



# E-GOVERNANCE

MODEL FOR SUSTAINABLE DEVELOPMENT OF  
**NEPAL**

## Municipality

HANUMANNAGAR  
KANKALINI

Dr. Acharya Balkrishna

**E-GOVERNANCE**  
MODEL FOR SUSTAINABLE DEVELOPMENT OF  
**NEPAL**

**Hanumannagar**  
**Kankalin**  
**Municipality**



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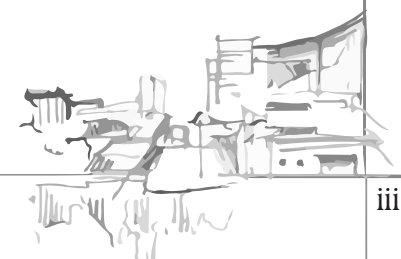
# Patanjali's Commitment Towards Sustainable Development of Nepal

In the tapestry of international relations, the enduring bond between India and Nepal stands out as a testament to the strength of shared history, cultural affinities, and a deep-rooted friendship. Nepal, a country steeped in the traditions of Sanatan, has consistently found harmony with its neighbor, India, throughout the epochs. This connection is not merely historical but is a living testament to the resilience and warmth that characterizes the relationship between the two nations.

In the context of Nepal being a developing nation, the support extended by Patanjali is not just a gesture, it is a pledge to stand shoulder to shoulder with the country on its journey towards sustainable development. Patanjali, in its pursuit of fostering growth and prosperity, offers its advisory and consultancy services to Nepal without any fee, underscoring its dedication to the nation's progress.

As Nepal strives to elevate its global standing, Patanjali steps forward as a steadfast ally, offering its services as a free brand ambassador. This noble gesture exemplifies Patanjali's commitment to not only the economic advancement of Nepal but also to enhancing the nation's presence on the world stage.

This document, a testament to the enduring friendship between India and Nepal, stands as a beacon of hope and collaboration. It is a call to action, an invitation for partnership, and a roadmap towards a shared future of prosperity, well-being, and harmonious coexistence.







# FOREWORD

In the sacred lap of the majestic Himalayas lies a nation of unparalleled beauty and rich cultural heritage- Nepal. As a land blessed with diverse landscapes, from the towering peaks to the lush green valleys, Nepal has always been a source of inspiration for seekers of truth and lovers of nature. However, the journey of this beautiful nation towards sustainable development is an odyssey that requires collective wisdom, dedication, and conscious efforts.

This book, “**Sustainable Development of Nepal: Current Status and Future Opportunities,**” is a profound exploration into the myriad facets of Nepal’s development journey. It goes beyond the surface to delve into the intricacies of the challenges faced by this Himalayan gem, offering a comprehensive overview that spans medicinal plant conservation, tribal affairs, sewage and sludge management, agriculture, rural enterprises, remittances, and micro-enterprise development for poverty alleviation.

Nepal, with its rich biodiversity, has been a treasure trove of medicinal plants for centuries. The book meticulously examines the status of these invaluable resources, shedding light on their conservation and sustainable utilization. Understanding the intricate relationship between nature and the indigenous communities is paramount, and the exploration of tribal affairs is a commendable effort towards fostering harmony between tradition and progress.

In the pursuit of sustainable development, effective waste management is indispensable. The section on sewage and sludge management provides insights into the challenges faced by Nepal in this crucial domain and presents potential solutions for a cleaner and healthier environment.

Agriculture is the backbone of Nepal’s economy, and the book presents a detailed SWOT analysis of the agriculture sector, offering a roadmap for enhancing productivity and resilience. Furthermore, the discussion on the Rural Enterprises and Remittances Project and Micro Enterprise Development for Poverty Alleviation provides a nuanced understanding of how economic initiatives can uplift communities, especially in rural areas.

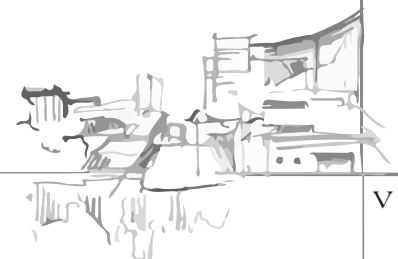
Rural development stands as a linchpin in Nepal’s growth story, and the book addresses the challenges faced by rural communities while emphasizing the urgent need for skill development and training. The solutions proposed within these pages aim not just to mitigate challenges but to empower individuals and communities, ensuring a sustainable and equitable future for all.

I appreciate Acharya Balkrishna Ji, and his devoted team who have dedicated their time and expertise to bring forth this invaluable resource.

May this literary serves as a valuable resource for policymakers, scholars, and anyone passionate about contributing to the prosperity of Nepal, and uplifts the lives of its people.

With heartfelt gratitude and blessings,

**-Swami Ramdev**





# MESSAGE



Nepal is a land blessed by nature, home to pristine rivers, streams, and the world's highest peak, 'Sagarmatha'. Our natural heritage is a testament to the country's beauty and significance. Nepal is one of the most esteemed countries and has long been a revered place where sages, rishis, and great seers have sought enlightenment.

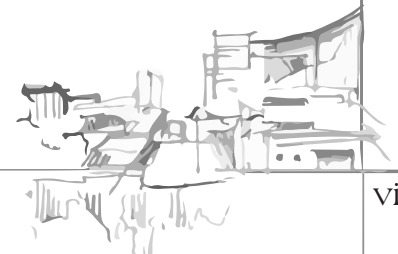
Despite our country's divine essence, elements of poverty and suffering persist. It is heartbreaking to hear about conflicts and bitterness in a nation nourished by the sacred resources of the Himalayas. Recognising this, I feel it is my duty to contribute to Nepal's development. Our enlightened citizens and those connected to our region share this hope and expectation.

By combining our capabilities, we can work towards a brighter future for Nepal. I consider it a privilege to contribute to the development of our country. We envision Nepal not as a poor nation but as a developed and prosperous one. Our goal is to create a sustainable, unified, and peaceful Nepal through holistic development, rooted in cultural values, social goals, and spirituality. This development must reach every individual, even in the most remote villages.

I am honored to have been recognised in the health sector by the United Nations. This recognition inspires me to continue working toward meaningful change, which is my ultimate aspiration for our beloved Nepal.

आचार्य बालकृष्ण

-Dr. Acharya Balkrishna







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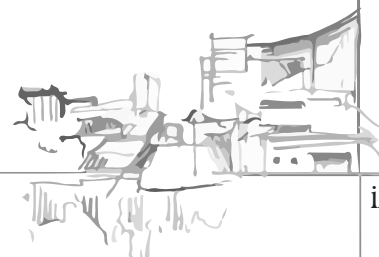
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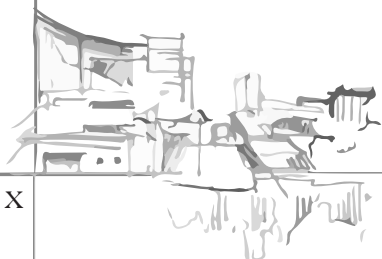
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01

NEPAL  
**AT A GLANCE**



## 1.1 Municipalities of Nepal

On September 20, 2015, Nepal adopted a new constitution, establishing the country as a three-tiered federal democratic nation. This was a shift from its previous system, which had a centralized authority. The country is divided into seven provinces, each containing districts, which are further subdivided into municipalities. In Nepal, a rural municipality is called a Gaunpalika.

1. Central or Federal Government based in Kathmandu, the capital.
2. Seven Provincial Governments with 77 districts.
3. 753 Local Governments (Municipalities and villages)

Further, Urban municipalities are categorized into 3 levels:

1. Metropolitan city (Mahanagarpalika)
2. Sub metropolitan city (Upmahanagarpalika) and
3. Municipality (Nagarpalika)

Following the new constitution, all previous municipalities and villages were restructured into a total of 753 new municipalities and villages. The previous 75 District Development Committees (DDCs) were replaced by 77 new DCCs, which have less power than the earlier DDCs. Currently, there are 6 Metropolitan Cities, 11 Sub-Metropolitan Cities, 276 Municipalities, and 460 GaunPaliks (also referred to as Rural Municipalities). The capital city Kathmandu is a Metropolitan city, and there are five other Metropolitan cities: Bharatpur, Biratnagar, Pokhara, Lalitpur, and Birganj (World Food Program, 2021).

### Provinces of Nepal

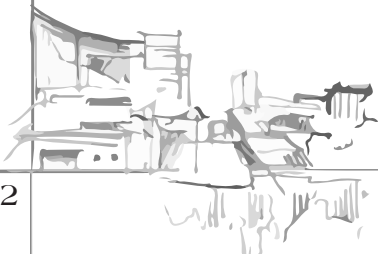
- ☞ Biratnagar
- ☞ Janakpur
- ☞ Hetauda
- ☞ Pokhara
- ☞ Butwal
- ☞ Birendranagar
- ☞ Dhangadhi

### Classification of municipalities based on population

- ☞ Metropolitan municipality (500,000+ population): 6 metropolitan municipality
- ☞ Sub-metropolitan municipality (200,000+ population): 11 sub-metropolitan municipality
- ☞ Municipality (10,000+ population): 276 municipalities

### Governance of the municipalities:

- ☞ In terms of administrative divisions, each province is composed of 8 to 14 districts. The local level is composed of wards. There are 6,743 wards in total.
- ☞ Governed by a Municipal Executive headed by a mayor
- ☞ The municipal Assembly hold all legislative powers of the municipality.



- It consists of the mayor, deputy mayor, ward chairpersons and four ward members elected from each of the wards in the municipality out of which at least two must be a woman

## 1.2 The Sustainable Development Goals in Nepal

The United Nations Sustainable Development Goals (SDGs) are a set of 17 global goals adopted by all UN member states in 2015 as part of the 2030 Agenda for Sustainable Development. These goals aim to end poverty, protect the planet, and ensure prosperity for all. Nepal, a member of the United Nations, is committed to achieving the United Nations Sustainable Development Goals (SDGs) by 2030. The country has made significant progress in human and social development, inclusiveness, and economic growth, but faces challenges such as multidimensional poverty, structural constraints, and climate change impacts. The 14th Plan (2016/17–2018/19) and the 15th Plan (2019/20–2023/24) have continued to align with the SDGs, with the aim of achieving a “Prosperous Nepal, Happy Nepali” vision. The 15th Plan aims for high and equitable national income, human capital potential development, accessible modern infrastructure, sustainable production, well-being, a safe, civilized society, a healthy environment, good governance, comprehensive democracy, and national unity, security, and dignity. The government has prepared a report on the status and roadmap of specific initiatives, identifying 494 indicators and estimating an annual average investment of NRs 2025 billion (about USD 19 billion) to achieve the SDGs in line with the 2030 targets (UN SDG, 2020).

### Key highlights of SDGs for Nepal 2020

#### 1. No Poverty (SDG 1):

- Goal:** Eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.

- Progress:** Nepal has made significant strides in poverty reduction. The poverty rate fell from 41.8% in 1996 to 18.7% in 2019.

#### 2. Zero Hunger (SDG 2):

- Goal:** End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

- Progress:** Malnutrition and stunting have decreased, but food insecurity remains a challenge, particularly in remote areas.

#### 3. Good Health and Well-being (SDG 3):

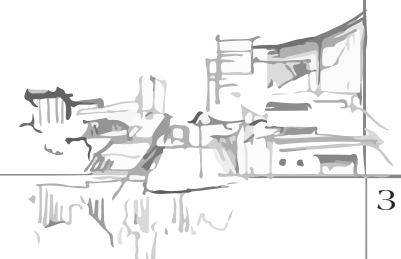
- Goal:** Ensure healthy lives and promote well-being for all at all ages.

