



Hand-in-Hand
Initiative

Investment Forum | Rome, Italy | 15-17 October 2024





Overview of Nepal and its Agrifood Systems



NEPAL

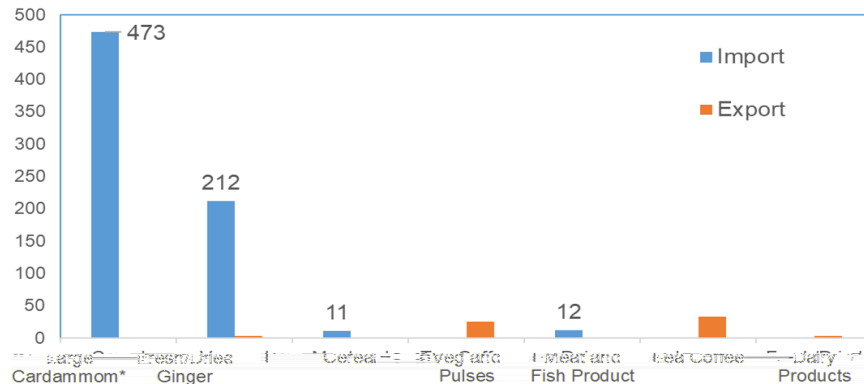
Land area	147 181 km ²	Population	29.19 million
GDP (USD Bil)	40.83	GDP per capita (USD)	1 336.55
Poverty rate	21.4 % (WB 2022-23)	Unemployment rate	11% (Youth: 20.52 %)

National Agrifood Systems

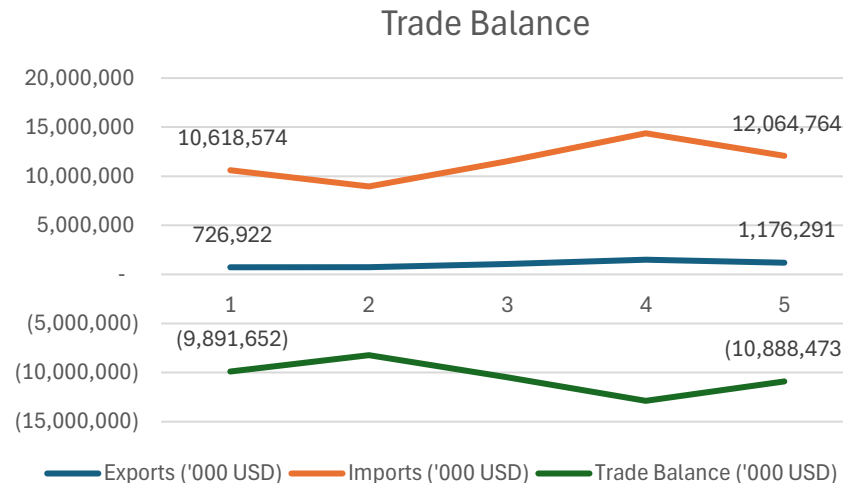
- With 28% of arable land, Nepal's agriculture sector contributes 24.12% to the GDP and accounts 62% of total employment
- The transformation of agri-food systems has been highly prioritized by the Government of Nepal (GoN) to enhance food and nutrition security, promote sustainability, bolster resilience, and foster rural development

Why invest in Nepal's agri-food systems?

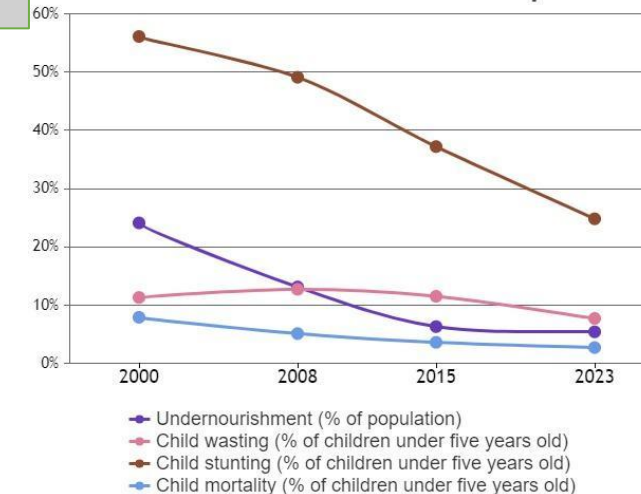
- To empower communities for dignified and decent jobs with access to healthy diet for all
- To mitigate carbon emissions, promote adaptation, ensuring environmental sustainability and conserving biodiversity



Major Agri Imports and Exports in Million USD (2020/21)



Trend for Indicator Values - Nepal



Source: Economic survey 2022, Custom portal, MoALD



Follow up of HIH Investment Forum 2022: Resources in negotiation/committed

	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		4.1 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)	4.5 million proposed for 2024	10 Million
4	Lumbini province government has prioritized Timur (Sichuan Pepper) value chain development in 7 districts in its policy and programme for FY 2024/25	Budgeting under process	
5	ADB funding support for Implementation of Timur (Sichuan pepper) Geographical Information (GI) system (project - climate resilient landscapes livelihoods) in HIH area	0.5 million (FAO TA), 2.5 million (investment for VC development)	
6	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 11 million, 50% allocated for HIH commodities)	5.5 million	
7	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	
8	Government organized Nepal Investment Summit 2024 (Total investment for all sectors- EOI of USD 69 Million received), Women Leadership Agriculture Summit 2024, Lumbini Province Timur Summit 2024 and National Potato Summit 2024 ; FAO supported with sideline events to catalyze investment in agri-food system	Investment Board of Nepal is in process of disaggregation	
9	Negotiation with Asian Infrastructure Investment Bank (AIIB)	100 million under negotiation	
10	Private Sector Commitments for Agri-Food System Investments from Nepal Food Forum 2024		29.1 Million



WHY INVEST IN NEPAL?



