and consumers”. The policy outlines four objectives, which are as follows:

- 1 To ensure efficient of services in the livestock sector in order to improve health, efficiency, and productivity of livestock with sustainable use of natural resources;
- 2 To conserve, improve and develop local livestock breeds;
- 3 To promote the production of safe and healthy food;
- 4 To promote one health approach to minimize the incidence of zoonosis.

The project will also contribute to the policy point 1, 3 and 4 through the introduction of best practices in food safety and food processing. How the project addresses these are, Chapter B.5 Project Implementation will further elaborate on the planned activities.

The Balochistan Agricultural Policy and Strategy was also developed by FAO in 2016 as part of the Australia Balochistan Agribusiness Programme, however, this document is still not available to the public. UNIDO requested the document from the Agriculture Department, but they were not in the position to share it with third parties.

A.3.2. KPK agribusiness context

There are 25 districts in KPK, bordered by seven agencies and five Frontiers. The capital and largest city of the province is Peshawar and other major cities are Nowshera, Mardan, Swabi, Mansehra, Nathia Gali, Abbottabad, Kohat, Karak, Bannu, Tank and Dera Ismail Khan. By landscape, KPK is mainly mountainous with large variations in the terrain through the entire province.

As per the 2017 census, KPK's population is around 30.5 million people and its majority, about 83 percent, dwells in rural areas receiving large part of their income from these land resources. In terms of agricultural land size, the province 10.17 million hectares of land, however, the cultivable area was only around 2.75 million hectare in 2013. Out of these areas only 1.8 million hectare is cultivated and 1.08 million hectare considered as a cultivable waste. The major chunk of cultivated land is rain fed which constitute 49 percent of the overall cultivated area.

As a result of this situation, about 94 percent of farms are now below the range of 12.5 acres, which is considered as a subsistence farm level. The land tenure system in KPK can be classified into three categories, i.e. 58% farm area is operated by owners while 27 percent and 15 percent of farms area is cultivated by owners-cum-tenants and tenants respectively. Due to great diversity in climate and soils, KPK grows over 42 crops; the major ones being wheat, rice, barley, maize, sugarcane, tobacco, grape & mustard, groundnut, pulses, vegetables and fruits. The major crops occupy nearly 90 percent of the total cropped area and play an important role in sustaining the living of the rural population. Agriculture employs about 50 percent of the labour force and contributes 40 percent of the province's GDP.¹²

Livestock farming is also a dominant occupation of the farming community, with more than 15 million animal heads and about 22 million poultry birds' inhabiting the province. However, this occupation is mostly to supplement families' nutritional and cash requirement. The capitalist trend in this sector is still lacking, resulting in weak and non-descriptive breeds with low level of milk and meat productivity.

Poverty incidence and trends in KPK reflecting 44% rural population living below poverty line shows disappointing results of recent economic growth, declining job opportunities and a range of natural resource problems. The perceived causes of these high poverty levels included a variety of factors such as low level of agricultural yields and livestock productivity due to use of obsolete technology, drought and geographic isolation. The development challenges for the KPK, therefore demand achieving sustainable economic growth particularly in rural areas through the development of agriculture and livestock sectors along with exploiting other opportunities. With regard to the agriculture sector, areas of grave concern for KPK are rain-fed cultivated land, cultivable wasteland, fragmented and uneconomical land holdings, weak coordination amongst various tiers of the Agriculture department, weak organizational trends amongst farming community, in-efficient utilization of water resources, non-availability of good quality seed, high cost of fertilizers and pesticides, inadequate technical capacity of the department coupled with **obsolete extension methodologies**, lack of agricultural marketing infrastructure, lack of gender mainstreaming, absence of rural based agricultural processing units, lack of health and management coverage for animals, low productivity of livestock, burden of multiple agricultural taxes and **absence of an enabling environment for private sector investment** and lack of food safety and hygiene compliant practices at farm and food processing level.

¹² FAO (2016) Women in Agriculture in Pakistan

A.3.3. Cattle value chain in KPK

The Government of Pakistan has recently launched its first National Food Security Policy which identified the livestock sector as a strategic area with large potentials. Livestock, most particularly, cattle value chain, serves as a primary income source to many households in KPK, providing 11 percent of the agricultural GDP. In addition to cattle, there is a large population of buffaloes, sheep, goats and camel along with poultry, horses and mules. According to the latest available statistics from KPK Statistical Yearbook 2015-16, the increasing cattle population reached 6.06 million which counts around 15 percent of the total cattle population of (42.8 millions) of Pakistan. This provides sufficient surplus not only for domestic consumption but also to export markets. As per the district-wise data, there is sufficient supply of different types of livestock in Hazara district, in Swat valley as well as in Peshawar. Subsequently, D.I. Khan district has the largest cattle population with 411,432 with 832 slaughtered animal, Abbottabad 111,415 with 3,327 slaughtered animal, Swat 253,790 with 3,124 slaughtered animal, Peshawar 223,150 with 6,203 slaughtered animal from the year 2015-16. When it comes to processing in inside facilities, there are 34 slaughterhouses in the province, 3 in D.I. Khan, 4 in Abbottabad, 3 in Peshawar and 1 in Swat, however, none of these would be able to comply with required practices in food safety and hygiene.

The challenges identified in the National Food Security Policy are also applicable in KPK, which include: a) expansion of provincial capacity for livestock sector development; b) promotion of meat as profitable business for local consumption and exports; c) low capacity of programs on highly infectious and economically important animal diseases; d) inadequate compliance to national and international standards for quality and hygiene; e) prevalence of zoonotic diseases due to close proximity of human and animals; f) lack of incentives for generation of quality export surpluses; g) low quality and contaminated feed; h) culling of dry animals and calves under per-urban dairy farming system; and i) inadequate legal framework for export standards and consumers' trust. In addition to these constrains, low value addition due to the lack of technical know-how and required technology also results in limited trade which currently performed only by one private company to Afghanistan. To ensure proper practices at farm level along with adequate practices by butchers, the Animal Husbandry Inservice Training Institute (AHITI) plays a key role for female and male practitioners. Despite of the federal support to practitioners, AHITI has limited resources and capacities to provide appropriate services. AHITI also provides training to butcher who later planned to work for slaughter houses and micro, small and medium-enterprises (MSMEs), but the allocated facility is not operational. The personnel of AHITI has not benefited from any training on best practices at farm and processing level during the past period. AHITI currently also provides a two year training programme in veterinary assistance to female candidates where they are able to provide the required lodging to students.

As a positive development, the Food Safety and Halaal Food Authority (FSHFA) launched its operation in this year, covering 7 main cities, including Peshawar, Abbottabad and Swat, and expects to upscale its operation to another 11 cities during the year 2018. Further support might be required to the FSHFA to enhance their inspection services. In long term, this could be translated to better practices at processing level, including in slaughter houses and butcheries functioning as a MSME.

The national government has completed multiple projects worth Rs 229 million in livestock and dairy development to improve the application as well as basic research, to enhance health and production of animal by developing potent and effective vaccines against infections/contagious livestock diseases and

surveillance, diagnosis and control of such diseases. The development projects completed by the research wing of Livestock and Dairy Development Department included (i) the introduction of Neeli Ravi and Azakhel buffaloes at livestock research and development station Surezai, Peshawar; (ii) enhancement of livestock productivity through improved research and development methodology in D.I. Khan; (iii) upgrading of veterinary research and diagnostic laboratory, Balogram, Swat; (iv) strengthening of veterinary research and diagnostic centre, D.I Khan; (v) piloting project for improved milk and meat in KP through farmers' participation; (vi) preparation and evaluation of foot and mouth disease vaccine, molecular characterization of brucella species prevalent in cattle in KP.¹³ A Dairy Science Park (DSP) was formed at the University of Agriculture of Peshawar which envisions KP, Fata, Northern areas of Pakistan and the adjoining regions of Afghanistan, Tajikistan and China as a hub for livestock and poultry entrepreneurs backed by quality control, research and development and marketing support organizations in partnership with United Nations¹⁴. Another project, the USAID Firms Project for Livestock Policy Reforms, a national programme, worked on disease surveillance and control. The objective was to increase government's capacity to detect new diseases including control and eradication. One of the objectives was to develop business standards (infrastructure, operational hygiene, and environmental care etc.) including licensing and accreditation of business entities to undertake domestic processing. Another area was to develop a code of practice for animal welfare in markets, slaughter, transport, research, and commercial production, reflecting good commercial livestock practice¹⁵.

There are two other technical assistance initiatives which are currently targeting the livestock sector in KPK. The first project developed by the Agriculture Department aims to introduce certification facilities for quality assurance and as a result, create market linkages for agricultural interventions. As part of this initiative, which expectedly will be implemented by FAO, national and international certifications will be implemented to build the capacities of actors at farm, processors, logistics as well as exporters level. It will also target the development of supply chain infrastructure through the dissemination of required technologies to farmers, slaughter houses and meat processors. The same initiative will also introduce web-based tool for livestock traceability system and data bank. In addition to this project, the Department of Agriculture is currently developing a PC-1 for a loan by the World Bank Group, which will also target the establishment of slaughterhouses and proper on-farm practices by farmers.

Livestock services are provided to the livestock farmers by the Government of KPK through the Livestock & Dairy Development Department (L&DD), and majority of the services are aimed to facilitate the subsistence farmers. Arpimd 2500 staff is deployed in 2200 service delivery units (including officers in FATA), to provide the following services¹⁶:

- a. Treatment of sick animals and outbreak handling,
- b. Diagnostic services to livestock and poultry farmers,
- c. Disease surveillance and vaccination of healthy animals,
- d. Special campaigns for the eradication of ticks for the control of CCHF,
- e. Breed improvement, artificial insemination and conservation services,

¹³ <https://www.dawn.com/news/776153>

¹⁴ <https://sustainabledevelopment.un.org/partnership/?p=9671>

¹⁵ <http://www.sedf.gos.pk/pdf/USAID%20FIRM%20PROJECTS/Livestock-Sector.pdf>

¹⁶ Khyber Pakhtunkhwa Livestock Policy 2018

- f. Rural poultry improvement,
- g. Livestock production extension services,
- h. Training of staff and farmers, and
- i. Vaccine and semen production, etc.

A.3.4. Balochistan agribusiness context

Balochistan is the largest province of Pakistan, occupying 44 percent of Pakistan's territory, however, it is also least densely populated area with 12 million inhabitants based on the 2017 census. The province has 32 districts, namely Awaran, Barkhan, Bolan, Chagai, Dera Bugti, Gwadar, Harnai, Jaffarabad, Jhal Magsi, Kalat, Kech (Turbat), Kharan, Kohlu, Khuzdar, Killa Abdullah, Killa Saifullah, Lasbela, Loralai, Mastung, Musakhel, Nasirabad, Nushki, Panjgur, Pishin, Quetta, Sherani, Sibi, Washuk, Zhob, Ziarat, Lehri and Sohbatpur. The soil of Balochistan is mainly, broadly classified into three groups shallow, medium and deep soils.

The climate of the province is semi-arid continental having uniform aridity. It has diversified precipitation, recording between 200-350 mm per annum but many parts having as low as 50 mm per annum which creates challenges for agricultural irrigation. Precipitation during monsoons is through intense showers, while in winter it receives rain and snow through western disturbances. Some parts have temperatures below freezing point for about more than 90 days during summer.

In terms of agricultural produce, wheat, rice, maize, jowar, bajra and barley are considered as the important food crops of Balochistan. Wheat and jowar account for more than 50% of the total cultivated area of the province. Jowar can be grown both as rabi and kharif crops. Wheat is more common in dry areas. Its cultivation is confined to the areas receiving adequate and timely irrigation.

Crop productivity changes have occurred in response to many technological developments during the last couple of decades. The adoption of seeds, fertilizers and irrigation has resulted in the increase of farm production and diversification of the production pattern. Soil conservation measures adopted have also been responsible for increasing the production. All these factors interacting with each other have helped enhance the changes in agricultural production.

Balochistan is considered the most underdeveloped province of the country having multi-dimensional, widespread and profound poverty. 52 percent of total households and 72 percent of the rural households live below the poverty line in this province. This number is quite significant, especially taking into account the fact that 75.7 percent of the population lives in rural areas and the rest in urban areas.

Among the major issues in agriculture production, water shortages, decreasing prices of farm produce due to quality, payment on minimum support prices, inadequate farm-to-market infrastructure and absence of proper cold storage and marketing facility are very common and hurdles the economic development of the province. As a positive indication, the farms yields have shown some improvements in the last years, especially when it came to rice, cotton, apple and vegetables. However, compliance capacities with market requirements at farm and processing level are still lacking which prevent farmers to sell their produce for a higher price.

In terms of market access, Balochistan accommodates one of the most relevant sites of the CPEC initiative, the Gwadar port. In case of air cargo, there are two options available, first the Quetta International Airport and the Karachi Airport in case of southern districts of the province, however, only very **low volume about \$45 million worth of fruits and vegetables are exported** at the moment.

There is a large expectation to increase the export volume to \$150-\$200 in the upcoming years, targeting a \$1 billion goal in mid-term.

A.3.5. Apple Value Chain in Balochistan

Balochistan is a key contributor of apple production in Pakistan with approximately 34 percent of the total national production. According to the Directorate of Crops Reporting Services, Agriculture Department Baluchistan, apple was the highest produced fruit grown in the province with 527,642 tons, overtaking almond and apricot. Among the districts, Killa Saifullah, Killa Abdullah, Pishin and Mastung have the highest production of apples in the province. Apple is the most planted fruit (in hectares) and the second most produced fruit (in tons) after dates in Balochistan. The fruit production usually exceeds the local consumption which results in export of the surplus to other provinces without any food security issues.

Table 1. District-wise production of Apple in Balochistan 2008-2009

District	Total Area (hec)	Production (tons)
Killa Saifullah	68560	34512
Killa Abdullah	4782	36305
Pishin	6133	43611
Mastung	7760	51793
Ziarat	2221	30688
Quetta	1480	3497

Source: Agriculture Market Information System

One of the key challenges identified includes a poor transportation network which is detrimental to the shelf life of apple. Transportation to major markets and market linkages across the country remains an issue for most apple producers in the province. The lack of marketing infrastructure, skilled labor and lack of technical knowledge and expertise contribute to the high post-harvest losses. Despite the availability of cold storage facilities in Quetta and Pishin, there is still a requirement for additional cold storages and refrigerated transportation. There are currently no major packing companies operating in Balochistan as majority of the packing and branding companies operate in Karachi. Apple treatment plants are also essential for preservation of lower grade fruits. A major issue in the province for fruit production is the shortage of irrigation water and non-availability of groundwater in the highland which are also required for the appropriate processing of the product.

