Hand-in-Hand Initiative

FAO 80 +1

HIHI commodities


Large Cardamom


Sichuan Pepper


Highland Potato


Pangasius Fish


Yak Cheese


Mandarin Orange


Ginger


Mountain Honey

Investment Forum I Rome, Italy I 13-16 October 2026

Overview of Nepal and its Agrifood Systems

NEPAL

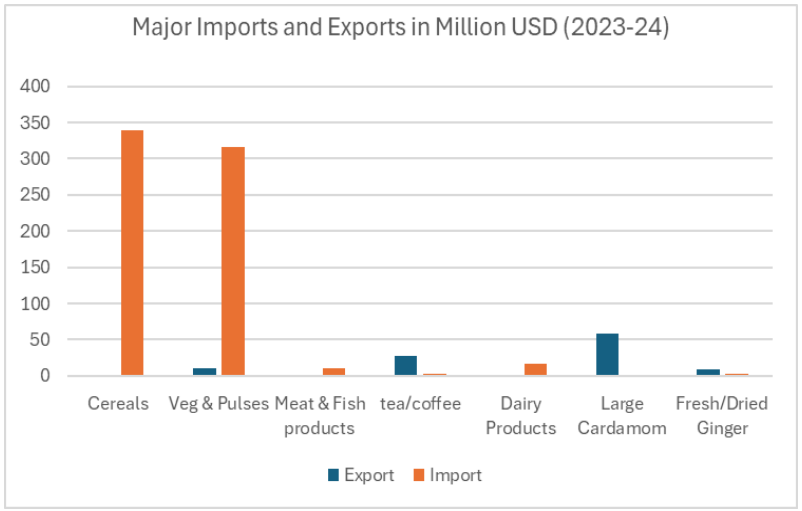
Land area	**147 181 km²**	**Population**	**29.69 million**
GDP (USD Bil)	**42.26**	**GDP per capita (USD)**	**1,434**
Poverty rate	**20.27 % (NLSS 2022-23)**	**Unemployment rate**	**10.71% (Youth: 20%)**

National Agrifood Systems

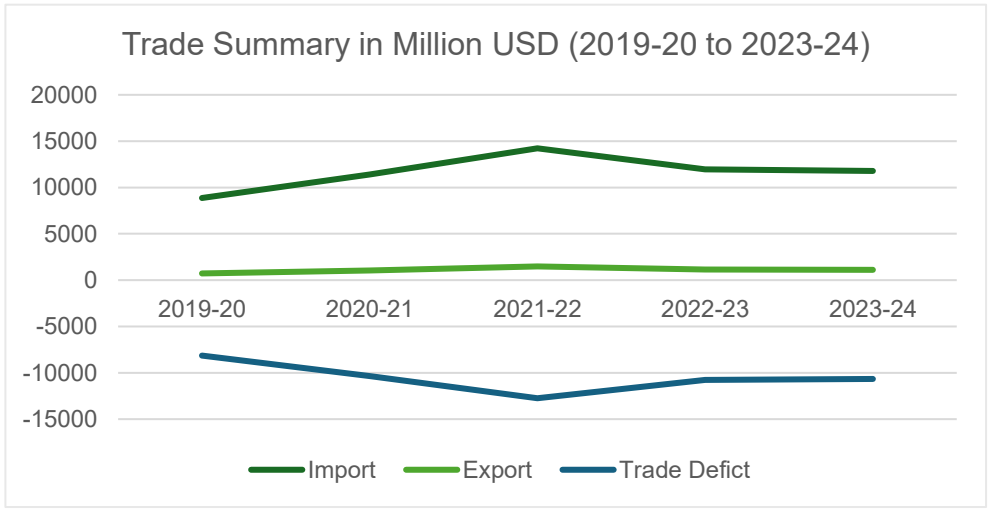
- With 28% of arable land, Nepal's agriculture sector contributes 24.09% to GDP and employs 62% of the workforce [54% male and 73% female (ILOSTAT,2025)]
- The Government of Nepal (GoN) prioritizes agri-food system transformation to strengthen food and nutrition security, drive sustainability, enhance resilience, and promote rural development.

Why invest in Nepal's agri-food systems?

- To empower communities with dignified jobs and ensure access to a healthy diet for all.
- To reduce carbon emissions, strengthen adaptation, safeguard environmental sustainability, and conserve biodiversity.



Source: Foreign Trade Statistics (2023-24)



Source: Foreign Trade Statistics (2019-24)

Source: Economic survey 2022 , Custom portal, MoALD

Follow up of HIH Investment Forum 2022 and 2024: Resources in Negotiation/Committed

SN	Programme/activities	In Negotiation (USD)	Committed (USD)
1	Government of Nepal declared the **Decade of Agriculture Investment 2024-34** and allocated resources for strategic framework development for the fiscal year 2024/25		100,000
2	Government of Nepal has allocated budget for HIH commodities in 2023-24		4.5 Million
3	Ministry of Agriculture and Livestock Development (MoALD) has allocated budget for prioritized HIH commodities under specialized project – Prime Minister Agriculture Modernization Project (PMAMP)		10 Million
4	ADB funding support for **Implementation of Timur (Sichuan pepper) Geographical Information (GI) system** (project - climate resilient landscapes livelihoods) in HIH area		2.5 Million
5	**Muktinath Krishi Company** is negotiating **investment from Dutch Fund For Climate And Development and SNV** for Cardamom value chain development with support of FAO (out of USD 10 million, 50% allocated for HIH commodities)		10 Million
6	Collaborating with Federation of Nepalese Chamber of Commerce and Industries (FNCCI), Confederation of Nepalese Industries (CNI), Nepal Agriculture Co-operative Central Federation Limited (NACCFL) for investment mobilization of HIH commodities	Negotiation under process	
7	Negotiation with Asian Infrastructure Investment Bank (AIIB)	100 million	
8	ADB funding support for water resource management and irrigation including HIH commodities in Nepal.	60 Million	210 Million
9	Private Sector Commitments for Agri-Food System Investments from Nepal Food Forum 2024		29.1 Million
10	Private Sector Commitments for Agri- Food System Investments from Madhesh Food Forum 2025		37.9 Million
Total		**160 Million**	**304.1 Million**

WHY INVEST IN NEPAL?

VISA SERVICE

- Tourist Visa on Arrival for Visitors
- Non-Tourist Visa and Business Visa for Foreign Workers and Investors
- Residential Visa for Investors (Investment >= USD 1 Million)

INDUSTRIAL INFRASTRUCTURE

Such as Access Roads and Transmission Lines to the Project Sites

GOVERNMENT TARGETS

To Deliver Critical Infrastructures for Realizing the government's vision of **PROSPEROUS NEPAL HAPPY NEPALI**

LAND OWNERSHIP

Allowed in Company's Name

INVESTMENT REQUIREMENT TILL 2030

Estimated NPR 2020 Billion Per Year to Meet Sustainable Development Goals (SDGs)

HUMAN RESOURCES

57%
Working Age (15-59 Years) Population

LOW COST OF LABOUR
Compared to other Peer Countries

MEMBER COUNTRY OF

SAARC, BIMSTEC, WTO, MIGA, UNESCAP, UNCTAD, BRI

AGREEMENTS AND TREATIES RELATED TO TRADE

BIPPA
with 5 Countries

DTAA
with 11 Countries

TREATY OF TRADE
TREATY OF TRANSIT
with India

TRANSIT AND TRANSPORT AGREEMENT
with China

FINANCIAL ADVANTAGES

UP TO 100%
Ownership Allowed to Foreign Investors

REPATRIATION
Fully Allowed

TAX HOLIDAY
for Some Sectors/Locations

COMPETITIVE CORPORATE INCOME TAX (CIT)
General: 25%
Priority Sectors (Energy, Transport Infrastructure, and Manufacturing): 20%

SUPPORTIVE CONSTITUTIONAL AND LEGAL PROVISIONS

PRIVATE-SECTOR FRIENDLY LAWS AND POLICIES
Encouraging Foreign Investments, Prioritizing Private-Sector, and Guaranteeing Property Rights, among others

PRIVATE-SECTOR FRIENDLY LAWS AND POLICIES
- Project Development Agreement - PDA (for PPP Projects)
- Project Investment Agreement - PIA (for Private Projects)
- Provision of Non-Nationalization and National Treatment

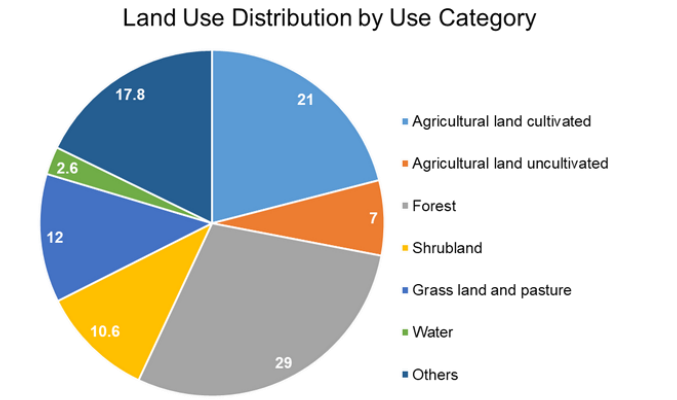
STRATEGIC ADVANTAGES

Located Between	Duty Free and Open Border	8000+ Products Duty Free	77 Items Duty Free Till 2026	Duty Free Quota Free (EBA)
CHINA AND INDIA	ACCESS TO INDIA	ACCESS TO CHINA	ACCESS TO US	ACCESS TO EU