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



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 NEPAL



LAND OWNERSHIP

Allowed in Company's Name



INVESTMENT REQUIREMENT TILL 2030

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

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

**CHINA
AND INDIA**

Duty Free and Open Border

**ACCESS
TO INDIA**

8000+ Products Duty Free

**ACCESS
TO CHINA**

77 Items Duty Free Till 2026

**ACCESS
TO US**

Duty Free Quota Free (EBA)

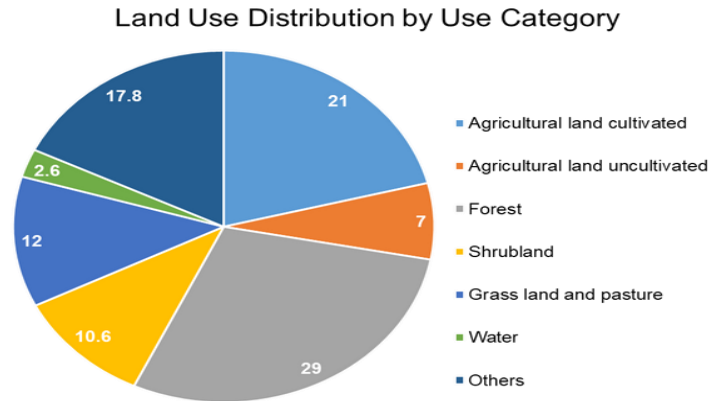
**ACCESS
TO EU**



Enabling Environment for Investment in Agriculture Sector



1. Land availability

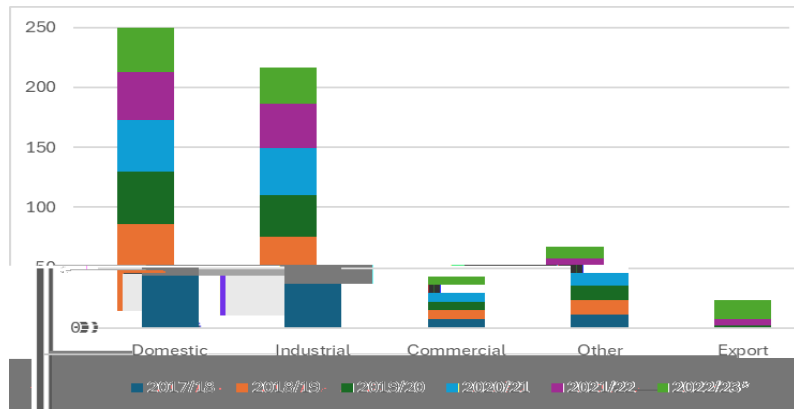


3. Abundance & access to quality water

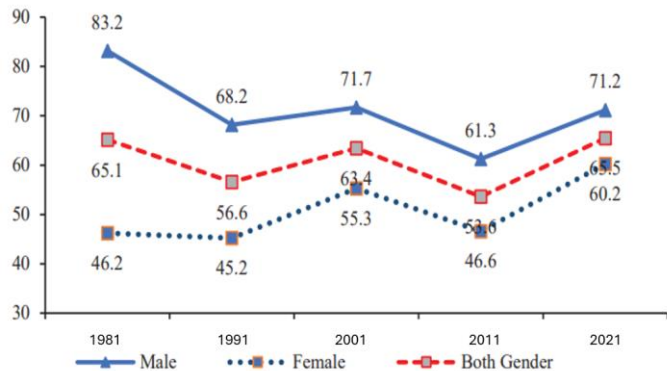


Per capita freshwater availability: 6,734 m³

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



2. Economically active population



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

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 1.57 billion concessional loans (2022-23) out of which 67.8% to commercial agriculture and livestock*
- *Start-up fund + enterprise loans*
- *Mobile phone access has reached 86% of the general public in Nepal*

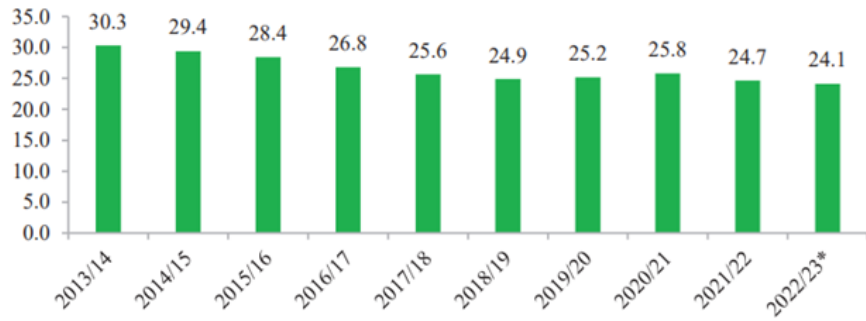
Source: NRB, Economic survey 2022 * Statistical Information of Agriculture, MoALD