- Progress:** Nepal has seen improvements in maternal and child health, life expectancy, and the fight against communicable diseases like HIV/AIDS, malaria, and tuberculosis.

#### 4. Quality Education (SDG 4):

- Goal:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

- Progress:** Literacy rates have improved, with a focus on gender parity in primary and secondary education. However, challenges remain in ensuring quality education, particularly in rural areas.



## 5. **Gender Equality (SDG 5):**

🏠 **Goal:** Achieve gender equality and empower all women and girls.

🏠 **Progress:** Nepal has made significant strides in gender equality, including legal reforms and increased female participation in education and the workforce. However, deep-rooted social norms still pose challenges.

## 6. **Clean Water and Sanitation (SDG 6):**

🏠 **Goal:** Ensure availability and sustainable management of water and sanitation for all.

🏠 **Progress:** Access to clean water and sanitation has improved, but disparities exist between urban and rural areas.

## 7. **Decent Work and Economic Growth (SDG 8):**

🏠 **Goal:** Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

🏠 **Progress:** Economic growth in Nepal has been steady, with a focus on creating job opportunities and reducing youth unemployment.

## 8. **Climate Action (SDG 13):**

🏠 **Goal:** Take urgent action to combat climate change and its impacts.

🏠 **Progress:** Nepal is vulnerable to climate change impacts, such as glacial melting, floods, and landslides. The government has committed to reducing emissions and promoting climate resilience.

## **Key Highlights from Nepal's Voluntary National Review (VNR) 2020**

In 2020, Nepal presented its second Voluntary National Review (VNR) on the implementation of the SDGs. The VNR is a comprehensive report that outlines the country's progress, challenges, and future plans for achieving the SDGs. Since the first voluntary national review in 2017, the government has made consistent efforts to accelerate progress towards achieving the SDGs. Partnership and coordination among all three tiers of government have been strengthened. Nepal has been able to achieve a high growth rate of average around 7 per cent in the last few years. The poverty has remarkably reduced as well. Internal and external resources have been mobilized, albeit not enough to meet the financing requirements to achieve the SDGs by 2030.

### 1. **Institutional Framework:**

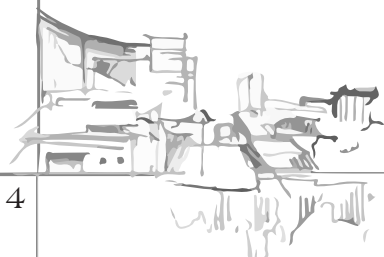
🏠 Nepal has established an SDG Coordination and Monitoring Unit under the National Planning Commission (NPC) to oversee SDG implementation.

🏠 Provincial and local governments have been integrated into the SDG planning and implementation process.

### 2. **Achievements:**

🏠 **Poverty Reduction:** Notable progress in reducing poverty, with significant investments in social protection programs.

🏠 **Health:** Major improvements in health indicators, including maternal and child health, vaccination coverage, and life expectancy.



🏠 **Education:** Increased enrollment rates in primary and secondary education, with a focus on improving quality.

### 3. **Challenges:**

🏠 **COVID-19 Impact:** The pandemic has posed significant challenges to SDG progress, particularly in areas like health, education, and economic growth.

🏠 **Resource Mobilization:** Financing the SDGs remains a challenge, with a significant funding gap.

🏠 **Climate Vulnerability:** Nepal's geographical vulnerabilities make it particularly susceptible to climate change impacts, hindering progress on SDG 13.

### 4. **Future Plans:**

🏠 Nepal aims to accelerate SDG implementation through targeted programs, increased investment in key sectors, and stronger partnerships with international organizations and the private sector.

🏠 Emphasis on building back better from the COVID-19 pandemic, with a focus on resilience and sustainability.

## Progress Indicators and Data

### 1. **Poverty Rate:**

🏠 2019: 18.7%

🏠 Target 2030: Below 5%

### 2. **Maternal Mortality Rate (per 100,000 live births):**

🏠 2020: 186

🏠 Target 2030: Less than 70

### 3. **Access to Clean Drinking Water:**

🏠 2020: 92%

🏠 Target 2030: 100%

### 4. **Literacy Rate (15-24 years):**

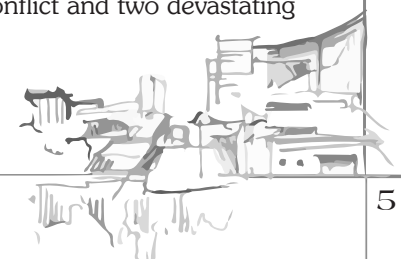
🏠 2020: 92.3%

🏠 Target 2030: 100%

The SDGs cannot be achieved without the participation and cooperation of all stakeholders, who lend their support with advocacy, knowledge generation, investment and implementation of programs, monitoring and evaluation. In view of Nepal's new federal structure, the localization of the SDGs needs to be intensified to make it effective on the ground. Capacity development and productive use of information and communication technology, big data and the evolving technologies should be given due priority for quality and disaggregated data. To fully realize the SDGs, Nepal will need continued support from international partners, efficient resource mobilization, and innovative approaches to tackle its unique challenges (National Planning Commission of Nepal, 2020)

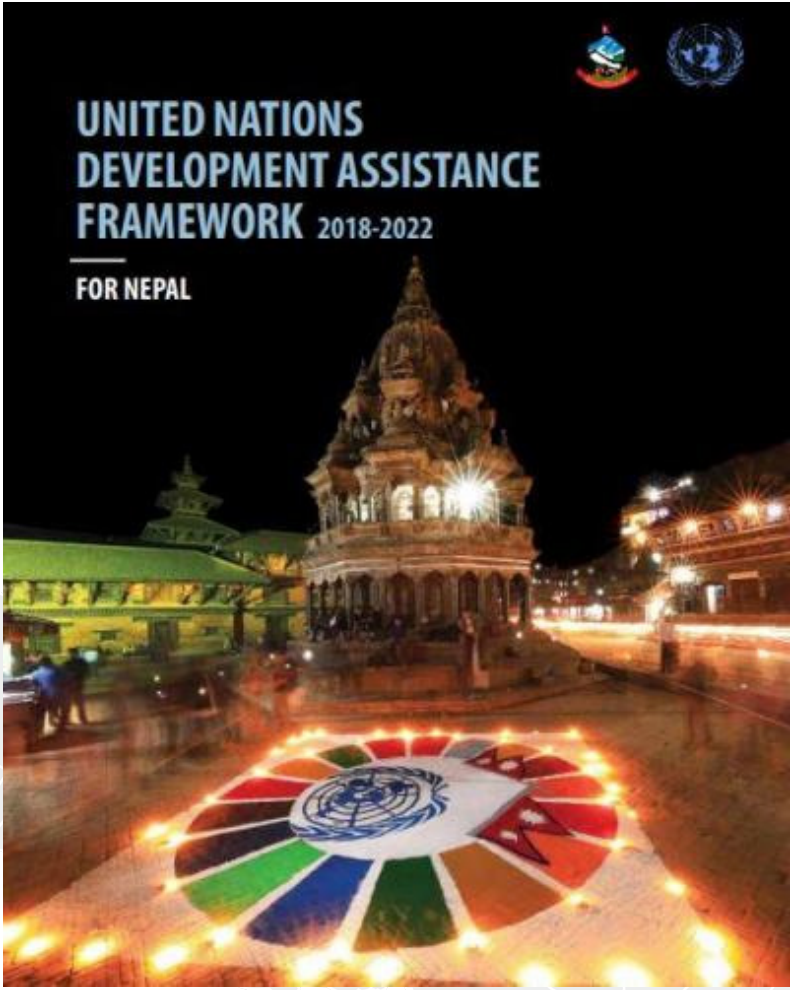
## UNDAF for Nepal 2018-2022

Nepal is undergoing a period of transition and while it has faced myriad obstacles over the last 20 years, it has made significant development progress. Emerging after a decade-long conflict and two devastating





earthquakes, Nepal now looks forward to achieving the SDGs, implementing its newly promulgated Constitution and ensuring no one is left behind.

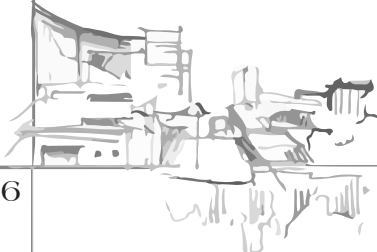


The United Nations Development Assistance Framework (UNDAF) 2018-2022 sets out the UN partnership aiming to support Nepal as it carves out its development agenda over the next five years. At the core of this new UNDAF are the SDGs, the Government of Nepal’s 14<sup>th</sup> plan and international commitments and norms to which Nepal is a party. Leaping off from the lessons learned from the previous UNDAF (2013- 2017), this new framework builds upon successes, incorporates emerging issues and agreements, and serves to address Nepal’s larger economic, social, and environmental objectives.

The four UNDAF outcomes weave together linked thematic areas: 1) Sustainable and Inclusive Economic Growth; 2) Social Development; 3) Resilience, Disaster Risk Reduction and Climate Change; and 4) Governance, Rule of Law and Human Rights. These outcomes are directly linked to the national priorities as laid out in the Government’s 14<sup>th</sup> Plan, and the globally endorsed 2030 Agenda for Sustainable Development (UNDAF for Nepal 2018-2022, 2018).

Goals being supported through this initiative are:

- SDG 7 Affordable and Clean Energy

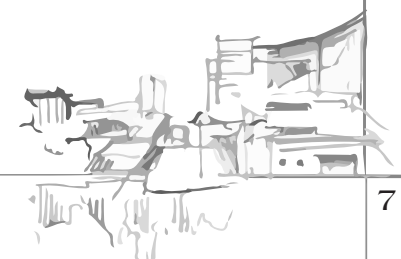


- SDG 11 Sustainable Cities and Communities
- SDG 13 Climate Action
- SDG 16 Peace, Justice and Strong Institutions

### 1.3 Function, duties and rights of Municipalities

Municipalities play a crucial role in local governance by managing funds, implementing policies, and overseeing various sectors essential for community development.

- ⌘ Local Taxation and Revenue: Municipalities have the authority to set policies, laws, and standards for various local taxes, service charges, and fees. They manage the collection and allocation of these revenues, which fund local infrastructure, services, and development projects.
- ⌘ Local Service Management: Municipalities oversee the policy, planning, and implementation of local services. They are responsible for organizational development, human resource management, and the efficient use of financial resources for service delivery.
- ⌘ Cooperatives: Municipalities are involved in determining local policies, laws, and standards related to cooperatives, including their registration, licensing, and regulation. They also focus on capacity building and promoting the cooperative sector.
- ⌘ Local Data and Records Management: Municipalities handle the collection, management, and regulation of local data, including demographic, economic, and environmental data. They ensure that resources are allocated for proper data management systems.
- ⌘ Local Police and Security: Municipalities are responsible for operating, managing, and regulating municipal police, including the development of policies, laws, and standards. They mobilize municipal police for various tasks, such as asset protection, disaster management, and controlling unauthorized activities.
- ⌘ Development Plans and Projects: Municipalities formulate, implement, and monitor local development plans and projects. These projects span various domains, including infrastructure, social development, environmental conservation, and tourism.
- ⌘ Education: Municipalities are responsible for the formulation, implementation, and regulation of education policies and plans at the local level. They manage and fund the establishment, operation, and maintenance of schools and educational infrastructure.
- ⌘ Health and Sanitation: Municipalities manage basic health services, sanitation, and nutrition. They establish and operate health institutions, develop infrastructure, and ensure the provision of clean drinking water and waste management.
- ⌘ Market Management and Environmental Protection: Municipalities regulate local markets, monitor goods and services, and promote environmental protection. They also manage waste and implement low-carbon development strategies. Cooperation and coordination with private and non-governmental sectors,
- ⌘ Infrastructure (Roads, Irrigation, etc.): Municipalities are involved in the planning, construction, and maintenance of local roads, bridges, and irrigation systems. They fund and regulate these infrastructures to support agriculture and local development.
- ⌘ Social Welfare: Municipalities manage social security programs for the elderly, disabled, and other



vulnerable groups. They fund and operate care centres, and rehabilitation facilities, and distribute social security benefits.