On a positive side nature has bestowed the province with a lot of natural resources and favorable climate conditions for the production of fruits such as dates, apples, grapes and apricots. The strategic location of the province, proximity to routes such as China Pakistan Economic Corridor (CPEC) and operationalization of Gwadar port would provide great access to the Central Asian Republics and the Gulf countries. The federal and provincial governments are also partnering to mitigate the water

shortage through the construction of dams and modern irrigations systems as medium to long term solutions.

As part of former capacity building initiatives, the United States Department of Agriculture, Winrock International project funded construction of cold storages, drying tunnels and other food preservation tools in Baluchistan¹⁷ related to apple. The provincial government currently has in its pipeline construction of an apple processing unit in Quetta costing USD 850,000¹⁸. The Centre for Agriculture and Bioscience International (CABI) is currently implementing a biological control programme funded by USAID which focuses on the most destructive insects in the province, such as apple codling moth which will allow the reduction of post-harvest losses.

The local government launched projects worth PKR 50 million in 2015 to establish apple grading and packaging facilities in the districts of Ziarat and Kalat¹⁹. The Baluchistan Agriculture Project of the Food and Agricultural Organization (FAO) helped increase the productivity and value of crops and livestock through strengthening market linkages and improving market competitiveness. Improvements were made by introducing load splitters into trucks transporting apples to reduce the damage to the apples due to overloading of the trucks. 165 farmer field schools were implemented, also focusing on apple production²⁰. A fruit preservation unit was launched under UNIDO's Agriculture Rural Development and Poverty Reduction Program in Kuchlak Baluchistan for disabled individuals. The Baluchistan Rural Support Organization formed apple production, marketing associations and village organizations in district Killa Saifullah and worked towards development in sectors of agriculture, horticulture and livestock²¹. All these initiatives will allow the implementation of much targeted intervention to introduce local value adding practices and ensure appropriate capacities among value chain actors.

¹⁷ <https://pk.usembassy.gov/united-states-announces-additional-27-million-to-feed-temporarily-displaced-people-in-pakistan/>

¹⁸ https://www.balochistan.gov.pk/index.php?option=com_content&view=article&id=709&Itemid=1054

¹⁹ <https://www.dawn.com/news/1183230>

²⁰ <https://www.sdpi.org/sdc/presentation-sdc/MuhammadIqbalValuechain20Nov1.pdf>

²¹ <http://www.ndma.gov.pk/Publications/Development%20Profile%20District%20Killa%20Saifullah.pdf>

B. PROJECT

B.1. Project objective and purpose

The long-term goal of the project is to **revitalize the livelihood of value chain actors** in Khyber-Pakhtunkhwa and Balochistan, covering their daily income **from the apple and cattle value chains** and improve practices of food manufacturers and processors along with the related enabling environment. To achieve this, the short-term goal of the project is to introduce improved practices and techniques in **product quality, safety and productivity, the female and male farmers / herders as well as enterprises** will be able to generate additional incomes by selling their food safety compliant and value added products in high-end markets. The project will follow a **piloting approach** for the apple and cattle meat value chains to showcase best practices in **selected districts** within the provinces. Furthermore, it will also pay attention to **disseminate** the developed know-how on best practices in product compliance, traceability value addition and productivity to actors, with consideration of economically more vulnerable groups, such as youth and women, as well as support the upgrading of their obsolete practices on-farm and processing level. Through the development of institutional capacities of the agricultural departments in KPK and Balochistan, they will be able to disseminate the developed code of practice (COP) after receiving training of trainer (ToT) trainings from senior experts. This in turn will also assist in the sustainability of the departments as an income generation opportunity and upscale of best practices in long-term.

During the introduction of the new practices, the project will follow a piloting approach for the selected value chains, however, by **closely involving the relevant departments at provincial level as well as their institutional capacity building** which in turn allows the establishment of a framework for up-scaling potentials in the future. This approach also allows the identification of lessons learned and additional challenges related to the upgrade of these practices. As part of the value chain performance development, UNIDO will look into numerous thematic areas to improve current practices and income opportunities, such as **compliant and productive capacities, value addition, and establishment of market linkages**.

B.2. Summary of the initial assessment for value chain analysis

As part of this intensive process for the selection of the most marketable value chains in the two provinces, UNIDO developed an initial economic assessment developed through desktop research, field visits and consultations with stakeholders. The initial assessment aimed to serve the purpose recommending the 2-3 most marketable value chains through (1) shortlisting the most potential value chains based on the criteria of production volume and concentration of sectorial production within a district; and (2) analysing the shortlisted value chains based on the developed selection criteria with socioeconomic indicators which was defined in the document as a preliminary selection. To facilitate the selection of the most adequate value chain in both provinces, UNIDO has also conducted a consultative process with the provincial governments and JICA. As part of these consultations, the outcome of the assessment was presented along with the two-three most potential value chains for investment. The final decisions on the two selected value chains, apple and cattle meat were made in

agreement with all parties, including the provincial departments, JICA and the Ministry of National Food Security and Research.

In details, the assessment was commenced with the identification of most potential value chains in each province and different districts within through an in-depth desktop research. These data were collected from the latest annual statistical yearbooks available at the provincial level, reports and international organization databases, such as FAO Stat and UN Comtrade. As a first step, the shortlisting of the value chains allowed the identification of value chains with the highest potential induced from the volume in production as well as the geographical areas or districts where the production of different agricultural sectors is concentrated.²² Table 2 summarizes the most potential value chains in the two provinces based on the aforementioned criteria.

Table 2. Most potential value chains in KPK and Balochistan based on production data

Sector	Main production district	Value chain	Unit	Production
Khyber-Pakhtunkhwa				
F&V	not available	Peach	tonnes	48,605
F&V	not available	Apple	tonnes	40,023
F&V	not available	Musk melon	tonnes	36,497
Livestock	Kohistan district*	Goats	population	671,353
Livestock	D.I. Khan district	Cattle	population	411,432
Livestock	D.I. Khan district	Buffaloes	population	205,636
Balochistan				
F&V	Killa Saifullah	Apple	tonnes	261,975
F&V	Turbat	Dates	tonnes	102,522
F&V	Killa Saifullah	Apricot	tonnes	91,578
Livestock	Jaffaranad	Cattle	population	518,382
Livestock	Kohlu	Sheep	population	1,561,518
Livestock	Khuzdar	Goats	population	1,133,273

*D.I. Khan district is the 3rd largest producer with the goats population of 583,923

Afterwards, further desktop research and field visits were done to collect complementary information on the short-listed value chains based on a set of indicators. These indicators consider multidisciplinary fields such as trade, food safety and security, gender studies as well as development level achieved through former capacity building initiatives. Accordingly, the selection criteria through an economic, defined in the annexed document, for the shortlisted value chains were as follows:

1. Production level
2. Export potentials
3. Existence of required enabling environment (soft and hard infrastructure)
4. Number of female and male farmers involved in the value chains
5. Potential involvement of both genders
6. Relevance to country priorities

²² The economic assessment includes additional production volume data selected on the most potential value chains for the horticulture and livestock sector in KPK and Balochistan.

7. Existing or past technical assistance initiative for value chain

To ensure the fact-based assessment and evaluation of the shortlisted value chain, a quantitative tool in the form of a matrix with grades of 'readiness' was developed. The matrix is available on page 23 of the assessment, indicating the three most potential value chains, namely **peach, goat and cattle** in KPK, **apple and dates** in Balochistan. Certain information would have to be verified and further researched during the value chain analysis as data is not public available and also could not be provided by the relevant departments. UNIDO has also shared the initial assessment (Annex 3) with JICA, GOP and the relevant agricultural departments to support the consultative process among all parties.

In conclusion, the agribusiness sector in Pakistan has a huge prospective, but it is crucial to upgrade the obsolete practices of the industry, the enabling environment and institutional capacities of relevant departments. As per the Gilgit-Baltistan experience, relevant departments of provincial governments usually lack the required technical expertise in food science, food safety and hygiene practices and food technology. In addition, many departments are understaffed and underfunded which hinder them to disseminate best practices gained under previous technical assistance initiatives. The lack of proper training and demonstration facility operated by the provincial departments is a common issue which lead to the issue of showcasing best practices to value chain actors on improved practices on value addition, productivity and compliance capacities. The inception phase will also identify the additional institutional gaps and needs of the concerned departments to deliver the required services to the farmers. As part of the inception phase, the project will also aim to identify those private sector entities that are interested in to participate in technical guidance and are willing to invest on their own. Consequently, insufficient agricultural, conservation and value addition practices lead to increased post-harvest losses, spoiled food and food-borne diseases mainly in rural areas. As an indirect outcome of this initiative, it is important to understand how positive impacts can be replicated by the industry and what the potential challenges at enabling environment and institutional capacity level are existing to upscale best practices learnt under such initiatives in KPK and Balochistan. This will allow the sustainability of the intervention areas targeted by this project, particularly after the project will be phased out. Development projects have very often provided technical assistance to industry members, forgetting the relevance of governmental agencies for any future upscaling activities.

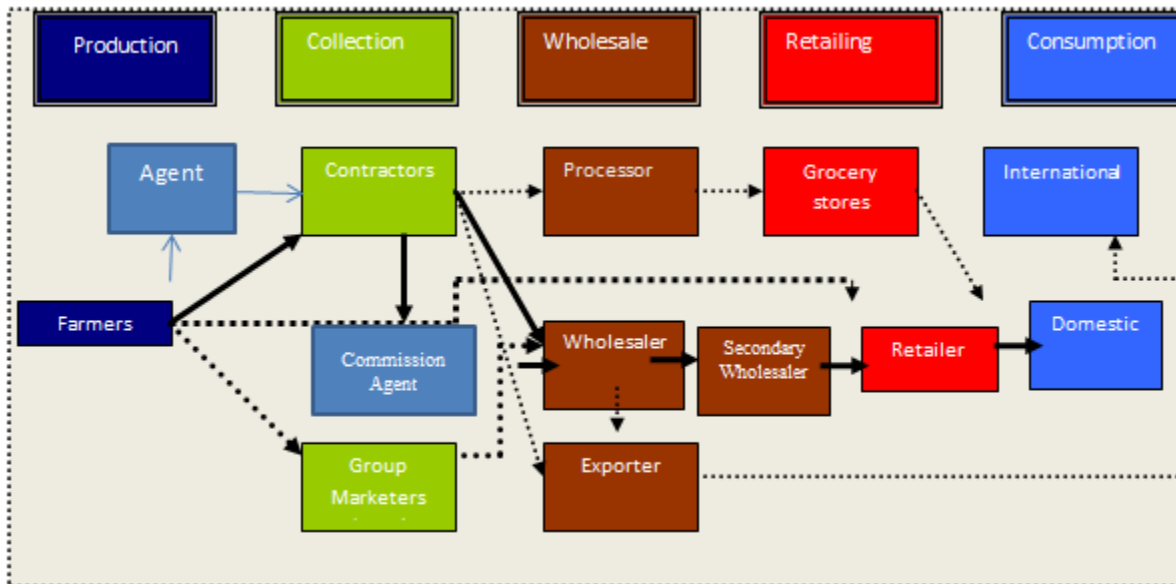
B.3. Main Target Groups and Stakeholder

The immediate beneficiaries of this project are all actors along the value chains ranging from female and male farmers or herders through agro-processors to relevant provincial governmental institutions, benefiting from the project activities at all levels. The intervention will also target youth and women, as the economically most vulnerable groups, to create new job opportunities among them. Where necessary, institutional capacities of provincial agriculture departments, their relevant institutions and other relevant organs will be strengthened to ensure the sustainability of the intervention and replication of best practices at provincial level.

As it is shown on Figure 2, there are multiple actors involved in the handling of agro-food commodities in Pakistan, however, very often with very low or no value addition. In general, all actors have very limited understanding and knowledge on the requirements of food safety and quality assurance of commodities. In addition, these actors, from farmers through traders to contractors do not have the needed equipment and infrastructure to apply appropriate safety and quality practices along the value

chain. The wholesalers, retailers, and sellers face with very similar issues and they use this as a bargaining power to reduce the price paid to the agents or in case of the women and men farmers. Overall, there is limited value addition along the value chains and in case of processed foods, they very often fit to the taste of the local consumers and thereby, they cannot be marketed in export markets.