Enabling Environment for Market access, Accelerated Trade and Economic Growth

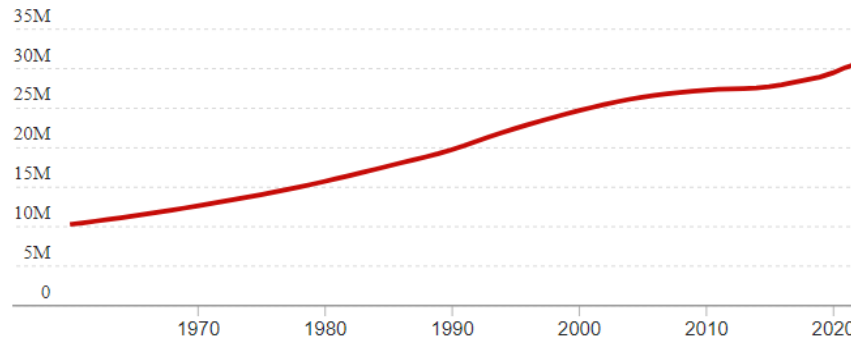


1. Agriculture Sector Contribution in Gross Domestic Production (In percent)



3. Increasing demand for food

Population in Nepal

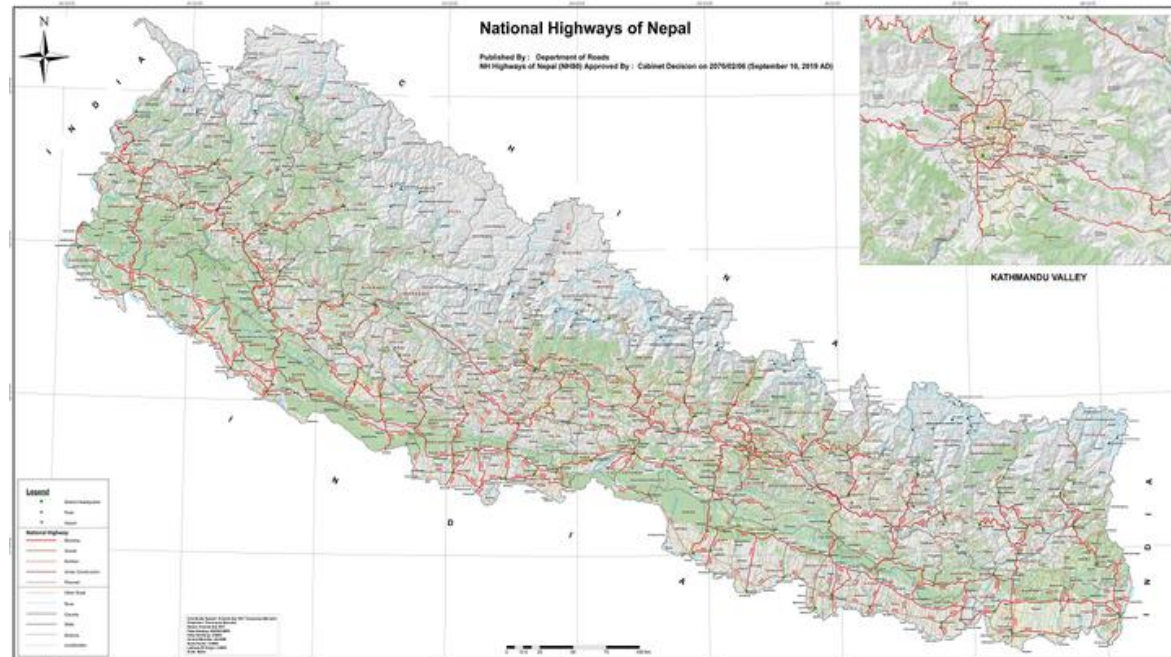


4. Increasing access to export market



2. Improved access to domestic market

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



- India
- Bangladesh
- Singapore
- Thailand
- Bhutan
- Direct Flight: 17 countries
- Total airports: 55 (3 international, 52 domestic)



