UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Market access programme for the Nepalese honey value chain

A GMAP country project

Global Market Access Programme (GMAP)

August 2024

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Project number	SAP ID 210186
Project title	Market access programme for the Nepalese honey value chain
Country	Nepal
Duration	48 months
Project site	Nepal
Main Counterparts	Ministry of Agriculture and Livestock Development (MOALD) Ministry of Finance (MOF)
Other Counterparts	Department of Agriculture (DOA) – Center for Industrial Entomology Development (CIED), Department of Food Technology and Quality Control (DFTQC/ both under MOALD)
Executing agency	UNIDO
Donor	Norad
Project inputs	
⇒ Norad	EUR 1,379,956.00 (incl. 13 % PSC)

The country project in Nepal will follow the overall structure of the programmatic framework of the Global Market Access Programme (GMAP, ID 180025).

Overall objective (impact): Improved livelihood opportunities for small-scale beekeepers, MSMEs and honey processors in selected districts of Nepal through the sale of high-quality honeys.

Specific objective: Enhanced market access for Nepalese honeys to the domestic as well as regional and international markets.

Outcomes:

The project will have three complementary technical outcomes:

- Outcome 1: **Enhanced technical competence and sustainability of the National Quality Infrastructure System.** Institutional strengthening of key institutions and relevant public-private support institutions through capacity building (use of best practices, skills development, implementation of management systems, testing laboratories upgrading and equipment procurement) to ensure quality and international recognition of their services.
- Outcome 2: **Enhanced MSMEs' compliance with standards and technical regulations.** Improvement of quality and compliance capacities through capacity building (including specialized training and advice) and preparation for certification, and strengthening of collaboration among value chain (VC) actors.
- Outcome 3: **Strengthened culture for quality.** Advocacy, upscaling of knowledge dissemination and awareness activities in the honey value chain, and support for any relevant policy development/informed policy decisions on standards compliance, as applicable.

Approved:

	Date:	Signature:	Name and title:
On behalf of the Government of Nepal:			
On behalf of UNIDO:			Gerd Müller Director General

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Acronyms

ADS	Agriculture Development Strategy
AFU	Agriculture and Forestry University
BL	Budget Line
CAB	Conformity Assessment Body/-ies
CAL	Central Agricultural Laboratory
CIED	Center for Industrial Entomology Development
DFTQC	Department for Food Technology and Quality Control
ESIA	Environmental and Social Impact Assessment
ESMP	Environment and Social Management Plan
ESSPP	Environmental and Social Safeguard Policies and Procedures
EU	European Union
EUR	Euros
FAO	Food and Agriculture Organization of the United Nations
FPIC	Free, Prior, and Informed Consent
GEF	Global Environment Facility
GMAP	Global Market Access Programme
GMP	Good Manufacturing Practices
GVC	Global Value Chains
HACCP	Hazard Analysis Critical Control Point
HKH	Hindu Kush Himalaya
HMF	Hydroxymethylfurfural
ICIMOD	International Centre for Integrated Mountain Development
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
kg	kilograms
LDC	Least Developed Country
MOALD	Ministry of Agriculture and Livestock Development
MOF	Ministry of Finance
MSME	Micro, Small and Medium-sized Enterprise
NAB	National Accreditation Body
NBSM	Nepal Bureau of Standards & Metrology
NFP	National Focal Point
NGO	Non-Governmental Organization
NMI	National Metrology Institute
Norad	Norwegian Agency for Development Cooperation
NPR	Nepalese Rupees
NQIS	National Quality Infrastructure System
NSB	National Standardization Body
NTC	National Technical Coordinator
NTIS	Nepal Trade Integration Strategy
PM	Project Manager
PMAMP	Prime Minister Agriculture Modernization Project
PPE	Personal Protective Equipment
PMU	Project Management Unit
QI	Quality Infrastructure
QIS	Quality Infrastructure System
SC	Steering Committee
SCM	Steering Committee Meeting

SPS	Agreement on the Application of Sanitary and Phytosanitary Measures
TBT	Agreement on Technical Barriers to Trade
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USA	United States of America
USD	United States Dollars
VAT	Value Added Tax
VC	Value chain
WTO	World Trade Organization

A. PROJECT CONTEXT

National project context

Nepal is a landlocked country in South Asia and is mainly situated in the Himalayas. It includes parts of the Indo-Gangetic Plain, borders China in the north and India in the east, south and west.

Nepal covers 147,181km^2, extending 800 kilometers from east to west and 144 to 241 90 to 150 miles from north to south. The largest city (and national capital) is Kathmandu. The population of 30.3 million people (2021) is multi-ethnic, multilingual and multi-religious.

Nepal has one of the poorest economies in the region and has been classified as a Least Developed Country (LDC) since 1971.[1]

Nepal has a traditional economic system in which much of the population engages in subsistence agriculture. The two large neighboring countries are promoting their own agricultural development using advanced technologies and state subsidies, making it is challenging for Nepal to transform its subsistence farming practices into a competitive and commercialized agricultural sector contributing to inclusive and sustainable industrial development.

Agriculture is Nepal's primary source of employment. Most farmers are poor, making growth in the sector critical for poverty reduction.[2] MSMEs' growth is critical to boosting economic growth, job creation, fostering innovation, promoting sustainable industrialization and contributing to economic diversification and resilience (OECD 2017). However, MSMEs are disproportionately affected by market failures and business environment-related constraints. Their viability and growth prospects depend, inter alia, on access to finance, knowledge networks, and skilled workers (OECD 2017)[3].

Socio-economic outlook

In recent years, Nepal has demonstrated continued socio-economic improvement, particularly through 2019 and 2020. Nepal has made progress in various sectors of development, including poverty alleviation, education, and health, infrastructure, and gender equity.

Nonetheless, Nepal's economy faces enormous environmental and socio-economic challenges. *Inter alia*, agricultural development is challenges by low production, an inability to increase the production of domestic goods, a lack of product diversification for export promotion, and lack of investment capacity to develop industrial infrastructures.

Addressing the identified socio-economic challenges, national policies focus on poverty alleviation, education, health, infrastructure, gender equity and newly emerging infectious diseases.

The trade deficit is increasing as imports continue to grow, while exports of goods and services remain constant. The import-export ratio is unlikely to improve unless domestic production is increased.[4]

There are opportunities for Nepal to capitalize on its natural resources and its young population demographic by promoting commercial agriculture and fostering entrepreneurship across various sectors to create jobs and income opportunities.

Beekeeping plays a significant role in this context since it provides mutual benefits to both beekeeper and the crop farmers in economic returns. In addition to the economic value of bee products,

[1] *https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/070/41/PDF/N2107041.pdf?OpenElement*

[2] *https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=NP*

[3] *David Irwin and Nada Ibrahim - World Bank (2020) "Market study to understand job growth potential in SMEs in Nepal"*

[4] *The Fifteenth Plan, Fiscal Year 2019/20 – 2023/24 (2020), National Planning Commission, Government of Nepal.*

beekeeping contributes the pollination services boosting crop yields and maintaining biodiversity across the country.

National strategies

15th Plan (Fiscal Year 2019/20 – 2023/24)

The 15th five-year plan is the first to be implemented under the decentralized, federalism-oriented system. For the agriculture sector, the plan lays out three goals: (i) ensuring food security and nutrition; (ii) increasing employment and income by developing agro-based industries; and (iii) increasing agriculture sector exports through competitive capacity development and commercialization. Shortages of quality goods and services in the market have been identified as one constraint to private sector development, while managing imports and promoting exports by increasing the professional and competitive capacity of the private sector is a dedicated objective for the development of the sector.

Nepal Trade Integration Strategy (NTIS) 2016 & Trade Policy 2015

The Nepal Trade Integration Strategy (NTIS) 2016 is Nepal's third generation trade integration strategy, which seeks to address the outstanding trade and competitiveness challenges confronting the country's export sector with the aim of promoting the trade-focused economic growth of the country. It focuses on identifying actions to address protracted constraints in a number of cross-cutting areas, and recognizes potentials for product and value chain development in certain priority export sectors, including agro and forest products, craft and manufacturing products, services, and tourism. The strategy is aligned with the Government of Nepal's Trade Policy 2015 which sets concrete goals to promote economic growth, including though improving the business and investment climate, enhancing competitiveness of Nepali products, and reducing the trade deficit.

Besides twelve priority export goods and services identified, further potential sectors for economic development have been identified, including, *inter alia*, fruits and vegetable juices, silver jewelry, paper products; readymade garments; coffee; semi-precious stones; and honey.

Agriculture Development Strategy 2015 to 2035[5] *& Zero Hunger Challenge National Action Plan (2016 – 2025)*[6]

The Agriculture Development Strategy (ADS) is a national sectoral strategy of Nepal for the period 2015-2035. The overall objective of the ADS includes five dimensions of increased food and nutrition security, poverty reduction, competitiveness, higher and more equitable income of rural households, and strengthened farmers' rights.

It targets increasing the volume of food production in Nepal in a sustainable way through higher productivity and sustainable use of natural resources; reducing the vulnerability of farmers through improved food/feed/seed reserves, improved preparedness and response to emergencies, and climate smart agricultural practices; increasing income of farmers; improving access to markets; reducing post-harvest losses; improving food safety; relying upon trade for a more diversified diet; accelerating the growth of micro, small, and medium agro-enterprises, including those headed by women, youth, disadvantaged groups, and individuals based in disadvantaged regions.

The ADS action plan and roadmap are formulated in order to move towards the ADS vision formulated by stakeholders as follows: "A self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security leading to food sovereignty." Outcome area 4 of the Strategy, "Increased Competitiveness", will be achieved through the development of market infrastructure (Output 4.1), the growth of innovative small and medium agribusiness enterprises (Output 4.2), the growth of food and agricultural products exports

[5] *http://extwprlegs1.fao.org/docs/pdf/nep171433.pdf*

[6] *http://extwprlegs1.fao.org/docs/pdf/nep174448.pdf*

(Output 4.3), and though enhanced food safety and quality (Output 4.4).Specific activities include the adoption and implementation of internationally compatible food quality and safety standards, the adoption of legislation on accreditation of national laboratories for Food Safety Quality certification as well as the strengthening and upgrading of laboratories towards obtaining of international accreditation.

In the ADS, honey has been identified as a niche commodity warranting exploration of and support to the value chain. Complementarily, the *Nepal: Zero Hunger Challenge National Action Plan (2016 – 2025)*, under Pillar 3, seeks to promote food quality and safety standards applied in food value chain at all levels, specifically aiming to ensure market access for the value chain processes by, e.g., monitoring the drug residues in the agricultural commodities, such as honey, to be marketed. Pillar 4, which aims at increasing smallholder productivity and income, seeks to promote the production and trade of high value agricultural products, such as honey.

Government of Nepal Common Minimum Program (published January 2023)[7]

The recently elected Government of Nepal presented its policy priorities and minimum program of action in January 2023. The project has taken note of these priorities and has specifically aligned the project with the following areas: 4. Sustainable economic development and strengthening of the economy, and 5. Make in Nepal: Work-Employment-Entrepreneurship and domestic production, and 9. Transformation of the agriculture sector.

Under 4., export growth has been identified as a key area of action to reduce Nepal's trade deficit by emphasizing, inter alia, domestic production, private sector development, and implementing export promotion strategies. Furthermore, the "easy supply of daily consumables" will be encouraged, e.g., through targeted action to counteract fraud in measurements and weight as well as the "selling and distribution [of] substandard goods". The project's focus on strengthening the National Quality Infrastructure system (see sections *The Quality Infrastructure System* and *Overall objectives, outcomes, outputs and activities*) and building honey producers' and processors' capacities to comply with relevant standards and best practices, will contribute to achieving these objectives.

Under 5., the promotion and development of domestic production and consumption, including food items, is emphasized. To this end, agriculture-based industries are to be strengthened and exports to be increased, e.g. by increasing the "productivity of domestic consumable goods" and the "quality of exportable goods". The project's work with MSMEs will address these and related aspects under Outcome 2. Under Outcome 3, the project will work on building a culture for quality, which will include consumer outreach and sensitization as well as the development of a national brand for high-quality, domestically produced honey.

Under 9., transformation of the agriculture sector, the focus lies on developing the sector to serve as a driver of economic growth, job creation and poverty reduction. Key actions will include connecting targeted extension services to farmers and firms, and encouraging indigenous produce. Besides its direct work with producers and processors to increase quality and productivity, the project will promote linkages between different actors and segments of the honey value and associated value chains, and promote a better understanding between beekeepers and farmers as well as information sharing and needs-supply matching between value chain actors and extension service providers and other business support organizations supporting the honey value chain.

Further key complementary areas include support to the establishment of "food quality measurement and determination laboratories" (8. Food, housing and drinking water); the review of school, technical institutes' and higher education curricula to make them more technology-focused and vocational (6. Quality education and educational infrastructure), and supporting "arrangements for the use of forest areas without having adverse effect[s] on the environment" (e.g., through fostering a dialogue and mutual understanding between, on one side, beekeepers and honey hunters, and, on the other side,

[7] *Unofficial translation – Common Minimum Program, 9 January 2023, Policy priorities and minimum programs of the Government of Nepal*.

farmers and local populations, including forest user groups (17. Forests – Environment, Climate Adaption and Disaster Management).

Bee Promotion Policy 2073 (2017 AD)

The Government of Nepal has issued its Bee Promotion Policy 2073 (2017 AD) to provide overall policy guidance to the beekeeping sector in Nepal. The main goal of the Policy is to develop and establish beekeeping as a competitive and lucrative business, to generate employment, to contribute to the substitution of honey and other hive products imports, and to promote exports from Nepal.

Apart from throwing light on the challenges and the needs of the beekeeping sector, the Policy can be seen as a source of foundational guidance for the development of working principles and a strategy for the promotion of the beekeeping sector.

It informs about the bee promotion strategic plan of action, including bee species management, bee pasture strengthening and management, bee migration management, bee disease and pest management, honey hunting management and habitat conservation, honey production and market management, a subsidy, support and promotion strategy, loans and insurance for beekeeping, taxation, arrangement for bee research, human resource management in the sector, but also about standardization of honey quality, certification, and pesticide residue monitoring, standardization monitoring, and regulation, as well as colony management for pollination services, bee-related institutional development and the management of legal concerns.

The policy is expected to serve as crucial guidance to project development, and as a backbone for implementation.

Good Beekeeping Practice Directives 2074 (2017 AD)

The Government of Nepal further approved and published the Good Beekeeping Practice Directives 2074 (2017 AD) as the guideline document for quality assurance and increasing competitiveness of Nepalese honey.

It includes the directives with regard to food safety, good beekeeping practices, residue monitoring plan, product quality, good beekeeping practices, standard of good beekeeping practices, food safety, environment management, workers' health, safety and welfare, agricultural chemical use management, suitable environment for beekeeping, beekeeping pocket area selection and development, bee species selection, beekeeping zoning and zone management, seasonal management of bees, special management practices, proper harvesting of honey and other hive products and storage, apitherapeutic importance of hive products, queen and colony production, production and supply of beekeeping equipment and implements, processing of hive products, and honey quality standard, quality control and assurance, laboratory management, hygiene, human resource management and capacity building, HACCP, insurance, honey value chain stakeholders, fair trade, linkages and networking with international organizations, environmental pollution, human safety and institutional security, technical committee formation and accountability.

The Directives are expected to provide guidance to achieve world standard quality honey production and contribute to facilitate trade in honey. The Directives will guide project implementation.

B. THE HONEY VALUE CHAIN

Beekeeping and honey hunting in Nepal

Beekeeping has a cultural heritage in Nepalese society and originated as honey hunting thousands of years ago[8]. Nepal is known for its "ancestral technology" of beekeeping. To some extent, this continues as geographical conditions and lack of modern equipment typically require honey collectors to climb rock faces and trees, collecting wild comb with very simple equipment.

Honey consumption has a long tradition in the country. Farmers kept bees to meet the demand in the local, national and international markets and for pollinating farm crops like oilseed crops, buckwheat and fruit crops to increase the yield. Furthermore, bees play a crucial role in conserving biodiversity by pollinating wildflowers.[9]

There are five species of social bees that are considered important for honey production in Nepal*: Apis mellifera*, *Apis cerana*, *Apis dorsata*, *Apis florea* and *Apis laboriosa*. Two species (*Apis mellifera*, *Apis cerana)* live in enclosed spaces and are kept in hives, while the others are open nesting species that are not managed.

Species	Bees that can be managed and kept in beehives	Wild open-nesting bees living on trees/ water tanks/ buildings	Wild open-nesting bees living on high steep rocky cliff faces & overhangs	Altitude range in which species is found
Apis mellifera	Yes			190m to 1,200m
Apis cerana	Yes	Yes		60m to 3,500m
Apis dorsata		Yes		190m to 1,200m
Apis florea		Yes		10m to 1,000m
Apis laboriosa			Yes	850m to 3,500m

Table 1 – Species of social bees producing honey in Nepal

Modern beekeeping systems are relatively new to Nepal and the European/ African species (*Apis mellifera*) is not indigenous. Modern frame beehives and colonies of *Apis mellifera ligustica* were introduced in the mid-1990s by government officers intending to increase honey production and create commercial beekeeping opportunities. The introduction was justified based on research and that the development of *Apis mellifera* husbandry, management and the selection of improved lines was at the time, throughout the world, well advanced. To develop production from *Apis cerana* to the same level would have taken considerable time and investment.

Little or no work has been done in Nepal on *Apis dorsata*, *Apis florea* or *Apis laboriosa,* but *Apis dorsata* has been studied, and sustainable harvesting systems have been developed in India and across Southeast Asia.

[8] *Joshi SR. Honey in Nepal: Approach, Strategy and Intervention for Subsector Promotion Income Distribution (2008) Laliptur: German Technical Cooperation/Private Sector Promotion- Rural Finance in Kedar Devkota (2020) "Beekeeping: Sustainable Livelihoods and Agriculture Production in Nepal"*

[9] *Kedar Devkota (2020) "Beekeeping: Sustainable Livelihoods and Agriculture Production in Nepal"*

Most honey in Nepal is extracted by squeezing the combs by hand. Squeezed honey is common in the mountain areas of Nepal where *Apis cerana* beekeeping is practiced in fixed-comb log and wall hives. Some honey, mainly honey produced by *Apis mellifera* beekeepers who keep bees in moveable frame hives, is extracted by centrifugal extraction.[10]

Most of the honey produced in Nepal is sold as table honey to the domestic market and consumed as food and for use as an ayurvedic medicine. Only small volumes are exported.

Beekeeping is recognized as a useful income generating option among poor and vulnerable communities and landless farmers. Small-scale beekeeping or honey hunting can make significant contributions to improving their livelihood security, requiring minimal start-up investment; needing little or no land (hives can be placed in a small area close to the house), and offering diverse products that can be used in the households or sold to supplement incomes. Beekeepers with hived bees can also supplement their incomes by providing pollination services to farmers.

The introduction of *Apis mellifera* and frame hives brought a new dynamic to the sector. *Apis mellifera* was introduced to establish commercial beekeeping/honey production as an enterprise.[11] This opportunity has attracted younger, more educated, business-minded people to the sector (rather than older traditional *Apis cerana* beekeepers and honey hunters). This new cadre of beekeepers has adopted modern methods, modern equipment and migratory beekeeping systems to maximize production through Nepal's long honey production season. This constitutes a major contrast to most LDCs where beekeeping development is dependent on older beekeepers who are using traditional equipment and husbandry systems that have not changed for generations. Nepal has created a new sector by importing a complete, progressive beekeeping model without needing to re-educate established beekeepers and change generations of practices and beliefs.

The distribution of highly diversified flora; the abundance of forage; the richness of honeybee species, and excellent climatic conditions suggest that beekeeping has a great potential in Nepal.

Production of and trade in other bee-products including beeswax, pollen and propolis is not yet significant but is also deemed to hold considerable potential, especially given the potential high quality of these products and their application in a society that places great emphasis on alternative medicines.

The leading districts for honey production (indicated by an "x" on the map[12] below) are Chitwan, Nawalparasi, Rupandehi, Dang, Sarlahi, Kapilvastu, Bardiya, Kailali, Pyuthan, Sunsari, Mahotari, Makwanpur, Banke, Surkhet and Kanchanpur.

[10] *Jagadish B. Shrestha (2018) "Value Chain Analysis of Honey Sector"*

[11] *The strain of bees introduced is Apis mellifera ligustica, a very gentle bee that is easy to work.*

[12] *Map adapted from https://d-maps.com/carte.php?num_car=107774&lang=en (accessed 23 February 2023).*

While several areas have high beekeeping potential, the project will need to focus the intervention on 8 districts in 4 provinces, namely Madhesh, Bagmati, Gandaki, and Lumbini, due to the project's scope. Further details can be found in Section D.6 *Geographic scope of the project*.