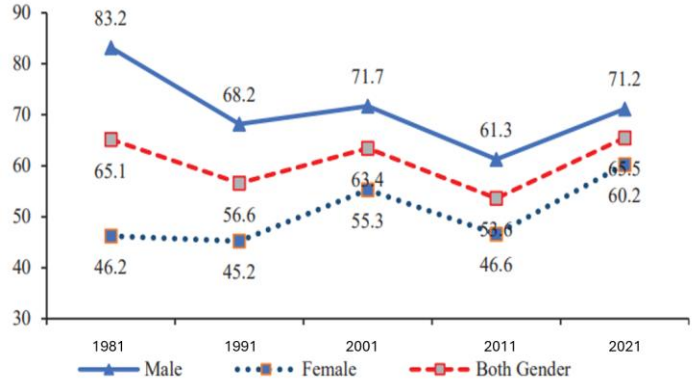
Source: Nepal Investment Board

Enabling Environment for Investment in Agriculture Sector

1. Land availability



2. Economically active population

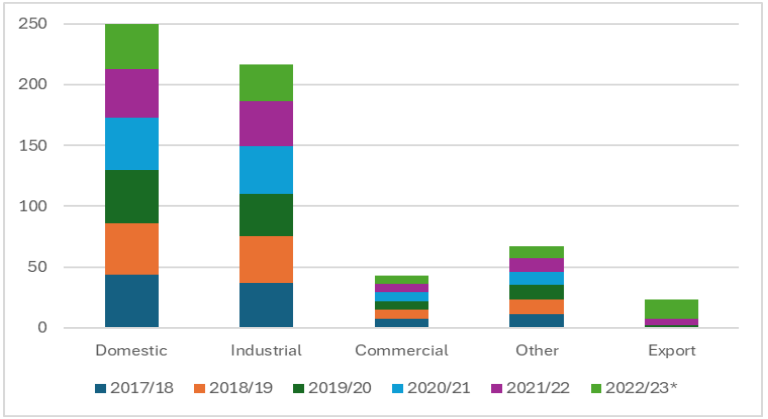


- *Labour force participation rate: 65.5%*
- *Literacy-76.3%(overall), 83.6% (male), 69.4 (female)*

3. Abundance & access to quality water

Per capita freshwater availability: 6,734 m^3

4. Access to energy (electricity) (in Gigawatt hours)



5. Suitable production environment

- **Diverse climate**
- Farmers use **sustainable, organic methods, protecting soil and biodiversity**
- Increasing interest in advanced irrigation, biotech and digitalization for better yields and resilience

6. High Potential Returns to Farmers

- ***Nepal's resources**: land, water, biodiversity—agriculture, ecotourism, renewable energy*
- *Nepal's **strategic location**: India, China—trade, transit, investment in manufacturing, logistics, tourism*

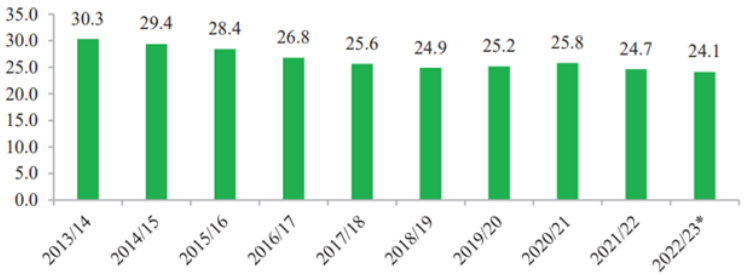
7. Access to Finance & Credits

- USD 1.11 billion concessional loans (2023-24) out of which 67% to commercial agriculture and livestock
- Start-up fund + enterprise loans
- Mobile phone access has reached 86% of the general public in Nepal

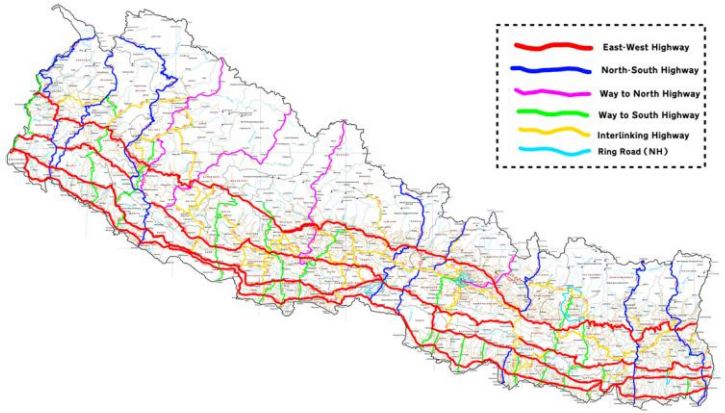
*Source: NRB, Economic survey 2023-24 * Statistical Information of Agriculture, MoALD*

Enabling Environment for Market access, Accelerated Trade and Economic Growth

1. Agriculture Sector Contribution in Gross Domestic Production (In percent)

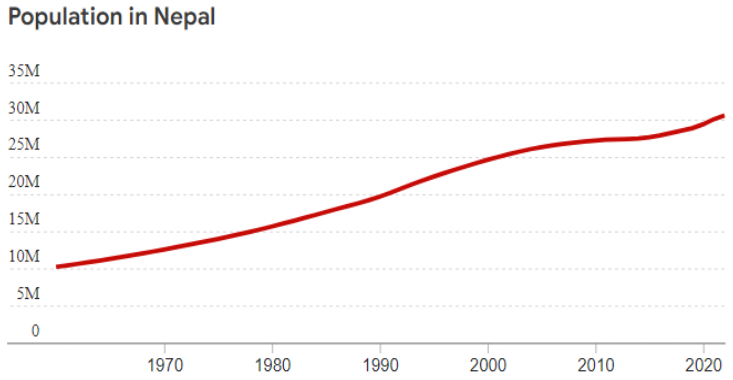


2. Improved access to domestic market



- *National highways*
- *Railways access to India*
- *Access to Indian highways*
- *Access waterways through India and China*

3. Increasing demand for food

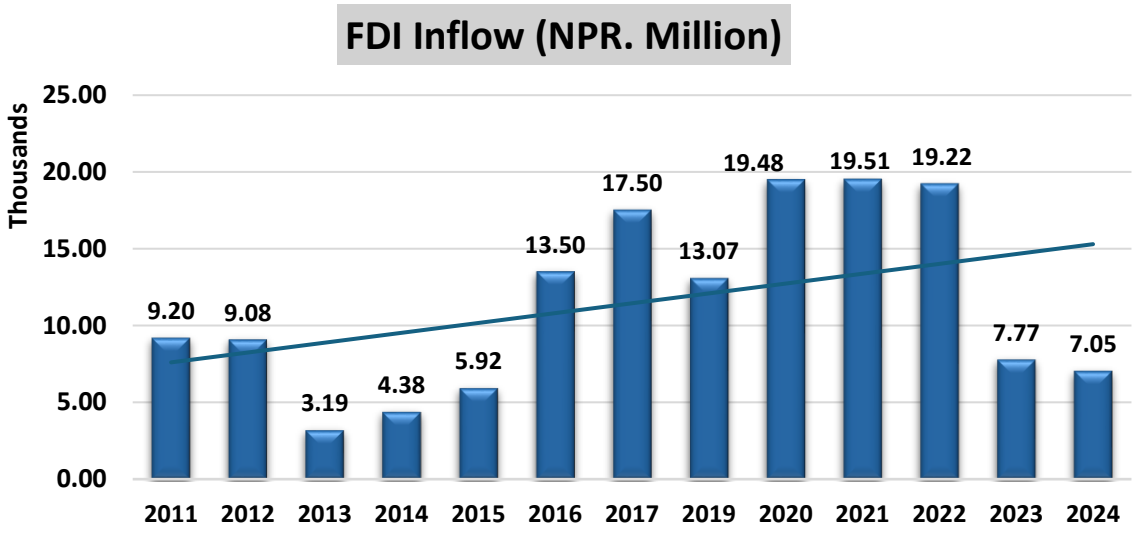


4. Increasing access to export market

- India
- Bangladesh
- Singapore
- Thailand
- Bhutan

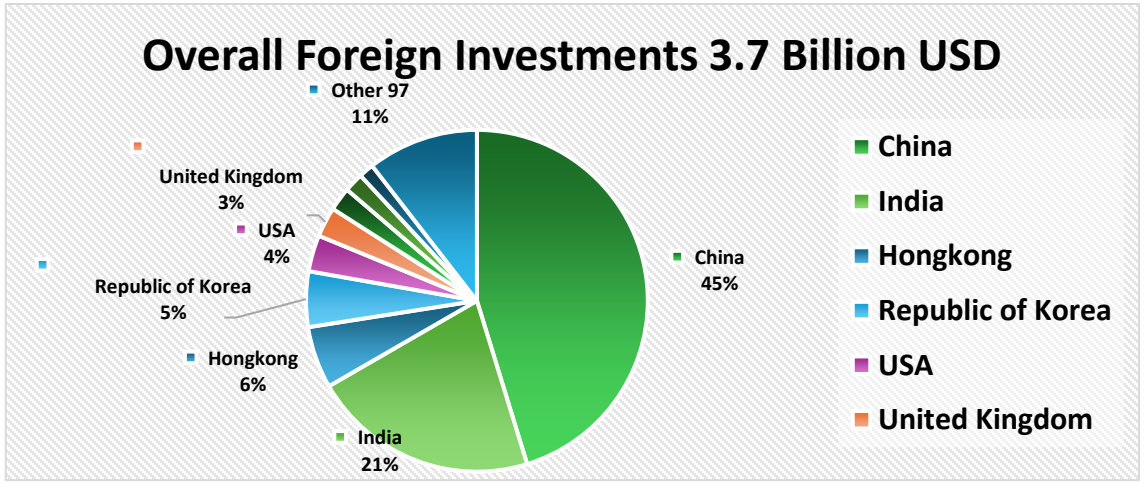
- *Direct Flight: 17 countries*
- *Total airports: 55 (3 international, 52 domestic)*