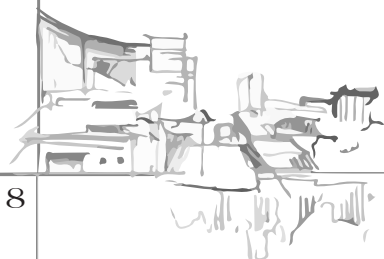
- ⌘ Record management: Use of latest information technology in local and land records management, Other works related to local records management, Cadastral mapping of local land
- ⌘ Agriculture & Livestock sector: Promotion, development and marketing of high value agricultural products, Data management and information system, Cold storages, agricultural seeds, breeds, fertilizers, chemicals and medicines etc., organic farming, Other works related to agri expansion.
- ⌘ Data collection of Unemployed: Data collection, processing and information system establishment, Financial literacy and entrepreneurship skills training, other works

### **Municipalities have the power to fund and manage several sectors:**

1. Agriculture: Municipalities can implement local programs and mobilize resources to support agriculture, which may include managing local irrigation systems and promoting agricultural practices.
2. Infrastructure: Municipalities are empowered to plan, implement, and manage local infrastructure projects, including roads, electricity distribution, and water supply systems. This includes setting tariffs for services like drinking water.
3. Tourism: Municipalities can declare areas as cultural or tourist centers, and they can receive funding and support from provincial governments for the development of these areas. They are also involved in promoting local tourism.
4. Herbal Sector: They have authority over the production, processing, and distribution of medicinal plants, herbs, and related medical products at the local level.
5. Health and Wellness: Municipalities are responsible for local health services, including the regulation of hospitals, public health campaigns, and the promotion of healthy lifestyles. They also manage health insurance and social security programs at the local level.
6. Education: While not explicitly detailed in the sections reviewed, municipalities generally have a role in managing local education infrastructure and may have concurrent powers with provincial and federal governments in certain aspects of education.
7. Ecology and bio-diversity: Survey, production, collection, promotion, processing and market management of herbs and other non-timber forest products at the local level. Documentation of biodiversity. Regional project formulation and implementation.

### **Other important responsibilities:**

1. The rural municipality or municipality should determine the local minimum rate of goods, wage, transportation cost, tariff etc. for construction and other services within its jurisdiction.
2. The rural municipality and municipality may, while carrying out development works and service delivery-related work at the local level, encourage the mobilization and promotion of users, private sector, community organizations, cooperatives and non-government sector within its area.
3. The rural municipality and municipality may operate and manage any plan or project in joint



investment of the Government of Nepal or provincial government or in public-private partnership.

## Function, duties and rights of Chair or Mayor

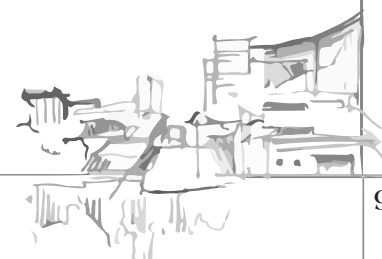
To carry out certification or recommendation to be carried out from the local level as per the prevalent Nepal law.

To take care, cause to take care of the movable and immovable asset, cause to carry out its maintenance, and keep safely, cause to keep safely the income, expenditure, accounts and other documents of the rural municipality and municipality.

To oversee the works of the committee, sub-committee of the rural municipality and municipality, and of the ward committee

The Chair or Mayor in a Nepalese municipality has several important functions, duties, and rights, particularly in relation to financial and funding aspects:

1. **Meeting Management:** The Chair or Mayor is responsible for summoning and chairing meetings of the assembly and executive, as well as managing the agenda and proposals discussed in these meetings.
2. **Budget and Program Preparation:** One of their key responsibilities is to prepare and present the annual program and budget, which is crucial for the municipality's financial planning and allocation of resources.
3. **Enforcement of Decisions:** They ensure that decisions made by the assembly and executive are enforced, which includes overseeing the implementation of financial plans and projects.
4. **Asset Management:** The Chair or Mayor is responsible for taking care of the municipality's movable and immovable assets, ensuring their maintenance, and safeguarding the municipality's income, expenditure, accounts, and other financial documents.
5. **Oversight of Committees:** They oversee the work of committees and sub-committees within the municipality, which can include financial committees responsible for budget oversight and funding allocation.
6. **Delegation of Responsibilities:** They can delegate duties to the Vice-Chair or Deputy Mayor, executive members, and the Chief Administrative Officer, including financial responsibilities when necessary.
7. **Public Service Grievance Management:** They manage grievances related to public service delivery, which may include addressing financial grievances or concerns related to municipal funding and expenditures.





02

MUNICIPALITY PROFILE  
**HANUMANNAGAR**  
**KANKALIN**  
**MUNICIPALITY**



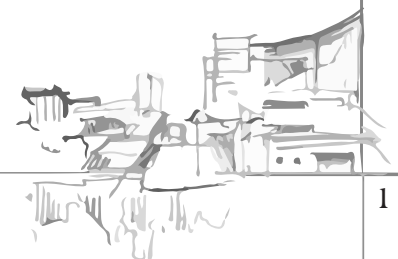
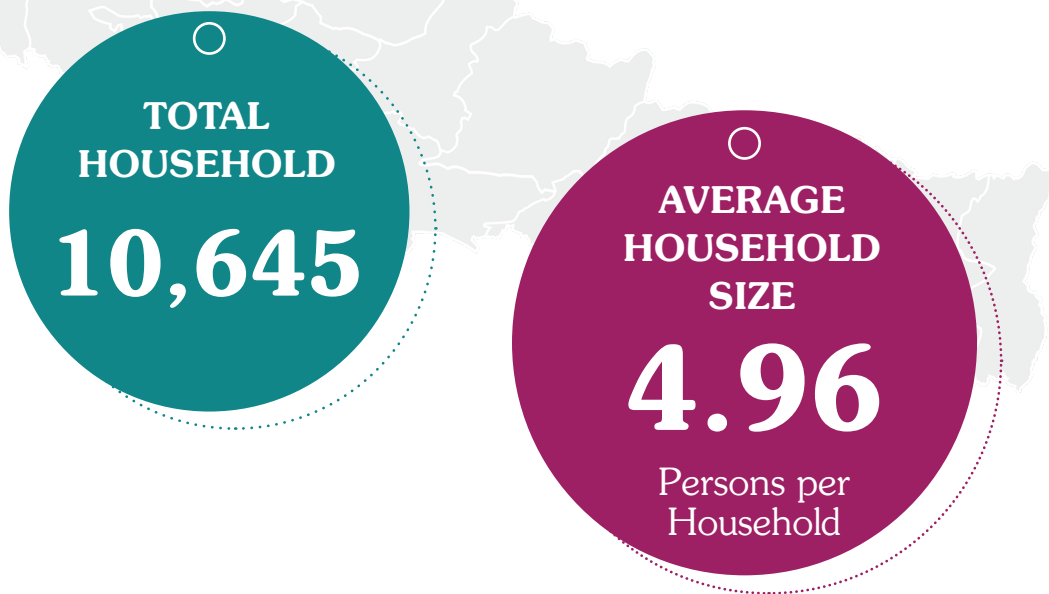
## 2.1 Introduction

Hanumannagar Kankalini is a municipality of Saptari District in Sagarmatha Zone of eastern Nepal. The municipality was established on 19 September 2015 by merging the existing Hanuman Nagar, Joginiya-1, Joginiya-2, Gobargada and Inarwa village development committees (VDCs). Later, Bhardaha, Portaha, Madhawapur, Rampur Malhniya, Malhniya village development committees (VDCs) were added to the existing Hanumannagar Yoginimai Municipality. The center of the municipality is established in the mid of Hanumannagar Bazaar. After merging the 10 VDCs population it had a total population of 45,734 according to 2011 Nepal census. After the government decision the number of municipalities has reached 217 in Nepal. Thus formed municipality has 14 wards.

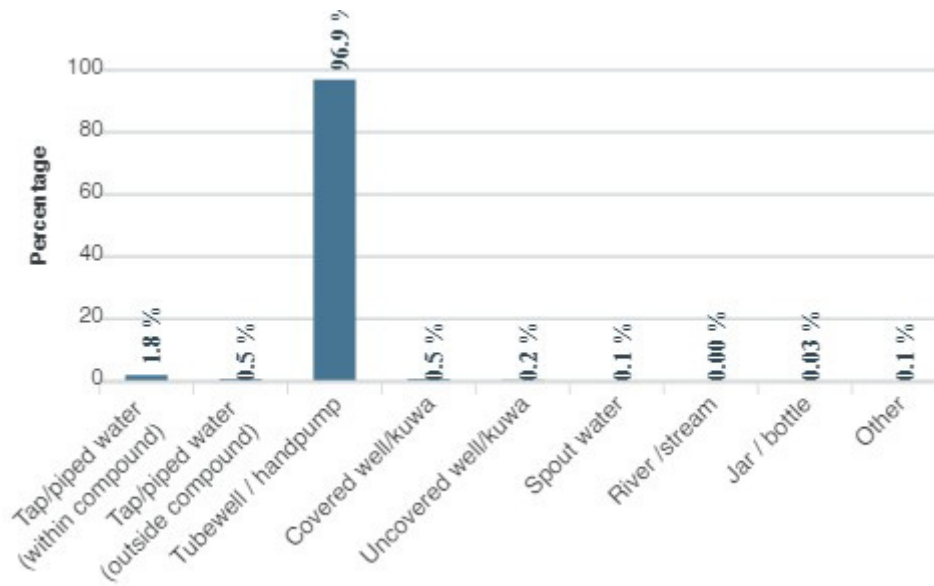
## 2.2 Socio-economic status (Household, Population, disability, Migration, and Economic activity)

### 2.2.1. Households highlights with amenities

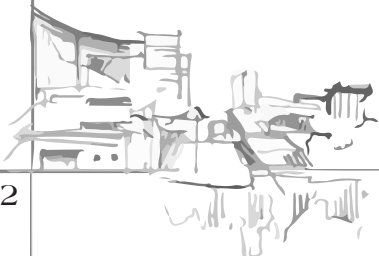
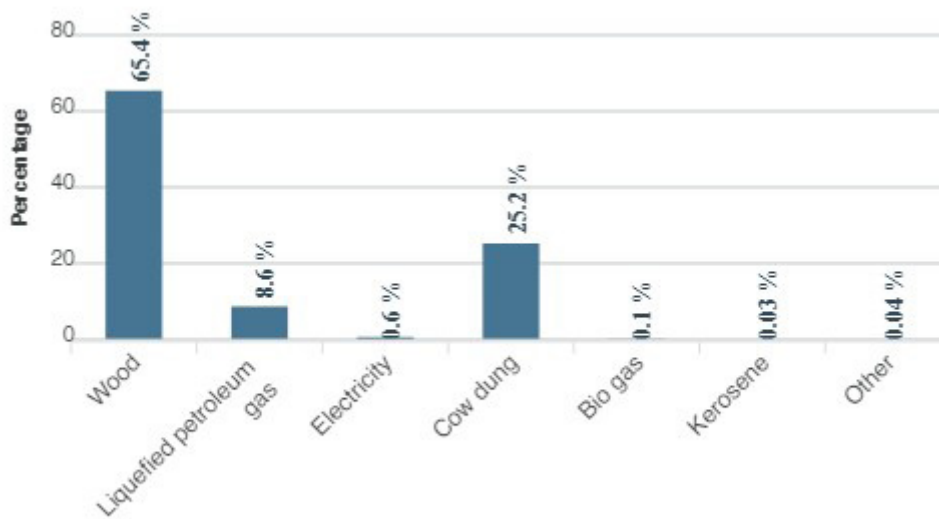
The Hanumannagar Kankalini municipality have a total 10,645 households and, on an average, accommodate 4.96 person per household. Most of the houses have the basic amenities. But mostly used the woods as fuel cooking.