Figure 1 – Map of Nepal by district, leading districts for honey production indicated.

Honey production

Nepal is the only country in the world in which honey is produced at altitudes between 60 meters and 4,200 meters. The floral diversity, climatic conditions and altitude variation provide opportunities to produce specialized honey varieties with diverse colors and often unique aromas and flavors.

Despite such diversity, Nepalese honey has yet to establish a significant position in the global market (producing only 0.15 percent of the world's total (FAOSTAT 2017)). This reflects a wide range of obstacles including its position as a landlocked country and its remoteness from deep-water ports, and very limited investment in the value chain (particularly the quality infrastructure system).

The huge diversity of honey types in Nepal is based upon the richness of floral types within a region, the ability of beekeepers to produce many mono-floral types, and the fact that different bee species to produce honey with different flavor profiles from the same crop. Approximately 70% of honey produced in Nepal comes from wildflowers.

The honey from each species of bee is distinguishable in many ways, in part reflecting enzyme content/ balance. *Apis cerana* spends more time processing nectar into honey, leading to higher invertase content. *Apis mellifera* processes nectar faster, so invertase levels are lower. *Apis laboriosa* produces honey with a higher moisture content and, typically, has a higher glucose oxidase content (which prevents fermentation).

Apis dorsata honey is considered a high-value crop for connoisseurs and is only available in low quantities because colonies are generally inaccessible, and the number of colonies is in decline.

Mustard and rudillo honey produced by *Apis dorsata* is considered better in flavor than mustard and rudilo honey produced by *Apis mellifera* (attributed to respective enzyme content).

There are, therefore, three niche types in Nepal:

- regional specific honey
- flower specific honey
- bee species specific honey

Table 3 – Overview of honey types produced by different bee species

Bee species	Honey (by floral source)
Apis mellifera	Buckwheat
	Nepalese butter tree (chuiri)
	Mustard
	Litchi
	Jungle
	Rudillo (from Pogostomone sap)
	Sunflower
	Honey dew[13]
	Fruit tree
Apis cerana	Unspecified (mixed flora)
	Small volumes of specific floral types
Apis dorsata	Mustard
	Rudillo
	Sisau forest (rare due to protected forest accessibility for honey hunters)
	Low altitude forest honey
Apis laboriosa	Unspecified

Nepalese agricultural products are perceived as pure and environmentally rich, a reflection of Nepal's ecology and diversity. There are voluntary organic certification schemes[14] working with agricultural production but these have yet to be adopted by the apiculture sector.

Current honey production is estimated at 3,900 tons per annum,[15] with production levels increasing. There is no differentiated data on honey by honeybee species or floral type, but *Apis cerana* honey probably accounts for 25% of this production total.[16]

Estimates based on mapping of Nepal's flora suggest honey production potential is up to 20,000 tons per annum. Nepalese experts consider this an underestimate, but given that current production levels fall well below the production potential estimates, there is little need to question the opportunities. Furthermore, honey production is possible through most of the year, and the climate and abundance of rich forage sources provide Nepal with the potential to adopt beekeeping on a significantly large scale.

Modern beekeeping based on *Apis mellifera* has been adopted with enthusiasm by business-minded people. The potential for further adoption, nationally, for professionalizing beekeeping with *Apis cerana* bees and professionalizing honey hunting (developing from the open nesting "wild" indigenous species) are significant, but production/productivity requires QIS development, improved management practices and greater entrepreneurship in the value chain innovation.

[13] *Honeydew is a sugar-rich sticky liquid secreted by aphids and other insects as they feed on plant sap. The honey in Nepal is collected from pine and spruce trees (Salle Maha) and oak trees (Dalle Maha) in some mountain areas.*

[14] *For example, Organic Certification Nepal (OCN).*

[15] *Based on CIED assessments using the most reliable figures available.*

[16] *Based on information from processors and sector specialists in Kathmandu.*

Type of honey	Average retail price per kg in Kathmandu	Average retail price per kg upcountry[17]
Apis mellifera	USD 5.00 to 6.00	USD 6.60
Apis cerana	USD 10.00	USD 12.30
Apis dorsata	-	USD 12.30 to 16.40
Apis laboriosa	USD 20.00 to 30.00	-

Table 2 – Domestic prices in USD of honey in Nepal

Following are average retail prices obtained from processors and sellers during UNIDO's fieldwork. No official database recording this type of information exists. The prices have been evaluated in reference to the cost of *Dabur* (brand) honey, which is sold in Kathmandu at USD 5.25 per kg honey.

Bee species	Type of honey	Retail price per kg in Chitwan
Apis mellifera	Buckwheat	USD 6.40
	Nepalese butter tree	USD 7.00
	Mustard	USD 6.50
	Litchi	USD 9.00
	Jungle	USD 8.10
Apis cerana	Unspecified	USD 11.40
Apis dorsata	Mustard/ rudillo	USD 8.20
Average USD / kg		**USD 8.10**
Apis laboriosa (not included in the average)	Unspecified	USD 42.60

Table 3 – Prices in USD in Chitwan for different types of honey

In order to provide an international comparison, the EU average import price for honey in the period 2018-2021 (excluding New Zealand) was around EUR 2.16 per kg.[18] The average price of honey imported to the USA in 2020 was just under USD 6.00 per kg (excluding New Zealand honey).[19] This is far below the price that Nepalese honey can command on the domestic and regional market, including some export markets for niche products (and low volumes) as Japan, South Korea and UAE. It is clear that Nepal will struggle to compete with major players in terms of price in the EU and US markets, particularly for bulk-undifferentiated honey.

Honey value chain context

The Nepal honey value chain is not based on linear steps (with products passing from producers to traders, to aggregators, to processors who sell on to the ultimate buyers).[20] Many beekeepers sell their honey directly to final consumers. In fact, many of the emerging enterprises cover more than one role, operating with considerable vertical integration.

Supply chain patterns vary and there is no rigid division of functions carried out by value chain operators. Following, are examples:

Many of Nepal's honey producers (the beekeepers/honey hunters) sell directly to final consumers, or to processors who sell wholesale to consumers. There are few intermediaries, i.e. few people trading

[17] *Converted; price in Bharatpur.*

[18] *EU Imports of Honey by Country of Origin 2018 – 2021 (Extra EU imports; in ton) - Source: Eurostat Comext /EC "Honey market presentation."*

[19] *Source: National Honey Report – USDA Customs and Border Protection (CBP) Automated Commercial Environment (ACE)*

[20] *Please see p.16 for a schematic diagram of the honey value chain in Nepal.*

and aggregating honey to sell on to larger processors. Nepali beekeepers have developed a multifunctional role within the honey value chain; they prepare hives, manage bees, harvest and process honey, then package and sell it to consumers. This is particularly true of the more traditional beekeepers working with *Apis cerana* bees and the honey hunters collecting wild comb honey. In this supply chain pattern, honey is seldom differentiated by floral-type or bee species.

An alternative but less common supply chain has developed around *Apis mellifera* beekeepers, who are observably more commercially minded and business-like. Beekeepers and groups harvest honey, process and then sell it (in bulk) to enterprises/cooperatives. The beekeepers and processors usually differentiate honey by floral type. The enterprises/ processors then further process and jar the honey for selling to retailers (or directly to customers) or pack in bulk for other customers. The strong vertical integration can provide high quality products for demanding and competitive markets. Beekeepers typically receive support, training or guidance on practices and hygiene, and purchase or receive equipment (and other technical inputs) from an enterprise or a cooperative they are associated with. This supply chain pattern is increasingly adopted. Cooperatives and private processors usually maintain a few apiaries themselves (as producers).

Although cooperatives are common, their role, unlike the private processors, seldom extends to buying and trading honey from members. Beekeepers only sell to cooperatives when they are unable to sell their honey in the local market.

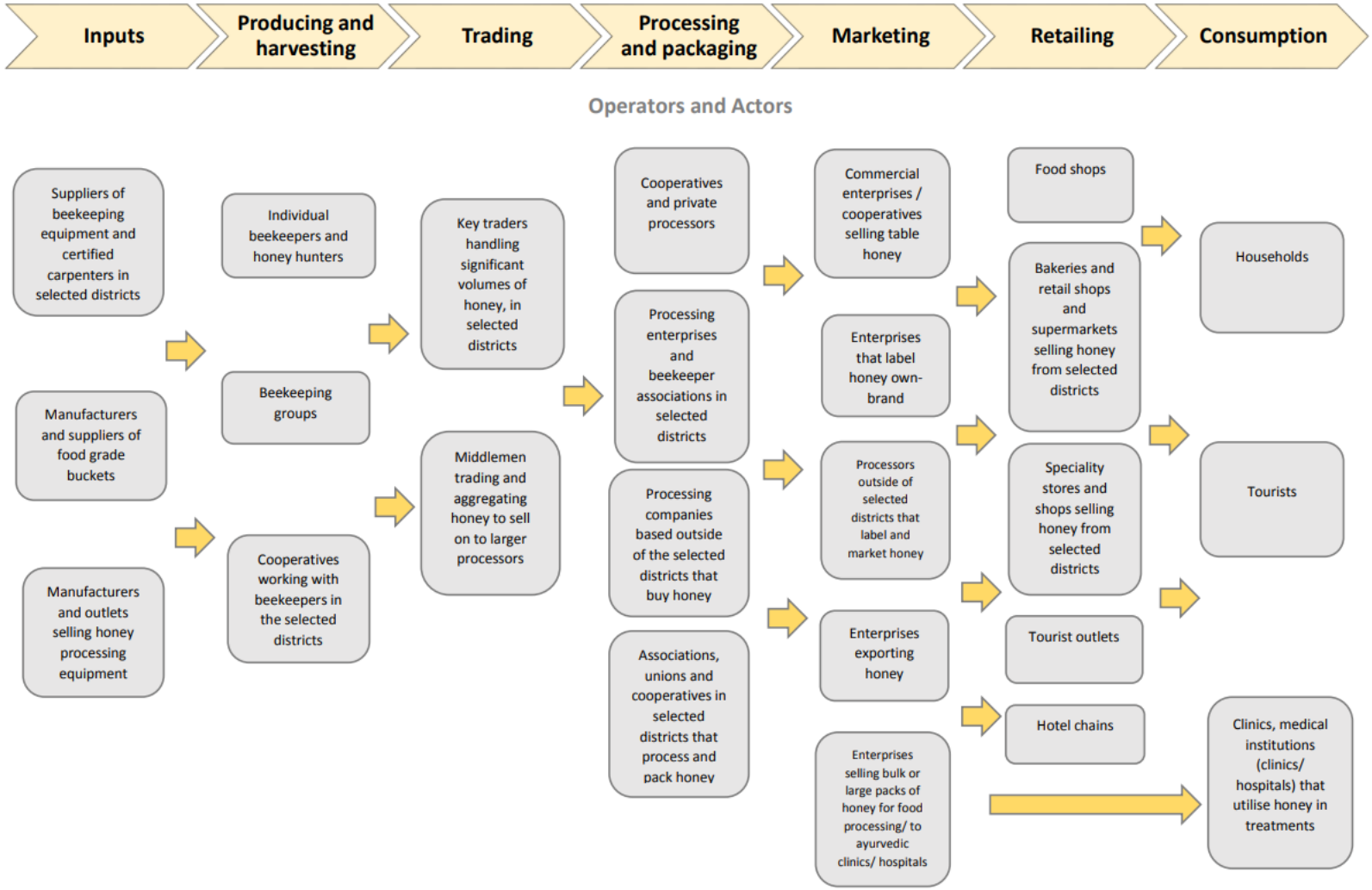
Where traders, wholesalers and retail buyers buy from producers, the relationships are typically informal. In these cases, there are seldom contracts, and transactions are wholly based on trust and on cash payments.

Most beekeepers sell at least a proportion of their honey directly to local consumers. While small operators are generally limited to the single function of beekeeping and the production of honey, the major, well-organized operators are therefore influencing the entire value chain.

Overall, honey value chain actors and related institutions show a strong a commitment to building the sector by increasing production and productivity; strengthening the requisite QI structure and the production and marketing of niche honey for the internal and export markets could provide significant economic and social benefits following appropriate investment and technical support.

Please refer to the schematic diagram of the honey value chain in Nepal on the next page for reference.

Figure 2 – Schematic diagram of the honey value chain in Nepal.



Value chain patterns[21]

As the different sectors of the Nepalese honey value chain are considerably inconsistent, based on bee species, the description of the value chain is broken down into three areas:

Apis mellifera honey value chain:

The *Apis mellifera* honey value chain is dominated by progressive, business-minded people and the sector utilizes modern systems and equipment. Producers and processors use frame hives; move their bees to different nectar sources through the seasons (in a migratory beekeeping system); use modern protective equipment; harvest honey using centrifugal extractors; pack honey in food standard plastic buckets, and shift their honey by vehicle. Processors handling *Apis mellifera* honey act as hubs providing inputs, training and advice to their network of producers, and sell hives, protective equipment, tools and honey buckets. They typically buy honey from beekeepers with whom they have a sustained working relationship, and some have established (or are establishing) traceability systems to further improve quality, accountability and address problems with producers. Their processing facilities are modern, with permanent hygienic structures that are subdivided for processing, bottling and storage, with staff facilities. *Apis mellifera* beekeeping equipment for production and processing is largely manufactured in Nepal.

Apis cerana honey value chain:

The *Apis cerana* honey value chain tends to be more traditional in both equipment used and practices. These bees were the only species subject to widespread beekeeping in Nepal prior to the introduction of *Apis mellifera* in the mid-1990s. The sector is dominated by older, more traditional beekeepers, many still using traditional practices with basic equipment and log or box hives. Their harvesting methods are basic, so a lack of hygiene is a continuing issue and, as the *cerana* sector is relatively un-modernized, *Apis cerana* beekeeping is seldom run as a business. (It is usually run as a sideline to other livelihood activities, such as farming.) The processing of *cerana* honey tends to use elementary equipment and methods, and the honey is sold locally. Despite this, *Apis cerana* beekeeping is more profitable than *Apis mellifera* beekeeping, as the work with these bees is less hard for the value of honey per hive produced. Initiatives to improve the *Apis cerana* honey value chain have been limited to the introduction of frame hives (tailored to the size of this species) and basic husbandry training for *cerana* beekeepers, but little work has been done on productivity and no major efforts to commercialize the species have been undertaken.

The hunted honey value chain:

The three other social bees producing honey, *Apis florea*, *Apis dorsata* and *Apis laboriosa*, are not managed/ husbanded and, as open-nesting bees, cannot be "hived". Their honey is hunted and, because it is hunted, this sector is marginalized and has received negligible attention from development bodies. Some useful studies have begun to document the behavior of these species and have highlighted their importance as natural pollinators, but little has been done to harness their potential, improve hunting practices (making harvesting less destructive), or developing equipment and systems to improve the working conditions of honey hunters.

Therefore, most honey hunters have not been brought into the beekeeping sector for training in harvesting, honey handling, quality control and standards, or differentiation of products and their

[21] *Primary data was collected by desk research and review of reports and publications on previous honey value chain projects in Nepal, research articles and the internet. Secondary information is based on field work in Nepal (undertaken in March 2022) including: face to face interviews with key actors and other respondents; visits to apiaries, processing facilities and factories manufacturing equipment; meetings with processors and retailers; meetings with government officers at ministry, departmental and district levels; visits to government laboratories and beekeeping training facilities; and meetings with cooperatives. Findings were cross-checked and validated. This included conversations with producers and cooperative members, government field staff, processors, and equipment manufacturers as well as national a district government staff.*

equipment is very rudimentary. They have little knowledge of the true value of their product, much of which is sold to traders, and mixed with other honey types (floral-type and from other bee species).

Access to beekeeping tools and equipment:

Nepal is self-sufficient in the production of beekeeping and honey processing equipment. Hive making is controlled, and producers can be trained and be certified as bee resource centers. There are about 40 hive manufacturers in the country (although not all are certified). Equipment standards appear, generally, to be good, but there are many small-scale producers/carpenters turning out hives of varying quality. Many processors are also registered as bee resource centers.

Key honey value chain roles

The key value chain roles can be summarized as follows:

Table 6 – Nepal honey value chain roles by provider

Role / Main Duty	Provider

A. Production inputs and technical support	• Input suppliers
	  ○ Equipment suppliers
	  ○ Packaging suppliers
	• Education/ Training centers
	• Extension Providers

B. Production and harvesting	• Beekeepers • Local beekeeping groups • Commercial beekeepers, pollinators and colony/ queen producers • Cooperatives dealing with beekeepers and honey
C. Buyers	• Private companies/ cooperatives trading/ aggregating/ processing • Consumers (via supermarkets, etc.) • Tourist associations and Hotel chains • Medical institutions including ayurvedic clinics and hospitals • Food manufacturers including bakeries and confectionery makers • The export market/ overseas buyers
D. Business support providers	• Banks • Insurance companies • Chambers of Commerce • Enterprise development agencies
E. Projects and other entities	• Government departments and programmes • Multi/ bilateral development initiatives • Non-Governmental Organizations (NGOs)
F. Representative bodies	• Beekeeping associations • Associations representing processors
G. Institutional actors working in economic empowerment	• Enterprise development organizations • Trade development organizations • Agri-food production and processing bodies • (M)SME development organizations
H. National QIS institutional actors	• Laboratories

	• Food hygiene and standards agencies
I. International bodies	• Organizations with transboundary mandates

Key constraints and gaps in Nepal's Quality Infrastructure System for honey

Quality control and inadequate infrastructure constrain growth of the honey industry. These include poor honey storage systems, lack of quality monitoring and control, inadequate laboratory facilities, and poor institutional mechanisms for ensuring quality and standards. In the absence of these facilities, it is difficult to tap specialty markets where better pricing is offered for niche products such as Nepal's honey.[22]

UNIDO field mission findings suggest that producers generally show a willingness to commit to and improve quality, if financial constraints for quality improvements (e.g. improving facilities, implementing food safety and quality principles, etc.) are appreciated. The processors interviewed are taking the initiative, often with limited government support, to adopt good practices, innovate, and generally improve their own capacities and facilities, and to strengthen the understanding and capacity among producers. Key private sector processors and cooperatives are championing progress in quality.

Key QI-related constraints at level of Government institutions/bodies encountered and/or observed include:

- QI supervision of the sector is still relatively ad hoc, with limited formal inspection. Complaints and problems are addressed, but with limited capacity.
- The Nepal Bureau of Standards and Metrology (NBSM) is a respected professional body, operating a voluntary certification scheme. Detailed standards for honey exist that are sufficiently broad to encompass standards for honey from both hived and wild species, but honey producers and processors are not required to test their honey with NBSM. Value chain actors seem to trust the Bureau, but find their services expensive and, because test results are published as notices, the risks (from bad test results) are greater than the certification benefits, especially in a country where voluntary certification has little leverage among customers. Accordingly, demand for NBSM testing in the honey sector is limited, even from the large packers.
- The Department for Food Technology and Quality Control (DFTQC, under MOALD) is the body mandated to oversee food testing (including honey), but their laboratory capacity is limited. DFTQC has a network of local inspectors, but honey is not a priority product. Furthermore, value chain actors wanting tests find DFTQC is comparatively slow and expensive, and trust in the facility is limited. Testing for honey destined for the local market is very limited; and where honey is exported, the processing companies/exporters tend to use international laboratories in Europe or India.
- The World Bank has supported the construction of separate buildings for the establishment and operation of the Sanitary and Phyto-sanitary Laboratory (SPS-Lab). The Central Agricultural Laboratory (CAL) (also under DOA under MOALD) partly uses the premises of the SPS-Lab. The laboratory was established to test agricultural produce for pesticide residues,[23] and its mandate is still developing. Although it is not mandated to address the wider testing for honey, there are suggestions (within the MOALD) that CAL would be the most appropriate home for tests addressing the needs of the honey value chain.[24]

[22] *Honey in Nepal Approach, Strategy and Intervention for Subsector Promotion. Kathmandu. GIZ. 2008.*

[23] *CAL only tests for pesticide residues in fresh fruit and vegetables.*

[24] *Tests against mandatory standards cover moisture content, ash content, and sucrose content, reducing sugar content, fructose-glucose ratio, acidity, water insoluble solids and HMF.*

There are other gaps in Nepal's QIS for honey, which include:

- A lack of legislation covering locally consumed honey, with no mandatory testing. There are no checks on the quality of raw honey unless they are carried out (voluntarily) by a processor.
- No post-harvest technical development unit.
- There appears to be no institution providing training in food hygiene in the food-processing sector. (Food quality appears to be neglected in almost every sector. The constraints are not limited to honey.)
- Lack of established codes of conduct for producers and processors, with good practices to achieve the established standards documented.

As indicated, many value chain actors are taking positive steps on quality management. Traceability systems are being established,[25] and many processors recognize that long-term relationships with their suppliers are key to developing quality along the value chain.