Figure 2. General flow diagram of agro-value chain products in Pakistan

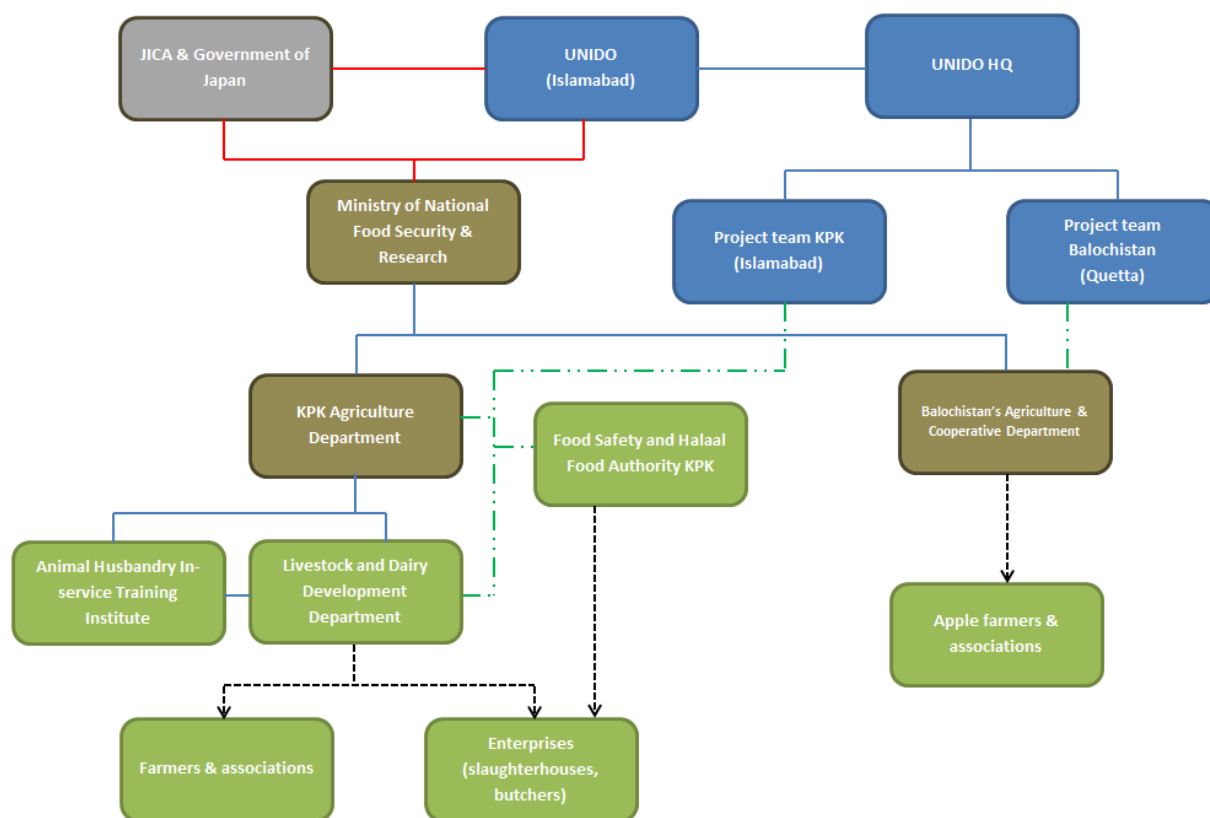


The main stakeholders of the project will be:

- Ministry of National Food Security and Research (MNFSR)
- Khyber Pakhtunkhwa Agriculture Department and its Animal Husbandry In-service Training Institute (AHITI)
- Food Safety and Halal Food Authority in Khyber Pakhtunkhwa (FSHFA)²³
- Balochistan’s Agriculture & Cooperative Department
- Women and Farmers’ Cooperative Associations
- Farmers and private sector entities, including associations and cooperatives

Chart 1. Project Implementation

²³ The FSHFA’s mandate is to provide safe, healthy, halal and wholesome food to the public at large. In project context, the project will assess the capacities of the FSHFA’s capacity to deliver the required services for the selected value chain when it comes to product compliance and certification. <http://www.kpfsa.gov.pk/>



Sign	Meaning
—	External coordination
—	Internal coordination
- - - -	Capacity building
- - - ->	Supervised service delivery

The level of involvement of different stakeholders depends on the verification of the needs after value chain analyses. Specific roles (observer, implementing partner or beneficiary) and responsibilities in this project will be defined during the inception phase as per the needs of the selected value chains.

MNFSR's role: The MNFSR is the leading state authority when it comes to the agri-industry and thereby, would play an overarching role including (1) coordination among federal and provincial agencies, JICA and UNIDO; (2) monitoring of the project implementation through the Project Steering Committee; and (3) addressing high-level policy issues related to the project. The Project Steering Committee will be chaired by the Federal Secretary of the MNFSR which serve the purpose of overall monitoring of project implementation and strategic decision-making of project stakeholders.

Role of provincial departments on agriculture: The departments will be involved as partners in the project implementation through daily coordination of project activities with the key stakeholders, including farmer and women associations, and simultaneously as beneficiaries through institutional capacity building of their relevant directories through training and building their extensions services related to the selected value chains. The project will strive for equal participation of male and female beneficiaries in trainings and where participation of women might cause certain risks for the individuals or the project, the recruitment of a female trainer will be considered. Engaging the departments throughout UNIDO's capacity building activities will provide a learning curve to the staffs of provincial departments on the provision of agricultural extension services. The Livestock and Dairy Development Department (L&DD) and Animal Husbandry In-service Training Institute (AHITI) require support by upgrading their current facilities on meat

technology, providing training to its staff and reviewing the current curricula as per requirements of the FSHFA.

Local administrations will have an essential role to facilitate smooth project implementation and outreach to those who are in needs. Particularly, local administrations will be actively involved in the identification of beneficiaries to reach the required impact.

Food Safety and Halaal Food Authority: FSHFA plays an essential role in enforcing food safety and hygiene standards among food business operators. For this reason, this new authority requires additional technical assistance in development and revision of current standard operating procedures (SOPs) for the meat sector, particularly butchers, slaughter houses and stores with meat section. These SOPs shall be aligned with best practices in food safety and hygiene as well as standards at federal level.

International non-governmental organizations (NGOs), media, civil society and private sector

The project will coordinate with the aforementioned relevant stakeholders to avoid any duplication, learn from best practices, and as a result, improve potential impact of intervention. UNIDO will coordinate with these organizations and hold meetings to ensure proper allocation of work among each other. In case, further technical assistance initiatives will be identified which is not covered by UNIDO's mandate, the relevant stakeholders will be informed on this.

Female and male farmers / herders and MSMEs: As one of the major beneficiaries of this project, farmers, particularly farmer and women association, as well as food processing and manufacturing MSMEs will be targeted to improve their capacities. The selection of these enterprises will be either through the consultation with the government by fulfilling certain criteria, such as existing hard infrastructure with certain gaps (e.g. cold storage, proper transportation etc.) or the willingness to invest. By improving on farm and processing practices, the yield as well as the market price of the commodities from this region can be increased, benefiting the farming community. The project also aims to introduce best practices improved grazing management to ensure the reduction of environmental impact caused by livestock. All documents will be revised by a gender expert to ensure gender sensitive approach of the manuals and strategies. Additionally, the project will measure its impact on different groups and possible perception change.

Based on UNIDO standards, the project will communicate the different events and achievements to the public through press and media releases, and social media campaigns. Media will be also invited to various events, including major training initiatives and possible opening ceremonies.

B.4. Inception Phase

The project will be split to an inception phase and project implementation phase to ensure adequate verification of the proposed intervention and afterwards implementation of the agreed activities. Accordingly, the budget breakdown along with the expected required human resources are attached as Annex 4 of this document and will be also verified after the value chain analysis. **During the inception phase**, UNIDO will conduct an in-depth value chain assessment based on the **principle of UNIDO's value**

chain diagnostic tool, taking into consideration **best practices** and **potentials for comparative advantage** in local and international markets. The value chain analysis will also map the available financing opportunities (including microfinance), financial products as well as lending policies of financial institutions available for the women and men farmer communities in the two provinces. Looking into these types of services is a crucial part to identify obstacles for women and men farmers in terms of sustainability and potential upscale opportunities through a gender-sensitive components as well as separate reports. In addition, sex disaggregated data and qualitative information will be collected on the agricultural gender participation rates and roles along the selected value chains in order to provide data for further gender-specific analyses during the inception phase.

The inception phase will also serve the purpose to collect and revise former studies and analyses conducted in relation to this intervention. Beside the value chain assessment, **institutional capacities** and status of the enabling environment will be reviewed based on the availability and capability of sectorial policies and institutional strategies. As part of this process, UNIDO will **develop roadmaps for the selected value chains** and supporting **feasibility studies** based on the needs. These two will allow defining the final scope of the project implementation phase. In addition to this, since the feasibility studies will be developed in a bankable project format, the government or the private sector can also finance its implementation in case the funds under this project are not sufficient to cover those activities. During the inception phase, the project will also conduct analyses on the role of women and men in the selected value chains, and how the current policies support the equal opportunity for both within the value chain. These analyses would also serve the purpose to provide recommendations to the project and future interventions how to uplift the situation of women farmers through their involvement in technical assistance interventions. Through the establishment of baseline data, the project will be able to monitor the changes how communities perceive women's role in the selected value chains.

After the finalization of all studies and analyses conducted for the value chains and related enabling environment and institutions, UNIDO will organize a Steering Committee to validate all these documents and verify the logical framework and the budget, work plan with timeframe, budget and management structure for project coordination and implementation.

B.5. Implementation phase

After the validation of the value chain analyses and work plan by the Steering Committee Members, the project will commence the second or implementation phase. The implementation phase will contain the following activities based on the detailed logical framework.

Output 1.1: Detailed value chain analyses on the meat and apple value chains and assessments on institutional capacities were conducted to verify project activities

The aim of this output is to conduct a detailed value chain analyses for the apple and value chain and institutional needs of relevant departments and supporting organizations in KPK and Balochistan. As part of

the value chain analysis, development roadmaps will be developed for the two value chains which will take into consideration the national and provincial policies and strategies. UNIDO will maintain direct communications with the agricultural departments of the two targeted provinces to ensure the best outcome for these studies. Additionally, UNIDO will encourage the engagement of other stakeholders, such as farmer and women associations and private sector entities, from the beginning of the project which in turn will support the 'shared ownership' of this project. Such engagement is crucial to sustain the project impact and support future upscaling opportunities.

UNIDO will conduct feasibility studies on the required investments for the two value chains, which can also serve the purpose of future upgrade in case of private sector interests to invest in such value addition activities in the two value chains. To address the social aspect of the intervention, sex disaggregated data will be collected as part of the value chain analyses and a separate gender report will be conducted on the current situations in both provinces. The activities planned to be undertaken during the inception phase will result in an inception report which will verify the planned project budget for the foreseen activities,

Output 2.1 Enabling environment and institutional capacities of relevant departments in KPK are upgraded through the introduction of adequate practices in food safety

To ensure adequate enabling environment through the availability of required services delivered by relevant public sector entities in KPK, the project aims to deliver a set of capacity building activities. First of all, the project will assess the current provincial and national laws and regulations on meat processing and sales. This will be also supported by an expert advisory group which will be technically guided by UNIDO, and include representatives from the public and private sector. This expert working group, as a public-private platform can play an important role in the validation of technical documents, such as the code of practice (developed under Output 2.2) or the revised standard operating procedures (SOPs) for the FSHFA. Additional trainings on the requirements of cattle meat related food safety certification and traceability will be provided to the inspectors of FSHFA. The project will also aim to build positive attitudes and incentives to mix robust enforcement by local authority with constructive compliance support for businesses, thus promoting the shared responsibility approach in food safety management. Current practices in delivering training in veterinary services and residue control for veterinary drugs and hormones will be assessed and required upgrades will be given by experts to ensure the proper application of international standards.

The project will establish relationship with local agricultural credit finance institutes to raise awareness among MSMEs on possible financing options. Additional awareness raising training will be conducted on gender to project stakeholders and awareness raising campaign to consumers on proper preparation and storage of meat.

Output 2.2 Improvement of cattle meat's compliance and productive capacities are piloted by creating awareness on best practices and establishing training framework on-farm and processing level

To disseminate best practices in cattle meat production, a code of practices (COP) should be developed for MSMEs, which includes on farm practice to processing. This document will integrate adequate farming and food safety practices to ensure compliance with food safety requirements and as a result add value to the current product. This COP will be developed with the involvement of the expert advisory group and technical guidance of UNIDO. After the finalization of the content, a manual will be designed and printed on which the relevant departments will receive training of trainers (ToT) training. To gather best practices, UNIDO will organize study tours in Japan and Pakistan, where the local representatives of the public and private sector will gain knowledge on the latest technologies in cattle and food safety requirements in processing.

To ensure the existence of appropriate practices at local level, the project aims to revise the current butcher training framework of the Animal Husbandry In-Service Training Institute (AHITI) and develop mini-processing unit for cattle which will be able to comply with food safety requirements. The former activity will focus on the revision of the training framework with the purpose of including appropriate food safety practices in this curriculum. The development of a mini-processing unit will showcase best practices for those MSMEs. To apply these best practices, the enterprises which showed interests and selected for technical guidance under the project will receive technical guidance from experts. At the same time, this technical guidance will provide a platform to train the field officers of the Agriculture Department and the FSHFA inspectors.

Output 2.3 Value addition of selected value chain actors is improved through the introduction of new practices and technologies in pre-processing and manufacturing

To improve efficiency and value addition at processing level, the project introduces a set of new processing technologies for value addition purpose through procurement of this equipment and conduct training on their application. These capacity building activities will target AHITI and other relevant offices of the Agriculture Department related to cattle meat in order to disseminate best practices among other MSMEs in the future.

Output 2.4 Market linkage of actors from meat value chain is improved

To ensure product compliance with food safety requirements along the value chain, creating proper linkages among herders and meat processors are inevitable. The project will support the establishment of proper linkage among the different stakeholders along the value chain. As part of the value addition and provision of appropriate product packaging, including fresh produce, the project will introduce new packaging materials for the private sector. The project also aims to create linkages between the food-grade packaging material producers and MSMEs. For this reason, several awareness session will be hold on the application of right packaging materials and techniques and potential suppliers of food-grade packaging materials will be invited to present the locally available packaging solutions.

Output 3.1 Enabling environment and institutional capacities of the Agriculture Department improved through the development of agricultural extension services on apple value chain

Since no sectorial policy and strategy was developed for the apple value chain yet, the project aims to formulate one with the direct involvement of the public and private sector. This will assist in the identification of future needs for the value chain. As part of this output, provincial laws and regulations on apple production safety should be revised and recommendations for implementation will be provided to the local government.

To ensure appropriate product quality practices along the value chain, current traceability practices will be analysed and as an outcome, a traceability system will be recommended for implementation. As part of the development agenda, the gender training will be given to the local authorities and discussion will be triggered how the situation of women in the apple value chain could be improved on a long-term. The outcome of this training might identify additional opportunities how the project can ensure better practices for gender equality. Finally, access to finance is a crucial part for food business operators when they are willing to upgrade their obsolete practices as this usually requires investment in their operation. Accordingly, organization of awareness session on credit finance opportunities can support the dissemination of ways how enterprises can refurbish their operation.

Output 3.2 Value addition, compliance and productive capacities of the apple value chain are piloted by introducing new techniques at farm, pre-processing and processing level

Like in case of the cattle meat value chain, the development of code of practices (COP) for apple farmers and enterprises can support the dissemination of best practices in food safety and quality. This COP will be developed by the project, taking into consideration the local needs and requirements of food safety certifications. In addition, a visual manual will be developed for the project. Afterwards, the staff of the Agriculture Department will be trained as part of the training of trainers (ToT) programme on the content of the manual. The project aims to equip the nursery and the food technology centre of the Agriculture Department with the tools and machines which will be introduced for the local private sector. Additional training on the appropriate operation of the equipment will be held in order to allow the staff of the Agriculture Department to disseminate this knowledge on value addition to the local farmers and enterprises. To introduce best practices in value addition, local and international study tours will be organized for selected stakeholders. The international study tour to Japan will aim to showcase what types of technological solutions are available for the apple value chain.