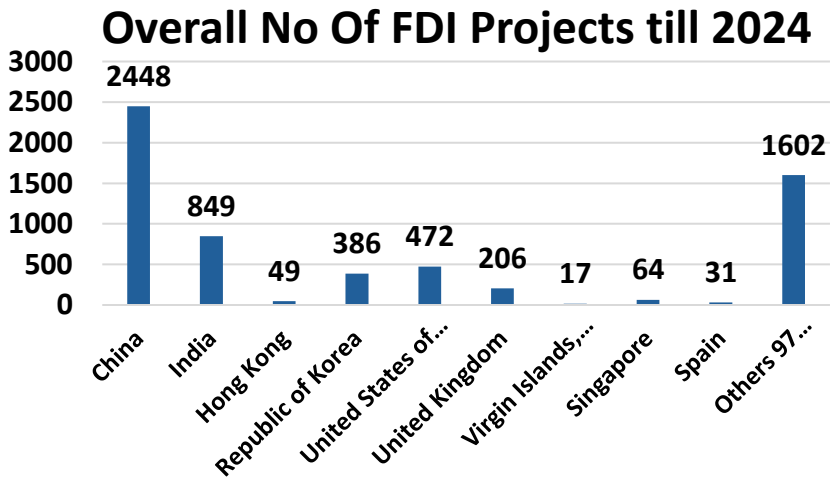
FDI and Financial Sector to Strengthen Investments



Critical reforms undertaken to improve ease of doing business

- **20 commercial banks** with 11,629 branches, covering all local governments, serving an average of 2,510 people per branch, and **31,373 cooperative nationwide**
- Faster and easier credit access, leading to **reduced borrowing costs** with demonstrated credit performance
- **Three Integrated Check Posts** (ICP) Birgunj, Nepalgunj and Biratnagar.
- **Bhairahawa Inland Clearance Depot** (ICD) reduce trade cost
- Out of 6,219 FDI approvals in Nepal to date, 304 (4.9%) have been in agriculture and forestry-based industries.
- In terms of value, agriculture and forestry-based industries account for only 1.8% of the total FDI in Nepal



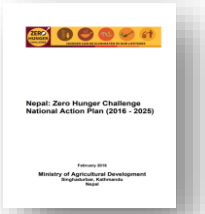


Enabling Policies for Agri-business Investment

Link

Nepal Trade Integration Strategy (NTIS) 2023: Increased export products and services to 32 from 12 in 2016. Upgrading testing/quarantine in Kathmandu, Birgunj, and border crossings with provincial cooperation. Digital trade for efficient B2B, B2C, C2C, and C2B transactions

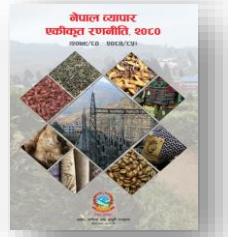
Link



Link

GoN amended laws through ordinance to attract investors in 2024: Electronic Transactions Act: Simplifies forex payments | Special Economic Zone Act: Facilitates machinery transfer| Industrial Enterprises Act: Supports startup registration

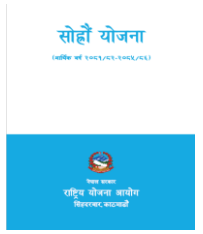
Link

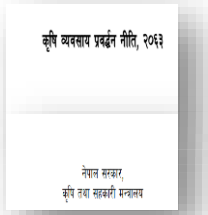


Link

Income Tax Act: Income earned by agriculture cooperatives engaged in fruit farming, fruit producing and refining, cold storage for vegetables, animal fodders, and agricultural tools is exempt from income tax and dividend tax. Industry based in agriculture sector that provides direct employment to at least 100 Nepalese national during a whole year, the effective tax rate is 70% of applicable tax rate

Link

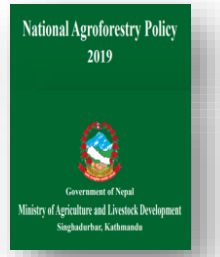




Link

Foreign Investment and Technology Transfer Act (FITTA 2019): Industries established in Special Economic Zones in Nepal's mountain or hill areas by the government enjoy 100% tax exemption for the first 10 years and 50% thereafter | Expanding industries reaching USD 1.5 million investment and ≥ 300 employees receive 100% income exemption for 5 years on the expansion, followed by 50% for 3 years and 10% on incremental income for the next 3 years

Link



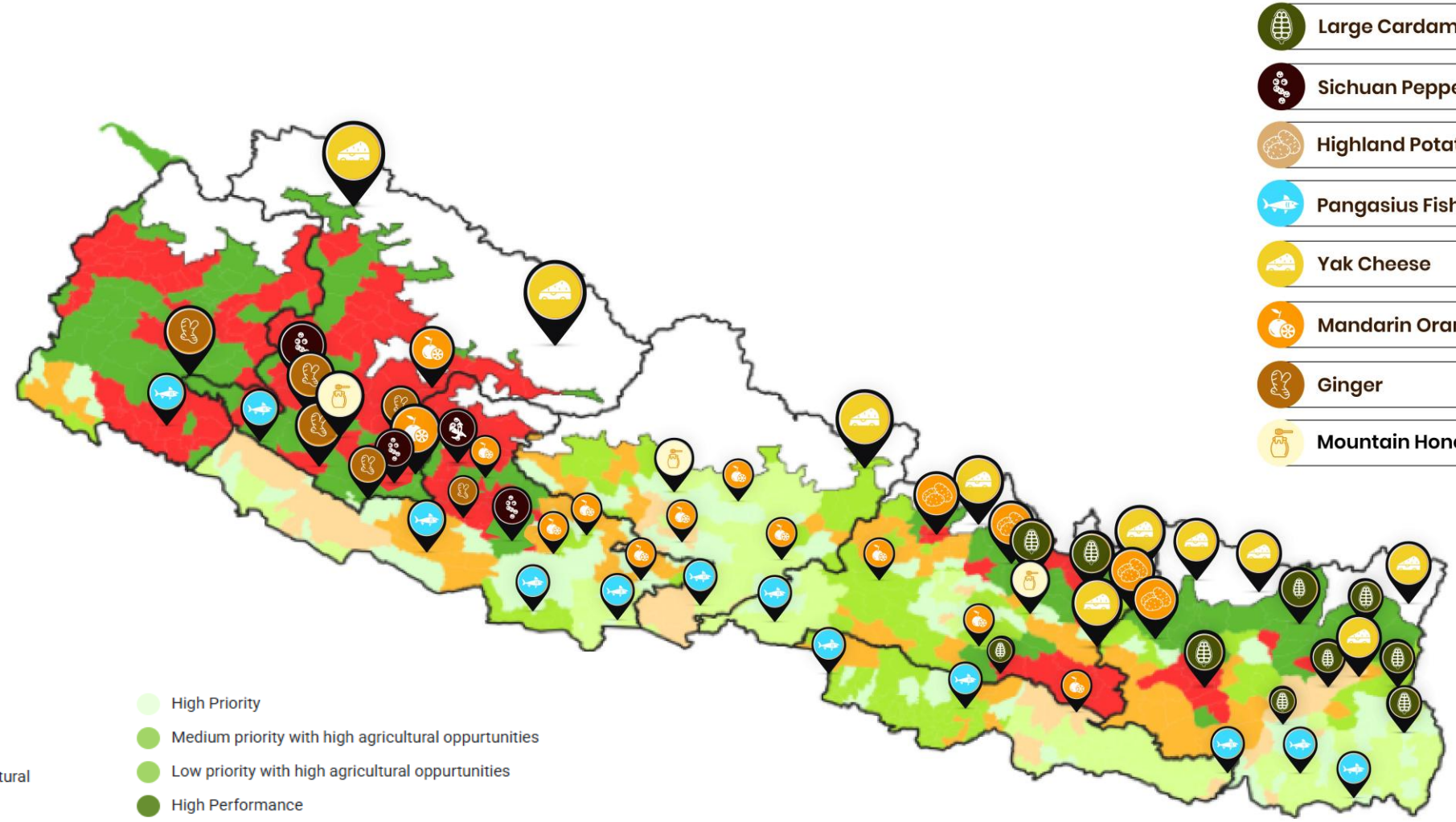
Link with Government Plans/Policies

1. **Government Policy and Programme 2024** – ***Decade of Agriculture Investment 2024-34***; Self-sufficiency in fish and meat within 2 years; Mountain prosperity programme
2. **16th Periodic Plan (2024-28) -** Targets economic growth rate of 7.5% from 3.5%, **increasing per capita income** from USD 1,456 to USD 2,351; **create 1.2 million jobs annually.**
3. **Agriculture Development Strategy (ADS 2015-2035)-** Prioritized commodities - Maize, Dairy, Vegetable, Lentil, Tea and others (under revision process)

	Target	2015 (baseline)	Target 2020	Target 2025	Target 2035
1	Agriculture trade balance	Trade deficit USD 1123 million	Trade deficit USD 1073 million	Trade deficit USD 882 million	Trade deficit USD 508 million
2	Agri commodities export	USD 255 million	USD 456 million	USD 814 million	USD 2598 million