Ease of Doing Business & Critical Reforms to Enable Investments

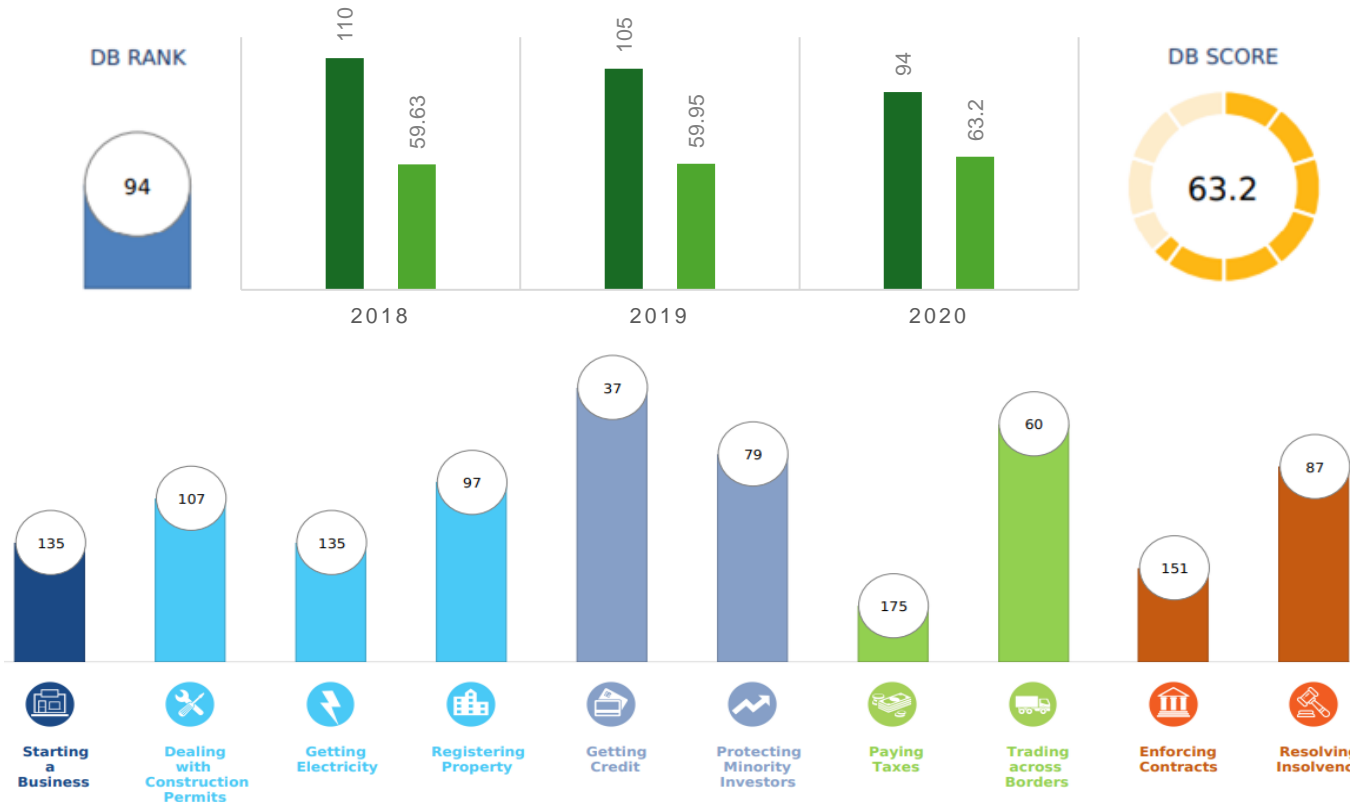


Ease of Doing Business

Nepal's ranking progress: 110 (2018) to 105 (2019) to 94 (2020).

DB SCORE AND RANKING

■ Ranking ■ Score



Source:: World Bank (Doing Business 2018, 2019., 2020)

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

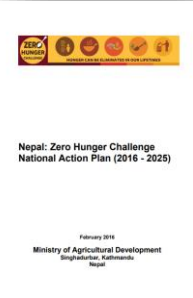


Enabling Policies for Agri-business Investment



[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



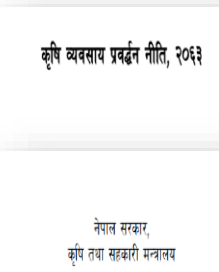
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GoN amended laws through ordinance to attract investors in 2024: Electronic Transactions Act: Simplifies forex payments | Special Economic Zone Act: Facilitates machinery transfer | Industrial Enterprises Act: Supports startup registration



[Link](#)

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

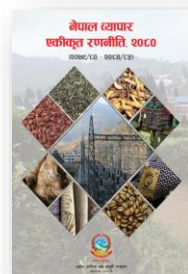


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Foreign Investment and Technology Transfer Act (FITTA 2019): Industries established in Special Economic Zones in Nepal's mountain or hill areas by the government enjoy 100% tax exemption for the first 10 years and 50% thereafter | Expanding industries 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



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Link with Government Plans/Policies

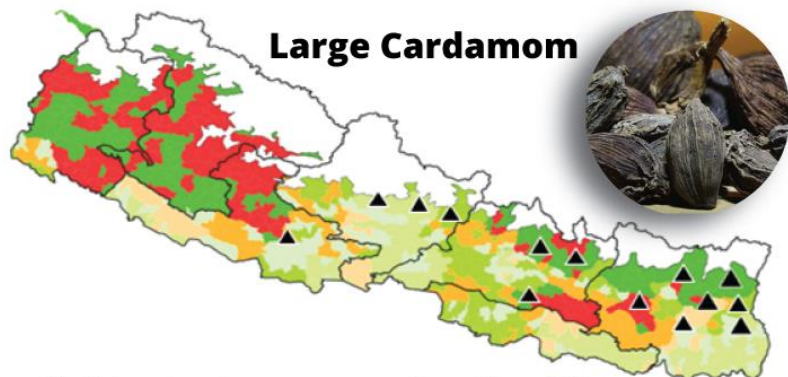
1. **Government Policy and Programme 2024 – Decade of Agriculture Investment 2024-34;** Self sufficiency in fish and meat within 2 years; Mountain prosperity programme
2. **16th Periodic Plan (2024-28)** - Targets economic growth rate of 7.5% from 3.5%, **increasing per capita income** from USD 1,456 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, and commercialization of agriculture
9. **Nepal Trade Integration Strategy (NTIS 2023):** Spices (Large Cardamom, Timur)