As food safety compliance is inevitable to sell produces on high-end markets with a higher profit margin, creating awareness on its importance should be well-communicated to private sector representatives. The enterprises selected for technical assistance by the project will receive technical guidance by the project how to apply the new technologies as well as applicable food safety certification. At the same time, the aforementioned value addition practices will contribute to the introduction of new type of products to the private sector in which endeavours the project will support the industry through technical guidance. As part of this, trainings on food safety compliance along the value chain will be addressed, also utilizing the aforementioned code of practices.

As electricity and clean water are general limitations for the agriculture and food processing industry in Balochistan, the project might have to support the access to those resources. For this reason, the project will require the support of the Agriculture Department in coordinating with other governmental bodies for the required approvals.

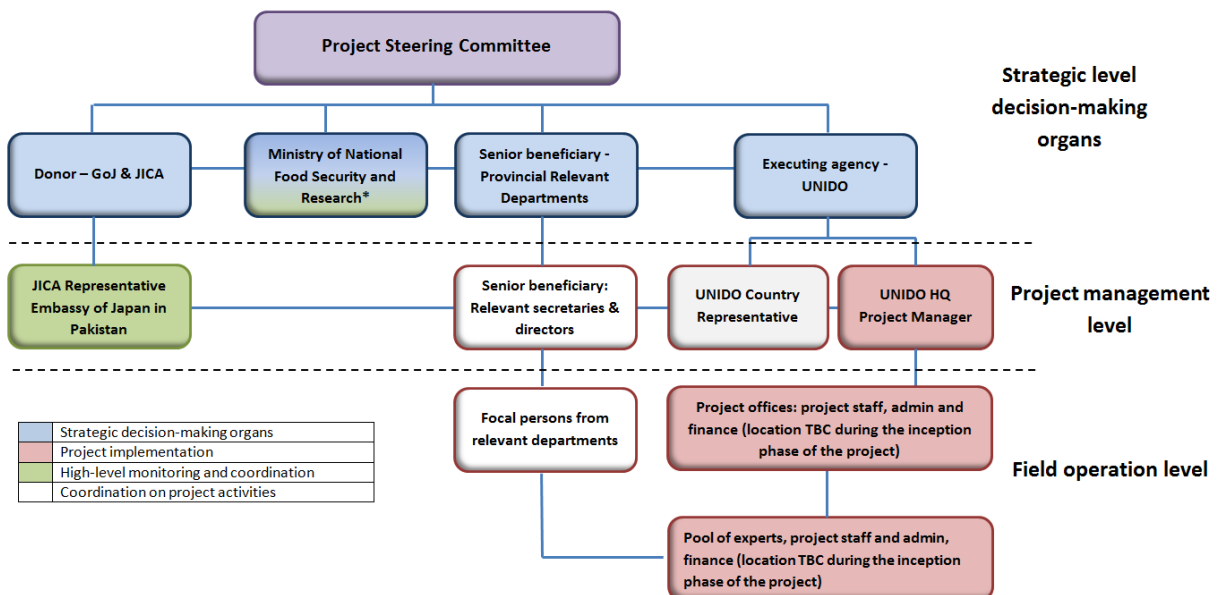
Output 3.3 Market linkage of actors from apple value chain is improved

As part of the value addition, branding in terms of packaging is required for new products. Simultaneously, the value added products need to conform with the laws and regulations in Pakistan and in long-term abroad. Introducing appropriate practices to food manufacturing enterprises will contribute to the aforementioned goal of selling their produce on a higher price through value addition and production of new products. In this effort, the project will support the development of new packaging design for the fresh produce and value added products. After the development of these products, the project will organize B2B matchmaking for enterprises in order to create linkage with high-end markets.

B.6. Project Implementation Structure: Institutional Arrangements and Coordination Mechanism

Following the approval of the project document the project implementation, coordination and monitoring mechanism will be created to ensure management of project’s activities and their smooth implementation.

Figure 3. Project Implementation Chart



*Possible technical assistance activities to the MNFSR to be defined during the initial phase of the project

Strategic Level: It is envisaged the creation of a **Project Steering Committee**, which will provide overall guidance and monitor the implementation of the programme. The Steering Committee will be composed of

representatives from the Ministry of National Food Security & Research of Pakistan, Japan International Cooperation Agency (JICA), the Government of Balochistan, the Government of Khyber-Pakhtunkhwa and UNIDO. The PSC should aim for equal number of men and women as much as possible.

The Steering Committee is expected to sustain, both technically and politically, a smooth project implementation through strategic decision-making mechanism and consultative process among the relevant stakeholders. The constitution along with the nominated members of the Steering Committee will be prepared by the Ministry of National Food Security and Research and agreed by JICA, the provincial governmental organs and UNIDO. It is envisaged that the Steering Committee will first meet at the end of the inception phase and then at least once a year to monitor project's operations, review its work programme and achievements and/or re-orient activities as and when necessary.

The project implementation will also seek **cooperation with** the Ministry of Planning & Development, Ministry of Industry, Economic Affairs Division, Chamber of Commerce and Industry, Universities, women and men farmers to transporters, wholesalers, retailers and agro-processors. It will also benefit from technical coordination with the international partners, which are involved in this domain in Pakistan in order to ensure that there will be no duplication of efforts.

Project Management Level (UNIDO Headquarters): The project will be managed by the Food Systems and Nutrition Division (FSN) of UNIDO, in accordance with the Guidelines for the Technical Cooperation Programme and Project Cycle (UNIDO/DGAI.17.Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle-partially superseded by UNIDO/DGB/(P).130 and UNIDO/DGAI.21). The overall management responsibility of the project will remain the responsibility of UNIDO through the **assigned project manager**; he/she will work closely with the members of the Steering Committee for the best planning and implementation of the project. The UNIDO project manager will be assisted by a project technical assistant (L level) to be appointed for the project. During the project team formulation, UNIDO will strive to have a gender balanced team.

Operational/Field level (Islamabad / Khyber-Pakhtunkhwa / Balochistan): the project team members in charge of the day-to-day implementation and coordination of the project will be structured as per the outcome of the inception phase and their role will be defined based on the intervention needs. The project implementation at provincial level will be organized and monitored through the local technical working groups with the participation of representatives from the relevant local departments, UNIDO senior project staff. In addition, beneficiaries, such as cooperatives and associations, can be invited to the local technical working group meetings when required.

A project operation unit assembled for a UNIDO agri-food value chain project usually has the following members for the life-time of the project:

At UNIDO HQ level

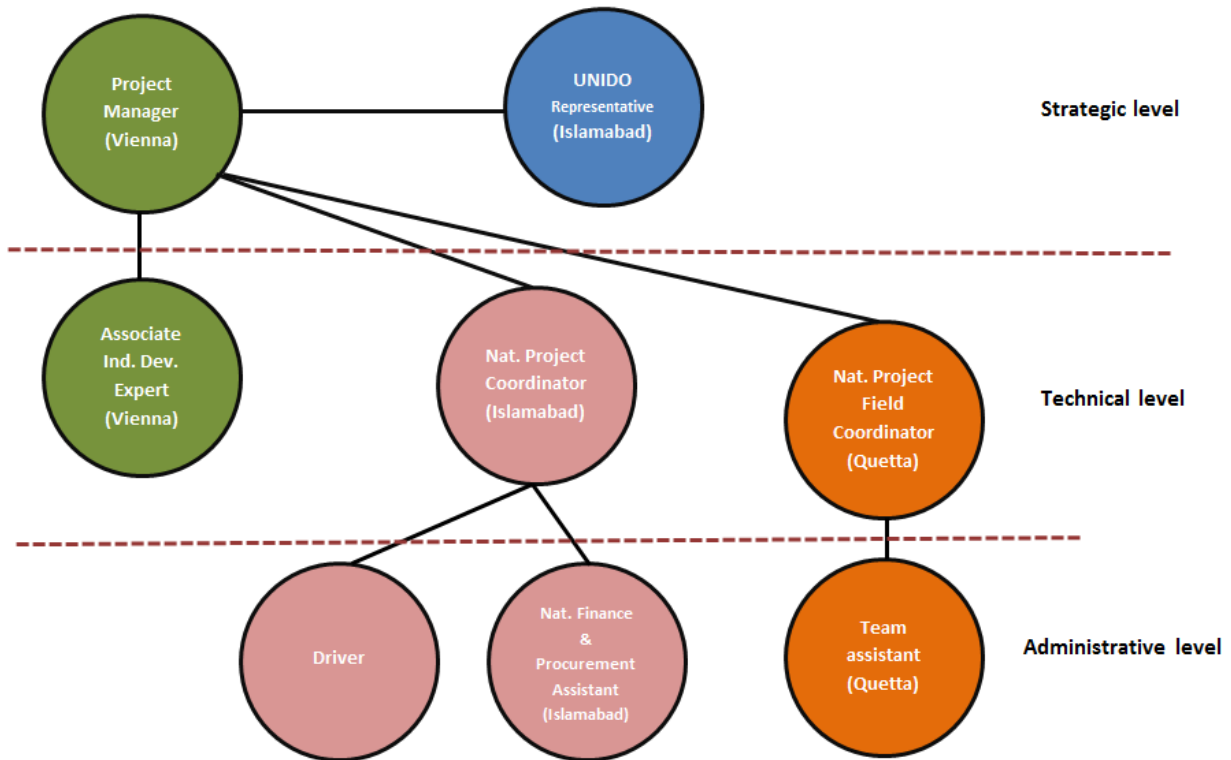
- 1. Industrial Development Officer / Project Manager:** assigned by UNIDO to have the overall supervision of the project;
- 2. (Associate) Industrial Development Expert** (UNIDO HQ / frequent missions to Islamabad) – daily monitoring and coordination of technical activities as per UNIDO's mandate as well as rules and procedures;

At field operation level - Pakistan

- 3. **National Project Coordinator / Team Leader** (in Islamabad) – the expert is in charge of cattle meat component in Khyber Pakhtunkhwa and the overall coordination of project reporting to UNIDO HQ and UNIDO Country Office.
- 4. National Project Field Coordinator (in Quetta) – the expert is in charge of the coordination of project activities for the apple value chain in Balochistan;
- 5.. **National Finance and Procurement Assistant** (in Islamabad) – delivering administrative duties and overall financial and administrative reporting.
- 6. **Team assistant** (in Quetta) – delivering administrative duties for the project operation in Quetta.
- 6. **Driver**

There are additional technical personnel / experts can be hired on a full time basis for the project operation, depending on the needs of the project and request of the stakeholders in the following areas: gender mainstreaming, communication, monitoring and procurement.

Figure 4. Project Management Unit (PMU) structure



B.7. Project Logical Framework

The outputs and activities as well as gender sensitive indicators will be revisited and validated for the Project Implementation phase as per the findings of the assessments conducted under the inception phase. All baseline (indicating prior project situation or actual value in 2019) and target indicator (target 2023) need to be verified as part of the detailed value chain analyses of the initial phase. Further explanation on the calculation of baseline and target indicators in (annex 2).

Activities	Indicators		Means of Verification	Risks / Assumptions
		Baseline (Actual value in 2019)	Target (2023)	
Impact: Revitalizing the livelihood of cattle meat value chain actors in KPK and apple value chain actors in Balochistan through improved production, quality compliances and introduction of new value addition practices	# of new jobs created for the industry	0	5,000 jobs Female: 2,500 Male: 2,500	The 100 days Strategy and National Food Security Policy of the Government emphasize the compliance and productive capacities of value chain actors.
	# of men and women farmers/workers trained on COPs	0	Total: 10,000 Female: 5,000 Male: 5,000	
	# of beneficiaries of livelihood improvement through project activities for the rural farmers / workers	0	50,000 people	The Government's interest to increase international trade in the near future will contribute to the long-term goal of the project.
	# of beneficiaries for the extension workers / officers / inspectors	0	1,200 people	

		Baseline (Actual value in 2019)	Target (2023)		
<p>Outcome: To upgrade the cattle meat and apple value chains through pilot interventions on the introduction of value addition, compliance and productive capacities of value chain actors and institutional capacity building of provincial governmental bodies</p>	# of sectorial policies / strategies developed	0	2 policies/strategies		<p>Assumptions: Through detailed value chain analyses complemented by gender and institutional capacity assessments will allow to properly define project intervention scope and identify beneficiaries. These indicators might reach the targets after the project closure and thereby, as these indicators can be reached in mid to long-term. The availability of baseline data might be limited which will be verified during the inception phase. Through exposure to new techniques in compliant and productive practices, farmers will be able to sell their products to high end markets and in long-term to export them to other countries</p> <p>Risks: Low engagement of the stakeholders in the inception phase which will harden to identify the local needs of the beneficiaries. . Hesitance by the farmers and communities to change obsolete techniques due to long-term financial benefits.</p> <p>Means to address: The project will involve all stakeholders from the inception phase thus ensuring proper ownership and engagement from early stage. The project needs to raise awareness among all stakeholders on the importance of applying new best practices at farm and processing level.</p>
	# of value chains compliance capacity developed	0	2 value chains		
	# of enterprises adopted best practices	0	35 enterprises	Inception report validated	
	# of value added products introduced	0	5 value added products	Assessments by certification body	
	# of national high-end market created	0	2 new markets	List of participants of workshops	
	# of enterprises upgraded with food safety certification	0	5 enterprises	Statistical reports	
	# of agricultural extension workers and competent authority officer trained on best practices along the value chain (production, processing and inspection)	0	Total: 240 Female: 120 Male: 120	Market assessment	
	# of COPs developed	0	5 COPs	Satisfaction survey	
	Avr % of sales price increased	0	Avr. 10% per product	Evaluation report	