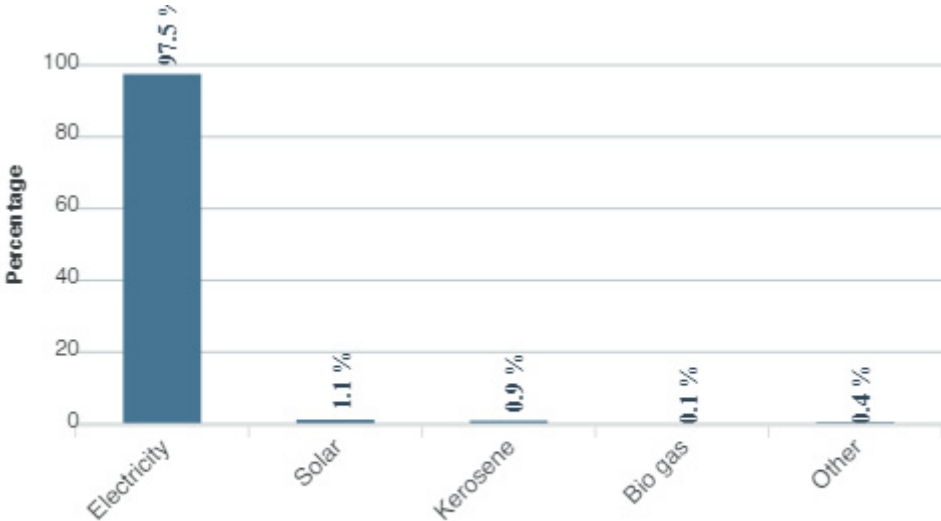
## Source of drinking



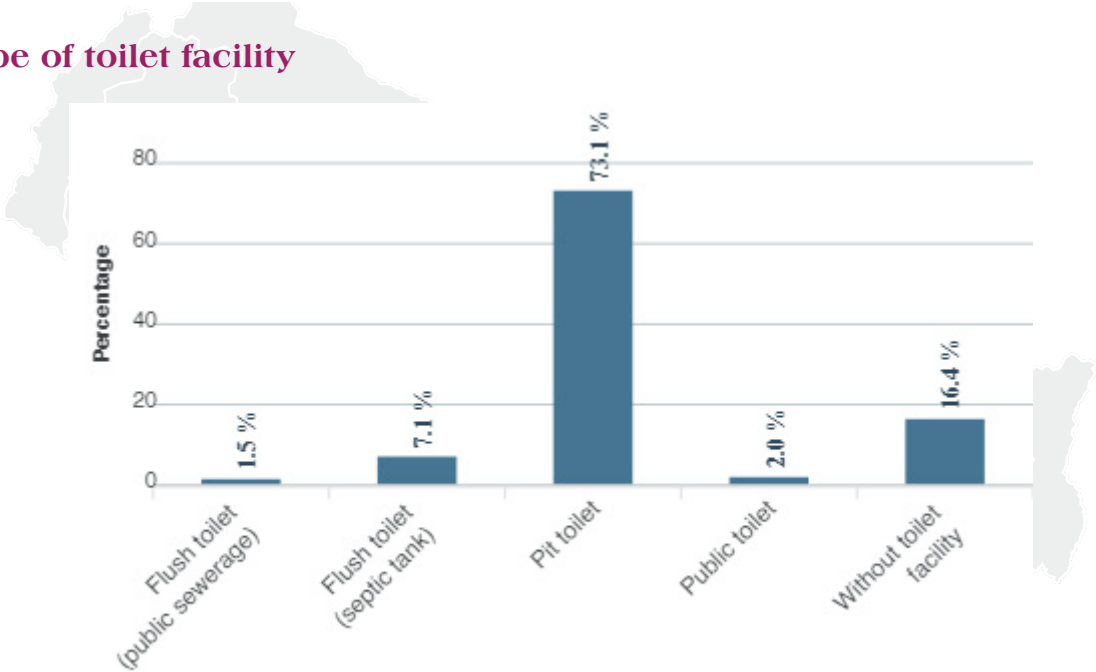
## Fuel usually used for cooking



### Main source of lighting

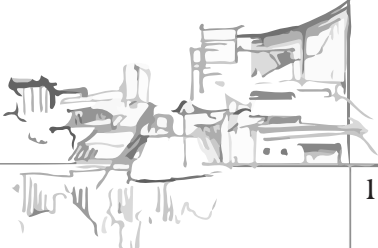


### Type of toilet facility

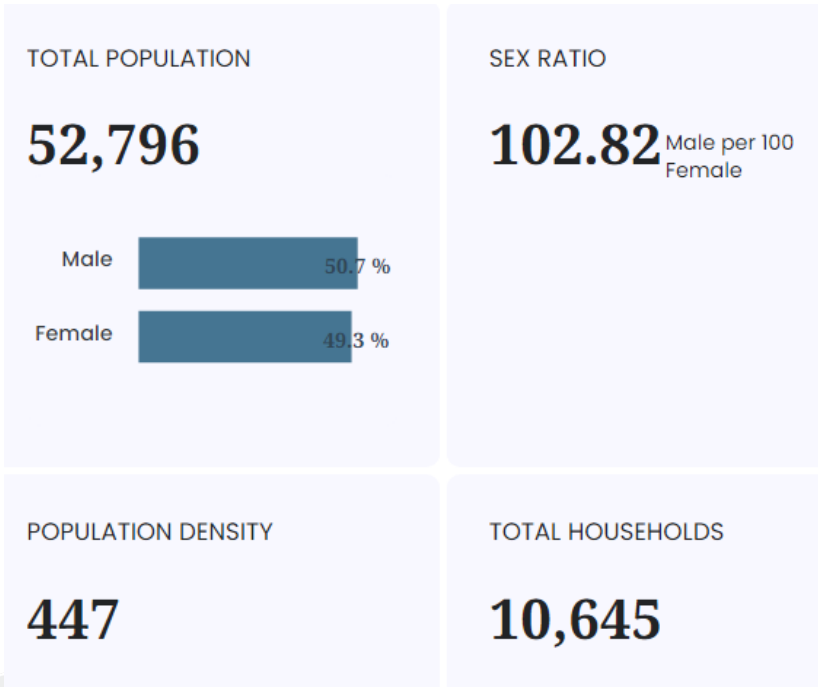


### 2.2.2 Population Highlights

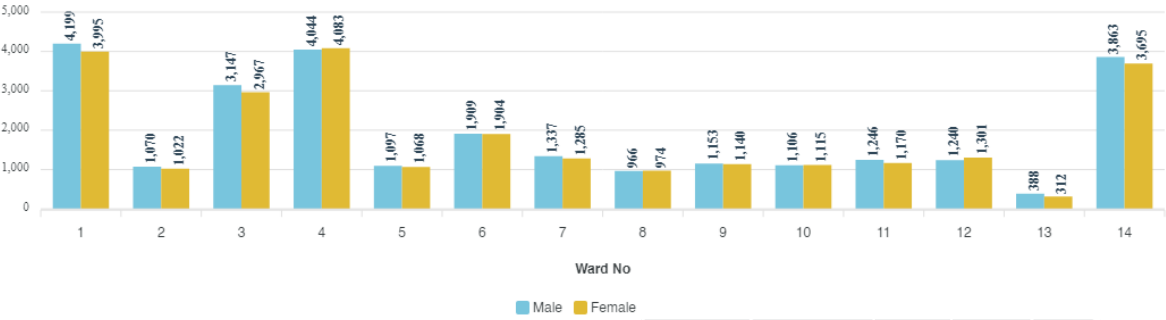
The total population of the Hanumannagar Kankalini is 52796 with a sex ratio of 108.82 with population density of 447.





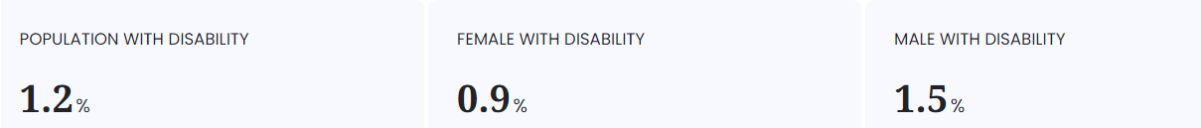


### 2.2.3 Ward wise population distribution



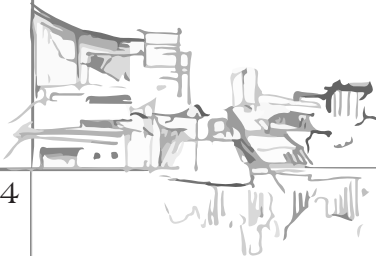
### 2.2.4 Disability

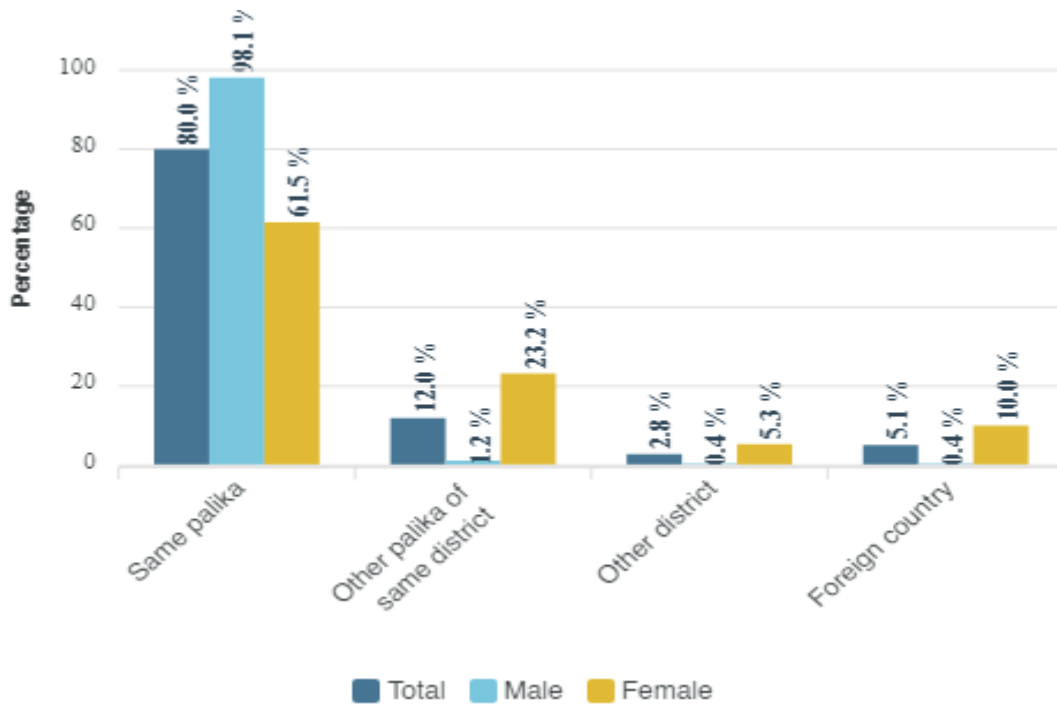
A total of 1.2% population of the Hanumannagar Kankalini is disable out of which 0.9% are female and 1.5% are male.