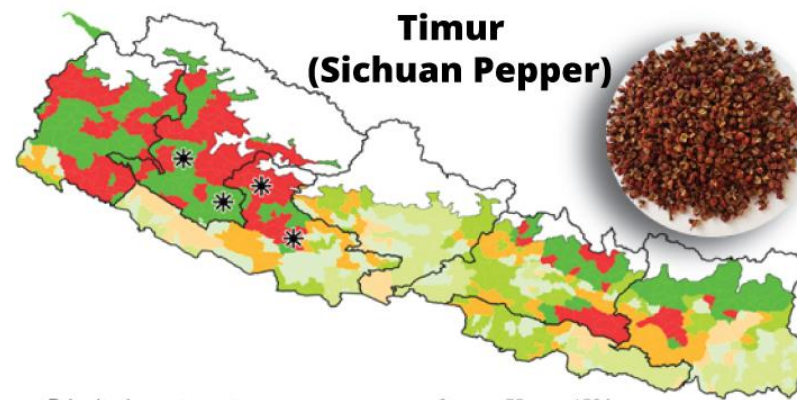
Investment Priorities based on Agriculture Typologies



Priority investment areas
▲ Large Cardamom

0 75 150 km
Disclaimer: 2019 Nepal administrative boundary

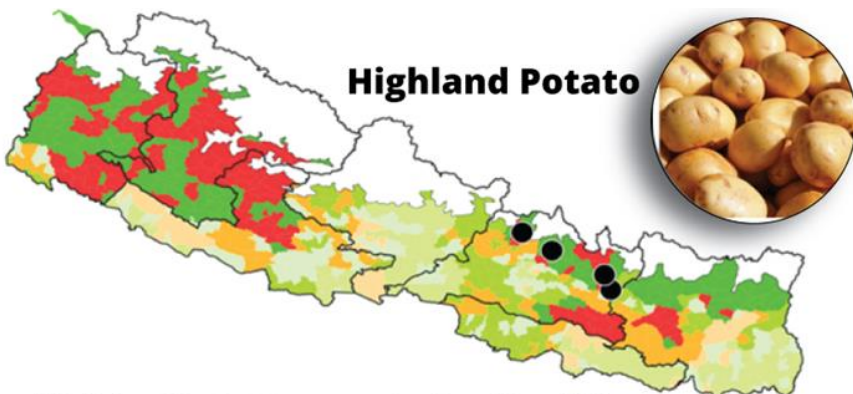
- SFA typology
- High priority
 - Critical with moderate opportunities
 - Medium priority with moderate agricultural opportunities
 - Low priority
 - Medium priority with high agricultural opportunities
 - Low priority with high agricultural opportunities
 - High performance



Priority investment areas
* Timur

0 75 150 km
Disclaimer: 2019 Nepal administrative boundary

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Priority investment areas
● Highland Potato

0 75 150 km
Disclaimer: 2019 Nepal administrative boundary

- SFA typology
- High priority
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 - Medium priority with high agricultural opportunities
 - Low priority with high agricultural opportunities
 - High performance

Potential Districts For Pangasius Fish Production



Potential districts
Other districts

0 75 150 225 300 375 450 525 600 675 750 825 km



Investment Plan - 1: Climate Smart Large Cardamom



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 lack of quality assurance system, and regular audits	1. Expanding existing tissue culture laboratory capacities to scale up production of climate resilient and disease-free saplings (81 million) of large cardamom including enhancement of lab capacity
2. Limited knowledge of modern cultivation techniques and practices among farmers	2. Scaling up annual training programmes for 18,000 farmers on improved cultivation practices and IPM practices
3. Inadequate infrastructure for irrigation water management	3. Install more efficient irrigation systems (1,200 units) (Drip irrigation) and water storage facilities (10,000 Litre Water Tank + pipeline)
4. Limited post-harvest processing and drying facilities	4. Install post-harvest facilities and more eco-friendly dryers (1,200 Electric/Solar dryers) to replace current firewood dryers
5. Limited access to market	5. Establish traceability, e-marketing platform, and certification system (Organic, GI)

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. Pest and Disease Outbreaks	2. Implement Integrated Pest Management (IPM) practices, biological control measure and regular monitoring
3. Market Price volatility	3. Strengthening cooperative through e-market platform, collective marketing and price stabilization
4. Inadequate quality standards and lack of proper certification	4. Implement standardized quality control measures and promote certification