4. **Government prioritized HIH commodities** – Large cardamom, Ginger, Potato, Timur, Fish, Dairy (Yak cheese), Citrus, Lentil
5. **Constitution of Nepal 2015 - guarantees the right to food for all the citizens** as a fundamental right
6. **Right to Food and Food Sovereignty Act (2018) -** entrusts the local level governments to identify and record households that are vulnerable to food insecurity
7. **Sectoral policies and plans –** National Agriculture Policy (under revision process)**,** Multi-Sector Nutrition Plan-II, National Agroforestry Policy, Agribusiness Promotion Policy, Agriculture Mechanization Policy, Rangeland Policy, National Dairy Development Policy
8. **SDG Nepal (2017)** for interventions on improvements in food & nutrition security of the most disadvantaged groups, gender equality and commercialization of agriculture
9. **Nepal Trade Integration Strategy (NTIS 2023):** Spices (Large Cardamom, Timur)

Investment Priorities based on Agricultural Typologies



Investment Plan - 1: Large Cardamom (Farm and Processing)

Key Bottlenecks	Key Investment Needed
1. Lack of improved and disease-free saplings of large cardamom due to weak tissue culture laboratory operational capacity and limited knowledge of modern cultivation techniques	1. Expand tissue culture lab facilities to produce 81 million climate-resilient saplings and implement annual training programs for 18,000 farmers on modern and sustainable cultivation techniques.
2. Inadequate infrastructure for irrigation and post-harvest handling	2. Install 1,200 drip irrigation units and 10,000-liter water tanks with pipelines and eco-friendly dryers (1,200 Electric/Solar dryers) to replace current firewood dryers.
3. Market Limitations and Certification Gaps	3. Establish traceability, e-marketing platform, and certification system (Organic, GI)
4. Inadequate Infrastructure for Processing and Storage	4. Construction of 10-processing warehouses, 10-collection centers, and 20-storage buildings to ensure proper handling, and storage of raw and processed large cardamom.
5. Inadequate Post-Harvest Handling, Grading, and Packaging Equipment	5. Install 20-Grading/sorting machines, 30-oil extraction units, 20-vacuum packaging, 20-labeling machines, 40-detailing machines, 20- oil bottle refilling units, and essential utility tools like 20-borewells and reusable packaging (bags, crates, buckets) to improve efficiency, quality control, and product value addition.

Scaling –Up Export Market

Products :

Dried cardamom, cardamom powder, essential oil, mixed spices, mouth fresheners

Country and destination market :

Existing market India and high scope for export to middle east, Pakistan and Bangladesh

Major Exporters:

- **Bhandari Traders and Supplier**
- **Everest Large Cardamom Industries**
- **Nima Himali Traders**

Risks	Mitigations
1. Risk of technical failures and operational inefficiencies in tissue culture laboratories	1. Implement technician training, establish stringent quality control, and conduct regular maintenance audits to ensure efficient lab operations
2. Market price volatility, inadequate quality standards, and lack of proper certification	2. Strengthening cooperatives via e-market platforms and implementing quality control with certification can enhance market stability.
3. Supply chain disruptions could affect raw material availability for processing.	3. Diversify suppliers and build buffer stocks to ensure smooth operations.

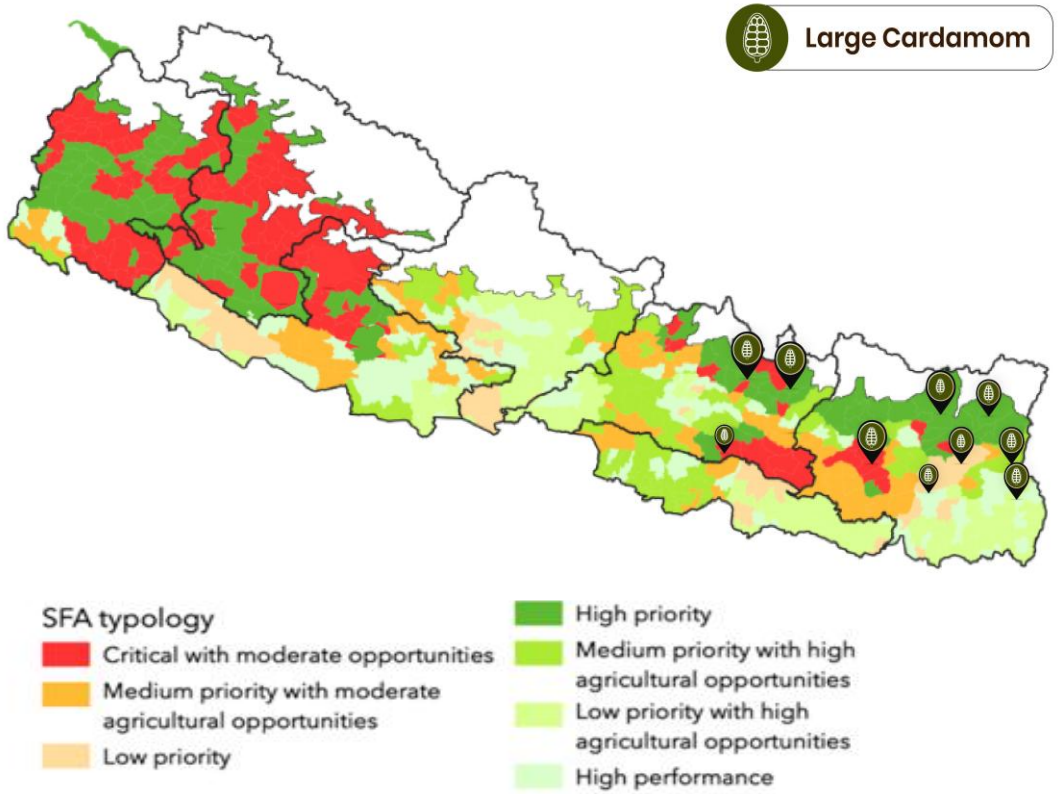
Investment Plan - 1: Large Cardamom (Farm and Processing)

Hand-in-Hand Initiative

Target Districts: Taplejung, Sankhuwasabha, Panchthar, Illam, Terhathum, Dhankuta, Bhojpur, Khotang, Dolakha, Sindhupalchok, Gorkha, Lamjung, Kaski, Arghakhanchi

Direct Beneficiaries (HHs): 18,000
Indirect Beneficiaries: 99,000
Area-6000 Ha

Investment: 38.63 M (USD)



Large Cardamom: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 22.93 Million USD GON (TA): 4.5 Million USD Private: 18.3 Million USD	48.8 Million USD	25.54%
Processing	Total: 15.7 Million USD GON (TA): 3.1 Million USD Private: 12.6 Million USD	10.7 Million USD	31.95 %

Social impact	Environmental impact
Employment generation (1,098,448 person-days/year)	Emission reduction: -414,825 tCO2-e (≥ 20 yrs)
Income diversification	Biodiversity conservation Soil & water conservation
Empowerment of women (mostly women led)	Agroforestry and agro-eco tourism

Investment Plan - 2: Sichuan Pepper (Farm and Processing)

Key Bottlenecks	Key Investment Needed
1. Lack of improved saplings of Timur and lack of lab facilities for production of saplings	1. Upgrading existing Government Tissue culture Laboratory and Nurseries to produce climate resilient Timur varieties (1.3 million saplings)
2. Inadequate post-harvest technologies including drying, processing, storage and poor irrigation and water management practices.	2. Install modern and eco-friendly drying and processing facilities and warehouses (1,250 solar/electric units), train 25,000 farmers in IPM and postharvest handling. Install 2,500 climate-smart drip irrigation systems and 1,000-liter storage tanks to improve water use efficiency.
3. Lack of branding, marketing and certification systems	3. Implement certification systems, traceability, e-marketing platforms including branding (GI,GIES Organic etc.) through co-operatives
4. Inadequate and outdated processing infrastructure affecting quality and scalability	4. Construction of 4-integrated processing units that combine collection centers, storage houses, drying houses, and processing facilities ensures streamlined operations.
5. Limited Access to Efficient Sorting, Grading, and Packaging Technologies	5. Install modern 4-sorting machines, 4-grading machines, 4-automated packaging units, and 21-vacuum sealing machines to ensure high-quality output with improved shelf life and market appeal.

Risks	Mitigations
1. Climate Variability	1. Introduce climate-resilient timur varieties
2. Pest and Disease Outbreaks	2. Implement Integrated Pest Management (IPM) practices, biological control measure and regular monitoring
3. Market Price Fluctuations	3. Diversify export markets and strengthen cooperatives for market stability and construct warehouses
4. Quality control issues	4. Implement standardized quality control measures and certification programmes

Scaling –Up Export Market

Product:

Primary processed dried Timur grain, Timur powder, mixed spices, essential oil

Country and destination market:

Germany, France,
US and domestic market

Major Exporters:

- **Methi Associates Pvt.Ltd.**
- **P and K Enterprises**
- **Saugat Koseli Ghar**