### 2.2.5 Migration

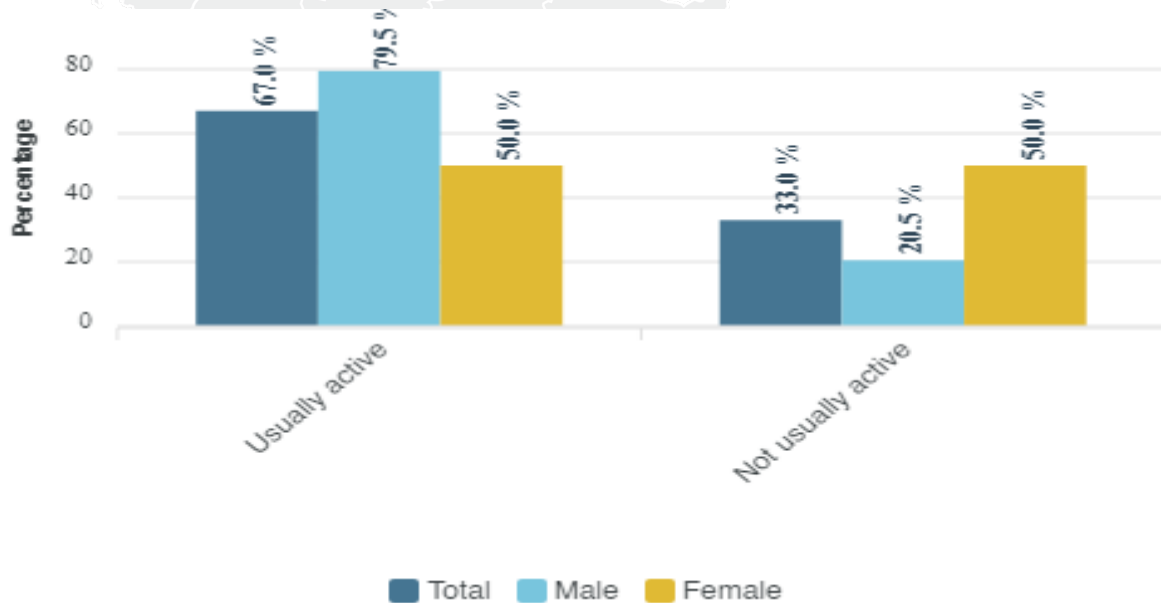
Most of the population is not likely to migrate and are residing in the same palika.





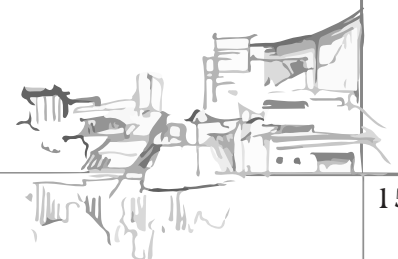
## 2.2.6 Economic activity

A total of 67.0% of the population of Hanumannagar Kankalini is active in economic activity for income generation.



## 2.3 Educational status

The literacy rate of Hanumannagar Kankalini is 65.3% among which the female literacy rate (55.3%) is less in comparison to male (75.1%).



LITERACY RATE

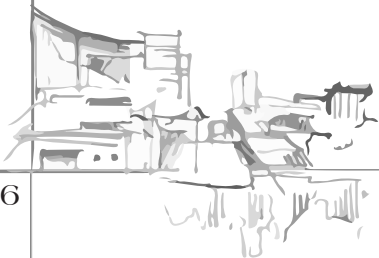
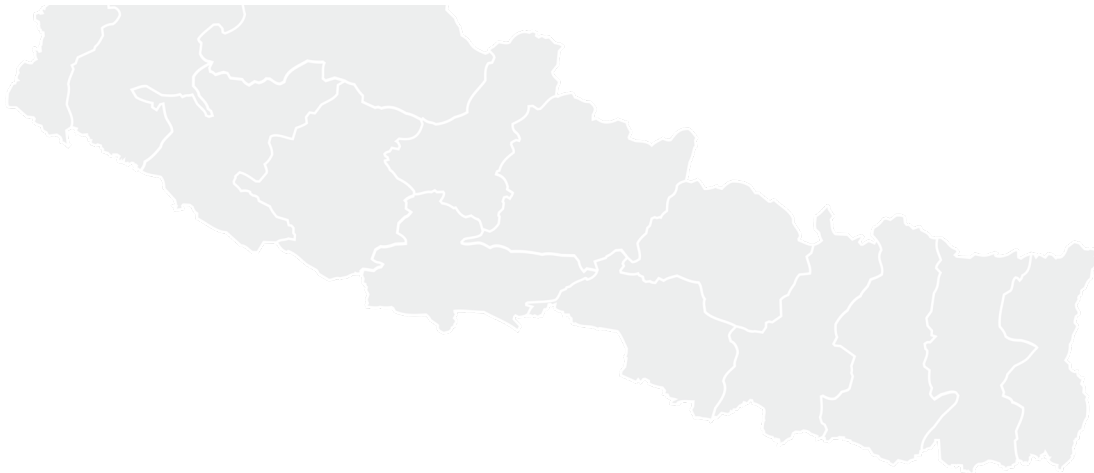
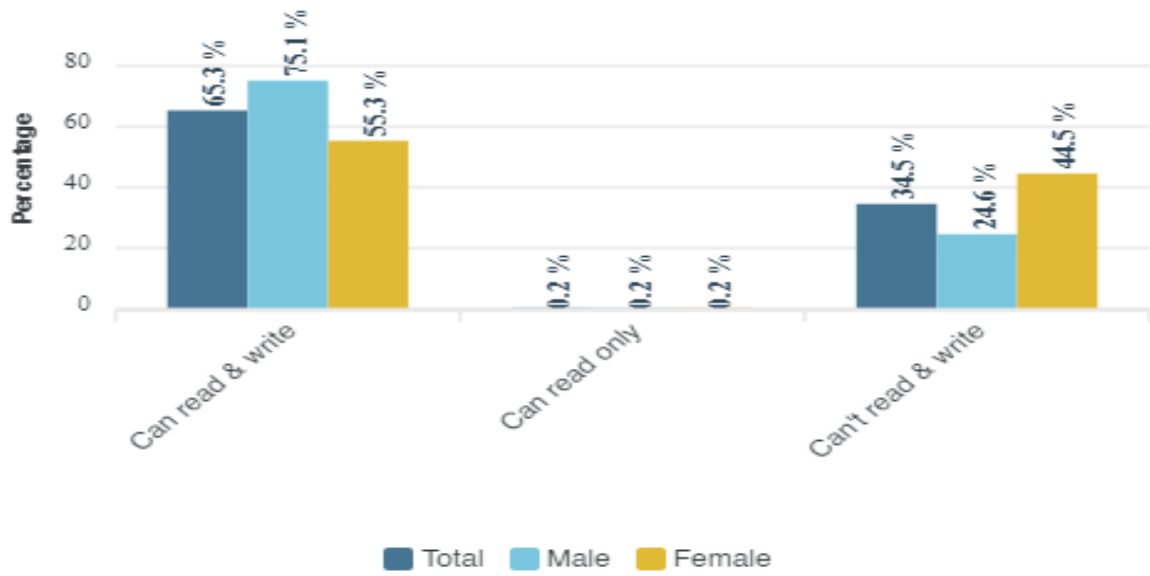
**65.3%**

LITERATE MALE

**75.1%**

LITERATE FEMALE

**55.3%**





03

# SYNERGIZING FOR SUSTAINABILITY



### 3.1 End-to-End Agri-tech Support System

Patanjali envisions a sustainable and prosperous farming ecosystem through innovative agricultural transformations. The organization focuses on reducing costs and increasing output by:

#### Agro-Input Advisories:

- ✦ Lowering input costs with pre-harvest solutions.
- ✦ Promoting advanced technology and resource optimization.
- ✦ Encouraging for better seed quality, organic farming certifications, and “Waste to Wealth” initiatives.
- ✦ Embracing digital agriculture and modernizing practices through farmer training.

#### Output/Market Linkage:

- ✦ Expanding crop acreage and aligning production with demand.
- ✦ Strengthening supply chains and market access.
- ✦ Supporting allied sectors like fisheries, poultry, and medicinal plant cultivation.
- ✦ Diversifying income sources to build a resilient agricultural economy.

#### 3.1.1 Soil Health Assessment and Fertilizer Recommendation

- ✦ Soil health assessment starts with collecting samples in patented “Mrida Sangrah Thalee” pouches, streamlining data transfer from field to lab for quick analysis.
- ✦ Farmers receive timely reports and can choose on-farm testing with the Dharti ka Doctor (DKD) machine or off-farm lab testing. The fully automated DKD machine links soil samples to geocodes, maps macro and micronutrients, and delivers accurate results in just 20 minutes with minimal manpower.
- ✦ The B-POS ERP system ensures real-time tracking and management of chemical fertilizers and agro-inputs, promoting efficient and sustainable farming practices.

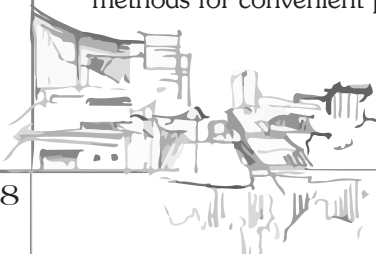


#### 3.1.2 Farming Landscape and Organic Certification

- ✦ In Nepal, Traditional Farming utilizes time-honoured techniques adapted to local ecosystems. Natural Farming aligns with nature by avoiding synthetic inputs, while Organic Farming relies on organic inputs to boost soil health and biodiversity.
- ✦ Organic Certification Nepal (OCN) provides national-level organic certification. However, challenges persist, such as high certification costs, limited awareness among farmers and processors, inadequate infrastructure, and intricate government assistance framework.

#### Tech-Enabled Organic Certification System

To ensure rigorous and efficient organic certification, there is a critical need for a tech-enabled system that integrates automated soil testing and geospatial mapping for certification, alongside advanced methods for convenient pesticide residue analysis.



### **☞ Pesticide Residue Mapping with Pesti Guard**

Pesti Guard is an innovative, cost-effective tool for detecting pesticide residues on produce, developed by Patanjali Organic Research Institute. It offers rapid, sensitive, and real-time detection, particularly excelling in identifying water pesticides. This tool advances safety and assurance in agriculture, addressing pesticide contamination concerns and promoting a healthier ecosystem.



### **☞ Automated Organic Certification**

Automated Organic Certification uses geospatial technology to map organic farming practices and provide precise fertilizer recommendations. This system features a detailed traceability framework, covering everything from land parcel and soil data to inputs, harvests, and market levels. By automating the certification process, it supports and integrates traditional organic farmers into the mainstream, enhancing transparency and efficiency in organic farming.

## **3.1.3 Technology in Agriculture: Harnessing the Potential of Digitalization**

In Nepal, the World Bank's PACT project has created three agricultural apps like Smart Krishi, Krishi Ghar, and IFA Krishi, for field verification, GPS-based monitoring, and providing farming information. However, these apps do not offer an end-to-end solution for pre- and post-harvest management.