Component 1: Inception phase of the project

Outputs	Output 1.1: Detailed value chain analyses on the meat and apple value chains and assessments on institutional capacities were conducted to verify project activities	# of value chains analyzed and selected for upgrade	0	2 value chains analyzed	Value chain analyses validated	<p>Risks: Possible limitations to send experts to the field to conduct assessments and analyses for the project formulation. In certain areas of the provinces require long planning for the visit of international experts due to the security risk and uncertainty.</p> <p>Means to address: The project will try to identify local experts to avoid any possible delays. With regard to the geographical size, the main production areas shall be identified prior to the mission of experts in order to ensure the collection of relevant data.</p>		
		# of feasibility studies developed and validated	1 study	9 studies	Gender analysis validated			
		# of enabling environment assessment validated	0	2 enabling environment	Environment and social management plan developed			
		# of validation workshops organized and hold	0	2 validation workshops	Feasibility study for (1) apple packing and grading unit; (2) apple juice producing and bottling unit; (3) apple jam production; (4) slaughter house; (5) meat processing center (6) meat value added products; (7) butcher store, (8) meat by products			
					Inception report with project work plan validated			
		1.1.1 Hold consultative process on the selection of the value chains to be analyzed for the project						
		1.1.2 Conduct value chain assessment in KPK and Balochistan						
		1.1.3 Conduct assessment on institutional capacities of relevant departments in KPK and Balochistan, assess current legal frameworks (incl. laws, rules, standards and traceability)						
		1.1.4 Conduct verification mission to validate data from the value chain analysis						
		1.1.5 Hold validation workshop for value chain roadmaps and feasibility studies						
1.1.6 Finalize inception report with revised logical framework, budget & work plan and submit to SC for approval								
1.1.7 Develop gender studies on the selected value chains								
1.1.8 Hold validation workshop for sectorial roadmaps and feasibility studies								
1.1.9 Finalize inception report with revised logical framework, budget & work plan and submit to SC for approval								

Component 2: cattle meat value chain in KPK

Outputs		Output 2.1 Enabling environment and institutional capacities of relevant departments in KPK are upgraded through the introduction of adequate practices in food safety	# of sectorial strategy were established for cattle meat value chain	Baseline (Actual value in 2019)	Target (2023)	Validated sectorial policies and strategies Survey questionnaire on the feedback of training to institutions	<p>Assumptions: Institutional capacities of the agriculture department need to be strengthened to deliver up-to-date agricultural extension services to farmers.</p> <p>Risks: Current capacities of personnel are limited to deliver required agricultural extension services.</p> <p>Means to address: Institutional gaps and needs will be identified during the inception phase and accordingly be addressed.</p>	
			# of public organs related to meat value chain supported in improving their services	0	1 strategy			
			# of expert working group established	0	3 organs			
	Activities				0	1 expert working group		
			2.1.1 Assess food safety laws and regulations for meat processing and publicly marketed meat and make recommendation thereon, and revise standard operating procedures of the meat inspection conducted by the FSHFA in KPK					
			2.1.2 Establish expert advisory group on meat value chains through the involvement of the private and public sector					
			2.1.3 Provide training on HACCP, ISO and Halal certification to inspectors to improve meat related inspection services and carry out pre-inspection advisory service on production line, technology, hygiene, sanitation, safety and traceability through expert advisory group					
			2.1.4 Assess residue control plan and make recommendation for meat sector					
			2.1.5 Assess veterinary service delivery mechanism by AHITI and provide recommendation					
		2.1.6 Work with banks on business incubation and credit finance						
		2.1.7 Conduct gender training to relevant stakeholders						
	2.1.8 Conduct awareness raising to consumers on meat practices							

			Baseline (Actual value in 2019)	Target (2023)		
	Output 2.2 Improvement of cattle meat's compliance and productive capacities are piloted by creating awareness on best practices and establishing training framework on-farm and processing level	# of code of practices (on-farm practices, meat processors/butcher, slaughterhouse) developed	0	3 COPs	Progress report Evaluation report Certifications provided	Assumptions: Through the improvement of compliant capacities, the agro-food producers will be able to comply with market requirements and export their produce to local and international high-end markets. Risks: Farmers are hesitant to apply new practices and have limitations to invest in more industrialized food pre-processing and manufacturing practices. Means to address: In case the SC decides accordingly, the project will pilot the upgrade or establishment of packing and storage facilities to ensure the product compliance along the value chain.
		# of women and men trainers trained on COPs	0	Target: 180 Male: 90 Female: 90		
		# of women and men trained on the developed code of practice	0	Target: 7,000 Male: 3,500 Female: 3,500		
		# of enterprises adopting best practices (slaughterhouses, meat processors/butcher)	0	25 enterprises		
Activities	2.2.1 Develop code of practices (COP) for appropriate on-farm (grazing, animal feeding) and processing practices and related ToT manual kit along with assessment document for trainers					
	2.2.2 Disseminate COP to trainers through TOT and afterwards farmers/herders in pre-defined districts					
	2.2.3 Upgrade the training services of AHITI through revision of current training framework to meat processors and veterinary assistant and equip its facility with required technology for halal meat production					
	2.2.4 Organize study tours to private and public sector representatives on meat processing to Japan and Pakistan					
	2.2.5 Provide technical assistance to pilot slaughterhouses and meat processing units in the selected districts through training to staff, pre-inspection services against HACCP and halal certification					
	2.2.6 Provide training to selected meat processors (MSMEs) on adequate practices on meat processing and food safety and hygiene					

		Output 2.3 Value addition of selected value chain actors is improved through the introduction of new practices and technologies in pre-processing and manufacturing	# of new technologies introduced # of departments and related institutes supported	Baseline (Actual value in 2019) 0 0	Target (2023) 3 technologies 1 department	Progress report Evaluation report Outcome report	Assumptions: By introducing new value adding practices, the farmers will benefit from higher price. Risks: Certain solutions are very costly and requires additional expertise (e.g. food engineering) which might not be available locally. Means to address: Selection of new value added practices shall be sustainable and take into consideration the local circumstances.
	Activities	2.3.1 Identify new techniques and technologies for value addition and acquire as well as train on new technology					
		2.3.2 Expose officials to new technologies on value addition and train them on their application					
		2.3.3 Equip relevant department of the Agriculture Department with new technology on meat processing techniques and train its staff thereon to develop new value added products					
		Output 2.4 Market linkage of actors from meat value chain is improved	# of product re-branded and marketed # of B2B matchmaking events organized	Baseline (Actual value in 2019) 0 0	Target (2023) 4 products 2 events	Progress report Evaluation report Report on buyer-seller event Survey to potential buyers	Assumptions: Upgraded agri-food to be sold in new high-end markets through creating direct linkage between farmers and buyers. Risks: Farmers are not able to comply with the requirements of high-end buyers in long-term. Means to address: Proper engagement of farmers under output 2.2 and 2.3 is crucial to ensure compliance with market requirements in quality and volume.
	Activities	2.4.1 Create awareness on improved branding and packaging among private sector representatives					
		2.4.2 Introduce new packaging techniques for the selected value chains					
		2.4.3 Create B2B linkage for herders, herder groups, cooperatives, abattoirs and meat processors					
Component 3: apple value chain in Balochistan							

Outputs		Output 3.1 Enabling environment and institutional capacities of the Agriculture Department improved through the development of agricultural extension services on apple value chain	# of sectorial policy and strategy were established for apple value chain	0	1 policy, including strategy	Validated sectorial policies and strategies Minutes of meetings Surveys	<p>Assumptions: Institutional capacities of the agriculture department need to be strengthened to deliver up-to-date agricultural extension services to farmers.</p> <p>Risks: Current capacities of personnel are limited to deliver required agricultural extension services.</p> <p>Means to address: Institutional gaps and needs will be identified during the inception phase and accordingly be addressed.</p>	
			# of public organs related to apple value chain supported in improving their services	0	1 organ			
	Activities	3.1.1 Develop sectorial policy and strategy for the apple sector						
		3.1.2 Provide technical assistance to the Agriculture Department to implement sectorial policy and strategy						
		3.1.3 Upgrade the nursery / demonstration farm and food technology center of the Agriculture Department to deliver training to SMEs						
		3.1.4 Assess laws, technical standards related to apple products and provide recommendations						
		3.1.5 Assess traceability system and make recommendation						
		3.1.6 Conduct gender training to the provincial departments						
3.1.7 Work with banks on credit finance and business incubation								

			Baseline (Actual value in 2019)	Target (2023)		
Output 3.2 Value addition, compliance and productive capacities of the apple value chain are piloted by introducing new techniques at farm, pre-processing and processing level	# of code of practices validated		0	2 COPs	Progress report Evaluation report Certifications provided	<p>Assumptions: Through the improvement of compliant capacities, the agro-food producers will be able to comply with market requirements and export their produce to local and international high-end markets.</p> <p>Risks: Farmers are hesitant to apply new practices and have limitations to invest in more industrialized food pre-processing and manufacturing practices.</p> <p>Means to address: In case the SC decides accordingly, the project will pilot the upgrade or establishment of packing and storage facilities to ensure the product compliance along the value chain.</p>
	# of women and men trainers trained on each COP		0	Total: 60 Male: 30 Female: 30		
	# of women and men farmers/herders trained on the developed code of practice		0	Total: 3,000 Male: 1,500 Female: 1,500		
	# of enterprises adopting best practices		0	10 enterprises		
Activities	3.2.1 Develop code of practices (COP) for farmers with the inclusion of good agriculture practices or Global GAP on apple production					
	3.2.2 Disseminate COP to trainers through TOT and afterwards farmers in pre-defined districts					
	3.2.3 Upgrade an apple nursery of the Agriculture and Cooperative Department as per best practices for training purposes					
	3.2.4 Provide assistance for access to required resources for the operation of the facility					
	3.2.5 Provide training and awareness raising to the private sector to adopt new techniques and technologies on pre-processing and processing and food safety and hygiene practices at factory level					
	3.2.6 Ensure mentoring to selected enterprises on proper practices					
	3.2.7 Conduct trainings on food safety compliance along the value chain					
	3.2.8 Conduct assessment on the upgraded factories against the selected certification					
	3.2.9 Organize study tour to Japan to create awareness on value addition practices					

	Output 3.3 Market linkage of actors from apple value chain is improved		# of product branded and marketed	Baseline (Actual value in 2019)	0	Target (2023)	3 products	Progress report	<p>Assumptions: Upgraded agri-food to be sold in new high-end markets through creating direct linkage between farmers and buyers.</p> <p>Risks: Farmers are not able to comply with the requirements of high-end buyers in long-term.</p> <p>Means to address: Proper engagement of farmers under output 3.2 is crucial to ensure compliance with market requirements in quality and volume.</p>
			# of B2B matchmaking events organized		0		2 events	Evaluation report	
								Report on buyer-seller event	
								Survey to potential buyers	
Activities	3.3.1 Conduct training on packaging, branding and requirements for apple								
	3.3.2 Support the development of new packaging design for apple product								
	3.3.2 Organize B2B matchmaking								
Output 4. Project management									
Mid-term and final evaluation									

B.8. Risks & Mitigation measures

Potential risks based on their level and their mitigation measures are described in the table below.

Result	Assumptions & Risks				
Project element	Risk Description	Risk Type	Risk Level	Assumptions	Mitigation Measures
Development of Agro-value Chains	Public and private sector are not able to run, manage and promote agro-value chains following the end of the project	Beneficiaries / Security	Low	The public and private sector cooperate to ensure project sustainability	<ul style="list-style-type: none"> • Involvement of Government and private sector from the start • Effective agro-value chain management is advised to project counterparts
Commitment to the project goals	Change in Government priorities with regards to the development of agro-value chains	Beneficiaries / Security	Low	All stakeholders consider the development of agro-value chains in Pakistan a priority for the enhancement of the Pakistani Agro-industry sector	<ul style="list-style-type: none"> • Keep advocacy and advisory support to the highest level of project stakeholders
Security situation in KPK and Balochistan	Since both regions are considered as a high security zone, there are some limitations when it comes to travel management of experts.	Security	Intermediate	There are certain delays with the project activities due to the travel limitations	<ul style="list-style-type: none"> • The project will try to identify local experts before engaging international ones. • Continuous support of UNIDO Country Office in Pakistan.
Willingness of experts to travel to provinces	Some experts might be hesitant to travel to Balochistan and KPK due to the security reasons. Certain expertise are not available locally and international expert is required.	Security	Intermediate	Due to the security situation, some experts might be hesitant to travel to specific areas of these provinces	<ul style="list-style-type: none"> • Other arrangement through bringing beneficiaries to other areas.

B.9. Project visibility

The project will deploy a number of actions to ensure visibility of the project in the host country and contribution from the Government of Japan. These actions will include preparation of press releases, use of social media to disseminate updates of the project, place stickers on all equipment provided by the project, host formal ceremonies and invite officials from the Embassy of Japan and the host country as well as sign-boards for main project sites.

B.10. Sustainability Strategy

Following UNIDO technical support approach, it is necessary to ensure the sustainability of the project outcomes through the following actions:

- Follow-up on the financing prospects to sustain the project;
- On-going involvement and unceasing pledge of project counterparts to the project at all the different stages;
- Suitability of the targeted locations and products; in addition to the degree to which the stakeholders are able and willing to replicate the studies developed in other provinces of the country;
- Ability of the stakeholders to record policy-level changes and request amendments to these policies whenever needed;
- Follow up of all technical assistance requests through a tailor-made approach;
- Establishment of additional private, public or partnership initiatives, for instance fruit processing facilities and fishery culture, to train women and men farmers and producers on how to produce and market their products using new technologies and practices, while ensuring highest product safety and quality standards.

B.11. Gender Mainstreaming

A national organ in charge of gender mainstreaming, the National Commission on the Status of Women (NCSW) together with UN Women has published the Women's Economic Participation and Empowerment in Pakistan Status Report 2016 which states that in Pakistan about 73% of the **26% of women in the labour** force are in the agriculture, forestry, hunting and fishing sector.