One further issue should be mentioned: While India has a tropical standard for Hydroxymethylfurfural (HMF) levels in honey, Nepal does not, despite having tropical honey production areas in the lowlands using *Apis mellifera* bees. Nepal's standards do not align with this.

On the question of a quality culture, it has been observed that a culture for quality does exist within the *Apis mellifera* honey value chain. It is driven by the producers and processors operating within it, rather than a national quality infrastructure i.e., the culture of quality is not effectively supported by national institutional bodies. In contrast, the *Apis cerana* honey chain does not exhibit a strong culture of quality, and the culture of quality in the hunted honey value chain is comparatively weak.

The trade in honey products

Overview of international market:

FAO statistics show the annual production of honey worldwide was approximately 1.77 million metric tons in 2020 and the world imports of honey reached 585,311 tons. Asia, South America and the EU are the major regions exporting.

The European Union is the world's second biggest honey producer (280,000 tons) after China but honey demand is even greater. The EU imports 40% of the honey that it consumes. The main suppliers of honey to the EU in 2020 were Ukraine and China (supplying over 50% of EU imports), followed by Argentina (13% of EU imports).

The United States of America are the world's largest importer of honey, providing significant opportunities for honey exporters. Over 70 countries supply honey to the USA, including very small countries.

The global honey market is expected to continue growing and forecasts are very optimistic. Consumers are increasingly aware of the benefits of a healthy lifestyle, so a high demand for nutritious food products is a prominent factor driving the market. Growing health concerns in the wake of the COVID-19 pandemic could be a game-changer for the honey sector. Honey positively affects the immune system through its antibacterial, antiviral, and anti-microbial properties. Honey is receiving increasing attention and wider acceptance as an effective medicine to treat acute cough and throat infections and a multitude of other medical problems/ conditions.

At industry levels, product manufacturers are developing innovative ways to engage an increasing the number of honey consumers. For instance, in July 2021, *Dabur India* launched honey-infused syrups, a new line of syrups and spreads. The product has no added sugars and is a healthier version of the classic

[25] *Nepal has already adopted traceability schemes for agricultural crops including mandarins.*

varieties available in the market. In addition, key players including *Blenditup*, *Just Like Honey*, and *Vegan Honey Company* are launching vegan honeys.[26]

The increasing penetration of independent retail giants such as *Walmart* and *Costco* is boosting honey products' visibility and attracting a larger consumer base. Online platforms offer high levels of convenience, increased product visibility, and at-home delivery features, which are promoting the segment's growth.

Nepal's international trade in honey:

The import-export data for Nepal varies according to source. While the government periodically provides official records on trade data,[27] most data appears to be gathered through direct and informal channels.

ITC Trade Statistics indicate that Nepal exported natural honey to the value of USD 30,000 in 2019, and USD 57,000 in 2020.[28] The main destinations between 2018-2020 were Malaysia, Japan, UAE, China, and India. (Although processors indicate they sell also sell to South Korea, these sales do not appear in any official database).

The honey trade balance in Nepal is largely negative; import levels widely exceed honey exports.

Nepal's honey trade performance has been poor and the economy has been unable to capitalize on the growing international demand for honey. Nepal remains a net importer of honey, and rising demand has not translated into rising exports (the volume of honey imports has been increasing, but exports remain constant).

The small volumes of honey being exported from Nepal to countries like China, United Arab Emirates, Malaysia, Japan, South Korea and others, are private initiatives, with individual processors selling niche products (in low volumes) to these markets. There is negligible and sporadic export to the USA, and a notable absence of Nepalese honey in European markets. Nepal does not have Third Country Status for honey exports to the EU and thus cannot export to any EU country.[29]

National policies for export development and promotion exist and are based on the Nepal Trade Integration Strategy (NTIS 2016). The NTIS was developed to support and build trade capacity through trade negotiation, but honey marketing remains elementary and must be developed in order to enter competitive international markets.

The potential for export to developed countries (including Nepal's neighbors India and China) can be increased through opportunities created by bilateral and multilateral trade agreements. Nepal's affiliation with regional and international organizations, such as World Trade Organization (WTO), the South Asian Free Trade Area (SAFTA), Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BISTEC), and agreements with major trading partners, have expanded market access, but this has not led to the expected results. The impact of export promotion has been limited by Nepal's inability to utilize and benefit from concessions offered by these agreements.[30] The weak performance of the Nepalese honey industry cannot be attributed to customs and tariff-related trade barriers, since Nepal enjoys preferential treatment as a zero-tariff nation among most developed countries globally. This provides the country with an advantageous position (because of tariff advantages) against competitors like China and India.

[26] *Source: Grand view research "Market analysis report" https://www.grandviewresearch.com/industry-analysis/honey-market.*

[27] *See: https://www.customs.gov.np/page/statistics*

[28] *Source: ITC calculations based on Trade and Export Promotion Centre statistics since January 2017.*

[29] *Nepal is on the Third Country List for ginger and turmeric.*

[30] *The Fifteenth Plan, Fiscal Year 2019/20 – 2023/24 (2020), National Planning Commission, Government of Nepal*

Nepal's domestic trade in honey:

In the recent years, domestic consumption of honey in Nepal has increased, particular in the major cities and urban areas. In effect, Nepali producers are more connected with national and regional markets than overseas markets.

Consumers in Nepal are beginning to show growing interest in locally sourced food, reportedly perceiving that local products have both higher intrinsic quality (healthier, fresher, and more diverse) and the potential to benefit local communities and foster rural development, environmental conservation, agrobiodiversity, etc. However, this interest (in some sectors of the Nepalese society) in both "quality" and the notion of "local" is limited and the domestic market remains poorly addressed. There are no strong communication strategies for promoting quality and local products.

Local authorities and the main value chain stakeholders are keen to strengthen the position of Nepalese honey in the local market, but most stakeholders believe the best strategy for increasing domestically produced honeys' market share is to compete on price. There is little thought, yet, on basing competition on quality, source and flavor, promoting its purity, the diversity of unique local honey types, traditional uses as well as medicinal properties.

In addition, the honey on shop and supermarket shelves in Nepal's major urban centers are dominated by imports. Many honey consumers currently prefer "branded and processed honey" than local honey without branding. These are relatively cheap (comparatively significantly cheaper than good quality Nepalese honey) and have a confused reputation for adulteration and quality.[31] Furthermore, Nepalese branded honey in supermarkets is usually blended with other origins.

Problems to be addressed

The major constraints to making use of the benefits of Nepalese honeys can be divided in four categories as follows:

a) Production challenges:

• Low production levels at the national level;
• Insufficiently working *Apis mellifera* colonies (a reflection of how recently *mellifera* has been introduced);
• Inadequate development of the *Apis cerana* beekeeping sector, with poor colony productivity, incomplete modernization of the sector, and an older demographic among *cerana* beekeepers;
• Inadequate attention to conserving bee species; maximizing production and quality in the hunted honey value chain;
• Insufficient differentiation of honey (by floral-type, bee species, and location) among producers and smaller processors;
• The high cost of local honey in Nepal's domestic market, and the relatively low cost of imported honey;
• Poor appreciation of quality and flavor and honey diversity in the market;
• Lack of zoning in areas where both *Apis mellifera* and *Apis cerana* can be managed, to protect, maintain and increase production of niche *cerana* honey;
• Continued pesticide problems in honeybee foraging in crop-growing areas, where farmers are failing to recognize the mutual benefits between cropping needs and hive production;

[31] *Some Nepalese processors (producing good quality products) suggest Government should impose tighter controls on honey imports to minimize sales of poor quality, possibly adulterated; honey in Kathmandu and other centers, i.e., the importation of honey for the mass market should become better regulated.*

• Insufficient support from/capacity in the national QIS to ensure standards compliance, ensure hygiene and quality, test to confirm quality parameters, and generally strengthen food hygiene practices through the honey value chain;
• The need to transform the honey sector into a profitable, competitive and commercialized sector, by improving regulatory measures for quality and hygiene.

b) Processing challenges:

• Insufficient support from national QIS to adopt standards and ensure quality in the honey value chain;
• The need to strengthen a culture of quality by processors, up the supply chain to producers;
• Insufficient differentiation of honey by (many) producers and processors, by floral-type and bee species;
• Lack of support from government for the adoption of traceability systems among processors (although some processors are taking the initiative);
• Failure of the sector to adopt voluntary quality testing/ certification by the NBSM;
• The need for better business skills among producers and cooperatives; and better linkages between actors/ stakeholders in the value chain.

c) Institutional and policy challenges:

• A strong bias in government support for the honey production sector in favor of commercial production from *Apis mellifera*-based systems, with insufficient recognition of the potential (both economically and environmentally) of the *Apis cerana* and the hunted honey sector's;
• Failure to promote the importance and value of NBSM certification in the honey sector;
• Inadequate laboratory testing facilities and insufficient staff for undertaking basic tests for honey;
• Lack of a national food hygiene curriculum and insufficient training for personnel working in the food/food processing sector;
• The need to encourage more women to work in the value chain, and a particular need to get young people and women involved in the *Apis cerana* and the hunted honey sector.

d) Market challenges:

In the domestic market:
• Lack of information among the Nepalese consumers on honey quality and local production;
• Widespread lack of knowledge among the Nepalese public about the diversity of honey that can be produced in Nepal;
• Poor packaging and label design;
• Poor pricing strategies and a widespread belief that the only way to compete in the domestic market is by selling cheaper than established brands;
• Insufficient checks for quality and standards on major brands of imported honey and commercially blended Nepalese honey, sold to urban outlets in Nepal;
• Building capacities to expand commercialization and competitiveness;

• Developing entrepreneurship in MSMEs.
For the international market:
• Lack of adequate and effective government support for exporters developing international markets;
• Mistrust in and inadequate facilities in-country for Nepal's honey testing capacity, and a reliance on (expensive) overseas laboratories for checking conformity with the respective international standards;
• Limited support available for helping processors/exporters address the sanitary and phytosanitary standards set by importing countries;[32]
• Insufficient advantage taken of available multilateral, regional and bilateral trade agreements that include provisions for honey;
• Insufficient international market assessment and lack of export promotion strategies for building an export market (in accessible countries) for the range of niche, high-value and unique honeys that Nepal can produce;
• Absence of a Nepalese honey mark, e.g., "Taste of Nepal".

C. REASONS FOR UNIDO ASSISTANCE

UNIDO is the specialized agency of the United Nations with a unique mandate to promote and accelerate sustainable industrial and economic development. UNIDO supports countries along industrialization pathways that advance inclusive growth, reduce inequalities, foster digital and green transitions, boost resilience, and accelerate progress towards the Sustainable Development Goals. With its mandate, the Organization carries out four core functions: (i) technical cooperation; (ii) analytical and research functions, and policy advisory services; (iii) normative functions, and standards and quality-related activities; and (iv) convening and partnerships for large-scale investment, knowledge and technology transfer, networking and industrial cooperation.

UNIDO has an extensive and proven record of accomplishment in working with governments, industry and other major stakeholders in trade facilitation and trade capacity building through quality and standards compliance, with many projects implemented around the world. UNIDO strengthens national and regional QI systems by defining quality-related policies and good governance strategies, strengthening metrology, standardization and accreditation services, enhancing the competitiveness of the private sector and promoting quality awareness. UNIDO has unique global expertise, being the largest multilateral player in QI development and a preferred partner of many developing countries and development partners, and "is widely recognized to be a center of excellence in this area"[33]. Building on the achievements and lessons learned from previous projects allows for exponential results.

The Directorate of Technical Cooperation and Sustainable Industrial Development (TCS) oversees the Organization's development of capacities for industrial development as well as industrial policy advice, statistics and research activities and the Organization's normative contribution to Member States and global development community in achieving the SDGs. The Directorate also ensures the application of strategies and interventions for sustainable industrial development related to Environment, Energy, SMEs, Competitiveness and Job creation, as well as Digitalization and Artificial Intelligence. The Directorate houses the technical Divisions of Capacity Development and Industrial Policy Advice (TCS/CAP); Circular Economy and Environmental Protection (TCS/CEP); Decarbonization and Sustainable

[32] *These include the EU's requirements for a Residue Monitoring Plan (RMP) and Hazard Analysis Critical Control Point (HACCP) plan; Grannotoxin-free testing by South Korea; and testing for food adulteration, HMF and other standards by India, USA and Japan, etc., as well as compliance with CODEX Alimentarius.*

[33] *Saana Consulting (2015). Review of Norad's support to UNIDO's Trade Capacity Building Programme, 2005-2013, p.24*

Energy (TCS/DSE); SMEs, Competitiveness and Job Creation (TCS/SME); and Digital Transformation and AI Strategies (TCS/DAS).

The Division of SME Competitiveness, Quality and Job Creation (TCS/SME) works towards increasing the competitiveness of industries in developing countries and countries in transition, especially emphasizing business development of SMEs engaged in manufacturing and creating jobs therein through two dedicated Units:

• SME Development and Job Creation Unit (TCS/SME/SDJ)

• Competitiveness, Quality and Compliance Unit (TCS/SME/CQC)

The Competitiveness, Quality and Compliance Unit (TCS/SME/CQC) builds national and regional production and quality infrastructure systems, with an emphasis on providing internationally recognized services, facilitating SME participation in regional and global value chains; strengthening institutional quality infrastructure capacities (i.e. standardization, metrology, and accreditation); building conformity assessment capacities (testing, inspection, certification, calibration, etc.); and supporting trade facilitation and quality awareness with the public sector, economic operators and consumers, placing a special emphasis on capacitating SMEs. The project formulated in this document will be implemented by the TCS/SME, led by the Competitiveness, Quality and Compliance Unit (TCS/SME/CQC).

How we work

The purpose of UNIDO's technical cooperation function is to build capacity of Member States to initiate and carry out their own programmes in the field of industrial development. Thus, tailored assistance is provided to developing countries under the following principles that emphasize hand-in-hand and hands-on cooperation with stakeholders on collective actions, based on shared objectives:

- *Coordination with other initiatives, where possible, to take benefit of synergies.* Identification of other cooperation programmes, projects and initiatives in the same field is critical to avoid overlaps and exploit synergies. A mapping exercise is undertaken at project development phase and will be further fine-tuned during the inception phase, to identify and analyze the planned or ongoing development cooperation projects and related development agencies (multilateral, bilateral and non-governmental organizations) active in the specific area, to determine linkages and synergies, and it will be refined during the inception phase. UNIDO promotes these synergies where possible.

- *Know-how transfer to local staff.* For project execution, UNIDO uses a blend of national and renowned international experts, as required for each specific project. Through the blending with local experts and local institutions, know-how is transferred, while enhancing awareness, commitment and involvement of local stakeholders, laying the foundation for sustainability.

- *International experience exchange.* Through UNIDO's international network of experts and institutions, the Organization strives to promote experience exchanges relevant to the beneficiary countries.

- *Holistic approach to upgrading, including sustainability aspects.* When working with enterprises directly, UNIDO applies a holistic approach, which not only focuses on compliance and delivery parameters, but also pursues good governance and is guided by sustainability considerations.

The Global Market Access Programme (GMAP)

In 2019, UNIDO developed the Global Market Access Programme (GMAP) with the Norwegian Agency for Development Cooperation (Norad). The related Administrative Agreement was concluded in November 2019. The GMAP aims to support (M)SMEs in improving their competitiveness and Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) compliance capacity in international and domestic markets. The programme is built on the constant cooperation between UNIDO and Norad of

over two decades of providing technical assistance in Trade Capacity Building (TCB) to developing countries. Through more than 30 projects, UNIDO and Norad have supported partner countries in strengthening their competitiveness in international markets through enhanced QI and compliance capacities, resulting in a very active partnership. Norway's evaluation of UNIDO's trade-related activities in 2015 stated that "the Norad-UNIDO collaboration is highly relevant to both partners as well as the recipient countries". The report highlighted that UNIDO "plays a special and even unique role [in QI development] and is widely recognized to form a 'center of excellence' in this area.[34]

In light of the continued and growing relevance of quality and standards compliance for market access, and the solid and positive track-record of their cooperation, Norad and UNIDO have decided to take their cooperation to the next level through a programmatic approach. This strategic approach consolidates UNIDO-Norad interventions within one framework that will lead to synergies, resulting in a more effective and efficient cooperation for greater impact.

The GMAP 2020-2024[35] reflects this joint programmatic approach. It aligns with the priorities outlined in Norad's White Paper[36], which underscores the Government of Norway's emphasis on gearing intensified aid towards the support of pro-poor private sector development, particularly through creating an enabling business environment while maximizing development impact. Recommendations laid out in the evaluation of Norad support to UNIDO TCB Programme 2005-2013[37] and recent changes and priority areas highlighted by both organizations were incorporated in the programme formulation. The GMAP presents capacity-building opportunities through strengthening selected value chains/sectors in selected Norad partner countries.

The GMAP will enhance the technical competence and sustainability of the Quality Infrastructure System, including support for policy development and informed policy decision-making on standards compliance. In this endeavor it will also help to strengthen key QI institutions and relevant public-private support institutions through capacity building (use of best practices, skills development, implementation of management systems and equipment procurement) to ensure quality and international recognition of their services. The programme further aims to enhance the compliance capacity of producers with standards and technical regulations in foreign markets through capacity building (including specialized training and advice) and preparation for certification, and strengthening of associativity among value chain actors. These objectives are complemented by awareness raising activities, advocacy, and upscaling of knowledge dissemination.

The Quality Infrastructure System

The Quality Infrastructure (QI) is a system that combines initiatives, institutions, organizations (public and private), activities and people. It includes the policies, relevant legal and regulatory framework, and the practices needed to support and enhance the quality, safety and environmental soundness of goods, services and processes.

The QI is required for the effective operation of domestic markets, and its international recognition is important to establish its credibility in local and foreign markets. It is also a critical element in promoting and sustaining economic development, as well as environmental and social wellbeing. It relies on metrology, standardization, accreditation, conformity assessment and market surveillance.[38]

A National QIS (NQIS), often named as National Quality System, includes a Quality Policy and the institutions which implement it, a regulatory framework, quality service providers, enterprises, customers and consumers (who include citizens as "consumers" of government services), as visualized in Figure 3.

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[34] *Review of Norad's support to UNIDO's Trade Capacity Building Programme 2005-2013. Saana Consulting, 2015, p.24.*

[35] *The Programme is in the process of being extended until 31 December 2026 at the time when this project document is being written.*

[36] *Working together: Private sector development in Norwegian development cooperation. Meld. St. 35 (2014–2015) Report to the Storting (white paper) Summary. Norwegian Ministry of Foreign Affairs, 2015, p. 15.*

[37] *Review of Norad's support to UNIDO's Trade Capacity Building Programme 2005-2013. Saana Consulting, 2015.*

[38] *This definition was agreed upon by the International Network on Quality Infrastructure (INetQI) in 2017.*

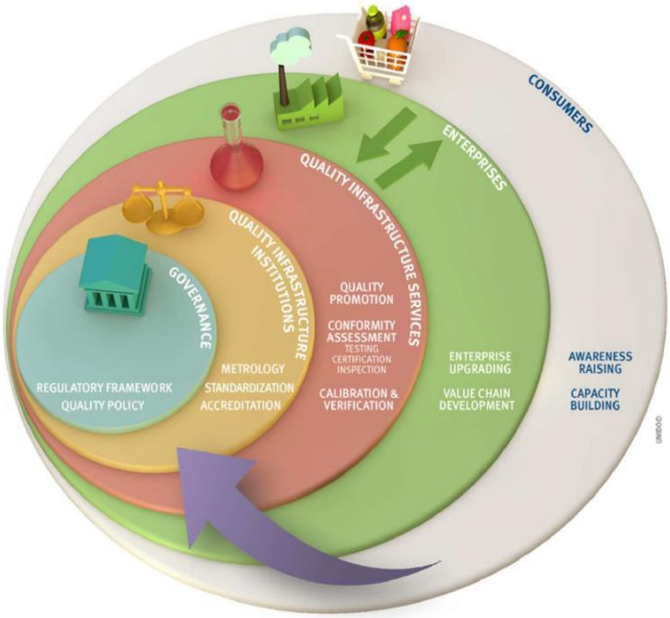
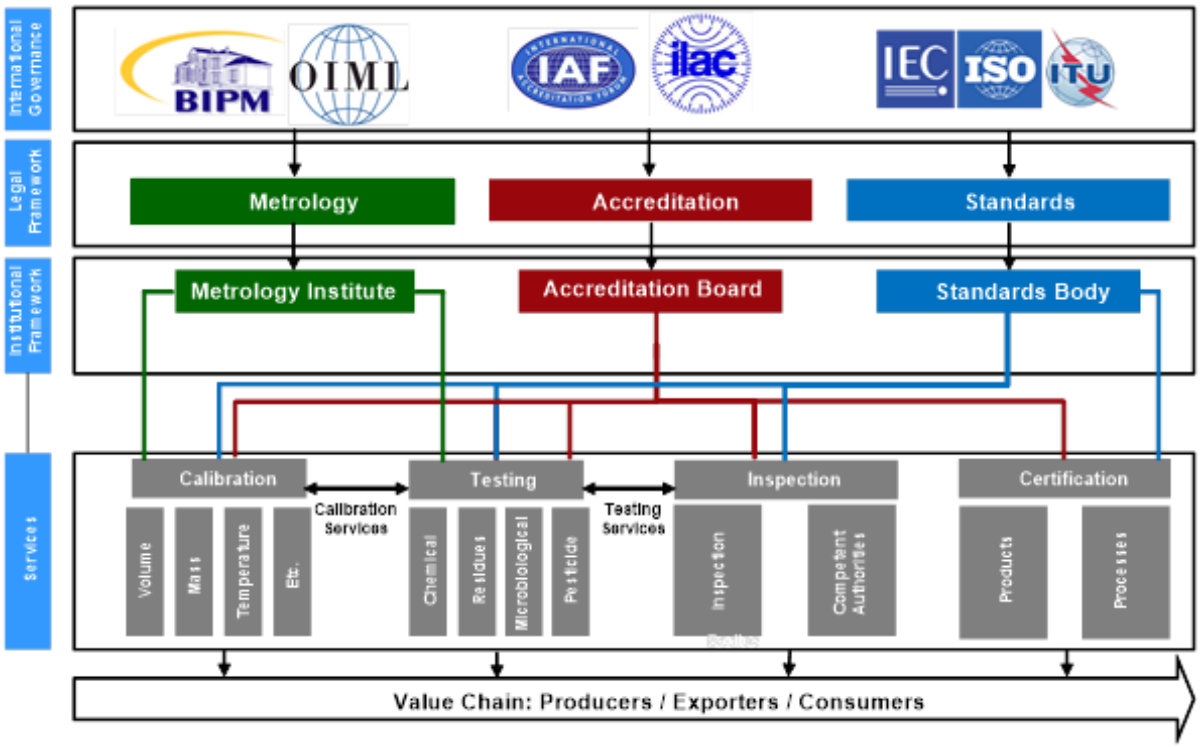


Figure 3 – Quality Infrastructure System and UNIDO approach - From policy to consumers.