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





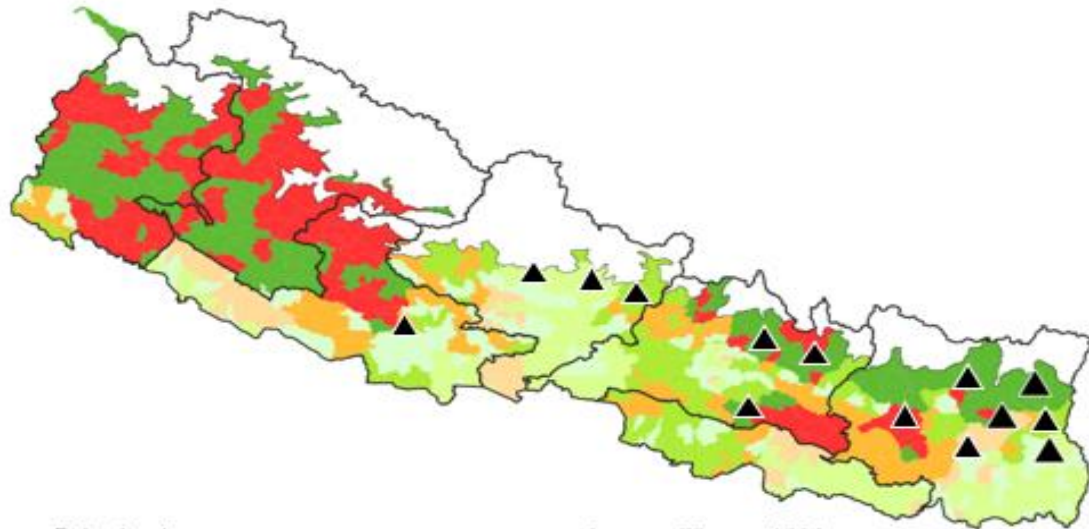
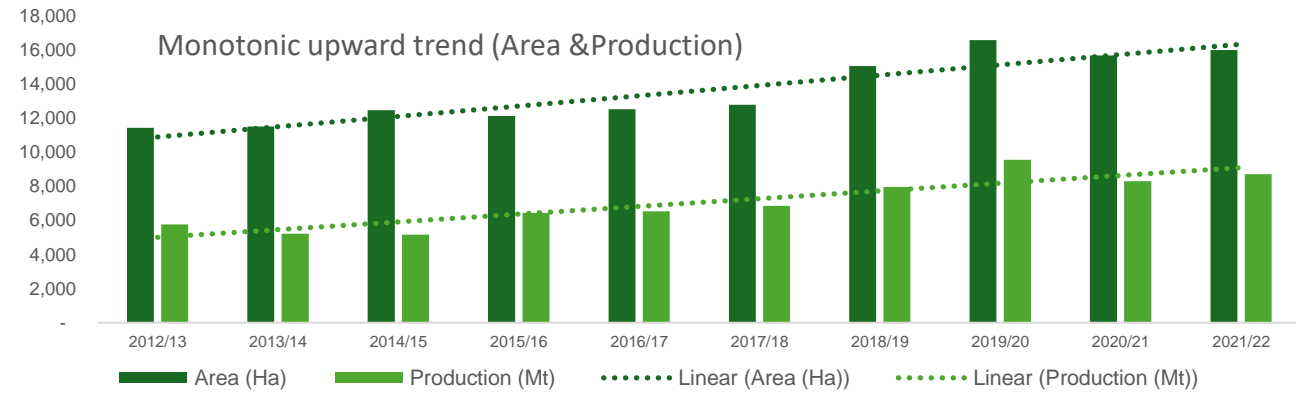
Investment Plan - 1: Climate Smart Large Cardamom



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

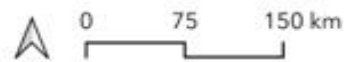
Direct Beneficiaries (HHs): 18,000
Indirect Beneficiaries: 99,000
Area: 6000 Ha

Investment: 22.92 M. (USD)



Priority investment areas

▲ Large Cardamom



Disclaimer: 2019 Nepal administrative boundary

SFA typology

- Critical with moderate opportunities
- Medium priority with moderate agricultural opportunities
- Low priority

- High priority
- Medium priority with high agricultural opportunities
- Low priority with high agricultural opportunities
- High performance

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

Intervention	Investment	NPV @10%	IRR
Production	Total: 22.92 Million USD GON (TA): 4.5 Million USD Private: 18.33 Million USD	48.8 Million USD	25.54%

Social impact	Environmental impact
Employment generation (1,099,200 person-days/year)	Emission reduction: -416,798 tCO ₂ -e (≥ 20 yrs)
Income diversification	Biodiversity conservation Soil & water conservation
Empowerment of women (mostly women led)	Agroforestry and agro-eco tourism



Investment Plan - 2: Climate Smart Timur (Sichuan Pepper)



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 and storage	2. Install modern and eco-friendly drying and processing facilities and warehouses (1,250 solar/electric units) and implement comprehensive training programmes on IPM practices and postharvest management (25,000 farmers)
3. Inadequate irrigation infrastructure and lack of know-how on water management practices	3. Install climate smart and efficient water management systems (2,500 drip irrigation units and 1,000 liters storage tanks)
4. Lack of branding, marketing and certification systems	4. Implement certification systems, traceability, e-marketing platforms including branding (GI, GIES Organic etc.) through co-operatives