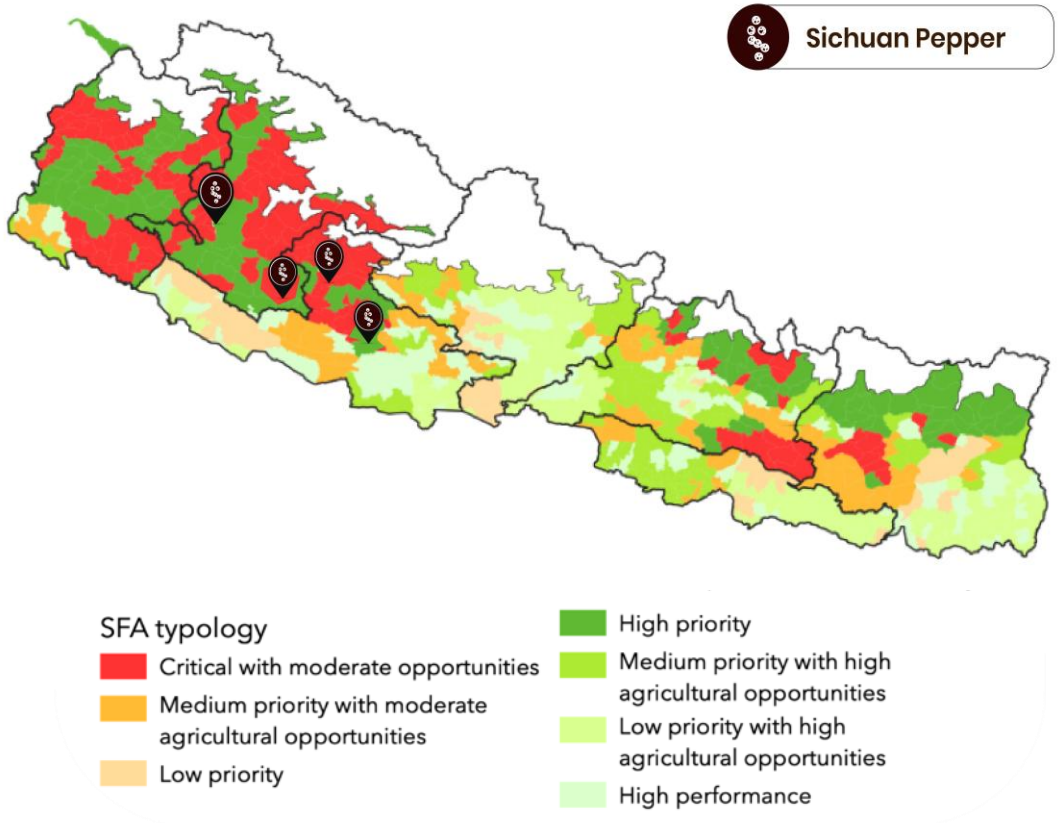
Investment Plan - 2: Sichuan Pepper (Farm and Processing)

Hand-in-Hand Initiative

Target Districts: Dailekh, Rukum, Pyuthan, Salyan

Direct Beneficiaries (HHs): 25,000
Indirect Beneficiaries: 137,500
Area: 2,500 ha

Investment: 33.7 M (USD)



Sichuan Pepper: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 31.6 Million USD GON (TA): 6.3 Million USD Private: 25.3 Million USD	35.4 Million USD	31.7%
Processing	Total: 2.07 Million USD GON (TA): 0.4 Million USD Private: 1.7 Million USD	2.4 Million USD	36.9%

Social impact	Environmental impact
Employment generation (275,239 person-day/year)	Biodiversity and eco-system conservation
Income diversification	Soil & water conservation
Empowerment of women (mostly women led)	Agroforestry
Community Development: Infrastructure, Cooperatives	Emission reduction: -86,350 tCO2-e (≥ 20 yrs)

Investment Plan - 3: Climate Smart Highland Potato (Farm)

Key Bottlenecks	Key Investment Needed
1. Limited infrastructure for high quality virus free potato seed production facilities, including labs and screen houses. (net houses), and limited capacity of tissue culture lab staffs	1. Establish one new tissue culture lab, enhance an existing government lab, and set up four screen houses (net houses) for climate resilient potato seed production (Capacity 5600 MT) and training for tissue culture lab staff (16)
2. Insufficient farmer capacity on improved cultivation techniques	2. Provide comprehensive training to 6,720 farmers on climate resilient cultivation practices and IPM practices
3. Inadequate irrigation infrastructure	3. Construct new small scale irrigation channels and water storage facilities (3360 schemes and tank capacity 10000 Litre)
4. Shortage and higher cost of labor	4. Provide potato diggers for harvesting, ridgers for planting, and power tillers (140 units each)
5. Insufficient infrastructures for seed storage and warehouse in the production pockets	5. Construct 18 rustic storage units (zero energy-based seed potato storage house of 100 MT capacity) for seed potato and construct a warehouse (1,500 MT Capacity) for table potato
6. Lack of branding, marketing and certification system	6. Set up certification systems, traceability, e-marketing platforms including branding (GI, GIES Organic etc.)

Risks	Mitigations
1. Climate variability	1. Introduce climate-resilient varieties and technologies
2. Pest infestations and disease outbreaks	2. Implement Integrated Pest Management (IPM) practices, biological control measure and regular monitoring
3. Market price fluctuations	3. Establish storage units, e-marketing platforms and market information systems to stabilize the price fluctuations

Scaling-Up Export Market

Products:

Off season high land fresh table potato, virus free high quality potato seed, organic potato

Country and Destination Market:

Domestic market (low lying) and urban center, Neighboring states of India (Bihar, UP, West Bengal) and Bangladesh

Major Exporters:

- **Arihant Commercial Pvt.Ltd.**
- **Ioons Traders**
- **Global Trading Company Pvt.Ltd.**

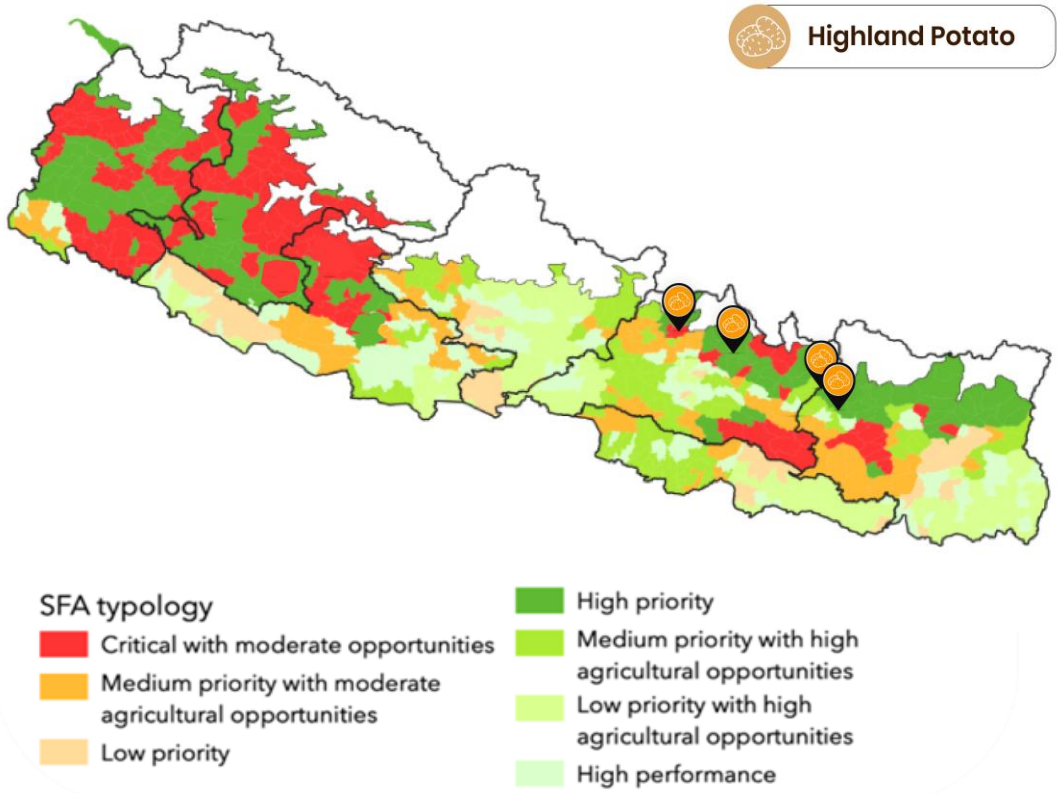
Investment Plan - 3: Climate Smart Highland Potato (Farm)

Hand-in-Hand Initiative

Target Districts: Dolakha, Sindhupalchok, Rasuwa, Ramechhap

Direct Beneficiaries (HHs): 6,720
Indirect Beneficiaries: 33,600
Area: 3,360 ha

Investment: 8.37 M (USD)



Highland Potato: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 8.37 Million USD GON (TA): 1.6 Million USD Private: 6.7 Million USD	10.57 Million USD	37.27%

Social impact	Environmental impact
Income generation	Maintain soil health: Crop rotation and organic farming
Maintain food security and nutrition	Biodiversity conservation
Empowerment of women and youth engaged on agriculture	Implementation of water efficient irrigation system
Creation of employment opportunity	Emission reduction: -4,822.22 tCO2-e(≥ 20 yrs)

Investment Plan - 4: Climate Smart Pangasius Fish (Farm)

Key Bottlenecks	Key Investment Needed
1. Inadequate infrastructures (Ponds) for pangasius fish farming	1. Upgrade 3,000 carp fishponds into pangasius fishponds ensuring bio-security measures and introducing digitalization on production system
2. Limited access to quality fish fingerlings	2. Supply of quality fish fingerlings (37.5 Million)
3. Slow adoption of advanced production technology	3. Upscaling of good aquaculture practices for Pangasius fish farming (750 farmers)
4. Lack of proper and climate smart water management systems	4. Install solar shallow tubewell and electric deep boring and efficient water management systems. (250 units)
5. Inconsistent feed supply chain	5. Construct feed storage units (100 MT Capacity each for 250 production units)

Scaling-up Market

Products:

Live Fish

Fresh Fish

Processed Fish

Destination markets:

High demand on domestic market- Chitwan, Pokhara, Kathmandu

Risks	Mitigations
1. Volatility in feed availability	1. Construct feed storage units
2. Disease Outbreaks	2. Implement bio-security measures and health monitoring
3. Climate change and Environmental vulnerability	3. Implement climate smart water management systems