The pillars of a QI are the National Standardization Body (NSB), the National Accreditation Body (NAB) and the National Metrology Institute (NMI). In addition to these pillars, the QI also consists of a wide variety and conformity assessment service providers that include calibration laboratories, testing laboratories, inspection bodies and certification bodies for systems, services, products and persons (see Figure 4).

Figure 4 – The Quality Infrastructure System.



As a system, QI can only function properly as a whole. The absence or weakness of any one of the institutions will compromise the effectiveness, and ultimately the efficiency, of the whole system, thereby negatively impacting the business environment. A healthy business environment is a prerequisite for trade and competitiveness, and it is essential for growth and poverty reduction. The QI is an important element of the business environment.

A QI is a catalyst for improving the quality of products and services on a national scale. It therefore helps to stimulate demand for these products and services, which invigorates individual businesses and the economy as a whole, providing the underpinnings that enable enterprises to compete nationally and internationally. By helping national industry to meet the requirements of domestic and export markets, a QIS increases the competitiveness of the nation's economy and its ability to participate in global trade and in global value chains (GVC). Thus, the ultimate goal of the QI is to provide confidence to the buyers, users and authorities that products, processes and services comply with the requirements of application. Therefore, QI plays a crucial role in the internationalization and competitiveness of the enterprises, the transparency of the market and the welfare of society.

Together with partners from the public and private sector, academia, national and international organizations, UNIDO promotes good practices, capacity-building and training, and fosters global cooperation in standard-setting, measurement and compliance development along value chains.

Quality culture

The notion of quality culture is comprised of shared values, beliefs, expectations and commitments toward quality, that are supported by policies, systems (including the QIS) and processes, which guide how actions are performed and how improvements are made to everyday practices and activities. It applies to all levels – individual, organizational, societal and national – that together contribute to the development of effective care for quality.

Developing a quality culture is the most effective, meaningful and sustainable way to ensure and improve quality, and to embed a dynamic system of change for increased competitiveness at all levels. As quality does not only refer to products, but extends to all areas of production, distribution and management, a quality culture is required to assist (M)SMEs to strengthen their competitiveness sustainably, in order to effectively compete in the global market. In turn, the development of a quality culture is crucial for ensuring demand for the QI services. Thus, it creates a link between the strengthening of the QI and the private sector, bringing the two components together. Enhancing awareness for quality is the first step in achieving a quality culture. Furthermore, UNIDO pursues the development of demand-driven interventions, which address the cultural dimension of organizations within the value chain.

The UNIDO approach

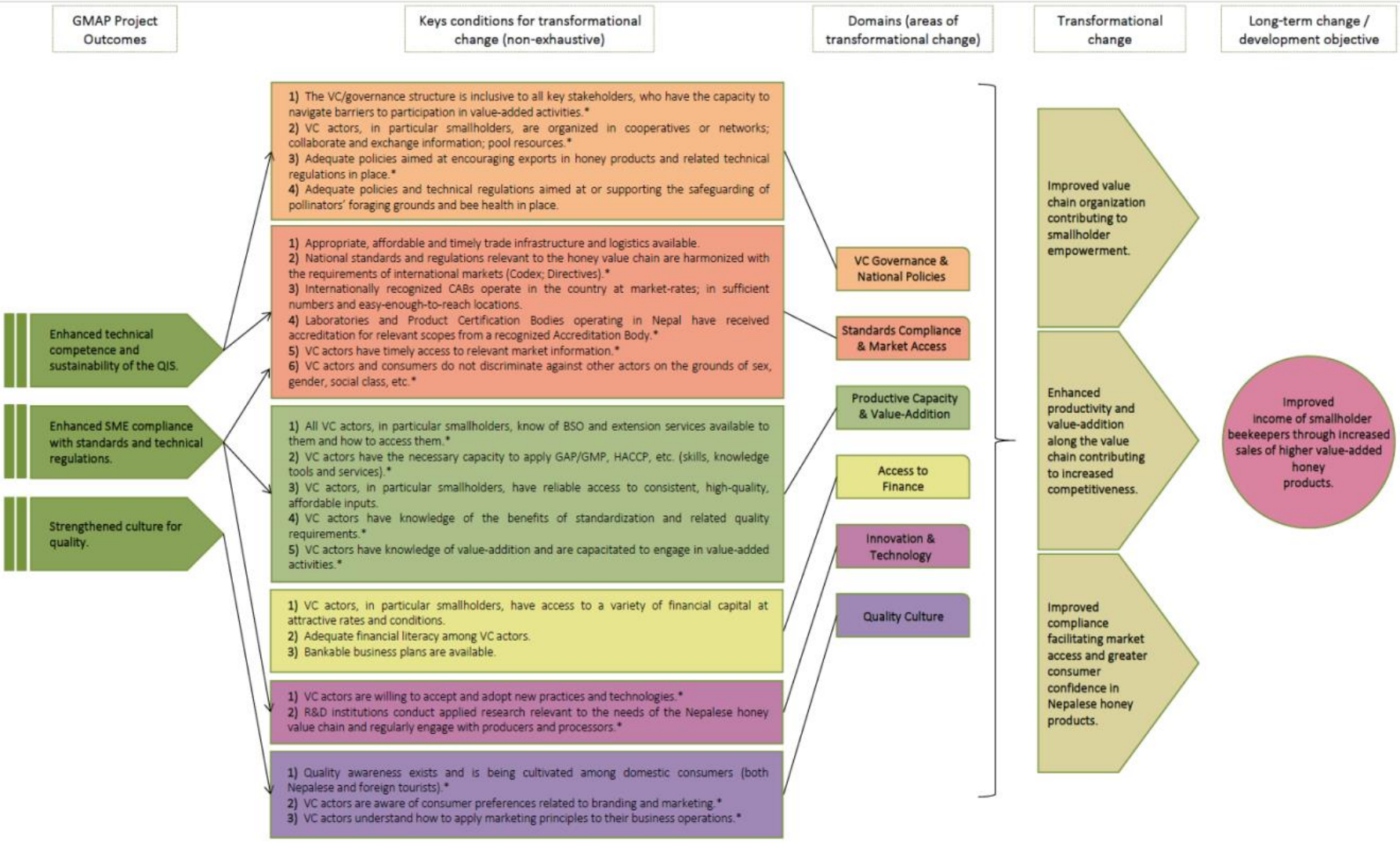
UNIDO has more than 50 years of experience in technical cooperation applying an approach to TCB that has evolved over time. The so-called "third generation" approach is holistic and systemic, and comprises of five components: governance, QI institutions, QI services, enterprises and consumers. The GMAP will apply this approach, driven by the private sector and market needs for the selected value chains per country, in order to achieve greater impact.

Strengthening the QI is essential for enterprises to be able to demonstrate conformity with the standards of application and market requirements to access and compete in the global market. It contributes to increasing consumer confidence in product safety and quality, including respect for the environment and human rights. Furthermore, having policies in place to promote a culture for quality is crucial to ensuring an environment where enterprises, institutions and consumers consistently follow and apply quality guidelines and promote quality-focused actions. The value-added impact of standards compliance includes increased market access, increased speed at which goods cross borders, acceptance of conformity assessment certificates at both sides of the borders, reduced rejections of goods, and reduced trading costs for the private sector, thus making (M)SMEs, and enterprises in general, more competitive and sustainable.

D. THE PROJECT

Theory of Change

The project's Theory of Change (ToC) and the interrelation between outcomes, conditions and envisioned changes is summarized schematically on the following page.



* Conditions which the GMAP Nepal will contribute to through the activities outlined in the logframe.

Expected impact and relevance of the project

The UNIDO field study and analysis of the quality system in Nepal's beekeeping sector indicated areas in which to focus work to support the honey value chain in Nepal. The project aims to improve livelihood opportunities for Nepalese beekeepers and processors in the honey sector through increasing market access for honey products by enhancing technical capacity of the quality infrastructure and the capacity of producers and MSMEs to comply with market requirements.

Nepal can add value to the current production system by differentiating the range of honey types: Increasing and improving productivity; producing high quality niche honeys; or, *inter alia*, improving product quality and positioning the products through a Nepalese mark within local and regional markets. The potential is not in providing bulk honey for blending and use as a food ingredient, but in championing Nepal's honeys as high-value niche products that are unique, pure and of high quality – raising the profile of Nepal's products in the world market.

Beekeeping activities provide growing potential for increasing livelihood opportunities, improving incomes and creating employment opportunities. Furthermore, additional hive products can be developed in the value chain in order to expand the activity of the sector in the future.

Sustainable beekeeping production and the commercialization of bee products can contribute significantly to agricultural development. It can also contribute to alleviating deforestation (a major environmental and socio-economic challenge for Nepal) and contribute to biodiversity conservation through pollination of indigenous plants and the protection and nurturing of honeybee species.

The present project will therefore focus on contributing towards increasing the competitiveness of Nepalese honey in the domestic and suitable regional and international markets. Special emphasis will be put on the promotion of fostering standards compliance capacities and good practices as well as strengthening the requisite QI services and structures. This will require important resources to transform Nepal's current QIS into an improved and sustainable quality infrastructure system, diversifying Nepal's honey products, producing high quality niche products, and developing marketing linkages.

Overall objectives, outcomes, outputs and activities

The overall objective of the project is to improve livelihood opportunities for small-scale beekeepers, MSMEs and honey processors in selected districts of Nepal through the sale of high-quality honeys.

Specifically, the project aims to enhance market access for Nepalese honeys to the domestic as well as regional and international markets. It will do so by enhancing Nepal's quality infrastructure system and facilitating market access for honey producers and processing MSMEs by improving the quality and diversity of honey types.

Outcome 1: Enhanced technical competence and sustainability of the National Quality Infrastructure System.

This outcome aims to strengthen the NQIS for honey through the provision of advisory support. Specifically, the support will be aimed at enhancing coherence of regulations and harmonization of national with international standards, and at improving the official control system for quality control along the honey value chain (honey inputs, production and inspection). Related activities will be planned and implemented in close collaboration with the key institution relevant to the honey value chain, namely the Center for Industrial Entomology Development (under DOA under MOALD), the Department of Food Technology and Quality Control (under MOALD), the Nepal Bureau of Standards and Metrology, and the Department of Agriculture Central Agricultural Laboratory (under MOALD).

The support to be provided will be targeted at addressing gaps and weaknesses in the national QI system and in the services provided to honey producers and processors. In particular, the project will:

- Strengthen the technical competence of key NQI actors by providing support towards achieving certification for relevant standards, such as ISO/IEC 17025 Testing and calibration laboratories, ISO/IEC 17020 Conformity assessment – Requirements for the operation of various types of bodies performing inspection, and/or ISO/IEC 17065 Conformity assessment — Requirements for bodies certifying products, processes and services.
- Increase the NQI's knowledge of the relevant standards pertaining to honey and honey products required for entry to specific overseas markets and strengthen their respective capacities to collect and monitor relevant trade information (e.g. notification of exports) and to conduct market intelligence research.
- Improve laboratory facilities, provide equipment (as appropriate considering the project's budgetary scope). Such support will be aimed at existing laboratory facilities which can/ could be developed to undertake honey testing within Nepal, such as DFTQC (the mandated laboratory), the Central Agricultural Laboratory (funded by the World Bank) and/or one laboratory at the Nepal Academy of Science and Technology.[39]
- Review previous work on developing a Residue Monitoring Plan (MRP) and applying for EU Third Country Status, further assessing the feasibility of renewing this work and progressing the applications as appropriate.
- Review, and update as necessary, national honey standards and make them available to honey value chain actors. National standards covering honey are currently broad enough to include honey from hunted sources.[40] Support the development of standards specific to honey from hunted species, which would establish specific quality parameters.

Main indicative activities are summarized in the table below.

Outcome 1: Enhanced technical competence and sustainability of the National Quality Infrastructure System.
Output 1.1: Technical competence of key QI actors and capacity to monitor honey quality for the local market strengthened.
Main indicative activities: • Select target export markets that should be prioritized (possibly including Japan, South Korea and UAE); • Conduct review of relevant technical regulations (mapping and assessment of alignment with international best practice); • Study of relevant standards and import requirements for honey for those markets and development of trade monitoring capacities; • Drafting of strategic plans to specify regulatory requirements for honey and relevant testing parameters; assessing of feasibility to attain EU third country status for honey.
Output 1.2: National capacity to comply with international regulations and quality control strategies and curricula for food hygiene in beekeeping established.
Main indicative activities: • Analysis of national capacities and organizational structures of relevant QI institutions with the aim to select the target laboratories; • Identification of laboratory equipment needs; • Support key QI institutions towards certification readiness, such as for ISO/IEC 17025, ISO/IEC 17020 and/or ISO/IEC 17065, and /or provide support to revising scope(s) of accreditation;

[39] *The capacity, competence and absorption capacity of this lab should be evaluated during the inception phase.*

[40] *These hunted species are not covered as permissible species under EU import rules. Their honey tends to have higher moisture and enzyme contents than Apis mellifera honey. At present, they fall at the upper end/ limit of the specifications. The development of specific standards from hunted honey will reduce blending with Apis mellifera honey (e.g., to compensate for high moisture content) and improve differentiation among producers and processors. It will also provide a basis for working (together with other countries with the same species) with the EU to include these bees as permissible species.*

- Technical assistance on laboratory calibration and certification capacity for relevant voluntary standards;
- Development curricula and training for food hygiene and quality control procedures; training courses on food handling;
- Quality control strategies and curricula for food hygiene in the beekeeping established;
- Support to drafting of strategies for zoning *Apis mellifera* and *Apis cerana*.

Outcome 2: Enhanced MSMEs' compliance with standards and technical regulations.

This area of the project is focused on quality production, addressing the linkages between producers and processors / exporters, strengthening business management and marketing skills among MSMEs and ensuring that food standards, quality management and honey differentiation is managed along the value chain. It also addresses work to increase the productivity of *Apis cerana* honeybees/ beekeepers. It aims at supporting producers and MSMEs to improve production systems and husbandry skills, establishing pertinent traceability mechanisms, and complying with legal and technical requirements.

During the inception phase, an in-depth analysis of the business environment (current compliance capacities of target beneficiaries (small-scale beekeepers, processors, cooperatives), gaps and insufficiencies) and its structure will be undertaken with the active engagement of, coordination with and validation by key stakeholders.

Specific capacity-building support will be directed to Business Service Organizations (BSOs) and extension service providers as well as relevant sectoral associations (beekeepers, processors, any export associations, etc.) to help them implement the required technical and strategic measures according to previously identified bottlenecks of the business environment of the honey value chain.

Capacity building activities foreseen within Outcome 2 are directly linked with key areas delivered under Outcome 1 and therefore should incorporate, whenever possible, technical personnel trained under the latter.

Target beneficiaries will be supported to build their respective food safety capacities for honey with a view to increasing compliance with international SPS measures and standards to increase domestic, international and regional market access.

Specifically, the following aspects will be addressed:

- Improving the linkages between value chain actors, as weak linkages between actors frequently lead to weak accountability and poor understanding of needs and expectations. The projects will seek to build linkages along the value chain, which will allow processors and exporters to work directly with beekeepers and honey hunters. Strengthening linkages is expected to lead to stronger business relationships, improved supply of higher-quality inputs as well as more differentiated training and knowledge exchanges. These relationships also provide a basis for linking producers with extension advice and are expected to provide a strong base for introducing traceability systems, which will be crucial in the production and marketing of differentiated honey (by floral-type and species). Furthermore, the project will seek to strengthen the exchange between honey value chain actors and educational and research institutions to contribute to more applied research geared towards supporting the apiculture sector;
- Provision of more targeted extension services and training for beekeepers and farmers building on the nexus between beekeeping, farming practices and biodiversity management. Specifically, the project will seek to improve the understanding of the potentially mutually beneficial relationship between beekeeping and farming. In short, the use of certain pesticides by crop farmers is a threat to the lives of bees and conformity of honey and honey products in export markets due to pesticide residue levels. Furthermore, pollination services are required for agricultural production. Sound relationships between beekeepers and local farmers will contribute to minimizing related risks;

- A need for targeted technical assistance to improve business knowledge of beekeepers. While business skills are generally considered sound, particularly among *Apis mellifera* beekeepers, cooperatives, and processors, value chain actors may benefit from access to business advisory services, marketing and brand development as well as training on stock management skills and traceability systems; the fostering of linkages as described above through proper exposure and first-hand experience and information sharing with other value chain actors and traders in the European Union and other countries will be useful in this regard. Targeted activities like multi-stakeholder platforms and the organization of Business-to-Business (B2B) meetings are recommended and will be pursued to the extent feasible;
- A need to raise food handling standards through targeted food hygiene training for beekeepers as well as MSMEs and cooperatives;
- Species conservation through adoption of best practices. E.g., Honey hunting uses basic skills that are often more destructive than necessary to colonies of wild bees, impacting not only on colony survival rates and populations but also on honey quality from hunted sources. This can be addressed by adopting systems developed elsewhere in Southeast Asia with related species. Similarly, work on developing the *Apis cerana* sector has largely stalled since the introduction of *Apis mellifer*a, which is more advanced than *cerana*-based production. Renewed efforts to improve production/ productivity from *Apis cerana* is built into the project.

Outcome 2: Enhanced MSMEs' compliance with standards and technical regulations.
Output 2.1: Collaboration and associativity among producers/ value chain actors strengthened for mutual benefit.
Main indicative activities: • Improvement of beekeeping processes and adoption of best practices; • Training on quality control mechanisms to increase compliance capacity with relevant standards; • Promotion of linkages/associativity among value chain actors; • Training and awareness on pollination services by bees and the impact of pesticides.
Output 2.2: MSMEs supported to improve management of food safety and quality of honey and honey products.
Main indicative activities: • Technical assistance on import requirements for targeted markets; • Training on: o Business knowledge among targeted beekeepers/ producers; o Good Manufacturing Practices (GMP); capacity building in handling, storage, processing, packaging and labelling; o Harvesting practices and honey handling to produce high quality honey; • Actions to increase traceability.

Outcome 3: Strengthened culture for quality

Alongside with strengthening the technical competence and aiming at improving the sustainability of the NQI and increased beekeepers' and MSMEs' compliance with standards and technical regulations in the honey value chain, the last outcome will aim to ensure sustainability of the intervention and of a behavioral change in the stakeholders' attitudes towards quality.