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: Climate Smart Timur (Sichuan Pepper)



Target Districts: Dailekh, Rukum, Pyuthan, Salyan

Direct Beneficiaries (HHs): 25,000

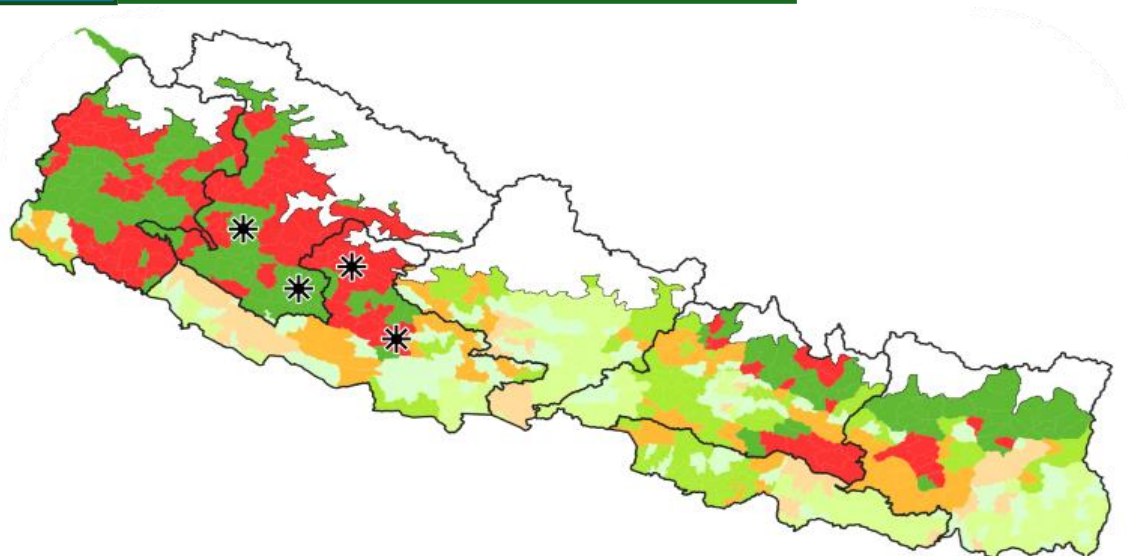
Indirect Beneficiaries: 137,500

Area: 2,500 ha

Investment: 31.6 M. (USD)

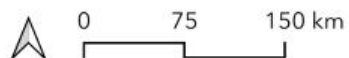
Timur: Investment and Returns (20 years) associating risk factor

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%



Priority investment areas

* Timur



Disclaimer: 2019 Nepal administrative boundary

SFA typology

- Critical with moderate opportunities
- Medium priority with moderate agricultural opportunities
- Low priority

- High priority
- Medium priority with high agricultural opportunities
- Low priority with high agricultural opportunities
- High performance



Social impact	Environmental impact
Employment generation (274,813 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: -90,420 tCO ₂ -e (≥ 20 yrs)



Investment Plan - 3: Climate Smart Highland Potato



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.
- loons Traders
- Global Trading Company Pvt.Ltd.