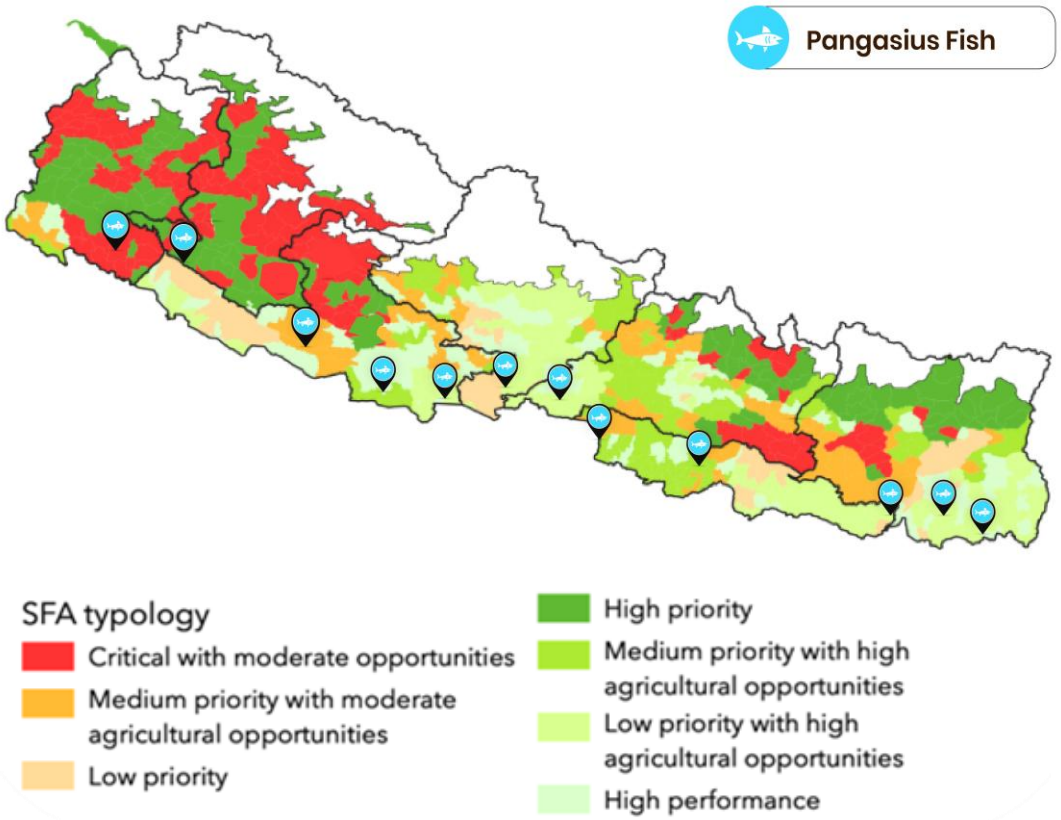
Investment Plan - 4: Climate Smart Pangasius Fish (Farm)

Hand-in-Hand Initiative

Target Districts: Chitwan, Parsa, Nawalparasi, Rupandehi, Kapilbastu, Sunsari, Morang, Jhapa, Sarlahi, Dang, Kailali, Surkhet

Direct Beneficiaries (HHs): 750
Indirect Beneficiaries: 4,125
Area: 750ha

Investment: 12.16 M (USD)



Pangasius Fish: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 12.16 Million USD GON (TA): 2.4 Million USD Private: 9.7 Million USD	31.10 Million USD	19.15%

Social impact	Environmental impact
Employment creation (90000 person-days/year)	Preserve aquatic ecosystem
Development of rural livelihood	Responsible water usage
Economic development	Emission reduction: -92,277 tCO2-e (≥ 20 yrs)
Enhancement of food security and nutrition	Maintain biodiversity

Note: "The investment reflects the enabling capital required to transition existing carp farms to pangasius production, while the IRR and NPV are based on incremental returns over the carp baseline."

Investment Plan - 5: Yak Cheese (Processing)

Key Bottlenecks	Key Investment Needed
1. Inadequate Processing Infrastructure	1. Construction of 15 modern processing facilities ensures a standardized and hygienic production process, improving efficiency and cheese quality.
2. Limited Storage and Preservation Facilities	2. Implementation of 60 Chilling vats, 60 aluminium containers, and 60 water tanks enhance proper storage and temperature control, maintaining cheese quality for longer periods.
3. Quality Control and Standardization Issues	3. Install 105 Milk analyzers and 105 digital weighing machines to enable precise quality control and consistency in production.
4. High Energy Dependence and Operational Costs	4. Install 105 Solar power systems to provide a cost-effective and sustainable energy source, reducing long-term electricity expenses.
5. Challenges in Transportation and Market Access	5. Adoption of 30- 4x4 vehicles/cooling trucks ensure efficient transportation of cheese to markets while maintaining its quality.

Risks	Mitigations
1. Market Fluctuations and Demand Uncertainty	1. Invest in branding, certification (organic, fair trade), and marketing strategies to create a stable demand.
2. Infrastructure and Maintenance Challenges	2. Train local staff in basic maintenance and troubleshooting to reduce dependency on external technicians.
3. Transportation and Supply Chain Disruptions	3. Invest in cold storage facilities at key collection points to reduce spoilage in case of delays.

Scaling-up Market

Products:

Aged Yak Cheese, Yak Cheese Snacks (Chhurpi) & Energy Bars, Yak Cheese Powder, Yak Cheese-based Health Supplements and Yak Cheese Spread & Soft Cheese

Destination markets:

Domestic markets- Kathmandu Valley, Pokhara, Lukla and Everest Region
International markets- United States, European Union (Switzerland, France, Germany) and China

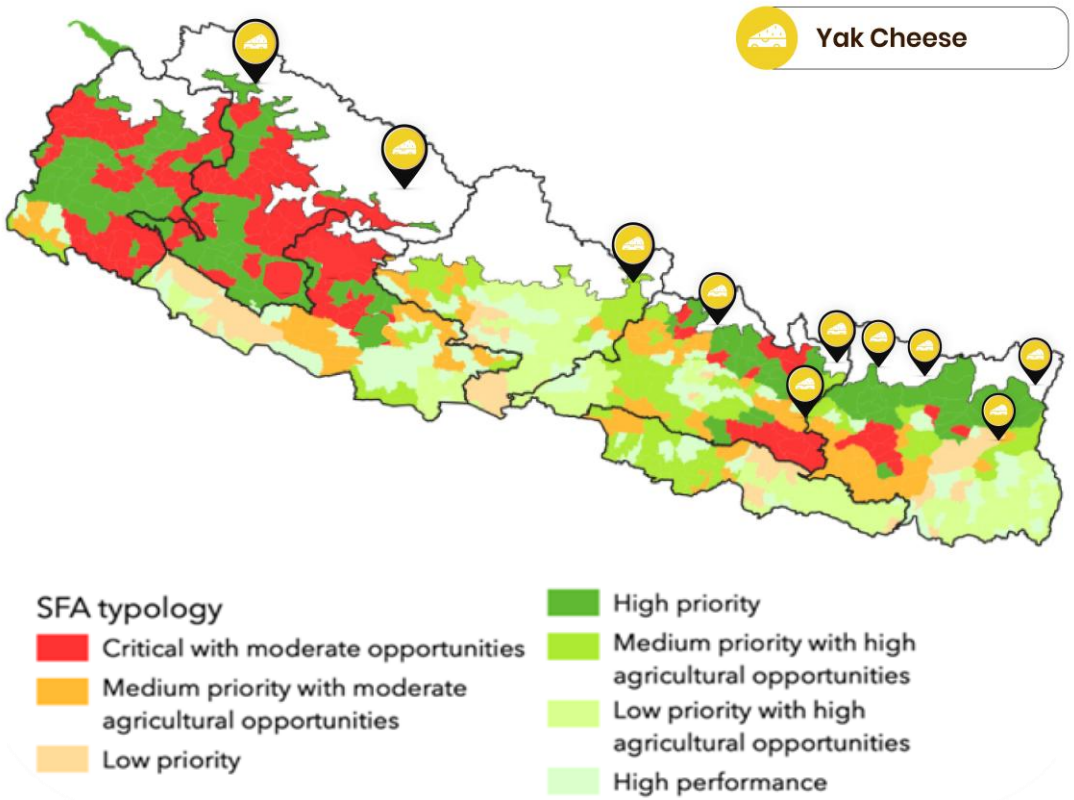
Investment Plan - 5: Yak Cheese (Processing)

Hand-in-Hand Initiative

Target Districts: Rasuwa, Ramechaap, Solukhumbu, Dolakha, Panchthar, Dolpa, Taplejung, Sankhuwasabha, Humla, Gorkha

Direct Beneficiaries (HHs): 300
Indirect Beneficiaries: 1500
Area- 0.75 Ha

Investment: 2.02 M (USD)



Yak Cheese: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Processing	Total: 2.02 Million USD GON (TA): 0.4 Million USD Private: 1.6 Million USD	12 Million USD	19.11 %

Social impact	Environmental impact
Employment generation (428 person-days/year)	Carbon emission: 6,246 tCO2-e (≥ 20 yrs)
Livelihood Enhancement for Mountain Communities	Biodiversity Conservation and Sustainable Grazing Practices
Preservation of Indigenous Knowledge and Culture	Agri-Tourism and Cultural Heritage

Investment Plan - 6: Mandarin Orange (Farm)

Key Bottlenecks	Key Investment Needed
1. Limited Availability of Quality Seedlings	1. Investment in 2 Million high-quality seedlings ensures sustained yield over the long term.
2. Lack of Proper Irrigation and Water Management	2. Implementation of 10,000 drip irrigation systems, 1,250 water storage tanks ensures water efficiency and consistent growth.
3. Post-Harvest Losses and Poor Handling	3. Investment in 1.2 Million crates for the storage facilities to minimize damage and maintain fruit freshness.
4. Pest and Disease Management Challenges	4. Adoption of 40,000 Spraying machines ensures better pest and disease control, maintaining healthy crops.
5. Labor Shortages and Outdated Equipment	5. Adoption of modern farming tools like 30,000 (mini tillers, pruning saws, ladders), and 40,000 semi-permanent fencing to improve efficiency and reduce reliance on manual labor.