The focus will be put on engaging all relevant stakeholders (i.e. beekeepers, MSMEs, cooperatives, institutional and policy-level actors identified during inception phase) in the promotion of a culture of quality. It is foreseen that areas of intervention include improvements in coordination and cooperation

between institutions and other actors of the value chain, which will contribute to enhancing awareness and demand for quality-related services.

Complementing the capacity building in Outcome areas 1 and 2, the desired mindset change will be effected through the development of awareness and visibility materials, and their dissemination to all segments of the value chain. Producers and processors engaged in capacity building activities under Outcome area 2 will serve to showcase successful initiatives.

Furthermore, activities under this Outcome area will be aimed at spreading the word about domestically produced honey to domestic and foreign buyers/consumers. Here, the project aims to create awareness for Nepalese honey(s) and honey products, and seeks to promote brand development and packaging as well as consumption.

Indicative project interventions to achieve this Outcome are:

- Awareness raising and knowledge building on the distinctiveness of Nepalese honeys: Differentiation is important to developing the market for quality honey. Quality and differentiation go hand in hand and, by default, differentiated honey is more expensive to produce than undifferentiated honey. One of the misconceptions among many producers and processors in Nepal is that the only way to compete in the market is to undercut prices on shop shelves. The project aims to challenge this belief through awareness raising and building knowledge on honey quality, local production, traditional uses and its medicinal/ health values. Furthermore, awareness will be built on why higher quality honey (and products more generally) costs more.
- Development of a Nepalese brand for honey, fostering international as well as domestic recognition. Nepalese honey would benefit from a voluntary certification scheme which provides certification for a "Taste of Nepal" or similar type of unique system which individual brands might link to in order to show they conform to various quality parameters (like quality, localness, purity, flavor, etc.). The quality mark would work as an advertising strategy and a collective way for individual brands to raise the profile of high-quality Nepalese honey. Besides targeting local consumers, a uniquely Nepalese quality mark would strengthen sales to tourists and the hotel sector, and could be used as a component of international marketing strategies. Complementarily, a website and other social media platforms ought to be developed to promote and advertise Nepal's niche honey products.

UNIDO foresees to subcontract the International Centre for Integrated Mountain Development (ICIMOD) and the Agriculture and Forestry University (AFU) for the conducting of some of the proposed actions, and other project activities, as deemed necessary, and foresees working with staff from the Faculty of Agriculture, where the research on entomology, agribusiness management, and further relevant research areas is housed.[41]

Outcome 3: Strengthened culture for quality.
Output 3.1: Nepalese umbrella brand and quality mark for honey and campaign to promote Nepalese honey in the domestic market developed and implemented.
Main indicative activities: • Assessment of the characteristics of the existing organizational culture for quality;

[41] *ICIMOD is an intergovernmental knowledge and learning center working on behalf of the people of the Hindu Kush Himalaya (HKH), which is based in Kathmandu, Nepal. ICIMOD operates in and for eight regional member countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. The Centre's work aims to improve the lives and livelihoods of men, women, and children of the HKH and to foster conservation and sustainable mountain development.*

AFU, established in 2010, is Nepal's first technical university. AFU aims to support the development of agriculture, livestock, aquaculture and forestry to improve the socio-economic conditions of rural people through quality teaching, research and extension. AFU's faculty "focus their research works on increasing production and productivity of agricultural commodities, post-harvest technology, improving s[h]elf-life of food products, biodiversity conservation, and local innovation[,] adopting participatory approaches to enhance sustainable livelihood systems of farming communities."(https://afu.edu.np/about-us)

• Development of training and awareness raising materials to promote understanding of NSBM certification, food quality and safety issues; • Promotion of quality culture for honey and honey products; design of a Nepalese umbrella brand and quality mark; • Development of a marketing plan to promote the Nepalese honey brand at the local level; • Further promotional activities.
Output 3.2: Quality awareness materials developed and strategic marketing plan for Nepalese honey drafted.
Main indicative activities: • Activities/events to raise quality awareness to create and sustain a quality culture are carried out; development of promotional and information materials; • Drafting of a strategic marketing plan for the promotion of Nepalese honey to international markets, incl. identification of technical assistance needs for logistics and testing, accessing licenses and certificates of exporting consignments of niche honey, etc.

Beneficiaries

The project will cover a wide range of beneficiaries, mostly in the private sector, including QI bodies and institutions and service providers, business support organizations, and beekeepers, processors/MSMEs/cooperatives. The direct beneficiaries will be identified and selected during the Inception Phase[42] based upon the following considerations:

- QI institutions and service providers (public and private) will be supported with equipment/consumables and building capacity for undertaking compliance testing of honey:
    - Public institutions and actors, including line-ministries, that are part of the national QIS;
    - National laboratories involved in testing;
    - Conformity Assessment Bodies (CABs) / laboratory/-ies.

- Business Support Organizations will be supported through training and capacity building in the fostering of VC linkages:
    - Any established and active honey/ beekeepers' associations existing in the districts;
    - Any national honey trading associations that can be involved in project activities, which have not been identified to date.[43]

- Producers and processors will be supported through training and capacity building on business management and manufacturing practices, beekeeping practices, and additional relevant quality aspects:
    - Cooperatives working with honey in the selected geographical districts;
    - Commercial processors based or operating in the selected districts (particularly those are already engaged or searching for export activities;
    - A number of established, competent *Apis mellifera* beekeepers; progressive *Apis cerana* beekeepers; and honey hunters, located in the proposed districts.

National counterparts

The proposed project will be implemented in partnership between UNIDO and the Government of Nepal. The key Government of Nepal Counterpart will be the Ministry of Agriculture and Livestock

[42] *Ensuring transparency and non-discrimination.*

[43] *To be identified during the project's inception phase.*

Development (MOALD). The main technical implementing partner will be the Center for Industrial Entomology Development (CIED, under the Department of Agriculture (DOA) under MOALD), in close liaison with other relevant departments under MOALD, as well as, other government institutions.

MOALD is responsible for the beekeeping sector/ bee products value chain in Nepal. Support to the sector is part of its overall responsibility for growth and development in agriculture and livestock production by increasing agricultural output and productivity, developing commercial and competitive agricultural systems, and making them competitive in regional and international markets. In addition, MOALD has a role in sustainably managing natural resources and the environment, and in promoting conservation and the sustainable use of biological diversity.

The Center for Industrial Entomology Development under DOA is a specialized unit within MOALD with responsibilities for the beekeeping industry, silkworm production and mushroom farming, with the objectives to create employment opportunities, to increase quality and production, and to support economic development, nationally, by fostering exports of honey and other bee products.

The Department for Food Technology and Quality Control is the mandated authority for QI in the honey sector. National capacity for training and oversight of food hygiene and public health in the food industry falls under DFTQC, but the department has limited capacity to perform these functions. Furthermore, challenges exist regarding the location of honey testing work given the limited capacity of the DFTQC facility. The Central Agricultural Laboratory (CAL) (also under DOA within MOALD), established by the World Bank, has been equipped for testing agricultural produce for pesticides, and has an evolving mandate, and may be considered for cooperation and capacity building under the project.

Effectively, oversight and support for honey production, processing and QI is firmly based within the MOALD, but the QI framework is broad and relatively complex. The involvement and level of influence of some of the stakeholders is uncertain and requires additional, more in-depth analysis.

Geographic scope of the project

The project will work with producers (beekeepers and producer groups) and honey hunters to improve practices that enhance honey differentiation, traceability and quality. It will also work with traders and processors that are buying honey from the project's beekeeping areas.

Nepal has considerable scope for locating field activities. Many areas have high beekeeping potential, and among the best are those classified as 'beekeeping zones', 'blocks' and 'pockets' by the Prime Minister Agriculture Modernization Project (PMAMP) under the Ministry of Agriculture and Livestock Development, Government of Nepal.

The selection of project areas (the proposed district) has been based on:

- Limiting the number of provincial authorities, the project will work with four (in order to minimize project bureaucracy).
- Ease of access - the ability to visit field activities, deliver project inputs and minimize logistical issues when transporting honey to identified national and international markets.
- Maximizing the range of honey-types that can be produced (based on floral origins and bee species).
- Building from ongoing work on the zoning of production areas for *Apis mellifera* and *Apis cerana*.
- Minimizing problems associated with crop farming and pesticide use (and residues) and maximizing opportunities for building on established positive relations between farmers and beekeepers.

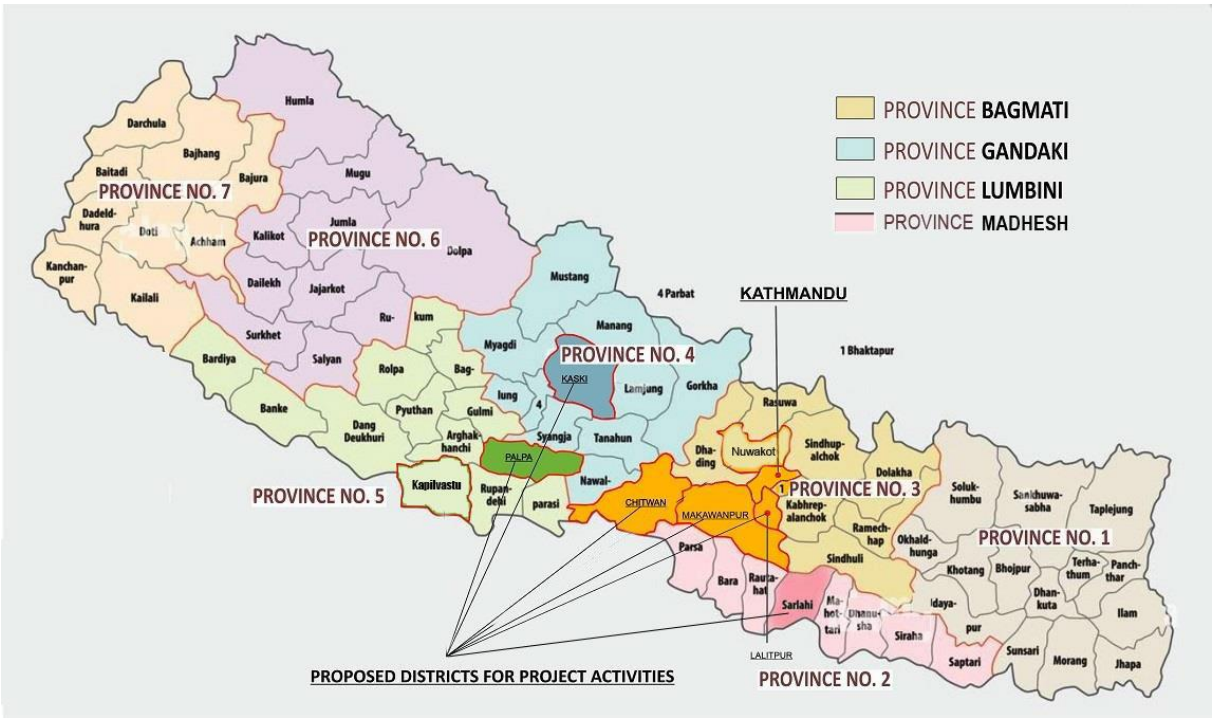


Figure 5 – Map of the districts of Nepal – Target Provinces and districts highlighted.

Province		District	Acc	Products								Bee species					Zon
No.	Name			Chi	Rud	Buc	Mu	Lit	Euc	Sis	Jun	Am	Ac	Ad	Af	Al	
2	Madhesh	Sarlahi	E		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
3	Bagmati	Chitwan	E	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y		Y
3	Bagmati	Makawanpur	E	Y	Y			Y		Y		Y	Y	Y			Y
3	Bagmati	Kathmandu Valley (Kathmandu, Lalitpur and Bhaktapur districts)	E				Y				Y	Y	Y				Y
4	Gandaki	Kaski	E		Y	Y	Y				Y		Y			Y	Y
5	Lumbini	Palpa	E		Y	Y	Y						Y			Y	Y

Table 4 – Field locations: Proposed Districts for project activities

Key to table headings:	
Acc	Accessibility of the district (from Kathmandu) for supervising and supporting production, etc.
E	Easy
Chi	Chiuri honey from the butter trees native to Nepal
Rud	Rudillo honey from the nectars of the herbal shrub (*Pogostemon benghalensis*)
Buc	Buckwheat honey
Mu	Mustard honey
Lit	Litchi honey
Euc	Eucalyptus honey
Sis	Sissoo honey (from the wild rosewood tree)

Jun	Jungle honey (from natural forests)
Am	*Apis mellifera* bees
Ac	*Apis cerana*, an indigenous species that nests in crevices and beehives
Ad	*Apis dorsata*, and open nesting medium altitude species
Af	*Apis florea*, a dwarf honeybee, is a low land species found from 10 m up to 1000 m in Nepal
Al	*Apis laboriosa*, a higher altitude open nesting species
Zon	Zoning – whether the government/ local authorities are establishing zones for different bee species

Table 5 – Key to Table 4 headings

Chitwan and Lalitpur are excellent production areas with *Apis mellifera*, *Apis cerana* and *Apis dorsata* species. *Apis florea* is found in Chitwan. A government beekeeping center is located in the Makawanpur district.

The final choice of locations targeted will be made in consultation with MOALD during the project's inception phase. The project intervention in the different locations will be pursued in an asymmetrical manner, as needs require and available resources permit.

Coordination and synergies with other ongoing activities /other projects

The following recently implemented or ongoing projects have been identified and listed below. The project will seek to ensure that there will be no overlap in activities, and that complementarities are sought and explored for greater impact. During the inception phase, the list will be reviewed and refined, as necessary. The proposed project will seek to gather learnings from the concluded projects, and will attempt to establish contact with development partners for coordination and exchange of information for the creation and identification of synergies and upscaling potentials, as feasible and appropriate in the geographic and specific thematic context of the project.

- GIZ implemented at least two consecutive interventions aimed at strengthening the honey value chain and market access for honey in recent years (Trade Promotion Programme and INCLUDE projects). Publications from these projects have been consulted in the process of drafting of the concept note.
- Norec, the Norwegian Agency for Exchange Cooperation, from 2019-2020 implemented the small-scale Organic Farming Promotion Programme in Nepal and India, which aimed to support young people's participation in agriculture as a tool for sustainable development. Currently, Norec implements the Fair Trade Group Nepal project, which aims to promote Fair Trade by sharing best practices on the creation of sustainable livelihoods for low-income, marginalized producers through Fair Trade and empower them to move up the supply chain.
- SNV, a not-for-profit international development organization, from 2016 to December 2020 implemented the PAANI project, which aimed at strengthening Nepal's ability to manage critical resources in the Karnali, Mahakali and Rapti river basins. One of the three results areas pursued aims at "professionalizing economic activities such as the local fishery and other relevant value chains."
- The Swiss Agency for Development and Cooperation implemented the Nepal Agricultural Services Development Programme (NASDP) between 2014 and 2020, which aimed to improve small farmers' (with a focus on female-headed households and farmers from disadvantaged groups) productivity, income and food security thanks to the strengthening of a decentralized and pluralistic extension and research system. A second phase aimed at increasing employment and incomes for men and women, including from disadvantaged groups, is currently being implemented.
- Under the UNDP's Micro Enterprise Development Programme (MEDEP) with the financial support of the Australian Government's Department of Foreign Affairs and Trade different enterprise

development programmes for poverty alleviation, and activities geared at creating self-employment opportunities were implemented between 1998-2018, including for beekeeping in 2017.

- Between 2008 and 2012, ICIMOD, with support from the Austrian Development Agency has implemented the "Improving Livelihoods through Knowledge Partnerships and Value Chains of Bee Products and Services in the Himalayas" project; one of the key activities has been documenting and sharing information to raise awareness of the importance of pollination in enhancing agricultural productivity and conserving biodiversity.
- The Israeli INGO, Tevel b'Tzedek, with funding from MASHAV, Israel's Agency for Development Cooperation, recently implemented a project aimed at generating higher incomes and building the capacity of farmers from deprived communities with limited traditional beekeeping knowledge through beekeeping trainings. Participants received three *Apis mellifera* bee colonies with modern beehives along with the necessary tools for modern bee keeping.
- GEF/UNEP/FAO jointly implemented the Global Pollination Project, which "showed how the services of pollination can be conserved and used sustainably in agriculture through the application of the ecosystem approach. Project outcomes were tested, evaluated and showcased in a set of representative farming systems in seven countries with a wide diversity of ecological zones and farming patterns." In Nepal, project sites were established in Chitwan. In collaboration with Village Development Committees, the project planted various legume and oilseed crops that are cross-pollinated and require pollinating agents, such as bees, bats, birds, butterflies, wasps, moths, and flies for quality production. Farmers follow eco-friendly practices promoted by the network, which are favorable to promoting pollinators and a healthy environment.

Sustainability strategy

The project has been designed to ensure the sustainability of the intervention. The project is fully integrated into the existing national trade priorities and in line with the strategic development of the private sector in Nepal.

Sustainability is considered along the project life cycle and built into these areas of intervention:

1) Responding to the demand and private sector needs: The project has been designed in close collaboration with country stakeholders and is demand-driven.
2) Ensuring national leadership and ownership: Close collaboration with the government-coordinating agency will ensure that project initiatives, lessons and best practices easily become focal areas for Government to build on in their plans and programmes.
3) Ensuring multi-stakeholder participation and consultation: The project will foster a high degree of participation and engaging stakeholders from both the public and private sectors will ensure high-level support and a strong sense of ownership. Regular Steering Committee meetings will be conducted to assess progress, identify potential risks and determine the strategic direction of the project.
4) Developing local expertise (through the Training-of-Trainer approach) with the adequate knowledge and experience and transferring the knowhow and technical expertise to the local institutions and experts that will support the National Quality Infrastructure System during and after the project will have ended. Where possible, it will mitigate the impact of employee rotation, thus contributing to sustainability of outputs.
5) Business principles will be introduced: When working with Government, laboratories, and MSMEs, training on business plans management and operations will be pursued to support self-sufficiency.

6) **Establishing agreements and linkages** with business support organizations/associations/clusters, MSMEs and other VC members and other institutions, contributing to enhancing competitiveness and creating more sustainable impact.

An appropriate sustainability strategy will be designed, so that the assisted organizations will be able to maintain and to improve their compliance capacity and performance when the projects will come to its end. This strategy will be designed during the inception phase of the project. Sustainability concerns will be considered in the agenda of the SC meetings.

Gender mainstreaming

Selective overview of gender equality and women's economic empowerment in Nepal

Nepal is party to a variety of international treaties and agreements aimed at strengthening the status of women in society, and has adopted several related policies and plans of action. For example, a commitment to gender equality features prominently in the Government of Nepal's 15th (National Development) Plan. *Inter alia*, the plan seeks to promote "economic empowerment and social transformation by giving special priority to economically poor and socially excluded women" through, among other initiatives, livelihood enhancement programmes fostering women entrepreneurship, programmes aimed at reducing the gender gap in technical education, the mobilization of women cooperatives in the sectors of productive businesses and self-employment as well as provisions to improve women's access to finance.

The Government of Nepal informs that in 2019, the participation of women and men in the labor force was at 26.3 and 53.8 percent, and the rate of unemployment 13.1 and 10.3 percent respectively.[44] According to FAO data, women in Nepal own 10 percent of land compared to 27 percent of men.[45] According to sources consulted for the same report, 84 percent of women employed work in the agricultural sector (62 percent for men) with over 78 percent employed as subsistence producers (60 percent for men). Male migration has reportedly increased in recent years, having led to a greater number of female-headed households. A recent FAO report suggests that "[t]he increasing number of female-headed households coupled with high participation of women in the agriculture [labor] force could be amongst the causes of the so-called phenomenon of 'feminization of agriculture'."[46] However, it has been reported that only inadequate gender-sensitive extension services exist due to a limited number of women extension workers and cultural perceptions, which lead to women not being perceived as farmers. As a result, women receive comparably less attention from extension service providers. Furthermore, technological adoption is arguably lower among rural women employed in agriculture because of such limited interactions with extension service providers.[47]

It has further been observed that in rural areas, men are said to be twice more likely to be employed in elementary occupations as well as crafts and related trades than rural women. The Nepal Labour Force Survey of 2017/2018 states that employed women earn on average 13,630 Nepalese Rupees (NPR) per month compared to NPR 19,464 for employed men, i.e., about 30% less on average.[48] Educational levels

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44 *Gov of Nepal, National Planning Commission. The Fifteenth Plan (Fiscal Year 2019/20 – 2023/24), p. 282.*

45 FAO. Data Snapshot Using Sex-Disaggregated Data to Better Understand Gender Gaps in Agriculture, accessed on 24 August 2022, https://www.fao.org/3/cb8934en/cb8934en.pdf

46 FAO. 2019. Country gender assessment of agriculture and the rural sector in Nepal, accessed on 29 August 2022, https://www.fao.org/3/CA3128EN/ca3128en.pdf, p.11.