Balochistan has a low literacy rate of 46 percent (65 percent for males and 23 percent for females). Gender Parity Index for primary and secondary education is 0.58 and 0.41 as compared to the national figures of 0.90 and 0.81 respectively. At agriculture level, the women in Balochistan are involved in almost every sphere of life and they are usually responsible for weeding, seed cleaning, drying, as well as storage of crops. Activities dominated by men are land preparation, threshing, marketing and transport. Some of the main constraints when it comes to women rights in Balochistan are poor health and malnutrition, lack of access to education, lack of land ownership and access to credit facilities, scarcity of segregated economic policy and reforms, low skill and low paid activities. Consequently, women are the most vulnerable to poverty and discrimination due to their socio-economic situation and they can be hardly approached in

certain areas of these provinces. Thereby, the project will consider the involvement of potential partners such as women associations or recruitment of gender experts / social organizers to facilitate the opportunity of providing technical assistance to women farmers. However, as per the UNIDO experience in Balochistan gathered during previous technical assistance initiatives, particularly during the Agriculture, rural development & poverty reduction (ARP) program, participation of female trainees were not possible despite of the constant engagement with relevant stakeholders. Women play an active role in horticulture related activities in district Killa Saifullah but is mostly neglected as it constrained to within the households²⁴. Role of female labour is neglected in the province due to the feudal culture and tribal setup²⁵. According to the Labor Force Survey 2014-15 the overall percentage of men involved in agriculture in Balochistan is 27.3% and women are 75.9%²⁶. Due to the special cultural conditions, the involvement of female social organizers is inevitable to approach female beneficiaries.

In Balochistan the role of rural women in agriculture involves weeding, seed cleaning, drying and storage of crops. They are also involved in processing of food (jam, jelly, tomato ketchup etc.) but play a limited role in marketing of the products due to limited mobility and access to the market²⁷.

Women's involvement from north to south of KPK depends on the zonal ecology in which they dwell. Accordingly table 9 summarizes the different types of activities pursued by women in agricultural production. It is also relevant to mention that they have different roles in livestock and crop production depending on the aforementioned factors. The general constraints in case of Balochistan women are almost the same to women in KPK.

Table 10. Women's perceived role in crop production in KPK

Cropping Activity	Northern Zone %	Central Zone %	Southern Zone %
Seed cleaning	60	90	90
Sowing	30	5	15
Weeding	75	10	30
Hoeing	70	2	5
Harvesting	65	10	20
Threshing	50	5	30
Drying	60	60	60
Seed Storage	70	50	50
Binding	50	10	40
Selling commodities	40	10	40
Packing	50	20	50
Sorting	50	25	55
Chemical Application	10	2	2
Cleaning Stores	35	80	80
Cleaning Fields	50	10	35
Irrigation	16	10	15
Thinning(vegetable)	80	30	40
Vegetable Picking	70	30	40
Storing food for home	70	80	50

²⁴ <http://www.ndma.gov.pk/Publications/Development%20Profile%20District%20Killa%20Saifullah.pdf>

²⁵ http://www.balochistan.gov.pk/index.php?option=com_content&view=article&id=837&Itemid=1087

²⁶ <https://sedc.lums.edu.pk/file/6803/download?token=E1HCFwQl>

²⁷ <http://www.fao.org/3/a-i4330e.pdf>

Source: FAO (2016) Women in Agriculture in Pakistan

In case of KPK, its newly adopted Livestock Policy 2018 also recognizes the active role which women play in livestock production in the province. For instance in case of homemade milk products women is the solely responsible people. The policy also mentioned that the role of women in “livestock rearing has always been underestimated”.

The project will consider gender specific interventions after the finalization of the gender report and value chain analyses during the inception phase. During the finalization of the activities and allocation of funds, it will be ensured that sufficient funds will be provided for promotion of gender equality and/or women’s empowerment. When it comes to gender responsive indicators, UNIDO will promote gender parity among beneficiaries, participation on project related events as well as provision of technical assistance to upgrade obsolete practices.

Cost factor	Activity	Costs
National Gender expert	Analyzing disaggregate data and revision of technical manual from gender sensitivity perspective	\$ 45,500
Value chain experts	Collecting sex disaggregate benchmark data as part of the value chain analyses	\$ 260,000
National Project Coordinator	Collecting sex disaggregate data for monitoring of perception change	\$ 98,350
Costs related to training on gender	Trainings to governmental officials on gender	\$ 5,000
Total		\$ 408,850
Percentage of total budget		8 percent

The project contains gender-related activities which promote gender equality and women empowerment within the framework of the project. From the side of UNIDO, the project will also aim to ensure gender parity within its project team and the training of team members on gender related matters. The project will aim for the organization of workshops on gender related matters to the main counterparts at federal and provincial level. In addition, the project will include but not limited to the following gender related principles and activities:

- Incorporate gender equality and women empowerment as integral part of any trainings, guidelines and manuals developed under the project;
- Ensure that the project objectives are non-discriminatory, equally benefitting women and men;
- Promote equal opportunity and equal pay for both sex under the project;
- Disseminate gender workshop to project stakeholders.

UNIDO will closely coordinate with the counterparts and partners to ensure the development and implementation of gender related guidelines as well as organize gender related workshops and trainings. The project will also pay special attention on monitoring the social perception on the role of women in the targeted districts and how these can be uplifted throughout the project. Sex disaggregated data and qualitative information will be collected on the agricultural gender participation rates and roles along the selected value chains in order to provide data for further gender-specific analyses during the inception phase. The project will aim to summarize these collected data and provide a case study for future

interventions.

B.12. Environmental and Social Assessment

The project will maintain the environmental safeguarding of its ecosystem, through sustaining the existing flora and fauna and not introducing any material or product that will affect or change them in a negative way. Additionally, the infrastructure and services that need to be developed and implemented will be planned in an environmental friendly way; where the introduction of proper water waste management practices will be an option that will be utilized and encouraged. The project doesn't aim to upscale current primary production practices rather improve existing one, thus reducing post-harvest losses. During the inception phase of the intervention, an Environmental and Social Management Plan will be developed and based on the outcome, required monitoring will be planned under the inception phase.

B.13. Synergy

The project will be implemented in synergy with other ongoing or past initiatives invested in agribusiness development for KPK and Balochistan. Accordingly, UNIDO will approach other development partners actively contributing to the economic developments of the two provinces. During the inception phase the project will review these past and on-going initiatives in order to avoid any duplication in activities and identify complementary services related to these projects. Some of the most relevant projects are listed below which should be considered prior to the inception phase. More detailed mapping along with the revision of lessons learned and recommendations will take place during the inception phase.

Table 9. Former capacity building initiatives in KPK and Balochistan

Project title	Donor	Implementing Agency	Budget	Objectives	Status
Agricultural Information System-Building Provincial Capacity for Crop Estimation, Forecasting and Reporting based on the Integral Use of Remotely Sensed Data	US Department of Agriculture	FAO	US\$ 1.9 mil	Improving current systems for the integral use of remotely sensed data into existing data collection, analysis, and dissemination systems and the development of complementary systems to enable integration of satellite remotely-sensed data and improved field estimates for area and yield forecasting; and estimation and crop condition monitoring	Completed in Sept. 2015
Australia Balochistan Agri-business Programme-Phase Two (AusABBA II)	Australia	FAO	AUD 12,880,000	People in South West Balochistan will live more prosperous in a food secure environment. Women will be empowered to beneficially engage with their livelihood systems. Households will engage in agriculture livelihoods that enhance their productivity, food security and nutritional	Ongoing until Jun 2023

				status. Commercial farmers will operate as agribusinesses and cooperate profitably and sustainably within selected agriculture value chains with public and private (market) actors.	
Balochistan Agriculture Project	USAID	FAO		The project aims to increase the incomes of 17,000 rural households (approximately 110,500 people) by 20 percent in more than 800 poorer communities in the districts of Killa Saifullah, Loralai, Mastung, Quetta, Zhob, Musakhel, Pishin, and Sherani.	Completed
Pakistan Agriculture and Cold Chain Development (PACCD) project	USDA	WinRock		Establishment of cold storage facilities in Balochistan.	Completed
Pakistan Agriculture Development	USDA	Winrock	\$ 20.4 million	Increased productivity, post-harvest handling, SPS, equipment procurement, market access, trade for chili, date, banana, and tomato producers	Ongoing until Sep. 21
Empowering Women in Balochistan through Agri-Entrepreneurship	USAID	FAO			Completed
Gwadar Lasbela Livelihoods Support Project (GLLSP)	IFAD & Saudi Development Fund	IFAD	\$ 33 million	Increasing the incomes and enhance the livelihoods of the poor rural/fishermen households in the project area.	Ongoing until March 2019
Transformation and Integration of the Provincial Agricultural Network	USAID	University of Illinois	\$ 60 million	Transform the Northwest Frontier Province Agricultural University (NWFP-AU) into a land grant-type institution with responsibility for the teaching - research - outreach missions in all sectors of agriculture in the entire Northwest Frontier Province.	Completed in 1994
Technical assistance and support to fruit and vegetable growers in Swat Valley for the improvement of production and marketing in the horticulture value chain	Italian Cooperation	MAECI	Euro 1.35 million	Improving the standard of living, economic and social development of local populations at the household and community level. Improving the production of fruit and vegetables in the Swat Valley to increase the income of small farmers, both in the agricultural operations and in post-harvest phase.	Completed in 2013

As indicated in a previous chapter, further technical assistance initiatives aim to upgrade obsolete practices of the livestock sector in KPK. The first project developed by the Agriculture Department aims to introduce certification facilities for quality assurance and as a result, create market linkages for agricultural interventions. As part of this initiative, which expectedly will be implemented by FAO, national and international certifications will be implemented to build the capacities of actors at farm, processors, logistics as well as exporters level. It will also target the development of supply chain infrastructure through the dissemination of required technologies to farmers, slaughter houses and meat processors. The same initiative will also introduce web-based tool for livestock traceability system and data bank. In addition to this project, the Department of Agriculture is currently developing a PC-1 for a loan by the World Bank Group, which will also target the establishment of slaughterhouses and proper on-farm practices by farmers. To avoid any segmentation, the project will consult with other development partners on the ongoing activities.

C. BUDGET ITEMS

The project follows the results-based management budget structure. In order to be able to respond to changing conditions and so as to ensure swift implementation, UNIDO may make budgetary adjustments, not foreseen in the project document, according to its rules and regulations. Changes between budgetary components are not to affect the total budget made available for the project. The costs indicated under the Overall Budget in Chapter E.1 serve the purpose to cover the foreseen assessments (output 1.1), technical assistance for the value chains and agricultural extension services (Output 2.1 – 2.4) and project operation (Output 3). These are further elaborated below to demonstrate the potential cost factors for such agro-food value chain project. As per UNIDO rules and procedures, output specific activities require the allocation of the budget as per separate budget lines (BL) for experts, travels, events and equipment.

C.1. Counterpart inputs

The Ministry of National Food Security & Research of Pakistan will appoint a focal point in charge of providing to support the project team in its local approaches.

C.2. UNIDO Inputs

UNIDO will provide the following through the project budget:

BU-LI 11

- **International experts/specialists/trainers** will be recruited as per required expertise, i.e. experts/specialists/trainers on fruit processing, and fisheries industries production, management and marketing.

BU-LI 17

- **National experts/specialists/trainers** will be recruited as per required expertise, i.e. le experts/specialists/trainers on fruit processing, and fisheries industries production, management and marketing.

BU-LI 15

- **Local Travel** is for local transportation of the working team in Pakistan; also for travel of consultants, as required.

BU-LI 16

- **HQ Staff missions** to Pakistan to attend important project related meetings with project counterparts and attend Steering Committee meetings.

BU-LI 21

- **Sub-contracts** will be procured through international competitive bidding following UNIDO Procurement Rules.

BU-LI 30 & 35

- **Trainings, Workshops and Study Tours:** The staff of the Ministry of National Food Security & Research, other ministries and project stakeholders will be trained on management practices related to the selected sectors, exposed to international best practices and models to develop and manage and govern these sectors through participation on international and national events. Those events organized by UNIDO will comply with UNIDO's international competitive bidding procedure.

BU-LI 43

- **Project office:** To cover expenses related to the operation of the project office in Islamabad.

BU-LI 45

- **Equipment:** The equipment required to enhance production and manufacturing in selected value chains and tools and computers necessary for monitoring and implementation of the project by the operation unit through international competitive bidding following UNIDO Procurement Rules.

BU-LI 51

- **Miscellaneous:** the budget reserved for miscellaneous expenses will cover the office running costs and project operation costs, such as fuel or service for project vehicle.

C.3. Funding Strategy

The Project is funded by the Government of Japan (USD 4,998,504); including 13 percent project support costs to UNIDO. In case UNIDO identifies additional needs which require immediate support for the prosperity of the value chains and related enabling environment, UNIDO will share the related documentation with the Government of Pakistan and the donor community.

C.4. Estimated overall budget

The overall budget is developed as per foreseen results required for an agri-food value chain project. The project follows the results-based management budget structure. In order to be able to respond the changing conditions and so as to ensure swift implementation, UNIDO may make budgetary adjustments, not foreseen in the project document, according to its rules and regulations: UNIDO will inform the donor about changes between budget components. In the case that shifts between outputs greater than 15 per cent become necessary, UNIDO will submit a revised budget for approval by the donor, showing and explaining the required changes. Changes between budgetary components are not to affect the total budget made available for the project. The detailed budget breakdown, which corresponds to the level of detail of UNIDO's financial reports, is outlined in the table below:

At the end of the inception phase covered by output 1.1, the overall budget will be verified and presented to the Project Steering Committee for approval.