Scaling-up Market

Products:
Dried Mandarin Oranges, Juice, Squash, Candy, Orange Peel Products, Orange-Based Cosmetics and Orange Wine

Destination markets:
Domestic Market- Kathmandu, Pokhara, Lalitpur
International Market- India, Middle Eastern Countries and European Union (Germany, UK, France)

Risks	Mitigations
1. Climate Change and Unpredictable Weather Patterns	1. Introduce drought- and disease-resistant mandarin varieties.
2. Market Instability and Price Fluctuations	2. Strengthen market linkages through cooperatives and digital trading platforms.
3. Pest and Disease Outbreaks	3. Train farmers on early disease detection and organic pest control methods.

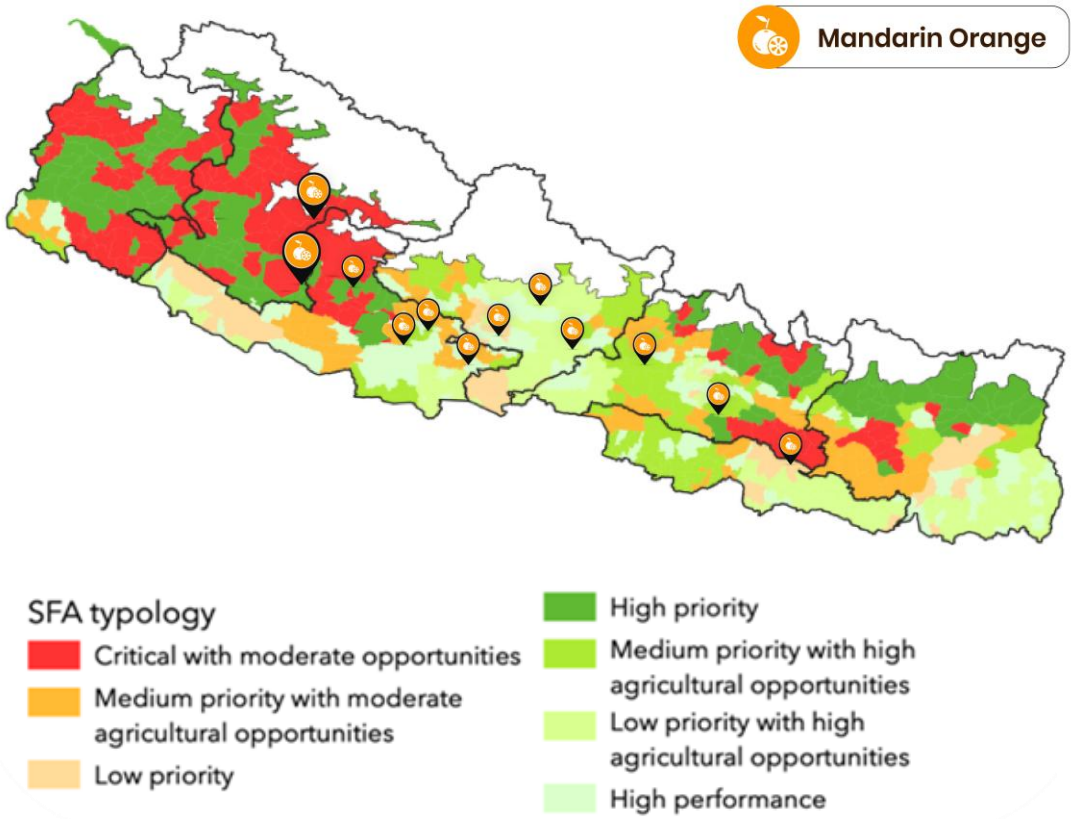
Investment Plan - 6: Mandarin Orange (Farm)

Hand-in-Hand Initiative

Target Districts: Sindhuli, Kaski, Tanahu, Syangja, Palpa, Gulmi, Arghakhanchi, Rolpa, Salyan, Dailekh, Kavrepalanchowk, Dhading

Direct Beneficiaries (HHs): 20,000
Indirect Beneficiaries: 100,000
Area-5,000 Ha

Investment: 82.65 M (USD)



Madarin Orange: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 82.65 Million USD GON (TA): 16.5 Million USD Private: 66.2 Million USD	23.79 Million USD	14.98 %

Social impact	Environmental impact
Employment generation (945,250 person-days/year)	Emission reduction: -71,602 tCO2-e (≥ 20 yrs)
Health and Nutrition Benefits	Biodiversity conservation Soil & water conservation
Empowerment of women (mostly women led) and income generation	Promotion of Sustainable Agriculture Practices

Investment Plan - 7: Ginger (Farm)

Key Bottlenecks	Key Investment Needed
1. Post-Harvest Losses and Quality Control	1. Implementation of proper 840 drying machines and 840 washing machines ensures efficient processing of ginger, reducing post-harvest losses and maintaining high quality.
2. Storage Issues and Spoilage	2. Establishment of 420 storage warehouse for proper ventilation and controlled conditions which helps to preserve ginger for longer periods.
3. Inadequate knowledge and skills in post-harvest techniques	3. 3-day training program for 8400 farmers helps to equip them with the necessary skills to handle ginger properly and improve processing practices
4. Market Certification and Compliance	4. Investment in annual quality certification ensures that the ginger meets necessary industry standards and food safety regulations

Scaling-up Market

Products :
Organic ginger product, essential oil, dried ginger, mixed spices, ginger candy, fresh ginger, ginger pickles

Destination market :
India for fresh ginger, Middle east, US, Germany, Bangladesh and EU countries for processed ginger products

Risks	Mitigations
1. Market Fluctuations and Price Volatility	1. Quality certification ensures access to premium markets, helping farmers secure better prices
2. Climate Change and Extreme Weather Events	2. Adoption of climate-resilient farming practices
3. Disease and Pest Infestation	3. Implementation of disease-resistant seed varieties, proper crop rotation, and organic pest control methods

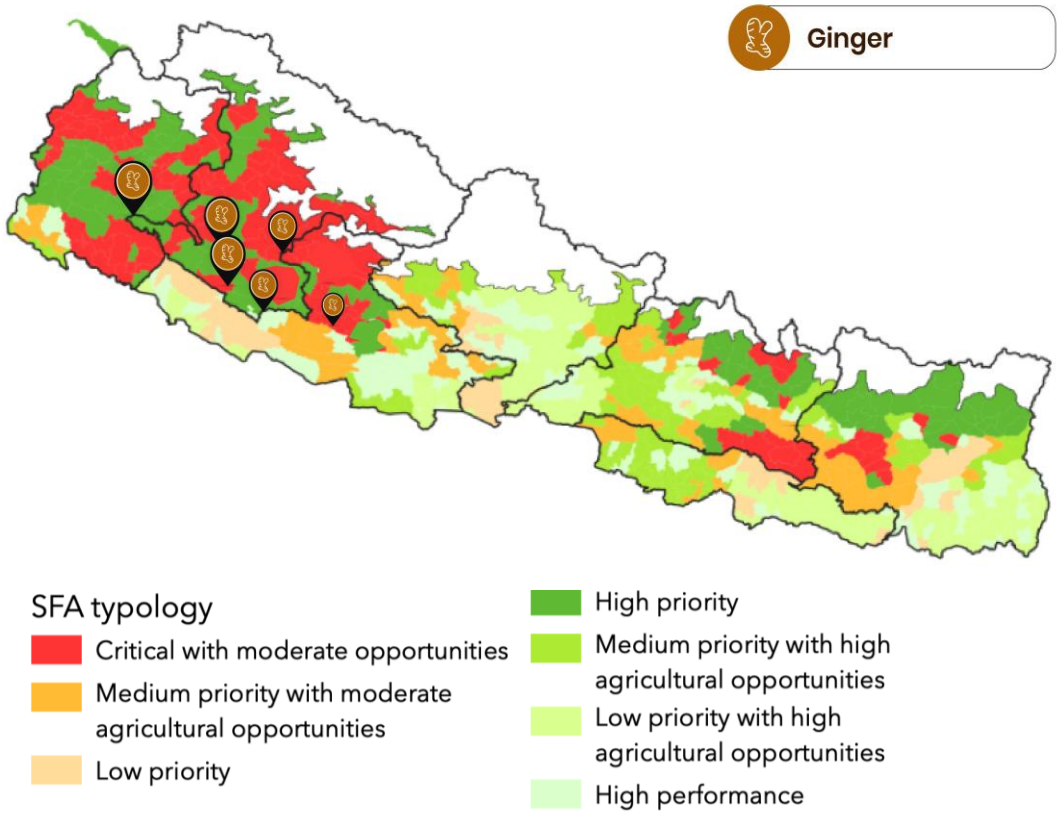
Investment Plan - 7: Ginger (Farm)

Hand-in-Hand Initiative

Target Districts: Salyan, Pyuthan, Rukum, Dailekh, Surkhet, Doti

Direct Beneficiaries (HHs): 8,400
Indirect Beneficiaries: 42,000
Area-2,100 Ha

Investment: 33.06 M (USD)