47 Ibid. P.39.

48 UN Women. August 2021. Gender Equality in Numbers: Progress and Challenges in Achieving Gender Equality in Nepal, accessed 29 August 2022, https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Docs/Publications/2021/10/np-GE-in-numbers-final-160924-web.pdf, p.35.

are lower for women and girls than for men, and only 41 percent of women compared to 60.6 percent of men use the internet.[49]

It is noteworthy that in beekeeping specifically, women make up the majority of executive-level members in beekeeping cooperatives at 58 percent compared to 41 percent for men.[50] The project will seek to further investigate the gender composition of honey processing cooperatives.

Project approach to gender mainstreaming

UNIDO recognizes that gender equality and the empowerment of women have a significant positive impact on sustainable industrial development and are key drivers of poverty alleviation and social progress.

This realization is echoed in the Norwegian Ministry of Foreign Affairs' White Paper on Private Sector Development in Norwegian Development Cooperation, in which a greater emphasis on women's rights and gender equality is urged: "The Government will ensure that women's rights and the gender perspective are integrated into its work to advance private sector development. Norway will also support targeted efforts to reduce political, economic, legal and other structural obstacles to women's participation in the private sector". Norway has also committed to "support measures that strengthen women's control of productive resources and their own income through [UNIDO]", as emphasized in Norway's Action Plan for Women's Rights and Gender Equality in Foreign and Development Policy 2016-2020 (recently extended).

The project will mainstream gender equality considerations throughout the project. During the inception phase, an in-depth gender analysis in the target value chain and target geographical areas will be conducted. Findings collected during the gender analysis will inform the design and any necessary revision of indicative activities as part of the inception phase. Certain suitable gender-specific indicators will be designed and baseline data be collected at the start of the project. Overall, the project will collect sex-disaggregated data and targets for women's participation will be set and monitored. For the time being, tentative targets have been set for suitable indicators and been included in the logframe.

The project team will liaise with relevant national industry and business organizations involved in furthering women's (economic) empowerment with the aim of supporting the identification of women beneficiaries, including women-led/-owned enterprises, and better integrating and responding to gender-specific concerns and needs through the project (including to capacity building activities/special trainings for female small-scale beekeepers and processors). UNIDO will closely coordinate with partners to ensure that their gender related policies and guidelines are taken into consideration and implemented.

All trainings and workshops will be designed and planned taking into consideration any known obstacles to women's involvement and participation in project activities (e.g., related to transport; potential time conflicts (e.g. due to household chores and childcare responsibilities); security and safety, cultural factors, etc.) as well as any barriers to the enjoyment of benefits derived from the project. As far as feasible, measures will be taken to maximize women's participation (ref. indicator TCO.1). Any events will be organized in line with the UNIDO policy on panel parity (AI/2020/03).

Any visibility and training materials designed and distributed by the project will employ gender-sensitive language and pursue balanced representation in images, further aiming not to portray women and men in a manner, which could reproduce (gender) stereotypes (ref. indicators PAO.2, TCO.3, POL.3).

In the composition of the project's governance body, the Steering Committee, the project will also encourage the participation on women in decision-making roles. This objective will be reflected in the

[49] *Nepal Multi-Indicator Cluster Survey 2019, referenced in UN Women, Gender Equality in Numbers: Progress and Challenges in Achieving Gender Equality in Nepal, ref. footnote 35.*

[50] *FAO. 2019. Country gender assessment of agriculture and the rural sector in Nepal, accessed on 29 August 2022, https://www.fao.org/3/CA3128EN/ca3128en.pdf, p.42.*

Steering Committee's Terms of Reference. The project will aim to pursue gender-balanced recruitment for all available project positions and women will especially be encouraged to apply.

All project staff will undergo basic gender-sensitization training by being asked to partake in the self-paced UN Women e-learning course "I know Gender" available on UN Women's e-learning campus" (https://trainingcentre.unwomen.org).

Environmental and social assessment

In line with UNIDO's Environmental and Social Safeguard Policies and Procedures (ESSPP), environmental and social considerations are being mainstreamed into UNIDO's project cycle through consistent application of an environmental and social screening and assessment. The proposed project in support of the Nepalese honey value chain has been designed and will be implemented in response to specific relevant areas of consideration in this context:

Bees' pollination function

Bees' lives and wellbeing is closely intertwined with human and other animals' lives due to bees' function as pollinators. Through their pollination services, bees play a critical role in food crop production and ensuring food security. Pollination also ensures plant growth; plants, besides serving as food sources, furthermore provide critical habitats for many animals. Climate change effects, e.g. rising temperatures, pose a threat to bee populations due to changes in blooming periods; destruction of habitats, and temperature-related stress, e.g. due to decreased availability of nutrition (i.e. sources of nectar and pollen). Moreover, specific farming/growing practices (e.g. monoculture farming) may negatively affect bee populations due to reduced biodiversity; also, the use of certain types of pesticides can kill or weaken bees, thus detrimentally affecting bee health and foraging efficiency, which, ultimately, negatively impacts not only farmer / growers' incomes, but also overall food production and security.[51] It has been estimated that crop production in high-income countries would fall by around 5%; in low-to-middle income countries between 8-10 % in the absence of pollinators for crops, which partially depend on pollinators.[52] The proposed project has been designed with bees' critical role for crop production in mind. The project's focus on promoting standards and quality will be pursued through capacity building in the areas of good agricultural practices (good beekeeping practices), including aspects of integrated pest management (responsible use of pesticides; promotion of bio-pesticides; also, residue monitoring). Furthermore, the project will aim to build linkages between actors along the honey value chain: In its foreseen support to business support organizations and/or extension service providers, awareness will be raised on the importance of increased communication and understanding between beekeepers' and farmers'/growers' needs to better manage biodiversity and schedule pesticide applications in consultation with local beekeepers.

Presence of indigenous peoples in project target areas

The indicative target project areas in Nepal are home to Nepal indigenous peoples. In Nepal, indigenous peoples make up over 30% of the country's populations (some sources arguing that up to 50% is more likely), counting 63 indigenous peoples. While Nepal has adopted the United Nations Declaration on the Rights of Indigenous Peoples and ratified ILO Convention 169 ("Indigenous and Tribal Peoples Convention, 1989"), several challenges exist in Nepal for indigenous peoples "in terms of participation in programs and policymaking processes [. . .] to lack of awareness, access to information, defense and the hegemonic mentality of the policymakers."[53] The proposed project will work to strengthen the compliance capacity of select beekeepers and processors (including cooperatives), and it is expected that project activities will either directly involve indigenous beneficiaries, or take place, at least partially, in geographic areas where indigenous peoples have (historically) settled. During its inception phase, the project will validate the proposed activities, and confirm the geographic intervention areas, and identify

[51] *https://www.earthday.org/wp-content/uploads/species/bees.pdf*

[52] *https://www.weforum.org/agenda/2021/08/how-essential-are-pollinators-for-global-food-security*

[53] *https://www.iwgia.org/en/nepal.html*

project beneficiaries and civil society stakeholders. It is foreseen to undertake consultations with chosen representatives to obtain Free, Prior, and Informed Consent (FPIC), as required, based on the related assessment(s) to be undertaken.

ESSPP categorization of the proposed project

The objective of the proposed project is to improve the income of key value chain actors, in particular, smallholder beekeepers (through increased sales of higher value-added honeys). As per UNIDO Environmental and Social Safeguards Policies and Procedures, the project has been categorized as belonging to "Category A". Category A projects are likely to induce significant and/or irreversible adverse environmental and/or social impacts that are sensitive, diverse, or unprecedented, or that affect an area broader than the sites or facilities subject to physical works. This project has been recommended for Category A clearance, as some of the proposed activities are located inside a National Park (Chitwan National Park) with potential adverse impacts on natural habitats. Because of this categorization, while remaining mindful of the project's budgetary scope, a basic Environmental and Social Impact Assessment (ESIA) and an associated Environmental and Social Management Plan (ESMP) will be developed during the project's inception phase. The project will consider working with experts from AFU for this purpose as well as activities related to the FPIC process.

The project intervention activities (mostly related to upstream activities) and the proposed approach to sustaining and enhancing beekeepers' and processors' compliance capacities are expected to have minimal or no adverse social and/or environmental impacts. In addition to the targeted activities at the enterprise-/beekeeper-level outlined before, the close collaboration with key Government stakeholders is expected to result in improved value chain coordination and targeted policy advice, which can be considered a type of mitigation measures, which contribute to avoiding negative impacts of beekeeping, and of other farming activities detrimentally affecting pollinators.

Research and policy-related work

The project will not undertake any research work beyond the research activities leading up to project implementation and the fine-tuning of specific technical assistance activities during implementation. Preliminary research work, which informed the project's design and focus, was undertaken in the form of the value chain analysis outlined in Section B., with a dedicated additional focus on the assessment of certain QI-related parameters. During the project's inception phase and in the lead-up to starting work on the different project components, further relevant assessments will be conducted, including, inter alia, more targeted stakeholder analyses, needs assessments, service portfolio assessments, environmental and social assessments, incl. a gender analysis. The findings, the analysis of these findings as well as recommendations for actions to be derived from the findings, will be presented to the Government of Nepal/ MOALD and key value chain stakeholders for validation / comment.

UNIDO will lead the project-specific research work (VC analyses and related assessments), which will be conducted by UNIDO consultants and/ or specialized subcontractors. As described in a previous section, certain of the analyses/assessments, e.g. the ESIA and the drafting of the ESMP, might potentially be conducted in collaboration with AFU and/or with ICIMOD, while it is not foreseen that UNIDO's involvement with these actors will be solely research-related.

While no policy will be drafted under the project, the project will support the formulation of a strategic plan to specify regulatory requirements for honey and testing parameters for the Government of Nepal under Outcome 1. The strategic plan will be drafted by suitable UNIDO consultants in consultation with Government stakeholders. The aim of the consultative process is the endorsement of the strategic plan by the Government of Nepal / MOALD, and, in the future, its implementation. The ultimate responsibility for the strategic plan lies with the Government of Nepal; while UNIDO consultants will do the actual drafting/ formulation work, the Government of Nepal / MOALD will be the final product owner.

The necessary research that precedes the drafting of the strategic plan will be undertaken by the same UNIDO consultants who will draft the plan. Specifically, this will include a review of relevant technical

regulations (mapping and assessment of alignment with international best practice) as well as a study of relevant standards and import requirements for honey for markets access under Output 1.1. Furthermore, the strategic plan will build upon the value chain assessment conducted by UNIDO consultants during the project's preparatory assistance phase in early 2022. As part of the project's inception phase, the project will conduct further assessments as described above, which will also inform the drafting of the strategic plan.

Risk management

Risks that could jeopardize the implementation of the project have been identified and are detailed in the table below (listed by type and relevance), together with the proposed mitigation measures.

Risk	Probability	Mitigation measures
Project implementation		
Interruption of activities due to COVID-19 restrictions, social distancing, etc.	Medium-low	- The project will provide the necessary infrastructure (working space, equipment, etc.) and transportation means to ensure the safety of project staff. - Remote working arrangements are in place to minimize disruptions due to sanitary measures. - Project activities will be carried out in a manner sensitive of any COVID-19-related health risks for project staff and beneficiaries (e.g. social distancing; distribution of Personal Protective Equipment (PPE); etc. - To avoid discontinuation/ break in capacity building activities, remote solutions will be pursued, as required, e.g. remote/online trainings and/or dissemination of materials; etc.
Lack of ownership and commitment from key project stakeholders and beneficiaries (business support organizations, associations, clusters, MSMEs, QI, etc.).	Medium	- Needs-based, demand-driven approach to project design; consultative process to project implementation. - Continuous monitoring for early detection of discontentment and or stakeholder withdrawal. - Regular stakeholder engagement (following engagement plan) to maintain open communication lines and establish trust-based relationships.
No adequate grievance mechanism in place to voice complaints and concerns about the project's activities.	Medium	- The project will make information on the project (preemptive approach) and contact details for key project personnel available. Grievances can be brought to the attention of UNIDO through UNIDO's Online Reporting Tool as well as other mechanisms. - Complaints received from sources inside and outside UNIDO, including anonymous sources, are recorded and tracked by the UNIDO Office of Evaluation and Internal Oversight.
Limited awareness of the nexus between beekeeping, pollination and food security.	Medium	- The project will implement targeted activities (awareness campaign(s); training; multi-stakeholder workshops and liaison activities to strengthen linkages along and beyond the honey value chain.
Conflict over land use and placement of hives.	Low	- The project will attempt to monitor any related conflicts in the project area and identify mitigating measures (e.g. mediation) as required.
Low absorption capacity of the key project counterparts and/or limited budgetary resources on the side of the counterpart which might delay project activities.	Medium	- In country permanent team to clearly and timely identify absorption capacity problems. - The project work plan will be revised accordingly to accommodate the identified constraints. - Cost effective and affordable solutions will be proposed in the case of the budgetary challenges.

High turn-over of skilled and competent staff trained by the project, as competent and skilled staff might leave the supported institutions.	Medium	- Continuous training (train-the-trainer focus) and skill upgrading will focus on young experts and professionals and newcomers in order to achieve a sustainable critical mass of resources. - Awareness raising/ sensitization of MSMEs and institutions on the importance of knowledge management and intellectual capital.
Insufficient coordination with similar projects at national and provincial levels.	Low	- Key complementary interventions have been identified during the formulation phase and will be further investigated during the inception phase. - Coordination with other donors /projects will be established during the inception phase and ensured throughout the project.
Social		
Insufficiently available information on indigenous peoples / communities living and working in target geographic areas.	Medium	- Consultation with experts/ indigenous associations/groups to gather information and referrals to indigenous peoples' representatives.
Opposition to the project by local populations, e.g. indigenous peoples living near or in target geographic areas.	Low	- FPIC consultative process to ensure appropriate involvement of chosen representatives. - Recruitment/subcontracting of expert(s) who will conduct pertinent assessments and draft an Environmental and Social Management Plan (ESMP) for the project will ensure the project meets needs.
Information on the project not accessible for affected populations (indigenous peoples; women; national, ethnic, religious or linguistic minorities; children; persons with disabilities, or migrant workers and their families, etc.).	Medium	- Translation/ interpretation into local languages will be provided, as required. - Locations for in-person stakeholder consultations will be selected taking any accessibility, safety, security and time constraints into account (e.g. time of day to allow women to participate; religious holidays; available means of transport; etc.). Digital/ hybrid formats will be pursued to ensure effective participation by interested parties.
Low participation of women and other lesser represented stakeholders in consultative processes and activities implemented by the project.	Medium	- Project activities will be designed and planned in a gender- and affected population-sensitive manner (e.g. related to timing, accessibility, security and safety, etc.). - Targeted outreach to promote participation by specific segments of the population in project target areas. - Liaison with civil society organizations, etc. working in support of the affected populations in question to share information on the project. - As required, advertisements and/or use of social media to encourage participation.
Obstacles to equal enjoyment of benefits resulting from the project (women and lesser represented stakeholders being disadvantaged in the enjoyment of benefits).	Medium	- Inclusiveness is a guiding principle in UNIDO project design. - Project activities will be designed and planned in a gender- and affected population-sensitive manner (e.g. related to timing, accessibility, security and safety, etc.). As suitable, responsive activities will be designed/integrated to contribute to changing gender and other social norms and roles. - Project-staff will undergo basic gender-sensitization training. As appropriate, the project will encourage further sensitization training (e.g. on disability; migration). - As appropriate, targets for participation will be set, monitored and reported on, thus creating greater accountability and awareness.

Rights of traditional and/or indigenous beekeeping communities / peoples not adequately safeguarded.	Medium	- The project pursues a human-rights based approach to implementation. - Recruitment/subcontracting of expert(s) who will conduct pertinent assessments and draft an Environmental and Social Management Plan (ESMP) for the project will ensure the project meets needs and respects rights.
Political		
Changes in governmental administration, policies and regulations affecting the NQI, the business environment and the selected VCs.	Medium	- Maintain strong coordination with the respective Government entities at national and provincial levels. - The activity plan will be adjusted as appropriate/necessary to reduce the number of critical activities during electoral/government change periods and the most critical activities will be implemented during periods of stability (as far as foreseeable).
Security		
Security-related incidents (e.g. acts of terrorism).	Low	- Regularly monitor security alerts for updates before travelling to the areas and follow the advice of the local authorities and UNDSS. - Project staff are required to undergo the BSAFE security training prior to commencing their respective assignments.
Environmental		
External shocks, such as earthquakes, displace populations and reduce/destroy/negatively impact lives, natural and productive resources.	Medium	- To the extent possible, the project will monitor natural disaster risks and take preventive actions (to minimize damages, negative health effects, loss of life). - Project staff are required to undergo the BSAFE security training prior to commencing their respective assignments (includes materials on natural disasters). - Office premises will be selected in accordance with UNDSS requirements and clearances. - Project training sites will be selected in good conscience; emergency exists and escape routes will be highlighted/mentioned. - Participants in meetings/trainings/etc. will receive relevant instructions as appropriate (e.g. how to behave in case of earthquakes to be shared with international travelers prior to their arrival in Nepal).
(Mis-)Use, mismanagement and mishandling of harmful herbicides and pesticides.	Medium	- The project foresees activities which will educate about/ build capacity on best practices and standards for the handling of chemicals; promotion of integrated pest management, etc. - Protective gear / equipment will be made available to project beneficiaries and stakeholders as appropriate in any given context.
Logical Framework assumptions (if not mentioned previously)		
Lack of coordination or consensus among the main stakeholders	Low	- Development of focus groups, technical tables, and committees to articulate visions on sector gaps and needs. - Maintenance of the role of observers in the Intersectoral Quality Commission as a consensus platform on issues related to QI.
Lack of active and effective participation of targeted national institutions	Low	- Joint construction of strengthening plans to incorporate current priorities of the institutions.
Lack of active and opportune participation of targeted VC beneficiaries	Medium	- Prioritization of technical assistance lines through consultation and validation by different interest groups, including government, sector, and representatives of relevant actors in the VC.

		- Address technical assistance programs to productive units with relatively mature business models and with a productive and/or export vocation.
Low commitment in the implementation of best practices, recognition of mandates and services offered by government officials	Medium	- Continuous monitoring of work plans and escalation of commitments and responsibilities as necessary. - Ensure the participation of technical and managerial levels in the construction of work plans supported by commitments to the program.
Uncertainty about government stability regarding policy and institutional support	Medium	- Continuous monitoring of the productive and quality ecosystem in terms of regulation, public policy, and institutional arrangements.
Uncertainty about the willingness of CABs to seek accreditation of supported methods	High	- Design of calls and selection criteria for beneficiaries with a demand-oriented approach, incorporating qualification criteria that assess the potential sustainability of future capacities. - Financial support for access to accreditations by selected groups of beneficiary CABs.
Low willingness to adopt practices to increase quality intended	Medium	- Design of calls to prioritize the participation of productive units with medium-high maturity. - Seek synergies with cooperation partners that facilitate the linkage of beneficiaries with other links in the supply chains.
Unstable demand of CAB services due to uncertainty in external demand of SMEs	Medium	- Promotion of market information and coordination tools that facilitate closing supply-demand gaps in CABs. - Monitoring of the sector's regulatory agenda to ensure that CAB services remain the primary mechanism for demonstrating conformity.
Lack of complementary actions oriented to the sector to cover unattended areas by GMAP Nepal	High	- Permanent dialogue with government and cooperation partners to highlight assistance needs in formalization and last-mile capacities. - Participation in tables for the reindustrialization of the phytotherapeutic sector aimed at promoting initiatives complementary to the program's offer.

Table 8 - Risk management matrix

E. INPUTS

Counterparts inputs

The respective counterpart institutions involved in the country project will contribute in-kind, covering the following specific items:

- Ensure that a sufficient number of staff of an appropriate professional-level and seniority within the respective organizations are made available for country project activities and consultation;
- Ensure continuity/retention of personnel during the project (any turnover in the staff assigned to the project should be promptly notified to UNIDO);
- Nominate participants to meetings, workshops and other events to be held inside the country, as part of the normal functioning of their respective organizations;
- Provide local administrative support for organizing meetings, conferences and training activities, as necessary;
- Provide support and facilitate the processing of any legal documents or decrees to be produced under the project;
- Solve any institutional difficulties or obstacles that may hinder the implementation of project-related activities and/or has direct impact on project objectives;
- Provide office space to host the Project Management Unit (PMU) in Kathmandu.

UNIDO inputs

UNIDO will provide know-how, expertise, facilities and staff time, in general terms:

- Identification and recruitment of project staff; setting up of the Project Management Unit;
- Identification, preparation of Job Description(s) of international and/or national experts required by the project;
- Identification of suppliers (national/international), preparation of Terms of Reference(s) and Technical Specification(s), and procurement of services and equipment;
- Preparation of and making arrangements for training(s);
- Project monitoring, reporting and evaluation;
- Making available of UNIDO methodologies, resource materials and platforms as required;
- Project visibility activities.