### **Harit Kranti App: Streamlined Pre-Harvest Management**

The Harit Kranti Solution simplifies pre-harvest management with an easy-to-use app. Farmers can upload crop images for quick identification and yield estimation. For precision, it uses AI, ML, GIS, NDVI, and VOD to enhance crop identification, yield estimation, and health assessment. This integrated approach ensures efficient crop management and accurate forecasting.

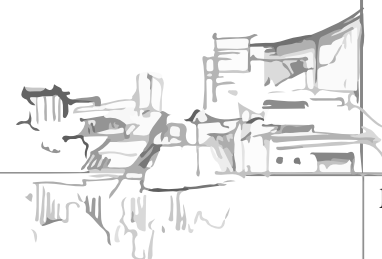


### **Annadata App: Post-Harvest Management Solution**

The Annadata App is an online marketplace for agricultural products, offering auction/bidding and fixed-price trading. It features distance-based seller filtering, nearby warehouse access, real-time mandi rate updates, and comprehensive traceability from farm to mandi. The app connects farmers, traders, FPOs, and mandis directly, boosting market accessibility and profitability.

### **Supply Chain Management and Market Linkage**

Supply Chain Management (SCM) optimizes the flow of goods from suppliers to customers. Warehouse management systems (WMS), like B-WMS, enhance warehouse functionality and distribution



management. Bharuwa Distribution Management System (B-DMS) simplifies distribution processes for all distributors, improving market link efficiency.

### 3.1.4 Allied Agri-Sectors: Scope of Secondary Income for Farmers

Allied agri-sectors like fisheries, poultry, beekeeping, horticulture, floriculture, medicinal plants, and cow rearing offer farmers opportunities for additional income through diverse practices. Success in these sectors depends on overcoming challenges such as technology adoption, market access, and climate constraints.

#### Fisheries Traceability Mechanism

Fisheries Traceability Mechanism is essential for tracking fish from capture or farming to the final consumer, ensuring safety and quality. Bharuwa Solutions Pvt Ltd. has developed a system that provides end-to-end traceability, from pond to plate, enabling quick recalls if public health is at risk and maintaining the integrity of the supply chain.

#### Dairy ERP: Complete Traceability for the Dairy Industry



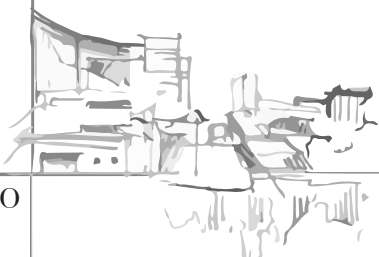
Dairy ERP is a specialized supply chain management and resource planning solution designed for the dairy industry. It ensures full traceability by collecting and storing milk quality and procurement data through autoanalyzers in a synchronized database. Farmers receive fair payments based on their milk supplies, streamlining operations and fostering trust within the industry. Dairy ERP delivers an efficient, transparent, and reliable system for managing the dairy business.

#### Sumadhu App: Honey Traceability Mechanism

Sumadhu App offers a transparent way to trace honey from “hive to spoon,” ensuring quality and authenticity. By tracking each step of production, from suppliers to consumers, it enhances transparency and compliance with industry standards. This mechanism strengthens the supply chain, safeguarding the integrity of honey for all stakeholders.

#### Floriculture & Medicinal Plants Cultivation

The Floriculture & Medicinal Plants Cultivation support system enhances operational efficiency through skill-based training and provides real-time supply chain management for Nepal’s floriculture, horticulture, and related sectors, ensuring streamlined processes from cultivation to market.



## Organic Fertilizers Production: Waste to Wealth

The organic fertilizers production system converts organic waste into compost, boosting crop yields and improving soil quality. This approach also reduces landfill waste, minimizing water and soil contamination and promoting a cleaner environment.

### 3.1.5 Farmer Skilling Programs

Our Farmer Skilling Programs aim to enhance agricultural practices and productivity through targeted training:

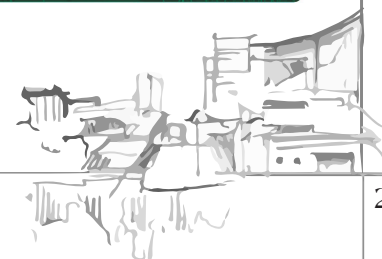
1. **Soil Testing:** Educates farmers on analyzing soil for better crop management.
2. **Natural Farming:** Promotes eco-friendly techniques using organic inputs and conservation.
3. **Organic Farming:** Covers organic methods, certification, and pest management.
4. **Millets Cultivation:** Teaches millet cultivation, processing (handling, threshing, milling), and product development aligned with consumer trends.
5. **Quality Control & Assurance:** Ensures agricultural products meet quality standards.
6. **Digital Farming:** Introduces digital tools and data analytics for modern farming.
7. **Good Farming Practices:** Covers best practices in crop management, irrigation, and pest control.
8. **Allied Sectors:** Focuses on areas like livestock, agro-processing, and agro-tourism to support diverse agricultural enterprises.



These programs empower farmers with essential skills to improve efficiency, sustainability, and market success.

### 3.1.6 Kisan Samridhhi Card

The **Kisan Samridhhi Card** enhances farmers' prosperity and self-respect by functioning as a debit card usable throughout Nepal. It allows convenient transactions and facilitates special discounts and support from companies and organizations. Additionally, the card can be linked with Crop Insurance, Life Insurance, and other government-supported schemes for added financial protection.





## 3.2 Rural Empowerment & Skill Development

### 3.2.1 Skill Based Trainings to Rural People of Nepal

The Skill-Based Training Program for Rural Nepal aims to empower local communities with essential skills, including:

1. **Organic & Natural Farming:** Learn sustainable farming practices to boost productivity and marketability.
2. **Medicinal Plants Cultivation:** Gain knowledge on growing and commercializing medicinal plants.
3. **Rural Entrepreneurship:** Develop skills to turn agricultural knowledge into successful business ventures.
4. **QCQA Training:** Ensure high standards in quality control and assurance for medicinal plants.
5. **Primary and Secondary Processing:** Understand processing methods to add value to products.
6. **Yoga Training:** Promote health and well-being through yoga.
7. **Tourism through Homestays:** Explore tourism opportunities and increase income through homestays.
8. **Climate Smart Agriculture:** Adopt practices to adapt to and mitigate climate change.
9. **E-Commerce Platform:** Learn to use online tools to market and sell agricultural products.

This program aims to enhance agricultural practices, boost local economies, and improve quality of life in rural areas.

### 3.2.2 Stock and Inventory Management System: B-POS ERP

The B-POS ERP is a patented cloud-based solution that efficiently manages stock and inventory for rural markets, offering real-time cloud-based management, integrated templates for e-invoicing, automatic bill generation, access to detailed e-invoice records, quick GSTIN validation, support for multiple data formats, email integration, lifetime

access to e-invoices, secure blockchain technology, customizable business reports, and management of loyalty programs and automated offers. B-POS ERP provides a comprehensive, secure, and efficient system for stock and inventory management, tailored for the rural product market.



### DigiTech System for Marketing of Rural Products

The DigiTech System enhances the marketing of rural products across sectors like handloom, handicrafts, natural food, and FMCG. It integrates quality assurance training from the Patanjali Group



and offers comprehensive modules in sales, marketing, and promotion. It utilizes both offline and e-commerce platforms, including Annadata for agri-products and IRULA for broader rural goods, to improve visibility and sales. This system bridges the gap between rural producers and consumers, boosting visibility and sales through both traditional and digital channels.

### 3.2.3 Strengthening of Women Community Groups in Nepal

#### AAMA SAMUHA (Mother's Groups)

AAMA SAMUHA groups enhance community development by resolving conflicts, providing financial support, promoting environmental care, aiding health workers, supporting domestic violence victims, addressing family planning, boosting women's economic status, and advocating for children's education.

#### Recommendations

1. **Register as SHGs:** Formalize AAMA SAMUHA as Self-Help Groups.
2. **Provide Microfinance:** Facilitate financial access.
3. **Skill Development:** Offer diverse training.
4. **QCQA and Marketing Training:** Improve artisan skills and market access.

These measures will strengthen and empower women's groups across Nepal.

### 3.2.4 Essential Life Skills

The system should incorporate essential life skills (cooking, driving, hospitality), soft skills (communication, leadership), personal development (public speaking, emotional intelligence), industry-specific skills, farm and non-farm skills, and language learning for comprehensive growth.

#### 🚩 Language Skills for Youth of Nepal

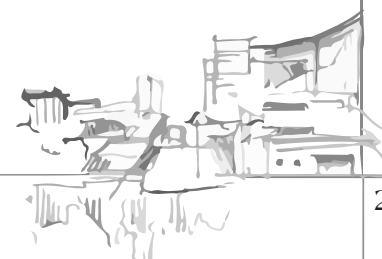
Acquiring proficiency in key languages can significantly enhance career opportunities for Nepalese youth: Spanish in business and hospitality, Mandarin in international business and technology, French in diplomacy and tourism, German in engineering and manufacturing, Arabic in sectors of the Middle East, and Japanese in technology and automotive industries.

### 3.2.5 Centralized Dashboard for Recruitments

A centralized Recruitment Portal is recommended to streamline job information, salary details, and terms transparently. This portal will help prevent the exploitation of unskilled workers abroad. Additionally, government regulations should ensure only skilled youth seek overseas job opportunities.

### 3.2.6 Adigram App: A Smart Digital Solution for Tribal People

The Adigram App is designed to empower tribal communities by providing a platform for their products and contributing to government policy-making through data analytics. This digital ecosystem includes the Adigram Dashboard, Harit-Kranti, Annadata, and IRULA apps, centralizing vital resources and information.



## Key Components:

1. **Centralized Data Bank:** Collects and compiles data to support rural and urban development.
2. **Survey App:** Uses geotagging to gather and verify infrastructure and household data.
3. **Dashboard:** Offers role-based insights into tribal welfare.
4. **Harit-Kranti App:** Supports agricultural operations, from soil health to crop management.
5. **Annadata App:** Facilitates direct market access for farmers through e-commerce.
6. **IRULA App:** Promotes tribal artisan products globally, enhancing livelihoods.

Adigram App is a comprehensive tool that connects tribal communities with resources, markets, and government support.

## 3.3 Industrial Economy: Empowering Businesses

Strengthening Nepal's MSME sector requires focusing on five pillars:

- 🏠 **Ease of Doing Business:** Simplify regulations and reduce bureaucratic hurdles.
- 🏠 **Access to Credit:** Improve financial access with tailored loans and credit schemes.
- 🏠 **Access to Market:** Expand market opportunities through digital platforms and export incentives.
- 🏠 **Employee Security:** Ensure fair labor practices and safe working conditions.
- 🏠 **Technology Upgradation:** Promote technology adoption to boost efficiency and competitiveness.

### 3.3.1 Policy Recommendations for MSME Support

- 🏠 Prioritize Local Assets for Collateral.
- 🏠 Create SME Loan Framework Based on Cash Flow.
- 🏠 Increase Micro-Enterprise Loan Sizes.
- 🏠 Mandate 10% SME Loan Portfolios for Banks.
- 🏠 Publish MSME Portfolios.
- 🏠 Simplify MSME Tax Requirements.
- 🏠 Develop MSME Financing Ecosystem.
- 🏠 Establish Credit Guarantee Scheme.
- 🏠 Promote Micro-Insurance for MSMEs.
- 🏠 Set Up MEDPA Units Locally.
- 🏠 Explore MSME Division in NRB/MOI.
- 🏠 Find Commercialization Pathways for Smallholders.
- 🏠 Strengthen CIB MIS for Better Data Sharing.
- 🏠 Expand FinTech Services for MSMEs.
- 🏠 Use Technology for Financial Literacy.