Ginger: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Production	Total: 33.06 Million USD GON (TA): 6.6 Million USD Private: 26.5 Million USD	10 Million USD	23.5 %

Social impact	Environmental impact
Improved Livelihoods and Employment Opportunities	Emission reduction: -31,235.29 tCO2-e (≥ 20 yrs)
Income diversification	Biodiversity conservation
Empowerment of women (mostly women led)	Soil & water conservation

Investment Plan - 8: Mountain Wild Honey (Processing)

Key Bottlenecks	Key Investment Needed
1. Inadequate Infrastructure for Processing and Storage	1. Development and refurbishment of 3 buildings, 3 storage houses, and 3 dedicated R&D facilities ensure hygienic and efficient processing and storage.
2. Inadequate Laboratory and Quality Testing Facilities	2. Purchase of high-end lab equipment such as 6-(HPLC, UV spectrophotometers, incubators, and biosafety cabinets) ensures product quality and compliance with export standards.
3. Limited Automation and Processing Equipment	3. Modern processing machinery including 6-pasteurizers, 180-Primary filters, 15-Pressure filters, 9-rotary gear pumps, 6-moisture reduction units, and 6-Clean in place (CIP) systems improves scale and efficiency.
4. Packaging, Labeling, and Branding Constraints	4. Investment in 6-shrink wrap and 6-automatic labeling machines boosts product presentation and market competitiveness.
5. Inefficient Transportation and Cold Chain Logistics	5. Acquisition of 6-vehicles with temperature control setup and 500 kg capacity of 300-food-grade storage tanks ensures safe, quality-preserving honey distribution.

Scaling-up Market

Products :

Organic Honey, Herbal or Infused Honey, Honey Candy and Lozenges, Honey Skincare Products, Honey Jam or Spreads, Bee Pollen and Propolis Products, Honey Chocolates or Baked Goods

Destination market :

Domestic Markets- Kathmandu valley, Pokhara, Chitwan, Bharatpur and Surkhet

International Markets- Germany, Japan and United States

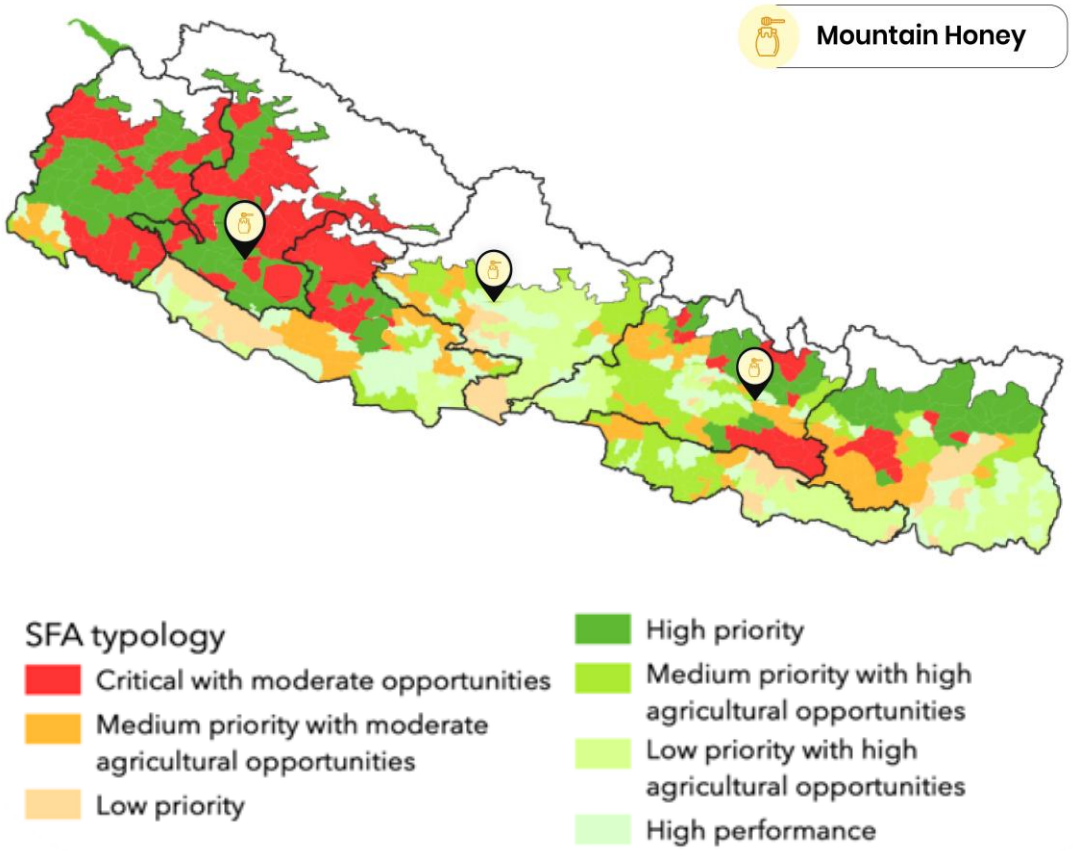
Risks	Mitigations
1. Market and Price Volatility	1. Establish a strong brand identity and certification (e.g., organic, fair trade) to access niche markets with stable demand.
2. Equipment Obsolescence and Maintenance Challenges	2. Schedule regular preventive maintenance and timely replacements as per the lifecycle.
3. Environmental and Climate Risks	3. Promote sustainable beekeeping practices and biodiversity conservation in production areas.

Investment Plan - 8: Mountain Wild Honey (Processing)

Hand-in-Hand Initiative

Target Districts: Kathmandu, Kaski and Surkhet
Area-0.15 Ha (3 Units)

Investment: 3.3 M (USD)



Mountain Wild Honey: Investment and Returns (20 years) associating risk factor

Intervention	Investment	NPV @10%	IRR
Processing	Total: 3.3 Million USD GON (TA): 0.6 Million USD Private: 2.7 Million USD	0.3 Million USD	38.4 %

Social impact	Environmental impact
Income Generation (339 person-days/year) and Livelihood Support	Carbon emission: 3,243 tCO2-e (≥ 20 yrs)
Empowerment of Women and Marginalized Groups	Biodiversity conservation
Preservation of Indigenous Knowledge and Practices	Forest Preservation and Sustainable Use

Nepal HIH Investment Plan

Hand-in-Hand Initiative

FAO

SUMMARY

Total Investment: US$ 213.9 M **GoN investment:** US$ 42.7 M (Estimated) **Investment gap:** US$ 171.2 M	22.9% **Weighted Average IRR**	79,170 **Direct Beneficiaries (HHs)**	395,850 **Indirect Beneficiaries**	US$ 204 **Weighted average income increase per capita**	MT 61.8 **Carbon emission Per ha/year**

KEY INVESTMENTS

1 Large Cardamom
i. Farm ii. Processing

Cost (USD)
i. 22.93 M ii. 15.7 M
IRR (%)
i. 25.54 ii. 31.95
NPV (USD)
i. 48.8 M ii. 10.7 M

Sustainability Benefits

Direct Beneficiaries (HHs): 18000

Indirect Beneficiaries: 90000

Income increase per capita: $ 263.14

Emission reduction per ha/year: MT -3.47 | ≥ 20 yrs: -414,825 tCO2-e

2 Sichuan Pepper
i. Farm ii. Processing

Cost (USD)
i. 31.6 M ii. 2.07 M
IRR (%)
i. 31.7 ii. 36.9
NPV (USD)
i. 35.4 M ii. 2.4

Sustainability Benefits

Direct Beneficiaries (HHs): 25000

Indirect Beneficiaries: 125000

Income increase per capita: $ 119.7

Emission reduction per ha/year: MT -1.8 | ≥ 20 yrs: -86,350 tCO2-e

3 Highland Potato
Farm

Cost (USD)
8.37 M
IRR (%)
37.27
NPV
10.57 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 6720

Indirect Beneficiaries: 33600

Income increase per capita: $ 486

Emission reduction per ha/year: MT -0.07 | ≥ 20 yrs: -4,822.22 tCO2-e

4 Pangasius Fish
Farm

Cost (USD)
12.16 M
IRR (%)
19.15
NPV
31.10 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 750

Indirect Beneficiaries: 3750

Income increase per capita: $ 2781.58

Emission reduction per ha/year: MT -6.2 | ≥ 20 yrs: -92,277 tCO2-e

5 Yak Cheese
Processing

Cost (USD)
2.02 M
IRR (%)
19.11
NPV
12 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 300

Indirect Beneficiaries: 1500

Income increase per capita: $ 182.66

Carbon emission per plant/year: MT 20.8 | ≥ 20 yrs: 6,246 tCO2-e

6 Orange
Farm

Cost (USD)
82.65 M
IRR (%)
14.98
NPV
23.79 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 20000

Indirect Beneficiaries: 100000

Income increase per capita: $ 93.17

Emission reduction per ha/year: MT -0.71 | ≥ 20 yrs: -71,602 tCO2-e

7 Ginger
Farm

Cost (USD)
33.06 M
IRR (%)
23.5
NPV
10 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 8400

Indirect Beneficiaries: 42000

Income increase per capita: $ 133

Emission reduction per ha/year: MT -0.74 | ≥ 20 yrs: -31,235.3 tCO2-e

8 Mountain Wild Honey
Processing

Cost (USD)
3.3 M
IRR (%)
38.4
NPV
0.3 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): Depends on ownership structure

Carbon emission per plant/year: MT 54.05| ≥ 20 yrs: 3,243 tCO2-e

Note: NPV@10%, 20-year project cycle, spill over beneficiaries not included