Procurement

The procurement of services and equipment will be conducted following strict adherence to UNIDO's procurement rules and regulations.

F. BUDGET[54]

BL	Description	Year 1	Year 2	Year 3	Year 4	Total
Component 1						
			Outcome 1			
11	Staff and International Consultants	6 000,00	6 000,00	6 000,00	6 000,00	24 000,00
15	Project Travel	4 000,00	4 000,00	4 000,00	4 000,00	16 000,00
16	Staff Travel	0,00	0,00	0,00	0,00	0,00
17	National Consultants/Staff	25 000,00	25 000,00	25 000,00	25 000,00	100 000,00
21	Contractual Services	20 608,00	14 490,00	14 490,00	16 339,00	65 927,00
30	Training/Fellowship/Study	10 000,00	15 000,00	15 000,00	10 000,00	50 000,00
43	Premises	0,00	0,00	0,00	0,00	0,00
45	Equipment	0,00	97 599,00	97 599,00	0,00	195 198,00
51	Other Direct Costs	2 400,00	2 400,00	2 400,00	2 400,00	9 600,00
Sub-total Outcome 1:		**68 008,00**	**164 489,00**	**164 489,00**	**63 739,00**	**460 725,00**
			Outcome 2			
11	Staff and International Consultants	6 000,00	6 000,00	6 000,00	6 000,00	24 000,00
15	Project Travel	9 500,00	9 500,00	9 500,00	9 500,00	38 000,00
16	Staff Travel	0,00	0,00	0,00	0,00	0,00
17	National Consultants/Staff	20 000,00	20 000,00	20 000,00	20 000,00	80 000,00
21	Contractual Services	16 166,00	16 163,00	16 163,00	16 163,00	64 655,00
30	Training/Fellowship/Study	21 187,00	21 187,00	21 187,00	21 187,00	84 748,00
43	Premises	0,00	0,00	0,00	0,00	0,00
45	Equipment	28 213,00	30 533,00	30 533,00	30 533,00	119 812,00

[54] *Outcomes will be treated as Outputs in UNIDO's ERP system. A threshold for second level approval for movement of funds between Outputs of 15% percent applies.*

BL	Description	Year 1	Year 2	Year 3	Year 4	Total
51	Other Direct Costs	4 000,00	4 000,00	4 000,00	4 000,00	16 000,00
Sub-total Outcome 2:		**105 066,00**	**107 383,00**	**107 383,00**	**107 383,00**	**427 215,00**
Outcome 3						
11	Staff and International Consultants	2 874,00	2 874,00	2 874,00	2 874,00	11 496,00
15	Project Travel	5 000,00	5 000,00	5 000,00	5 000,00	20 000,00
16	Staff Travel	0,00	0,00	0,00	0,00	0,00
17	National Consultants/Staff	10 000,00	10 000,00	10 000,00	10 000,00	40 000,00
21	Contractual Services	10 086,00	10 081,00	0,00	0,00	20 167,00
30	Training/Fellowship/Study	10 600,00	15 750,00	23 750,00	18 750,00	68 850,00
43	Premises	0,00	0,00	0,00	0,00	0,00
45	Equipment	0,00	0,00	0,00	0,00	0,00
51	Other Direct Costs	4 000,00	4 000,00	4 000,00	4 000,00	16 000,00
Sub-total Outcome 3:		**42 560,00**	**47 705,00**	**45 624,00**	**40 624,00**	**176 513,00**
Sub-total Component 1:		**215 634,00**	**319 577,00**	**317 496,00**	**211 746,00**	**1 064 453,00**
Project Management and Coordination						
11	Staff and International Consultants	0,00	0,00	0,00	0,00	0,00
15	Project Travel	2 000,00	2 000,00	2 000,00	2 000,00	8 000,00
16	Staff Travel	7 000,00	7 000,00	7 000,00	7 000,00	28 000,00
17	National Consultants/Staff	8 000,00	8 000,00	8 000,00	8 000,00	32 000,00
21	Contractual Services	3 000,00	3 000,00	3 000,00	3 000,00	12 000,00
30	Training/Fellowship/Study	0,00	0,00	0,00	0,00	0,00
43	Premises	5 000,00	5 000,00	5 000,00	5 000,00	20 000,00
45	Equipment	36 639,00	14 107,00	0,00	0,00	50 746,00
51	Other Direct Costs	1 500,00	1 500,00	1 500,00	1 500,00	6 000,00
Sub-total Project Management & Coord.:		**63 139,00**	**40 608,00**	**26 500,00**	**26 500,00**	**156 746,00**

BL	Description	Year 1	Year 2	Year 3	Year 4	Total
Sub-total Component 2:		**63 139,00**	**40 608,00**	**26 500,00**	**26 500,00**	**156 746,00**
TOTAL		**278 773,00**	**360 185,00**	**343 996,00**	**238 246,00**	**1 221 200,00**
PSC (13 %)		36 240,50	46 824,00	44 719,50	30 972,00	158 756,00[55]
GRAND TOTAL		**315 013,00**	**407 009,00**	**388 715,00**	**269 218,00**	**1 379 956,00[56]**

The description of budget lines (BL) is as follows:

- Staff and International Consultants (BL 11) is used to describe the contracting of specialists appointed by UNIDO, or current staff of UNIDO, to undertake technical assignments, to support the project objectives in the target country.
- Project Travel (BL 15) occurs if the project staff/traveler (or government/counterpart official) is required to travel within the country where the project is based, and other expenses for project travel.
- Staff Travel (BL 16) covers the costs of staff undertaking official missions (monitoring, attendance of steering committees among others).
- National Consultants/Staff (BL 17) are citizens of the recipient country, including nationals living abroad (non-resident nationals) or aliens who are permanent residents of the host country. They shall have spent a considerable number of their formative years in the country so that they are familiar with the social and economic conditions in the locality. They will perform functions of a professional nature requiring local knowledge and experience.
- Contractual Services (BL 21) covers costs of suppliers. UNIDO will subcontract the provision of services to national and/or international entities (public or private) where deemed necessary. The procurement of services will be conducted following strict adherence to UNIDO's procurement rules and regulations.
- Training/Fellowship/Study (BL 30) make reference to in-country trainings, study tours, project meetings required to achieve the project objectives.
- Premises (BL 43) is used for the rental of premises, and all activities related to this (e.g. insurance).
- Equipment (BL 45) refers to the purchase of office equipment, including minor IT equipment, and costs related to equipment depreciation, as well as equipment to be procured for technical assistance purposes. The procurement of equipment will be conducted following strict adherence to UNIDO's procurement rules and regulations.
- Other Direct Costs (BL 51) covers language and document services; editing & printing services, translation & interpretation; hospitality, sanitation/cleaning materials; office supplies & photocopy; fuel & vehicle maintenance; food & beverage; and other direct operating expenses.

[55] *Rounded.*

[56] *Rounded.*

G. PROJECT MANAGEMENT

Project governance and management

Project governance

At the topmost level of the governance structure, a Steering Committee (SC) will be created to provide strategic guidance and monitoring of progress towards established objectives and outputs. Its tasks will include, but will not be limited to:

- Taking strategic decisions, which may include approval of the inception report as the basis for the project implementation, monitoring and evaluation.
- Setting and assessing project milestones, which may include changes or amendments to timeline (implementation of activities), objectives or key beneficiaries.
- Discussing relevant issues regarding the implementation of the project, incl. findings from the gender analysis.
- Approving the semi-annual work plan for the project and formulating recommendations, as necessary.
- Approving the progress reports and formulating recommendations, as necessary.

The Ministry of Agriculture and Livestock Development will act as the main government counterpart facilitating communication and coordination among the various line-ministries. The SC will be chaired by a senior government official to be determined by the Government. The core members of the Steering Committee will be the Ministry of Finance, MOALD, DFTQC, UNIDO and the Royal Norwegian Embassy. SC participants will also include representatives from the principal line-ministries and other relevant public and private institutions. These may be invited as members or observers at the initiative of the SC core members. The Terms of Reference and the exact composition of the Steering Committee will be finalized during the project's inception phase. The SC will meet officially twice a year in Kathmandu or virtually, depending on requirements. The UNIDO PMU will act as the Secretariat of the SC.

Project management

The overall project management and coordination of the country project implementation will be ensured by a responsible Project Manager from the TCS/SME/CQC unit at UNIDO Headquarters. The Project Manager will be supported by the GMAP Programme Coordinator and the GMAP Programme Assistant at no extra cost to the country project.

A Project Management Unit (PMU) will be established and will be consisting of a full-time National Technical Coordinator (NTC), a full-time National Value Chain Development Expert, and a National Quality Infrastructure Expert, all based in Kathmandu. To ensure proper management and optimization of resources, MOALD will provide the premises for hosting the PMU.

The NTC will act as team leader for coordination with UNIDO HQ, supervising the local-level PMU, and working closely with the Focal Point appointed by the MOALD. Additionally, the NTC will provide strategic guidance and maintain close relationships with the local representatives of the donor and Government counterparts. The management of the technical project components will be ensured by the TCS/SME/CQC Project Manager.

The NTC will further be in charge of overlooking the day-to-day operations, coordination and administration, under the supervision of the Project Manager in Vienna, Austria.

From the side of MOALD, for the main national technical counterpart, the Center for Industrial Entomology Development, a National Focal Point (NFP), responsible for all matters related to the project, will be assigned to facilitate project implementation as well as streamline communication efforts.

International and national technical experts will be recruited as per the technical requirements of the activities on a short-term basis. Technical assistance will be provided in a sustainable manner, ensuring knowledge transfer to the beneficiaries.

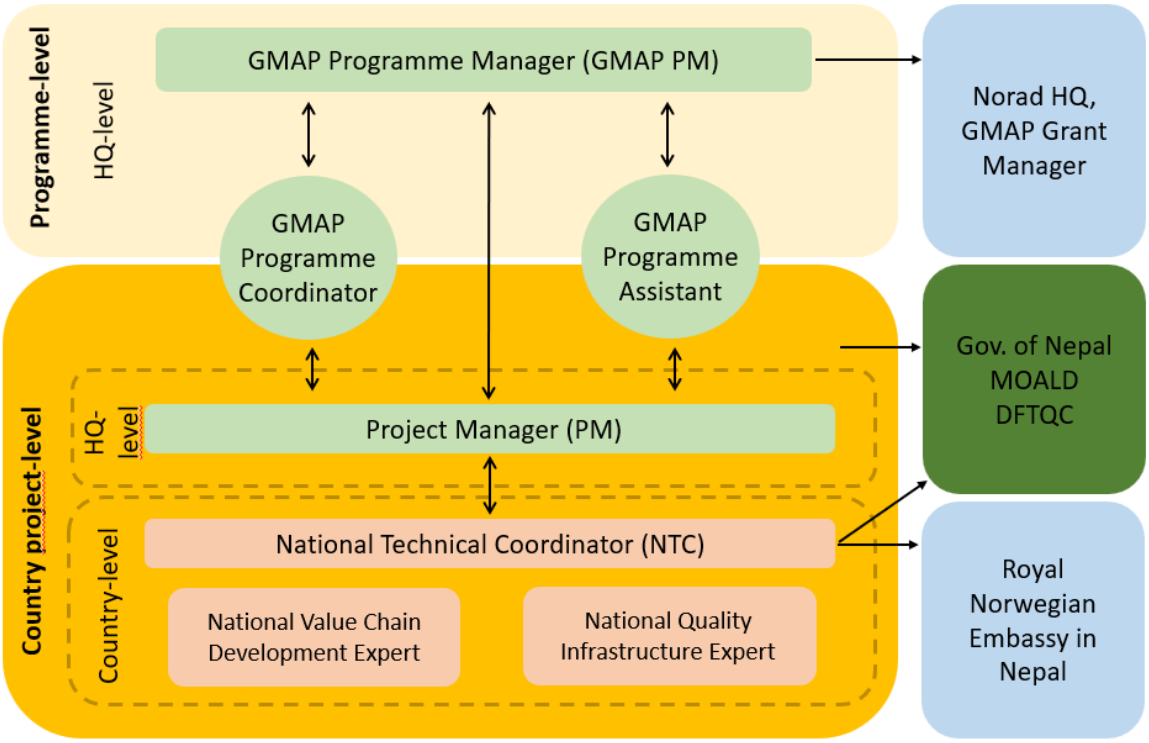

Figure 6 – GMAP Nepal project management and coordination structure

The nature of the project will require frequent travel in and out of Kathmandu. Therefore, it is planned to provide for local means of transportation within the framework of this project. During the initial phase, the most cost-effective options for local travel (e.g., purchase of a vehicle, lease agreement with local rental companies, LTA for transportation, e.g., by taxi, etc.) will be reviewed and any necessary actions will be taken.

H. RBM CODE AND THEMATIC AREA CODE

The Results Area Code applicable to the GMAP country project is as follows:

JR30 – Innovative, inclusive and sustainable businesses

I. VISIBILITY

Communication and visibility will follow the guidelines established by the integrated communication framework as approved as part of the project's inception. The communication framework includes clear functions and communication objectives, identification of relevant target audiences, and identification of suitable channels to reach target audiences.

In addition to the communication framework, visual guidelines and graphical elements, and key messages will be developed in alignment with the GMAP's visual identity (with a view to creating a strong brand) as well as the UNIDO corporate design manual.

At country level, country projects will be responsible for the production and local dissemination of promotional material.

Any visibility and training materials designed and distributed by the project will employ gender-sensitive language and pursue balanced representation in images, further aiming not to portray women and men in a manner, which reproduces (gender) stereotypes.

J. INCEPTION PHASE

The project envisages an inception phase of 6 months starting from the signature of the present project document.

The inception phase will build from the project document to consolidate linkages with the proposed partner institutions and key stakeholders. During this phase, the proposed project strategy and focus will be reviewed. The inception phase will also serve to validate the proposed geographical areas of intervention, taking account of developments in the sector and government, provincial and district level priorities. In addition, the inception phase will then confirm/ identify local stakeholders, training providers and experts to be involved in the various activities, and which beekeepers, processors and support institutions to work with in the prioritized locations. It will serve to build and validate a work plan, establish a baseline and then launch project activities.

During the inception phase UNIDO will:

- Recruit the requisite technical experts and set up the Project Management Unit (PMU).
- Set-up and equip the project office in Nepal, including transportation means.
- Validate the proposed geographical areas and confirm/identify direct project beneficiaries.
- Elaborate the first annual detailed work plan.
- Conduct in-depth assessments, where necessary (e.g. capacity assessment of Nepal Academy of Science and Technology laboratory; involved areas of a consistent official control system (from animal health to general food safety requirements and additional specific requirements for the honey value chain, complementary and follow-up activities by CIED, etc.), and establish baselines for the KPIs, inclusive of gender-specific indicators based on the collection of sex-disaggregated data through a dedicated gender analysis (potentially as part of the ESMP).
- Validate the budget, and process adjustments to the same, as necessary (e.g. transfer of funds among outcomes/outputs).
- Establish the Steering Committee (SC) and modus operandi (Terms of Reference (ToR)).
- Validate the approaches, concepts and logical framework ("logframe") proposed in the project document, taking into consideration the latest developments in the country and the information collected through the in-depth assessments. The log-frame will include, as a minimum, the KPIs detailed in Annex A, if applicable to project intervention, in order to contribute to reporting at the Programme level.
- Design tools for planning, implementation, coordination, progress and impact monitoring and evaluation of the project, including risks.
- Commence to build awareness and kick-off liaison with stakeholders and partners to secure their active involvement.

The results of the inception phase will be documented in an inception report and will include the following key deliverables: i) PMU and SC set up; ii) action plans with detailed activities and an operational plan/roadmap; iii) baselines for the KPIs; iv) logframe and budget adjustments, as necessary: v) detailing of levels of involvement of key stakeholders, and vi) approach to project strategies (in aspects such as: visibility and communication, expansion of results and knowledge management as well as the sustainability of the results, including the exit strategy with a view to continuation beyond the

project's duration). The inception report be presented and discussed at the first SC meeting for approval and endorsement.

K. MONITORING, REPORTING AND EVALUATION

A monitoring and evaluation framework, aligned with UNIDO and Norad monitoring and evaluation requirements, will be applied to: 1) the entire programme; 2) each country. Reporting will be done at programme and country project-level and will be due twice a year (dates to be determined during the inception phase and agreed by the SC).

The project will establish a Result-Based Monitoring (RBM) mechanism to ensure timely identification of possible implementation challenges and provide support in addressing them. The baseline data identified in the inception phase will form the basis of the monitoring system.

Monitoring at country level will happen internally for day-to-day monitoring of implementation, activities and results. Day-to-day monitoring will be done by the PMU. The PMU will monitor the project against the Project Logical Framework with a results-based management approach, oriented towards delivering outputs and achieving desired outcomes. The project staff will be required to monitor the gender compositions and indicators in project activities. The PMU will also identify possible implementation challenges and obtain support to address them. Progress will be reported at the Steering Committee meetings. On this basis, UNIDO will prepare narrative project progress reports every six months and financial reports every 12 months. Official reporting will be English; Nepali translation will be prepared upon requests placed by either the donor or SC members. The progress report template will be in line with the progress reporting template agreed on in the approved GMAP Inception Report.

Besides day-to-day monitoring of implementation, strategic monitoring will be conducted at the country level in projects with an increased implementation risk, for example given their scope and context. This will allow for timely assessment and timely initiation of corrective actions (if required) for optimized project performance.

The project will be evaluated as part of the GMAP in accordance with the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle, for which the evaluation plan will be defined during the inception phase and which will include a mid-term evaluation and a final independent evaluation with selected country project participation. The final evaluation will be carried out in accordance with the global programme.

Monitoring and Evaluation plan and budget

Type of M&E activity	Responsible Parties	Estimated Budget EUR	Time frame
Kick-Off meeting/petit SC	UNIDO Project Manager (PM); National Technical Coordinator; Project Management Unit (PMU); donor local office; national counterparts	0**	First month of project start up
Monitoring tools design to collect implementation data (performance indicators)	UNIDO Project Manager (PM); National Technical coordinator; Project Management Unit (PMU) and relevant team members	0**	Start and mid of project
Steering Committee Meetings	UNIDO Project Manager (PM); National Technical coordinator; Project Management Unit (PMU); local steering committee	7,000	Two steering committee meetings every year

Type of M&E activity	Responsible Parties	Estimated Budget EUR	Time frame
Preparation of Annual operational plan (AOP)	National Technical Coordinator; Project Management Unit (PMU) and relevant team members	0**	1 month prior to every implementation year
Annual reporting on performance indicators to Global coordination	National Technical Coordinator; Project Management Unit (PMU)	0**	Once per year before global SC
Regular monitoring of AOP and analysis of performance indicators	UNIDO Project Manager (PM); National Technical coordinator; Project Management Unit (PMU); core team members	0**	Two times per month to feed into AOP detailed action plan follow-up and monitoring matrix
Visits to field sites	PM, NTC, donor local office, FO, national counterparts	3,000**	When critically required
Mid-term Review	PM, external consultants, Steering Committee; UNIDO HQ	0*	Mid of project or when deem necessary
Terminal project evaluation	PM, UNIDO HQ, Project Steering Committee, independent external evaluators	0*	In consultation with Global Programme as deem appropriate.
TOTAL indicative cost ** Other costs to be added, covered by Global Programme budget* *** The costs are covered under Project Management Costs*		10,000	

L. LEGAL CONTEXT

The Government of the Federal Democratic Republic of Nepal agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 23 February 1984.