### 3.3.2 Business incubators

Business incubators support early-stage startups by providing resources like mentoring, office space, and funding to accelerate their growth and increase their chances of success.

#### Early Stage Support

- 📌 Training
- 📌 Access to Seed Finance
- 📌 Prototype Development
- 📌 Strategy Development
- 📌 Hosting (Pilot Runs)
- 📌 Reviews & Feedbacks

#### Commercialization & Scale-Up Support

- 📌 Business Partnering
- 📌 Product Diagnosis
- 📌 Commercial Modelling
- 📌 Financials
- 📌 Impact Assessment
- 📌 Consolidation & Elevators Pitch

#### Ideation & Facilitation

- 📌 Ideation Support
- 📌 Innovation Assessment
- 📌 Business Concept Development
- 📌 Business Modelling
- 📌 Trainings & Seminars



### 3.3.3 Empowering Business with Technology

Bharuwa Solutions offers a comprehensive suite of solutions tailored to enhance operational efficiency and streamline processes across various sectors.

- ☞ **B-POS ERP:** Retail enterprise solutions for growing businesses.
- ☞ **B-Accounting:** Automates accounting processes to simplify business management.
- ☞ **B-WMS:** Comprehensive warehouse management solution.
- ☞ **B-DMS:** Complete distributor management system.
- ☞ **B-FORCE:** Sales force tracking management solution.
- ☞ **B-Ecommerce:** E-commerce and online ordering management.
- ☞ **B-ERP:** Enterprise solution for improving business efficiencies.
- ☞ **Dairy ERP:** Integrated solution for dairy sector management.
- ☞ **HRMS:** Comprehensive human resource management system.
- ☞ **B-HMIS:** Hospital management information system.
- ☞ **B-Bank ERP:** Monitoring and supervision of business portfolios.
- ☞ **Financial Services:** Solutions for consumer financial needs.

### 3.3.4 ERP and Logistics Support for MSMEs

An ERP and Logistics Support System enhances MSMEs by:

- ☞ Real-Time Billing and Accounting
- ☞ Precise Inventory Control
- ☞ Multi-Location Management
- ☞ Automated GST Filing
- ☞ Digital Ledger and Reports
- ☞ Robust Accounting

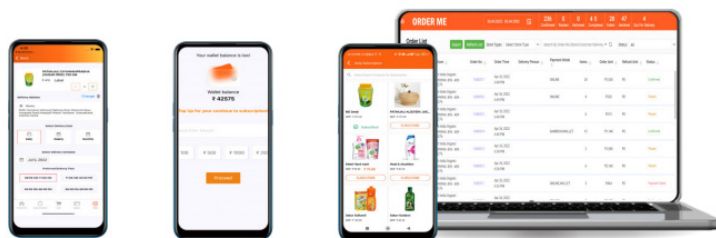


The B-POS and B-ERP system streamlines operations and supports business growth.

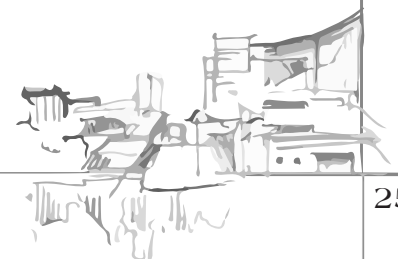
### 3.3.5 E-Commerce Marketplace Platform for MSMEs

In the rapidly evolving digital landscape, MSMEs are increasingly turning to e-commerce platforms to expand their reach and streamline their operations. Our e-commerce platform for MSMEs, powered by B-Order, offers essential features to streamline online sales and enhance customer satisfaction:

- ☞ Multi-Address Delivery
- ☞ Product Subscriptions
- ☞ Hassle-Free Ordering
- ☞ Real-Time Order Tracking
- ☞ Refunds and Adjustments
- ☞ Online Payment with Wallet
- ☞ Preferred Delivery Slots
- ☞ Customer Support



These features equip MSMEs to boost their online presence and improve their customer experience.



## 3.4 Effective Pathways to Uplift Education System in Nepal

Nepal's education system is crucial for the country's development and prosperity. Despite challenges such as limited resources and infrastructure, significant strides have been made to improve educational quality and accessibility.

### 3.4.1 Recommendations for Nepal's Education System

- ☞ **Increase Funding:** Improve infrastructure, teacher training, and materials, focusing on rural areas.
- ☞ **Address Teacher Shortages:** Provide training and incentives for teachers, especially in rural areas.
- ☞ **Promote Gender Equality:** Ensure equal education opportunities for girls and tackle barriers.
- ☞ **Enhance Quality:** Implement national standards, ensure resources, and support teacher development.
- ☞ **Focus on Early Childhood:** Expand early education programs to build a solid foundation.
- ☞ **Boost Private Sector Involvement:** Encourage partnerships for additional resources and support.

### 3.4.2 Skill-Based Education System

Patanjali's Skill-Based Education System aims to align education with modern job market needs through:

- ☞ **Identification of Essential Skills:** Prioritizing key skills such as technical, interpersonal, and problem-solving abilities.
- ☞ **Integrated Curriculum:** Combining theoretical knowledge with practical application.
- ☞ **Vocational Training and Apprenticeships:** Offering hands-on experience through industry collaborations.
- ☞ **Technology Integration:** Equipping students with digital literacy and modern technology skills.
- ☞ **Soft Skills Development:** Enhancing communication, teamwork, adaptability, and critical thinking.
- ☞ **Entrepreneurship Education:** Fostering innovation and an entrepreneurial mindset.
- ☞ **Assessment Methods:** Using diverse assessments, including practical tasks and projects, alongside traditional exams.

This approach ensures students are well-prepared for the demands of today's job market.

### 3.4.3 Holistic Education System

The **holistic education system** provides a comprehensive and inclusive approach to learning, focusing on:

- ☞ **Inclusivity:** Ensuring all students have equal access and support, regardless of background or needs.
- ☞ **Comprehensive Curriculum:** Balancing core subjects with life skills, creativity, and physical fitness.
- ☞ **Student-Centered Learning:** Tailoring education to individual needs and encouraging hands-on, inquiry-based learning.
- ☞ **Holistic Development:** Promoting emotional intelligence, character, and overall well-being.
- ☞ **Teacher Development:** Offering ongoing training and support for educators.



**卐 Community Engagement:** Involving families and integrating local knowledge into the curriculum. This system aims to provide a well-rounded, supportive learning experience for every student.

### 3.4.4 Value-Based Education System

The Value-Based Education System blends Vedic principles with modern education. Institutions like Acharyakulam, with campuses in Haridwar, Chirang, Kumarikatta, and Seijosa, and Vedic Kanya Gurukulam, in Haridwar and Devprayag, exemplify this approach. They integrate ancient wisdom with contemporary learning methods to promote holistic development and moral integrity, preparing students for both academic and personal success.

## 3.5 Innovative Solutions for Healthcare Sector

### 3.5.1 Decentralized Planning for Primary Healthcare Systems

Decentralized planning is crucial for enhancing primary healthcare systems, ensuring they are more responsive, efficient, and aligned with community needs. This approach focuses on several key areas to drive improvement and sustainability:

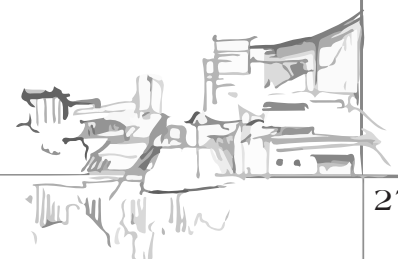
1. **Addressing Magico-religious Beliefs:** Promoting evidence-based medical practices over traditional beliefs.
2. **Re-strengthening Health Care Units:** Upgrading community health units with better equipment, logistics, and human resources.
3. **Implementing Clear Policies:** Ensuring immediate, clear policies for responsibility and accountability at all governance levels.
4. **Enhancing Social Health Security:** Improving UHC through research, cost analysis, and prioritizing multi-sectoral and public-private partnerships.
5. **Investing in Service Quality:** Using community health worker assessments to invest in and improve existing services.

This approach ensures a responsive, efficient, and equitable primary healthcare system.

### 3.5.2 Integrated Care & Services

Integrating traditional practices with modern medicine enhances comprehensive healthcare. Key initiatives include:

- 卐 **Skill Training:** Programs for nurses and midwives in Yoga and Naturopathy.
- 卐 **Education and Awareness:** A new curriculum for evidence-based care and investment in public health professionals to address evolving needs.
- 卐 **Integrated Care:** Promoting holistic practices and their synergy with conventional medicine.
- 卐 **Public-Private Partnerships:** Developing Centers of Excellence for research and specialty care, and leveraging the private sector to improve health coverage and service quality.



These efforts aim to create a seamless healthcare system combining traditional and modern practices.

### 3.5.3 Quality Control of Herbal Raw Materials

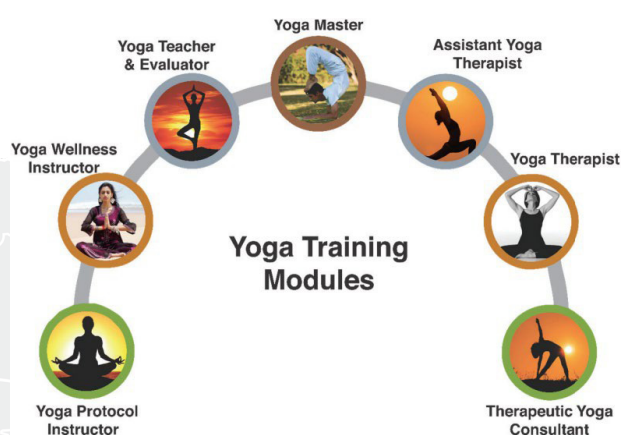
- ☞ **Quality Management System:** Ensures safety and quality through systematic processes and regular audits.
- ☞ **Claims Validation:** Herbal product claims must be scientifically supported and regulatory compliant.
- ☞ **Routine Tests:** For general claims, tests include active ingredient identification, purity, and microbial contamination.
- ☞ **Advanced Testing:** High/medium claims require rigorous testing with methods like HPLC, stability studies, and clinical evaluations.
- ☞ **WHO GMP Guidelines (2007):** Provide standards for quality throughout herbal medicine production.
- ☞ **Testing Methods:** Involves verifying identity, potency, purity, and safety to meet quality standards.

### 3.5.4 Skill Training and Capacity Building

#### Yoga Teacher's Training Program

Patanjali, a pioneer in Yoga promotion, leverages a vast network of volunteers around the world. It offers:

- ☞ **Yoga Training:** For Self-Help Group (SHG) members to enhance their overall wellness.
- ☞ **Yoga Teacher Training:** Certified by the Yoga Certification Board, enabling SHG members to become yoga instructors, either as volunteers or entrepreneurs.



These programs aim to improve personal well-being and create a network of skilled yoga professionals.

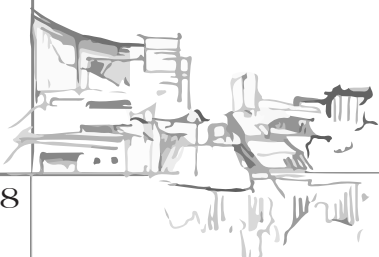
#### Traditional Healer's Training

Patanjali Yogpeeth (Trust) empowers women and SHGs with yoga training for primary health care needs. Delivered by top experts from universities and institutions, our onsite and online programs ensure holistic well-being. We train village-level healers who provide essential health care to families and communities. Additionally, we support nutrition gardens at homes and plan mid-day meals for students, incorporating nutraceutical values for better health.