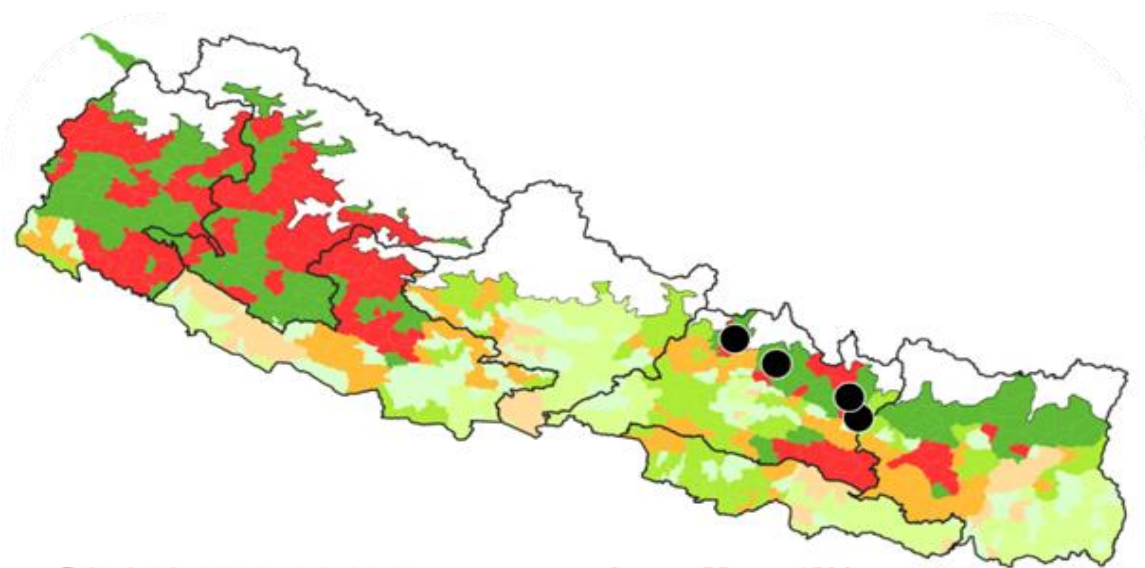
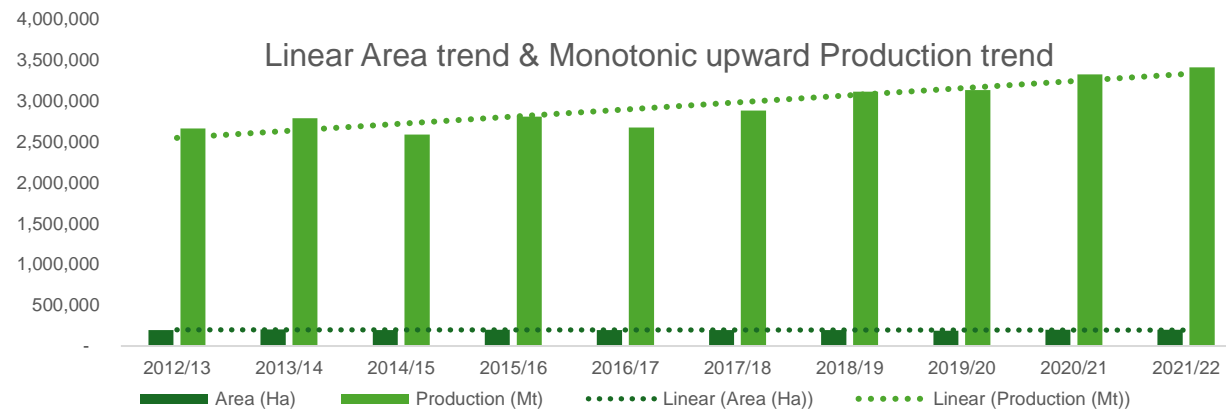
Investment Plan - 3: Climate Smart Highland Potato



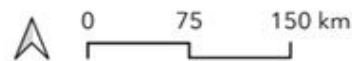
Target Districts: Dolakha, Sindhupalchok, Rasuwa, Ramechhap

Direct Beneficiaries (HHs): 6,720
Indirect Beneficiaries: 36,960
Area: 3,360 ha

Investment: 8.37 M. (USD)



Priority investment areas
● Highland Potato



Disclaimer: 2019 Nepal administrative boundary

SFA typology

- Critical with moderate opportunities
- Medium priority with moderate agricultural opportunities
- Low priority

- High priority
- Medium priority with high agricultural opportunities
- Low priority with high agricultural opportunities
- High performance

High land 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 tCO ₂ -e(≥ 20 yrs)



Investment Plan - 4: Climate Smart Pangasius Fish



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)

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

Scaling-up Market

Products:
Live Fish
Fresh Fish
Processed Fish

Destination markets:
**High demand on domestic market-
 Chitwan, Pokhara, Kathmandu**





Investment Plan - 4: Climate Smart Pangasius Fish



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	30.89 Million USD	19.09%

Potential Districts For Pangasius Fish Production



Social impact

Employment creation (90000 person-days/year)

Development of rural livelihood

Economic development

Enhancement of food security and nutrition

Environmental impact

Preserve aquatic ecosystem

Responsible water usage

Emission reduction: -92,277 tCO₂-e (≥ 20 yrs)

Maintain biodiversity



Nepal HH Investment Plan



SUMMARY

Total Investment: **US\$ 75.05 M**
 GoN investment: **US\$ 15 M** (Estimated)
 Investment gap: **US\$ 60.05 M**

28.4%
 Overall
 Average IRR

50,470
 Direct Beneficiaries (HHs)

277,585
 Indirect Beneficiaries

US\$912.6
 Income Increase
 Per Capita

MT -11.54
 Emission Reduction
 Per ha/year

KEY INVESTMENTS

1

Intervention

Large Cardamom

Cost (USD)

22.92 M

IRR (%)

25.54%

NPV

48.8 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 18,000

Indirect Beneficiaries: 99,000

Income increase per capita:
\$263.14

Emission reduction per ha/year:
MT -3.47 | ≥ 20 yrs: -416,798
tCO₂-e

2

Intervention

Timur (Sichuan Pepper)

Cost (USD)

31.6 M

IRR (%)

31.7%

NPV

35.4 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 25,000

Indirect Beneficiaries: 137,500

Income increase per capita:
\$119.7

Emission reduction per ha/year:
MT -1.8 | ≥ 20 yrs: -90,420 tCO₂-e

3

Intervention

Highland Potato

Cost (USD)

8.37 M

IRR (%)

37.27%

NPV

10.57 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 6,720

Indirect Beneficiaries: 36,960

Income increase per capita: \$486

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

4

Intervention

Pangasius Fish

Cost (USD)

12.16 M

IRR (%)

19.09%

NPV

30.89 M USD

Sustainability Benefits

Direct Beneficiaries (HHs): 750

Indirect Beneficiaries: 4,125

Income increase per capita:
\$2781.56

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

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