BL	Description	Year 1	Year 2	Year 3	Year 4	Total
Impact: Revitalizing the livelihood of farmers from selected value chains in KPK and Baluchistan through improved production, quality compliances and introduction to new value addition practices						
Outcome: To upgrade the cattle meat and apple value chains through pilot interventions on the introduction of value addition, compliance and productive capacities of value chain actors and institutional capacity building of provincial governmental bodies						
Output 1.1: Detailed value chain analysis on the meat and apple value chains and assessments on institutional capacities were conducted to support the selection process						
11	International experts	180,000				180,000
17	National experts & admin staff	54,000				54,000
30	In-service training, conferences, workshops	5,000				5,000
Sub-Total Output 1.1		239,000	-	-	-	239,000
Component on cattle meat value chain in KPK						
Output 2.1: Enabling environment and institutional capacities of relevant departments are upgraded in KPK						
11	International experts	30,000	74,000	18,000	6,000	128,000
17	National experts & admin staff	5,000	14,000			19,000
21	Subcontracts	10,000	10,000	10,000	10,000	40,000
30	In-service training, conferences, workshops	1,500	35,500	32,500	8,500	78,000
Sub-Total Output 2.1		46,500	133,500	60,500	24,500	265,000
Output 2.2: Improvement of cattle meat's compliance and productive capacities are piloted by creating awareness on best practices and establishing training framework on-farm and processing level						
11	International experts		90,000	64,000		154,000
17	National experts & admin staff	9,000	30,500	36,500		76,000
21	Subcontracts		50,000	10,000	10,000	70,000
30	In-service training, conferences, workshops		27,000	13,500	11,500	52,000
35	International Meetings		25,000	25,000		50,000
45	Equipment	-	567,815	-	-	567,815
51	Miscellaneous	10,000	15,000			25,000
Sub-Total Output 2.2		19,000	805,315	149,000	21,500	994,815
Output 2.3: Value addition of selected value chain actors is improved through the introduction of new practices and technologies in pre-processing and manufacturing						
17	National experts & admin staff	21,000	21,000	21,000	21,000	84,000
21	Subcontracts		10,000		10,000	20,000
30	In-service training, conferences, workshops		13,500	5,000	5,000	23,500

Sub-Total Output 2.3		21,000	44,500	26,000	36,000	127,500
Output 2.4: Market linkage of actors from meat value chain is improved						
11	International experts			24,000		24,000
21	Subcontracts			10,000		10,000
30	In-service training, conferences, workshops		16,500	22,500	15,000	54,000
Sub-Total Output 2.4		-	16,500	56,500	15,000	88,000
Component on cattle meat value chain in KPK						
Output 3.1: Enabling environment and institutional capacities of the Agriculture Department improved related to services on apple value chain						
11	International experts	12,000	48,000	38,000	12,000	110,000
17	National experts & admin staff		7,500	10,500	7,000	25,000
21	Subcontracts	10,000	10,000	10,000	10,000	40,000
30	In-service training, conferences, workshops		11,500	9,000	1,500	22,000
Sub-Total Output 3.1		22,000	77,000	67,500	30,500	197,000
Output 3.2: Value addition, compliance and productive capacities of the apple value chain are piloted by introducing new techniques at farm, pre-processing and processing level						
11	International experts		50,000	40,000		90,000
17	National experts & admin staff	23,000	69,000	47,000	23,000	162,000
21	Subcontracts	10,000	60,000	10,000	10,000	90,000
30	In-service training, conferences, workshops		15,500	9,000		24,500
35	International Meetings		25,000	25,000		50,000
45	Equipment	-	99,600	683,000	-	782,600
51	Miscellaneous	10,000	10,000			20,000
Sub-Total Output 3.2		43,000	329,100	814,000	33,000	1,219,100
Output 3.3: Market linkage of actors from apple value chain is improved						
11	International experts			24,000		24,000
21	Subcontracts			10,000		10,000
30	In-service training, conferences, workshops		12,000	11,000	6,500	29,500
Sub-Total Output 3.3		-	12,000	45,000	6,500	63,500
Output 4. Project management						
11	International experts	36,000	36,000	36,000	54,000	162,000
15	Project staff travel	31,000	38,300	31,000	33,240	133,540
16	Staff travel	12,000	19,000	12,000	19,000	62,000
17	National experts & admin staff	69,650	97,200	97,200	97,200	361,250
21	Subcontracts	40,000	40,000	40,000	40,000	160,000
30	In-service training, conferences, workshops	4,750	5,000	5,000	5,000	19,750
43	Premises	30,000	30,000	30,000	30,000	120,000
45	Equipment	34,000	-	-	-	34,000

51	Miscellaneous	27,500	34,500	32,500	22,500	117,000
Sub-Total Project Management		284,900	300,000	283,700	300,940	1,169,540
Evaluation & monitoring			30,000		30,000	60,000
TOTAL (excl. programme support costs)		675,400	1,747,915	1,502,200	497,940	4,423,455
Support costs (13%)		87,802	227,229	195,286	64,732	575,049
GRAND TOTAL		763,202	1,975,144	1,697,486	562,672	4,998,504

C.5. Explanatory note on the budget per technical assistance

The project financial and technical assistance requirements are summarized in the table below, for explanatory purposes. Financial reports are prepared in line with the structure and the level of detail of the budget estimate in section C.4. above.

BL	Item Description	Unit	Qty	Unit cost	Total budget in US\$
1. PERSONNEL					
1.1. Project Management Unit					
11	Project Manager (Vienna HQs)	Per/month	24	0	0
11	International Associate Development Expert (Vienna)	Per/month	18	9,000	162,000
17	National Project Coordinator / Team Leader (Islamabad+KPK)	Per/month	45	3,000	135,000
17	National Project Field Coordinator (Quetta)	Per/month	44	2,500	110,000
17	National Team Assistant (Quetta)	Per/month	44	750	33,000
17	National Finance and Procurement Assistant (Islamabad)	Per/month	45	1,200	54,000
17	National Driver	Per/month	45	650	29,250
1.2 Technical experts					
11	International expert on value chain development	Per/month	15	10,000	150,000
11	International expert on meat value chain	Per/month	11	10,000	110,000
11	International expert on horticulture / apple value chain	Per/month	11	10,000	110,000
11	International expert on food control system	Per/month	23	6,000	138,000
11	International expert on agricultural strategy development	Per/month	5	8,000	40,000
11	International expert on packaging and marketing	Per/month	6	8,000	48,000
11	International expert on traceability	Per/month	6	10,000	60,000
11	International expert on intensive animal farming / rotational animal grazing	Per/month	9	6,000	54,000
11	Mid-term / Final Evaluator	Lump-sum	2		60,000

				30,000	
17	National gender expert	Per/month	13	3,500	45,500
17	National communication expert	Per/month	10	2,500	25,000
17	National expert on environmental and social assessment / waste water management	Per/month	5	4,000	20,000
17	National research analyst / agricultural feasibility study expert	Per/month	8	5,000	40,000
17	National expert on meat value addition / food engineer	Per/month	24	3,500	84,000
17	National architect on factory design	Per/month	10	6,000	60,000
17	National food safety expert	Per/month	16	3,500	56,000
17	National cold chain system expert	Per/month	5	3,500	17,500
17	National expert on apple products / food engineer	Per/month	24	3,000	72,000
Sub-total of 1. Personnel					1,713,250
2. SERVICES for TRAINING & CAPACITY BUILDING					
21	Design brochures / manuals / website	Lump sum	7	10000	70,000
21	Design packaging material	Lump sum	1	20,000	20,000
21	PR campaigns (awareness raising on food safety and the project)	Lump sum	4	20,000	80,000
21	Armored vehicle rental (incl. driver and fuel)	Per/day	320	500	160,000
21	Certification bodies (pre-assessment for companies)	Lump sum	4	10,000	40,000
21	Infrastructure improvement (AHITI) (electric wiring etc.)	Lump sum	1	30,000	30,000
21	Water well dwelling and water tank installation (Balochistan)	Lump sum	2	20,000	40,000
Sub-total 2. Services for training and capacity building					440,000
3. TRAINING DELIVERY					
30	Training to farming community on grazing management	# of days / event	16	1,500	24,000
30	Meeting of expert working group	# of days / event	4	1,500	6,000
30	Training on intensive animal farming / veterinary drug application	# of days / event	18	1,500	27,000
30	Training on meat processing / value addition techniques	# of days / event	3	5,000	15,000
30	Training on packaging	# of days / event	5	3,000	15,000
30	Training on cold chain system	# of days / event	5	1,500	7,500
30	Training on apple processing / equipment application	# of days / event	4	2,000	8,000
30	Training on HACCP / meat inspection	# of days / event	10	3,500	35,000
30	Training on transportation	# of days / event	5	1,500	7,500
30	Training on testing equipment	# of days / event		3,500	7,000
30	Awareness raising on food safety & hygiene practices / consumer awareness raising	# of days / event	7	1,500	10,500
30	Training on gender	# of days / event		1,500	3,000
30	Training on business incubation and credit finance	# of days / event	4		8,000

				2,000	
30	National training and study tours to other factories	Event	2	10,000	20,000
30	B2B matchmaking event	Event	6	15,000	90,000
30	Catering for consultative process PSC	Event	10	2,500	25,000
35	Overseas training/study tour cost to Japan & other target countries	Event	4	25,000	100,000
Sub-total 3. Training delivery					408,500
4. EQUIPMENT					
45	Laptops	Number	8	1,000	8,000
45	Industrial high-speed color photocopier	Number	1	4,000	4,000
45	Printers/Plotters/Scanners/	Number	5	400	2,000
45	Office/Security Equipment/Thuraya/VHF	Number	5	1,000	5,000
45	Beamer	Number		2,500	5,000
45	Support equipment to PMU Offices (Internet, generator, office furniture)	Lump sum	1	10,000	10,000
45	Tongue bone cutter 525TBC	Number	1	3,500	3,500
45	Warm water tough 525 TBC	Number	1	5,000	5,000
45	Blade sharpener BR5A	Number	1	6,000	6,000
45	CVI steamer	Number	1	3,000	3,000
45	Beef catalog MGIV 903mpg	Number	1	8,000	8,000
45	Hydraulic bracket Saw MA-1B	Number	1	7,000	7,000
45	Reciprocating hydraulic DE breaking saw	Number	1	4,500	4,500
45	Halal hydraulic slaughtering box for cattle	Number	1	65,000	65,000
45	Meat industrial hanging scale	Number	1	600	600
45	Meat standing scale	Number	1	500	500
45	Butcher stainless steel hooks for cows	Number	50	25	1,250
45	Node hook	Number	40	30	1,200
45	Boning hook 4"	Number	20	30	600
45	Boning hook 6"	Number	20	40	800
45	Boon cutter saw	Number	1	3,000	3,000
45	Industrial meat grinding machine	Number	1	3,000	3,000
45	Chain quipay[weight lifter]	Number	1	25	25
45	Uniform Hangers	Number	3	80	240
45	Meat Knives Kit	Number	20	200	4,000
45	Table for meat cutting (stainless steel with plastic food grade cutting surface)	Number	5	80	400
45	Uniforms (universal)	Number	100	50	

					5,000
45	Plastic gloves	Number	200	10	2,000
45	Boots	Number	100	50	5,000
45	Apron plastic surface	Number	20	60	1,200
45	Cleaning equipment (detergent, washing machine etc.)	Number	1	1,000	1,000
45	Smoking oven (stainless steel, multi-house)	Number	1	20,000	20,000
45	Cow scratcher	Number	12	500	6,000
45	Installation of small-sized chiller system for meat	Lump sum	1	210,000	210,000
45	Mini slaughter line (10-15 bovine head per hour)	Number	1	200,000	200,000
45	Water tank and pipe	Number	1	25,000	25,000
45	Aluminum harvesting ladder	Number	10	270	2,700
45	Professional picking / harvesting bag or apron	Number	80	80	6,400
45	Pole fruit picker	Number	40	50	2,000
45	Loppers	Number	20	25	500
45	Fruit nursery equipment set (rain gauge, saw, testing equip.)	Number	1	18,000	18,000
45	Equipment for fruit technology center in Balochistan (pasteurizer, pulper, homogenizer, boiler)	Number	1	45,000	45,000
45	Apple juice machinery and equipment	Number	1	148,000	148,000
45	Packaging material (apple box, juice box)	Lump sum	1	45,000	45,000
45	Infrastructure upgrade of Food Technology Center	Lump sum	1	30,000	30,000
45	Laboratory testing equipment	Lump sum	1	30,000	30,000
45	Waste water management system	Lump sum	1	130,000	130,000
45	Apple packing line (washing, grading waxing line) capacity 10-15 tons per hour	Lump sum	1	300,000	300,000
Sub-total 4. Equipment					1,384,415
5. OPERATION COSTS					
43	Operation, rental and Maintenance office/field equipment (incl. communication radio, security and UN protection cost)	Lump sum (4 years)	4	30,000	120,000
51	Printing services (documents, top-ups)	Lump sum	10	7,000	70,000
51	Security equipment cost (security doors, blast film, window screens etc.)	Year	4	2,000	8,000
51	Office stationery	Lump sum (year)	4	2,500	10,000
51	General office misc. equipment	Lump sum	1	4,000	4,000
51	UNIDO vehicle Fuel and vehicles maintenance	Lump sum (4 year)	1	17,500	70,000
Sub-total 5. Operation costs					282,000
6. TRAVEL					

15	Local travel (including tickets, DSA etc.)	As per detailed project calculation			71,290
15, 16	UNIDO HQ project personnel travel project	Per/mission	20	6,000	96,000
15, 16	UNIDO HQ backstopping missions to Japan, incl. DSA	Per/mission	4	7,000	28,000
Sub-total 6. Travel					195,290
7. PROGRAMME / PROJECT SUB-TOTAL					4,423,455
8. UNIDO AGENCY SUPPORT COSTS (13%)					575,049
9. PROJECT BUDGET TOTAL					4,998,504

D. TIMELINE OF THE OUTPUTS

Outcome: Cattle meat and apple value chain are piloted and enhanced through introduction of value addition, compliance and productive capacities of value chain actors and institutional capacity building of provincial governmental bodies		Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outputs	Output 1.1: Detailed value chain analysis on the meat and apple value chains and assessments on institutional capacities were conducted to support the selection process																
	Component on cattle meat value chain in Balochistan																
Outputs	Output 2.1 Enabling environment and institutional capacities of relevant departments in KPK are upgraded through the introduction of adequate practices in food safety																
	Output 2.2 Improvement of cattle meat's compliance and productive capacities are piloted by creating awareness on best practices and establishing training framework on-farm and processing level																
	Output 2.3 Value addition of selected value chain actors is improved through the introduction of new practices and technologies in pre-processing and manufacturing																
	Output 2.4 Market linkage of actors from meat value chain is improved																
Component on apple value chain in Khyber Pakhtunkhwa																	

Outputs	Output 3.1 Enabling environment and institutional capacities of the Agriculture Department improved through the development of agricultural extension services on apple value chain															
	Output 3.2 Value addition, compliance and productive capacities of the apple value chain are piloted by introducing new techniques at farm, pre-processing and processing level															
	Output 3.3 Market linkage of actors from apple value chain is improved															
Mid-term and final evaluation																

E. MONITORING, REPORTING AND EVALUATION

The project team leader will continuously monitor the progress and will make a monthly report to the Project Manager of UNIDO Headquarters (Vienna) and UNIDO Country Representative in Pakistan. Project and monitoring reports will be submitted to the Steering Committee at least on a 6-month basis in order to keep track of all progresses, improvements and challenges to be adjusted. The reporting template will be decided by the Steering Committee during its first session.