#### Vaidya Training Programs

The Vaidya Training Programs offer specialized education in Ayurveda for different levels of practitioners:

- ☞ **BAMS Students Training:** Foundational training for future Ayurvedic practitioners.
- ☞ **MD (Ayurveda) Students Training:** Advanced training focusing on clinical practice and research.
- ☞ **Therapeutic Training:** Specialized training for 10,000 participants in Ayurvedic therapies.



These programs aim to advance skills and knowledge in Ayurveda, preparing participants for excellence in their field.

## 3.6 Sustainable Solutions for Biodiversity Conservation

### 3.6.1 Policy Level Suggestions

Nepal has enacted several key policies and acts aimed at biodiversity conservation, such as the National Biodiversity Strategy, Forest Policy 2019, and the Environmental Protection Act. However, inconsistent enforcement has hindered their effectiveness. There is an urgent need for stronger enforcement and adherence to these policies to protect Nepal's biodiversity, combat climate change, and preserve endangered species.

### 3.6.2 Skill-based training programs

Skill-based training programs are crucial for effective biodiversity conservation. Unlike brief sessions, these programs require continuous effort, recognizing the seasonal variations in biodiversity. They equip individuals with the skills needed for thorough assessments, sustainable resource management, and wildlife protection, focusing on proper harvesting techniques and preventing deforestation and hunting.



### 3.6.3 Data and Documentation of Flora and Fauna of Nepal

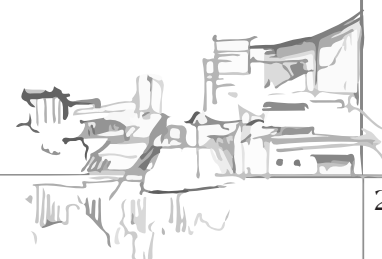
Documenting biodiversity is crucial for conservation, yet species diversity in Nepal remains under-researched. Comprehensive efforts are needed to capture data at the species level, including digitization, herbarium preparations, and specimen collection. Alongside this, documenting habitat, habits, and key characteristics is essential. Accurate taxonomic identification is also critical to effectively conserve Nepal's rich biodiversity.

### 3.6.4 Commercial Cultivation on Barren Lands

Mountain regions above 3,000 meters, where 83.59% of barren land is found, face limited agricultural potential due to rugged terrain and harsh climate. To address this, organizations like the FAO recommend redistributing barren land to the poor for cultivating climate-suitable trees and plants. Equipping these farmers with the necessary skills can transform barren lands into productive areas, enhancing livelihoods and promoting sustainable land use.

### 3.6.5 Improving Export Potential of Medicinal Plants

Nepal's exports, including soybean oil, palm oil, and spices like nutmeg, mace, and cardamoms, are vital to its economy, with key markets in India, the U.S., Germany, the U.K., and Turkey. To boost the export potential of medicinal plants, Nepal should utilize barren lands for cultivation. Growing medicinal

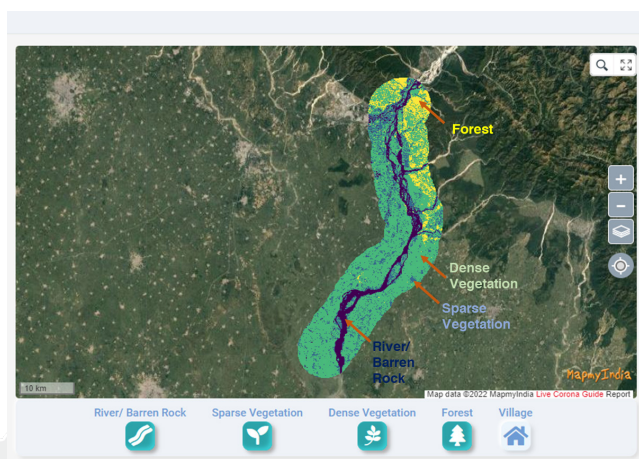




plants like teak, poplar, and nutmeg on these lands can meet global demand and enhance export volumes. Investing in climate-smart agriculture, as recommended by the FAO, could increase crop yields by 20% to 50%, benefiting farmers with higher incomes and contributing to rural employment. This strategy not only strengthens exports but also supports food security and economic resilience.

### 3.6.6 Conservation of Forests with Community Engagements

Effective forest conservation requires strong governance and active community involvement. In Nepal, community forestry and protected areas have significantly contributed to forest preservation by engaging local communities in management efforts. Private forestry is also encouraged to complement these public initiatives. To reduce pressure on forests, alternative energy sources should be provided on a subsidized basis, as fuelwood remains a major energy source. Additionally, raising public awareness about the importance of forests and the impacts of deforestation is crucial for fostering support and sustainable practices.



### 3.6.7 Geo Mapping of Nepal's Floral Diversity

To protect Nepal's floral diversity, especially medicinal plants threatened by overharvesting, comprehensive geo-mapping of the entire floral ecosystem is essential. Key medicinal plant hotspots should be identified and placed under special conservation acts to ensure their protection and sustainability.

### 3.6.8 Ethnomedicinal Preservation and Documentation

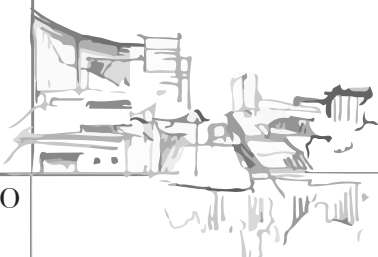
Preserving and documenting ethnomedicinal knowledge involves:

- ☞ **Document Traditional Knowledge:** Record remedies and practices from rural and tribal communities.
- ☞ **Map Medicinal Plants:** Geo-reference and tag the locations of medicinal flora.
- ☞ **Profile Healers:** Assess the demographics and socioeconomic status of traditional healers.
- ☞ **Analyze Plant Chemistry:** Profile medicinal plants based on environmental variations.
- ☞ **Prepare Herbal Monographs:** Create detailed profiles of medicinal and aromatic plants.
- ☞ **Manage Supply Chain:** Oversee stock, inventory, logistics, and availability.
- ☞ **Assess Demand and Supply:** Monitor and adjust to meet market needs in real-time.

These efforts ensure the preservation of traditional knowledge and the sustainable use of medicinal plants.

### 3.6.9 Training of Tribal Healers

Traditional healers are crucial for providing healthcare to socio-economically disadvantaged communities,



particularly in rural Nepal where they are 100 to 200 times more accessible than the limited number of medical doctors. To support their vital role, traditional healers should be recognized as key practitioners and provided with training, equipment, and resources like seeds and saplings to establish home herbal gardens. This will enhance their ability to deliver effective care and better serve their communities.



### 3.6.10 Quality Control and Mapping of Herbal Medicines

Quality control and mapping of herbal medicines involve identifying, preparing, and testing samples, ensuring consistency and standards, documenting sources and traditional knowledge, and maintaining regulatory compliance while gathering feedback for continuous improvement.

## 3.7 Tourism Sector in Nepal: Effective Resolutions

### 3.7.1 Patanjali's Recommendations for Nepal's Tourism

**Spiritual Tourism:** Nepal's spiritual sites, including Buddha's birthplace and key Hindu shrines, offer enriching experiences and positive vibes.

**Healthy Tourism:** Nepal's wellness centers for meditation, yoga, and Ayurveda make it a growing destination for health tourism.

### 3.7.2 Sustainable Tourism in Nepal

Nepal promotes sustainable tourism through:

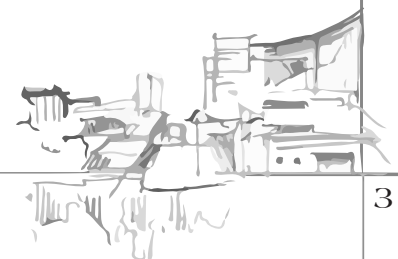
- 卐 **Environmental Conservation:** Eco-friendly practices to protect natural beauty.
- 卐 **Community Involvement:** Local communities benefit economically and culturally.
- 卐 **Skill Development:** Training in hospitality and foreign languages for improved tourist experiences.
- 卐 **Safety and Infrastructure:** Safety measures and information centers for traveler support.
- 卐 **Government Support:** Policies and incentives for eco-friendly practices.

This approach ensures a balanced and responsible tourism industry.

### 3.7.3 Agro-Eco Wellness Tourism in Nepal

Agro-eco wellness tourism in Nepal combines agriculture, ecology, and wellness. Key elements include:

- 卐 **Farm Experiences:** Farm tours, homestays, and organic farming.
- 卐 **Ecological Tours:** Biodiversity tours and eco-friendly lodging.
- 卐 **Wellness Retreats:** Yoga, meditation, and nature therapies.
- 卐 **Cultural Programs:** Cultural exchanges and sustainable living workshops.
- 卐 **Infrastructure:** Local training and eco-friendly facilities.
- 卐 **Marketing:** Targeted campaigns and strong online presence.



This approach aims to offer unique, sustainable experiences while preserving Nepal's natural and cultural heritage.

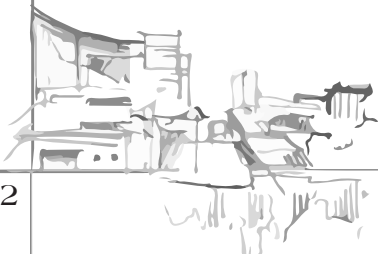
### 3.7.4 Branding Nepal Tourism

Nepal's tourism industry struggles due to limited government involvement and a reliance on private entrepreneurs. Effective branding requires collaboration between public and private sectors.

#### Key Objectives:

1. **Establish Nepal as a Top Holiday Destination:** Position Nepal as the preferred choice for travelers.
2. **Showcase Nepal's Friendliness:** Highlight the country's warm and welcoming nature.
3. **Reinforce Unique Positioning:** Promote the slogan 'Naturally Nepal - Once is Not Enough' to emphasize the country's unique appeal.
4. **Stimulate Curiosity:** Encourage potential visitors to seek more information about Nepal.

Achieving these goals will help Nepal overcome current challenges and enhance its global tourism presence.



## References

- 🇳🇵 World Food Program. (2021). Nepal - 1 Country Profile | Digital Logistics Capacity Assessments. Logcluster.org. <https://lca.logcluster.org/nepal-1-country-profile>
- 🇳🇵 UN SDG. (2020). Voluntary National Review 2020. Un.org. <https://sustainabledevelopment.un.org/memberstates/nepal#:~:text=Nepal%20has%20halved%20extreme%20poverty,to%205%20percent%20by%202030>
- 🇳🇵 National Planning Commission of Nepal. (2020). National Review of Sustainable Goals. In [sustainabledevelopment.un.org. https://sustainabledevelopment.un.org/content/documents/26541VNR\\_2020\\_Nepal\\_Report.pdf](https://sustainabledevelopment.un.org/content/documents/26541VNR_2020_Nepal_Report.pdf)
- 🇳🇵 Nepal - 1 Country Profile: (2024). Retrieved from <https://lca.logcluster.org/nepal-1-country-profile>
- 🇳🇵 National Population and Housing Census 2021: (2023). Retrieved from <https://censusnepal.cbs.gov.np/results>
- 🇳🇵 Hanumannagar Kankalin Municipality: (2024). Retrieved from [https://en.wikipedia.org/wiki/Hanumannagar\\_Kankalini\\_Municipality#:~:text=Hanumannagar%20Kankalini%20is%20a%20municipality,village%20development%20committees%20\(VDCs\)](https://en.wikipedia.org/wiki/Hanumannagar_Kankalini_Municipality#:~:text=Hanumannagar%20Kankalini%20is%20a%20municipality,village%20development%20committees%20(VDCs)).