M. ANNEX A – Logical Framework

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
ISID impact				
Overall objective Improved livelihood opportunities for small-scale beekeepers, MSMEs and honey processors in selected districts of Nepal through the sale of high-quality honeys. **Specific objective** Enhanced market access for Nepalese honeys to the domestic as well as regional and international markets.	• ECO.1 – Number of firms with economic gains (additional sales, savings) (disaggregated by women-led firms) • ECO.2 – Number of firms with improved labour productivity → Number of firms with improved competitiveness in the supported sector(s)/industry(-ies)/value chain(s) (disaggregated by women-led firms) • ECO.3 – Number of firms with an increase in exports (disaggregated by women-led firms) • SOC.2 – Number of MSMEs with increased inclusion in value chains (disaggregated by women-led firms) • % change in regional/local market share in the supported value chain by year • % change in export market share in the supported value chain by year	• Trade and export reports and statistics • Surveys/project reports	*Not applicable*	*Not applicable (N.a.)*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• % increase in amount of honey exported (in metric tons) by year			
Outcome 1:				
Enhanced technical competence and sustainability of the National Quality Infrastructure System.	• GOV.1 – Number of institutions established or strengthened • GOV.2 – Number of actors participating in enhanced collaboration settings (sex-disaggregated) • KASA.1 – Number of government bodies gaining awareness or knowledge on UNIDO knowledge areas • KASA.2 – Number of government bodies gaining skills on UNIDO knowledge areas • POL.2 – Number of new standards adopted or implemented → Number of technical regulations reviewed and updated[57] • POL.3 – Number of guidelines adopted by government bodies • REA.1 – Number of government actors reached	• Project baseline assessments and final analyses • National reports and statistics on the sector • Stakeholder surveys/ questionnaires	Government and beneficiaries are committed to improvement and will make available the required resources to maintain the improved operational practices and processes/management systems.	GOV.1: 0/1 laboratory GOV.2: • 0/1 laboratory • 0/20 cooperatives (target for women-led cooperatives to be identified during inception phase) • 0/5 commercial processors (target for women-led firms to be identified during inception phase, presumably 40%). • 0/1150 beekeepers/honey hunters (target for women beekeepers to be identified during inception

[57] *Due consideration will be given to making any standard-setting processes supported by the project gender-responsive, e.g. by ensuring approximately equal active participation of women and men, and/or encouraging the representation of relevant VC women's associations in the processes, as appropriate.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• REA.2 – Number of government actors engaged • REACT.1 – Percentage of government actors satisfied with UNIDO interventions • TEC.3 – Number of new technologies adopted			phase, but min. 40%/460). • 0/1 beekeeping/sectoral association KASA.1: 0/1 laboratory KASA.2: 0/1 laboratory POL.2: 0/ to be identified during inception phase POL.3: 0/ to be identified during inception phase REA.1/2 & REACT.1: 0/ to be identified during inception phase TEC.3: 0/ to be identified during inception phase
Output 1.1				
Technical competence of key QI actors and capacity to monitor honey quality for the	• NOO.1 – Number of standard-setting processes with UNIDO participation → Number of Technical Working Groups established/ joined[58]	• Technical reports • Reports from QI institutions • Project reports	Government is committed to providing necessary resources (human and financial) for achieving	NOO.1: 0/ to be identified during inception phase PAO.1: 0/ to be identified during inception phase

[58] *See footnote 54.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
local market strengthened.	• PAO.1 – Number of industrial strategies and industrial policy documents drafted / prepared → Number of strategic plans on regulatory requirements drafted[59] • TCO.1 – Number of capacity building activities provided → Number of capacities building activities on trade monitoring provided • TCO.3 – Number of toolkits and guidelines produced[60] • TCO.2 – Value (USD) of assets provided[61] • Number of new technical regulations formulated		objectives and sustainability of the beneficiary institutions. Responsible political authorities accept the cooperation and integrate the findings and policy recommendations into their respective strategic and operational plans. Effective participation by the target beneficiaries in the planned project activities and in accordance to the set timeline.	TCO.1: 0/ to be identified during inception phase TCO.3: 0/ to be identified during inception phase TCO.2: 0/ to be identified during inception phase No. of new techn. reg.s: 0/ to be identified during inception phase
Output 1.2				
National capacity to comply with international regulations and quality control	• PAO.1 – Number of industrial strategies and industrial policy documents drafted / prepared → o Number of relevant sectoral training curricula developed	• Project reports • Reports from CIED, DFTQC, etc.	Responsible authorities accept the cooperation and collaborate to carry out the analysis.	PAO.1: 0/ to be identified during inception phase TCO.1: 0/ to be identified during inception phase

[59] *As suitable, any strategies formulated with project support will include specific activities to enhance women's representatio n or other measures to enhance gender equality and the empowerment of women (along the value chain).*

[60] *Consideration will be given to highlighting any relevant gender issues. Any data presented will be disaggregated by sex. Quotes and images feature both women and men – notably in a way that does not replicate gender stereotypes.*

[61] *UN Rate of Exchange at time of reporting applies.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
strategies and curricula for food hygiene in beekeeping established.	○ Number of quality control strategies developed ○ Number of zoning strategies drafted • TCO.1 – Number of capacity building activities provided → ○ Number of capacity building activities towards certification readiness provided ○ Number of capacity building activities towards accreditation readiness provided ○ Number of capacity building activities on food safety provided • TCO.2 – Value (USD) of assets provided[62] • TCO.3 – Number of toolkits and guidelines produced[63] • Number of assessments (needs/gaps analyses) conducted	• Technical reports • Lists of participants and certificates awarded • Value of equipment procured • Project monitoring and evaluation reports	Responsible authorities accept the cooperation and integrate the findings and recommendations Effective participation by the target beneficiaries in the planned project activities DFTQC has adequate infrastructure and sufficient human and financial resources to carry out the activities	TCO.2: 0/ to be identified during inception phase TCO:3: 0/ to be identified during inception phase No. of assess.: 0/ to be identified during inception phase No. of feas. studies: 0/ to be identified during inception phase No. of benef. gov. bodies accredited: 0/ 1 laboratory No. of scopes: 0/ to be identified during inception phase

[62] *UN Rate of Exchange at time of reporting applies.*

[63] *See footnote 56.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• Number of feasibility studies/ business plans for laboratories developed • Number of beneficiary government bodies accredited for management systems (ISO 17020, ISO 17025, ISO 17065, etc.) • Number of scopes of accreditation for which the beneficiary Conformity Assessment Body/ies is/are accredited to perform services			
Outcome 2				
Enhanced MSMEs' compliance with standards and technical regulations.	• BUS.1 – Number of firms with improved management practices → Number of firms in the supported value chain certified on management systems (ISO 9001, ISO 14001, etc.) (disaggregated by women-led firms) • BUS.2 – Number of actors developing new products ○ Number of beekeepers/ MSMEs/cooperatives producing compliant honeys (disaggregated by women-	• Project reports • Agreements with MSMEs and other VC members to receive technical support • Registration documents for certification schemes	Beneficiaries are keen to comply with technical regulations, standards and to implement and maintain management systems. Local BSOs / extension service providers are willing and capable to deliver development services with project support.	BUS.1: 0/ 5 commercial processors BUS.2: 0/ to be identified during inception phase GOV.2/KASA.1/KASA.2: • 0/20 cooperatives (target for women-led cooperatives to be identified during inception phase) • 0/5 commercial processors (target

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	led firms or cooperatives/ sex-disaggregated) • GOV.2 – Number of actors participating in enhanced collaboration settings (sex-disaggregated/ disaggregated by women-led firms or cooperatives) • KASA.1 – Number of actors gaining awareness or knowledge on UNIDO knowledge areas (disaggregated by women-led firms or cooperatives/ sex-disaggregated). • KASA.2 – Number of actors gaining skills on UNIDO knowl. areas (sex-disaggregated/ disaggregated by women-led firms or cooperatives). • POL.3 – Number of guidelines adopted by relevant actors → Number of good agricultural/ beekeeping practices adopted by beekeepers/ SMEs/ cooperatives/ BSOs (disaggregated by women-led firms or cooperatives/ sex-disaggregated)[64]	• Training records & evaluations		for women-led firms to be identified during inception phase; presumably 40%). • 0/1150 beekeepers/honey hunters (target for women beekeepers to be identified during inception phase, but min. 40%/460). • 0/1 beekeeping/sectoral association POL.3: 0/ to be identified during inception phase REA.1/2 & REACT.1: 0/ to be identified during inception phase TEC.3: 0/ to be identified during inception phase

[64] *See footnote 56.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• REA.1 – Number of beekeepers/ SMEs/ cooperatives/ BSOs reached (disaggregated by women-led firms or cooperatives/ sex-disaggregated) • REA.2 – Number of beekeepers/ SMEs/ cooperatives/ BSOs engaged (disaggregated by women-led firms or cooperatives/ sex-disaggregated) • REACT.1 – Percentage of beekeepers/ SMEs/ cooperatives/ BSOs satisfied with UNIDO interventions (disaggregated by women-led firms or cooperatives/ sex-disaggregated) • TEC.3 – Number of new technologies adopted by beekeepers/ SMEs/ cooperatives/ BSOs (disaggregated by women-led firms or cooperatives/ sex-disaggregated)			
Output 2.1				
Collaboration and associativity among producers/	• PAO.2 – Number of analytical and statistical publications produced[65] • TCO.1 – Number of capacity building activities provided → Number of	• Project reports • Constitution agreements	Actors along the targeted VC are committed to complying with technical regulations and standards and collaborate to conduct the	PAO.2: 0/ to be identified during inception phase

[65] *See footnote 56.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
value chain actors strengthened for mutual benefit.	capacities building activities on quality control mechanisms / integrated pest management provided • TCO.3 – Number of toolkits and guidelines produced[66] • TCO.2 – Value (USD) of assets provided[67] • Number of beekeepers/ MSMEs/ cooperatives/ BSOs that participated in capacity building activities (disaggregated by women-led firms or cooperatives/ sex-disaggregated)	(linkages/clusters) • Lists of participants and training records	assessment and to agree on an action plan. Beneficiaries are committed to collaborating through associativity/linkages. Capacity building resources are available.	TCO.1: 0/ to be identified during inception phase TCO.2: 0/ to be identified during inception phase TCO.3: 0/ to be identified during inception phase No. of beneficiaries participating: 0/ to be identified during inception phase hunters (target for women participants at min. 40%).
Output 2.2				
MSMEs supported to improve management of food safety and quality of honey and honey products.	• TCO.1 – Number of capacity building activities provided → Number of capacities building activities on good business practices / GMP / etc. provided • TCO.3 – Number of toolkits and guidelines produced	• Project reports • Registration documents for certification schemes • Training records & evaluations	Effective participation by the target beneficiaries in the planned project activities and in accordance to the set timeline.	TCO.1: 0/ to be identified during inception phase TCO.3: 0/ to be identified during inception phase No. of firms receiving technical support: 0/to be identified during inception

[66] *See footnote 56.*

[67] *UN Rate of Exchange at time of reporting applies.*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• Number of firms receiving technical support in the improvement of their management systems to comply with national and international standards (disaggregated by women-led firms) • Number of MSMEs staff trained (sex-disaggregated)			phase (target for women-led firms at min. 40%) No. of MSMEs staff trained: TCO.1: 0/ to be identified during inception phase (target for women participants at min. 30%)
Outcome 3				
Strengthened culture for quality.	• GOV.2 – Number of actors participating in enhanced collaboration settings (sex-disaggregated) • KASA.1 – Number of actors (people/ consumers) gaining awareness/knowledge on UNIDO knowledge areas (sex-disaggregated) • REA.1 – Number of actors (people / consumers) reached (sex-disaggregated) • REA.2 – Number of actors engaged (sex-disaggregated)	• Project reports • Attendance lists • Social media mentions/ reposts	Effective participation by the target beneficiaries in the planned project activities and in accordance to the set timeline.	GOV.2/KASA.1/REA.1/REA.2/ REACT.1: • 0/20 cooperatives (target for women-led cooperatives to be identified during inception phase) • 0/5 commercial processors (target for women-led firms to be identified during inception phase).

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• REACT.1 – Percentage of actors satisfied with UNIDO interventions (sex-disaggregated and/or gender disaggregated) • Number of project initiatives adopted at the sectoral level (e.g. Nepalese trade mark for honey/ umbrella brand)			• 0/1150 beekeepers/honey hunters (target for women beekeepers to be identified during inception phase, but min. 40%/460). • 0/1 beekeeping/sectoral association • 0/ to be identified during inception phase for any other actors No. of project initiatives: 0/1

Output 3.1

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
Nepalese umbrella brand and quality mark for honey and campaign to promote Nepalese honey in the domestic market developed and implemented.	• CPO.1 – Number of global fora, workshops, EGM, events and side events organized[68] • CPO.5 – Number of interventions in partnership with non-UN institutions (e.g. collaboration agreement with ICIMOD and/or AFU) • Number of attendees at the awareness raising activities (sex-disaggregated) • Number of awareness activities organized/ implemented (e.g. marketing and information campaigns)	• Project reports • Agendas of the activities • Lists of participants	Stakeholders are committed to enhance quality and support the project activities. Stakeholder and beneficiaries of the project are committed to support the project activities.	CPO.1: 0/3 (to be confirmed during inception phase) CPO.5: 0/2 (to be confirmed during inception phase) No. of attendees: 0/ to be identified during inception phase (target for women attendees at min. 40%) No. of awareness activities: 0/3 (to be confirmed during inception phase)
Output 3.2				
Quality awareness materials are developed and strategic marketing plan for Nepalese honey drafted.	• PAO.1 – Number of industrial strategies and industrial policy documents drafted / prepared (e.g. strategic marketing plan and recommendations on quality parameters) • Number of awareness/ promotional materials developed	• Project reports • Newsletter subscriptions • Social media mentions • Requests for further information received by project team	Responsible authorities commit to accept the findings and integrate them into their respective strategic and operational plans. Cooperation/advice is received from beneficiaries/counterparts.	PAO.1: 0/ to be identified during inception phase No. of materials developed: 0/to be identified during inception phase

[68] *As suitable, depending on the subject and context of the event, efforts will be made to highlight relevant gender issues, and quotes and images of both women and men will be featured, in a way that does not replicate gender stereotypes. Any events will be organized in line with the UNIDO policy on panel parity (AI/2020/03).*

Narrative	Measurable Indicator	Source of verification	Assumptions & risks	Baselines/Targets
	• Number of technical assessments conducted • Number of project newsletters subscribers (sex-disaggregated) • Number of visits/clicks to project online platforms/ websites	• IT-analytics		No. of techn. assessments: 0/to be identified during inception phase No. of project newsletter subscribers: 0/to be identified during inception phase No. of visits: 0/to be identified during inception phase

N. ANNEX B – SWOT analysis

Honey value chain in Nepal

Strengths	Weaknesses
• Honey still features prominently in the Government of Nepal's trade and agricultural plans and strategies; • Large number of small-scale beekeepers; • Government of Nepal's 15th Plan and NTIS 2016 put emphasis on improved quality infrastructure and support to meeting relevant standards for Nepalese (food) products; • National Food and Feed Reference Laboratory of DFTQC accredited to ISO/IEC 17065 and provides certain chemical testing services for honey; • Existence of Government center under the Department of Agriculture dedicated to beekeeping; • Unique flavor of honey produced in Nepal; • Comparatively small start-up costs to enter the VC	• Nepal is not on the list of "third countries" approved for production of food of animal origin to be exported to the EU market; • Nepal does not have a Residue Monitoring Plan in place, as required by the EU; • The EU defines honey as the "natural sweet substance produced by *Apis mellifera* bees", limiting export opportunities for honey produced by *Apis cerana* and other native species; • Nepal Honey Quality Standard (NS 350:2052 Honey) is not fully aligned with the Codex Alimentarius international standard (basis of SPS Agreement); • Limited availability of conformity assessment services in the country and limited scopes of accreditation of public laboratories; no national accreditation body; • Many beekeepers live in remote rural areas and face associated infrastructural limitations in accessing markets and inputs; • Lack of working capital and limited access to finance.
Opportunities	**Threats**
• The Government of Nepal has legislation in place and encourages the formation of agrifood producer and processor cooperatives; • Domestic consumption of honey has grown over the last years; • Much of the honey produced in Nepal is *de facto* organic; • High potential to contribute to women's economic empowerment, youth employment and rural livelihoods; • To date little product diversification/ value addition; • Few branding and marketing efforts have been undertaken; • Enhance institutional capacities to deliver required technical services; training capacities to improve HACCP and good farming/beekeeping practices; • Linking honey VC actors to the tourism sector through sale of products to hotels and other accommodation types; apitourism; ayurvedic operators, etc.; • Uniting a number of cooperatives under one brand for greater reach and cost-sharing of marketing costs, etc.	• Clashes between farmers and beekeepers over bee colony presence in their fields due to lack of awareness of bees' pollination function; • Pesticide use is increasing in certain areas (e.g. Terai) and improper handling, storage and application of such chemicals; • *Apis mellifera*, due to its foraging patterns, increasingly displaces *Apis cerana* and other species, thus potentially posing a threat to local biodiversity; • Strong competition for honey exports from neighbors China and India.

O. ANNEX C – Tentative work plan[69]

Sr.Nr.	Indicative description of activities	Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
0.0 Inception phase																	
0.1	Project launch & inception phase meetings with counterparts																
0.2	Facilitated workshop/roundtable to validate project approach with key stakeholders																
0.3	Meetings with key institutions/ stakeholders to prepare initial activities																
0.4	Validate proposed geographical areas of intervention																
0.5	Identify and confirm proposed direct beneficiaries (NQI institutions, private laboratories, MSMEs, beekeepers, honey hunters, cooperatives, BSOs, etc.)																
0.6	Confirm and formalize involvement of local stakeholders and other relevant actors in the sector and clarify involvement in specified project activities, as required																
0.7	Conduct gender analysis																
0.8	Conduct ESSPP-related consultations and assessments (→ FPIC)																
0.9	Identify complementary and follow-up activities for CIED.																
0.10	Revision of work plan and budget, as necessary, by PMU; validation with Counterparts																
Outcome 1: Enhanced technical competence and sustainability of the National Quality Infrastructure System.																	
Output 1.1: Technical competence of key QI actors and capacity to monitor honey quality for the local market strengthened.																	
1.1.1	Select target export markets that should be prioritized (possibly including Japan, South Korea and UAE)																
1.1.2	Conduct review of relevant technical regulations (mapping and assessment of alignment with international best practice)																
1.1.3	Study of relevant standards and import requirements for honey for those markets and development of trade monitoring capacities																
1.1.4	Drafting of strategic plans to specify regulatory requirements for honey and relevant testing parameters; assessing of feasibility to attain EU third country status for honey																
Output 1.2: National capacity to comply with international regulations and quality control strategies and curricula for food hygiene in beekeeping established.																	
1.2.1	Analysis of national capacities and organizational structures of relevant QI institutions with the aim to select the target laboratories																
1.2.2	Identification of laboratory equipment needs																

[69] *The indicative work plan will be reviewed and revised as necessary following the project's inception phase.*

Sr.Nr.	Indicative description of activities	Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.2.3	Support key QI institutions towards certification readiness, such as for ISO/IEC 17025, ISO/IEC 17020 and/or ISO/IEC 17065, and /or provide support to revising scope(s) of accreditation																
1.2.4	Technical assistance on laboratory calibration and certification capacity for relevant voluntary standards																
1.2.5	Development curricula and training for food hygiene and quality control procedures; training courses on food handling																
1.2.6	Quality control strategies and curricula for food hygiene in the beekeeping established																
1.2.7	Support to drafting of strategies for zoning *Apis mellifera* and *Apis cerana*																
Outcome 2: Enhanced MSMEs' compliance with standards and technical regulations.																	
Output 2.1: Collaboration and associativity among producers/ value chain actors strengthened for mutual benefit.																	
2.1.1	Improvement of beekeeping processes and adoption of best practices																
2.1.2	Training on quality control mechanisms to increase compliance capacity with relevant standards																
2.1.3	Promotion of linkages/associativity among value chain actors																
2.1.4	Training and awareness on pollination services by bees and the impact of pesticides																
Output 2.2: MSMEs supported to improve management of food safety and quality of honey and honey products.																	
2.2.1	Technical assistance on import requirements for targeted markets																
2.2.2	Training on business knowledge among targeted beekeepers/ producers																
2.2.3	Training on Good Manufacturing Practices (GMP); capacity building in handling, storage, processing, packaging and labelling																
2.2.4	Training on harvesting practices and honey handling to produce high quality honey																
2.2.5	Actions to increase traceability																
Outcome 3: Strengthened culture for quality																	
Output 3.1: Nepalese umbrella brand and quality mark for honey and campaign to promote Nepalese honey in the domestic market developed and implemented.																	
3.1.1	Assessment of the characteristics of the existing organizational culture for quality																
3.1.2	Development of training and awareness raising materials to promote understanding of NSBM certification, food quality and safety issues																
3.1.3	Design of a Nepalese umbrella brand and quality mark																
3.1.4	Development of a marketing plan to promote the Nepalese honey brand at the local level																
3.1.5	Further promotional activities																
Output 3.2: Quality awareness materials developed and strategic marketing plan for Nepalese honey drafted.																	

Sr.Nr.	Indicative description of activities	Year 1				Year 2				Year 3				Year 4			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3.2.1	Activities/events to raise quality awareness to create and sustain a quality culture are carried out; development of promotional and information materials																
3.2.2	Drafting of a strategic marketing plan for the promotion of Nepalese honey to international markets, incl. identification of technical assistance needs for logistics and testing, accessing licenses and certificates of exporting consignments of niche honey, etc.																
Outcome 4: Project Management																	
4.1	Establishment of Project Management Unit																
4.2	Establishment of Project Steering Committee																
4.3	Participation in GMAP Programme Mid-Term Review (tbd at Programme level)																
4.4	Project Steering Committee Meeting																