Auditing: The funds provided shall be subject exclusively to the internal and external auditing procedures laid down in the financial regulations, rules and administrative instructions and directives of UNIDO.

Monitoring: the monitoring of the project happens at two levels: (1) **high-level monitoring** and (2) **implementation monitoring**. The former will be supported by the development of a progress report in every six months which capture the progress made by the project. This document will be shared with the members of the Project Steering Committee for their inputs and will assist also this body to approve the annual work-plan for upcoming periods. The structure of this progress report will be agreed among the Steering Committee Members. In addition, the project will also follow the result-oriented monitoring (ROM), where the members of the Steering Committee can agree on the conduction of an independent monitoring mission by an evaluation expert on an annual basis to capture the progress made by the project. Other format of monitoring activities can be also agreed by the parties during the inception phase. At the end of the project, a narrative report will be developed by UNIDO to summarize the project results, lessons learned and recommendations for future interventions. Furthermore, UNIDO will also submit a financial statement to the donor. When it comes to the monitoring of daily activities or **implementation monitoring**, the direct monitoring will be conducted by the field operation unit, which will be under the constant administrative supervision of UNIDO Country Office located in Islamabad. The field operation unit will directly report to and liaise with UNIDO Headquarter in Vienna on the daily operation related the implementation of the agreed activities and receive technical inputs thereon.

Reporting: The project will adhere to the following reporting schedule:

1. Progress report(s)/Interim report(s): every six months
2. Annual financial statement: Showing income, expenditure for the year, and assets and liabilities as of 31 December with respect to the funds provided in United States dollars
3. Terminal report: within six months after operational completion of the project
4. Final statement of account: within six months of termination or expiration of the grant agreement in United States dollars

Evaluation: All UNIDO programmers and projects are evaluated in accordance with the UNIDO Evaluation Policy.

F. LEGAL CONTEXT

The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Republic of Pakistan and UNIDO. The Islamic Republic of Pakistan agrees to apply to the present project, mutatis mutandis, the provisions of the Revised Standard Technical Assistance Agreement concluded between the United Nations and the Specialized Agencies and the Government on 2 July 1956.

G. INTERNATIONAL DEVELOPMENT GOALS

The project will mainly contribute to the achievement of the Sustainable Development Goal #9: “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. In addition, it can contribute to the achievement of additional SDGs, which are shown in graph 5.

Graph 5. How the project addresses the SDGs



Through the creation of new job opportunities, the project will create higher income potentials and increase the standard of living of rural communities.

The inception phase will consider the potential impact of upgraded production of the selected value chains. Food security in KPK and Balochistan are more economic driven and by uplifting the rural economy these issues can be also tackled.



The project will provide equal opportunity for women to work. Simultaneously, the project will promote the approach of equal money for equal work.

UNIDO aims to introduce industrialized production and manufacturing practices thus ensuring value addition of end products.





The project makes efforts to reduce the footprint related to the establishment of any industrial level activity or facility and recycle by-products along the value chain.

To increase the possibility for the sustainability of this intervention, especially the establishment of market linkages of the selected value chains, UNIDO will utilize its network within the private sector.



H. COUNTRY-LEVEL COHERENCE

H.1. Linkages with the United Nations Strategic Framework (UNSF) 2018-2022

This project is in line with the United Nations Sustainable Development Framework for Pakistan 2018-2022 (UNSDF). Within the UNSDF UNIDO has aligned its technical assistance to the output 3.1: “Productive sectors strengthen of the economy promoting inclusive growth and local development especially in most disadvantage areas”.

H.2. Linkages with the UNIDO Pakistan Country Programme 2018-2022

This intervention also fits within Pillar 1 of UNIDO Country Program framework 2018-22 for Inclusive and sustainable Industrial Development. Within this component of the country programme UNIDO wishes to support Government institutions to untapped the Pakistani potential of its manufacturing sector to function at its full capacity. The UNIDO Country Program document framework 2018-2022 is at the moment in formulation stage.

H.3. Linkages and Policy Coherence with Main Counterpart – Ministry of National Food Security & Research of Pakistan

The project will help the Ministry of National Food Security & Research of Pakistan’s National Food Security Policy vision to direct and aid the development and promotion of the agricultural and agroindustry sectors in Pakistan. This strategy specifically aims at outlining the industry’s role to achieving inclusive and sustainable development, stressing on the growth of national markets, the growth of exports, job creation, improve competitiveness and investments in the agro industry. The project will also be aligned with the sustainable development strategy of Pakistan, which is being formulated by the Government and

emphasize the importance of productive activities to attain Pakistan's sustainable development goals.

I. PRIOR OBLIGATIONS AND PREREQUISITIES

Ownership of equipment, materials, supplies and all other property financed from this programme shall vest in UNIDO. Unless otherwise provided in the project document, following operational completion of the project, ownership of equipment, of materials and supplies, as well as other property necessary for operation of the project, shall be transferred to the recipients as per the decision of the Final Steering Committee.

Annex 1. Initial assessment on value chain selection

Annex 2. Project indicators

All the indicators will be verified and validated during the inception phase of the project.

Activities	Baseline (Actual value in 2019)	Target (2023)
Impact: Revitalizing the livelihood of cattle meat value chain actors in KPK and apple value chain actors in Balochistan through improved production, quality compliances and introduction of new value addition practices		
Indicators	# of new jobs created for the industry	
	Baseline: 0	Target: 5,000 jobs Calculation note: Calculation note: 3,000 households from KPK and 2,000 households from Balochistan based on the created job.
	# of men and women farmers/workers trained on COPs	
	Baseline: 0 No information about any value added products (marketing and processing) in targeted districts in 2019. District-wise data will be collected during the inception phase.	Total: 10,000 Female: 5,000 Male: 5,000 Calculation note: between 1,200 -1,500 herders and farmers will be targeted in each district (8 district altogether) 8 * 1,250= 10,000 trainees.
	Avr. % of sales price increased	
	Baseline: 0 Estimated prices for the products: 1kg of apple from Balochistan mandi (market) price - 50 Rupees; 1 kg of apple in Metro - 150 Rupees. 1kg of cattle meat in KPK. 450 Rupees with bone. 650 Rupees for boneless	Target: Avr. 10% per product
	# of beneficiaries of livelihood improvement through project activities for the rural farmers/workers	
Baseline: 0	Target: 50,000 people 10,000 farmers / workers who receive the project training multiplied with their families (average 7 family size is	

		members deducted by 2 due to the possible close family member also participated in training) = 5 x 10,000= 50,000 people
	# of beneficiaries of the livelihood improvement through project activities for extension workers / officers	
	Baseline: 0	Target: 1,200 240 officers multiplied with 5 (average family size) = 1,200.
Outcome: To upgrade the cattle meat and apple value chains through pilot interventions on the introduction of value addition, compliance and productive capacities of value chain actors and institutional capacity building of provincial governmental bodies		
Indicators	# of sectorial policies / strategies developed/ revised	
	Baseline: 0	Target: 2
	# of value chains compliance capacities developed	
	Baseline: 0 Previous projects rather focused on upstream activities.	Target: 2 value chains
	# of value added products introduced	
	Baseline: 0	Target: 5 Value added products will be based on local consumer interests and potential export markets option
	# of enterprises adopted best practices	
	Baseline: 0	Target: 35 Number of project experts able to support.
	# of enterprises upgraded with food safety certification	
	Baseline: 0	Target: 5 Calculation note: 2-3 enterprises will be piloted for each value chain with improved productive and compliance practices.
# of agricultural extension workers and competent authority officer trained on best practices along the value chain (production, processing and inspection)		
Baseline: 0	Target: 240 Calculation note: Calculation note: 15-20	

		people from each targeted district office (8 district altogether) of the agricultural departments and 100 inspectors from the food authority in KPK
	# of COPs developed	
	Baseline: 0	Target: 5 3 COPs for cattle value chain, 2 COPs for the apple value chain
	# of new national high-end market created	
	Baseline: 0	Target: 2 National high-end markets purchasing value added products.
Component 1: Inception phase of the project		
Output 1.1: Detailed value chain analyses on the meat and apple value chains and assessments on institutional capacities were conducted to verify project activities		
Indicators	# of value chains analyzed and selected for upgrade	
	Baseline: 0 No comprehensive value chain analysis was conducted on these sectors.	Target: 2 Calculation note: Value chain analyses for cattle and apple value chains.
	# of feasibility studies developed and validated	
	Baseline: 1 As per available information in 2019, a recent feasibility study was developed for growing specialized apple cultivars for sale to commercial hard cider producers.	Target: 9 Calculation note: (1) apple packing and grading unit; (2) apple juice producing and bottling unit; (3) apple jam production; (4) slaughter house; (5) meat processing center (6) meat value added products; (7) butcher store, (8) meat by products
	# of enabling environment assessment validated	
	Baseline: 0	Target: 2 Calculation note: Assessment on regulatory and policy framework in each province for the selected value chains
	# of validationon workshops organized and hold	
	Baseline: 0	Target: 2

Component 2: cattle meat value chain in KPK

Output 2.1 Enabling environment and institutional capacities of relevant departments in KPK are upgraded through the introduction of adequate practices in food safety

	# of sectorial policy and strategy were established for cattle meat value chain	
	Baseline: 1 The KP Livestock Policy was developed in 2018	Target: 2 Calculation note: Support the development of a Strategy on the Cattle value chain taking consideration the recommendation of the KP Livestock Policy and project scope.
	# of public organs related to meat value chain supported in improving their services	
	Baseline: 0 There is no ongoing technical assistance by UNIDO to relevant governmental organs .	Target: 3 Calculation note: Capacity building will be provided to Food Safety and Halaal Food Authority, AHITI and other livestock specific organ of Department of Agriculture in KPK.
	# of expert working group established	
Baseline: 0 As per collected information, there is no public private expert working group in place for the cattle or livestock value chain in KPK.	Target: 1 Calculation note: Establishment of expert working is required to support the development and validation of applicable procedures, ensure stakeholder participation and project awareness on project activities.	

Output 2.2 Improvement of cattle meat's compliance and productive capacities are piloted by creating awareness on best practices and establishing training framework on-farm and processing level

Indicators	# of code of practices (on-farm practices, meat processors/butcher, slaughterhouse) developed	
	Baseline: 0 As per collected information, no COP established at KPK level in 2019 which follow national requirements.	Target: 3 Calculation note: code of practices (COPs) (1) on-farm practices, (2) meat processors/butcher, (3) slaughterhouse operation.
	# of women and men trainers trained on COPs	
	Baseline: 0 Since COPs will be developed	Target: 180 Male: 90

	during the project, this will take place during the project implementation.	Female: 90 Calculation note: 20 agricultural extension workers (4 district) and 100 FSHFA workers to be trained on appropriate practices and COP = $(20 * 4) + 100 = 180$ trainers
	# of women and men trained on the developed code of practice	
	Baseline: 0	Target: 7,000 Male: 3,500 Female: 3,500 Calculation note: 1,500 female and male herders/farmers trained on the application of COPs and 250 meat processors in each target district (4 districts): 1750 beneficiaries / district * 4 (no. of districts) = 7,000 people trained on COPs
	# of enterprises adopting best practices (slaughterhouses, meat processors/butcher)	
	Baseline: 0 Since COPs are not available in 2019, the developed COPs will be conducted during the implementation phase. With regard to the exact number of enterprises, this information was requested by UNIDO, but FSHFA was still unable to provide this data during the project formulation stage due to its early operation.	Target: 25 Calculation note: 6-8 enterprises in each district(4 pre-selected district) = 25 enterprises
Output 2.3 Value addition of selected value chain actors is improved through the introduction of new practices and technologies in pre-processing and manufacturing		
Indicators	# of new technology introduced	
	Baseline: 0	Target: 3 Calculation note: (1) meat processing technologies (Halal slaughtering machine and cutting equipment), (2) 2 value addition technologies in processing (e.g. smoker/dryer).and branding (meat packaging solution).
	# of departments and related institutes supported	

	Baseline: 0	Targets: 1 Calculation note: Potential beneficiary for dissemination of knowledge on value addition is AHITI.
Output 2.4 Market linkage of actors from meat value chain is improved		
	# of product re-branded and marketed	
	Baseline: 0	Target: 4 Calculation note: Calculation note: 2 fresh produces and 2 value added products
	# of B2B matchmaking events organized	
	Baseline: 0	Target: 2
Component 3: apple value chain in Balochistan		
Output 3.1 Enabling environment and institutional capacities of the Agriculture Department improved through the development of agricultural extension services on apple value chain		
Indicators	# of sectorial policy and strategy were established for apple value chain	
	Baseline: 0 No existing sectorial policy for apple value chain in Balochistan	Target: 1 Calculation note: Develop sectorial policy and strategy for the apple value chain sector
	# of public organs related to apple value chain supported in improving their services	
	Baseline: 0	Target: 1 Calculation note: Agriculture Department in Balochistan
Output 3.2 Value addition, compliance and productive capacities of the apple value chain are piloted by introducing new techniques at farm, pre-processing and processing level		
Indicators	# of code of practices validated	
	Baseline: 0	Baseline: 2 Calculation note: COP on on-farm practices and COP on packing center.
	# of women and men trainers trained on each COP	
	Baseline: 0	Target: 60 Male: 30 Female: 30

		Calculation note: 15 trainers per selected district (4 district) = 60 trainers
	# of women and men farmers/herders trained on the developed code of practice	
	Baseline: 0	Target: 3,000 Male: 1,500 Female: 1,500 Calculation note: 700 – 800 beneficiaries in each district(4 district) = 3,000 beneficiaries
	# of enterprises adopting best practices	
	Baseline: 0	Target: 10 Calculation note: Project targets 3-4 enterprises in each district (4 district)= 12 enterprises
Output 3.3 Market linkage of actors from apple value chain is improved		
Indicators	# of product branded and marketed	
	Baseline: 0	Target: 3
	# of B2B matchmaking events organized	
	Baseline: 0	Target: 2