Rajiv Gandhi
Institute for Contemporary Studies

An Analysis of the Current Status of the Environment, Society and Economy of Himachal Pradesh and A NEW Strategy for Inclusive and Sustainable Development of Himachal Pradesh

हिमाचल प्रदेश

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हिमाचल प्रदेश की पर्यावरण, सामाजिक एवं आर्थिक स्थिति का आकलन, एवं प्रदेश में हरा भरा सुराज स्थापित करने की समावेशक योजना

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Western Himalayas Environment, Economy and Livelihoods Study Advisory Panel

Contents

1 Introduction

Himachal Pradesh is a state in the Western Indian Himalayas that has a unique ecology, economy and culture. It is located on the northern border with China on its northeastern side across the Himalayas, Ladakh and Jammu and Kashmir on its northwestern side and Punjab on the southwestern side. The state has very little foothills land and there is some flat land in a few valleys, but the major part is mountainous, with altitudes rising from 1000 metres to 4000 m. The foothill Shiwaliks are less than 1000m and unconsolidated so prone to erosion, The middle Himalayas include the Dhauladhar and Pir Panjal ranges with mean elevation of 4500m. The high peaks in the state are mostly situated in Kullu, Kinnaur, and Lahaul and Spiti districts. At 6816 m Reo Purgyil is the highest mountain peak in the state.

Figure 1 Map of the state with district boundaries

Formed on 25th January 1971, this small hill state of northern India has some unique geographical as well as developmental challenges. Until the 1990s, Himachal Pradesh was recognized for its locally appropriate development model which had roots in horticulture, agriculture, livestock and tourism, which was built around its local resources, providing wages and earning to masses. The state had created infrastructure around this model of the economy. Universities and their extension centres in horticulture and agriculture helped farmers to convert their small farms into profitable enterprises. The apple sector came up as a major boost to the economy in the 1960s.Then the tourism sector took off in the 1990s. A few industries also came up in the foothill districts of the state.

However, in the last three decades the development approach of the state has moved from horticulture and tourism enterprises to hydropower projects, highways and large infrastructure. This shift in developmental approach further re-aligned state and private investment in favour of large projects leaving employment of masses unattended. There has also been degradation of the environment.

Data suggests that the state has not recorded any significant growth in agriculture and horticulture, while employment in industry has also not grown. The younger job-seekers, no longer willing to work in agriculture or horticulture in rural areas, moved to urban areas and migrated to other states in search of jobs.

1.1 Why this Study – the triple crisis facing the state

Himachal faces significant challenges in environmental conservation, human development and employment generation, compounded by its geographical and infrastructural limitations. Here are the key challenges:

1.1.1 Status of the Environment and Challenges

HP is rich in natural resources, including extensive glaciers, river basins, rivers, springs, surface water bodies and groundwater aquifers, forests and biodiversity, and agricultural land, which are vital for the livelihoods of its residents. However, the degradation of these resources has significant economic consequences, leading to a decline in primary sector livelihoods over the past two decades. The state faces challenges such as ecological degradation and social deprivation.

The Himalayan region is particularly vulnerable to global warming, with rising temperatures affecting snowlines, glaciers, and precipitation patterns. The glacial area in HP has decreased significantly, impacting water resources and leading to the drying of water sources. The state has five major river networks, with the Satluj River having the largest catchment area. Despite the availability of water from various sources, studies indicate that water shortages and extreme weather conditions are increasing due to rising demand and environmental changes. Groundwater is crucial for meeting water demands, but its levels are declining in many monitored areas.

The forests of Himachal Pradesh play a critical role in disaster prevention and climate resilience, yet the quality of forest cover is deteriorating. The total forest cover has increased, but dense forests have decreased, indicating a decline in forest quality. The state has a diverse range of forest types, which are essential for local subsistence and revenue.

Only about 10% of the land is under agricultural use. However, land degradation is a pressing issue, with a significant portion of the state under desertification. Urbanization and the diversion of agricultural land for non-agricultural uses have also increased. Soil erosion and nutrient loss due to excessive fertilizer use are major challenges for agriculture.

Climate change is exacerbating these issues, with rising temperatures and changing rainfall patterns affecting the ecosystem. The state faces environmental issues such as deforestation and soil erosion, which not only impact agricultural productivity but also, consequently, employment in this sector.

Global warming is causing glacial melting, which is changing temperatures in the apple growing belt and may lead to significant disruption in this sector, important to the state's economy.

The adverse impact of climate change on the environment, and local damage, such as landslides, acts as a deterrent to tourism, which is a major source of employment and income. Environmental degradation is leading to rising health problems as well.

1.1.2 Status of social development and challenges

In discussing the status of social development in Himachal Pradesh, we focus on both individuals and institutions as the building blocks of society. According to the 2011 Census, HP had a population of 68.6 lakh, projected to rise to 78.4 lakh by 2024. The state is predominantly rural, with only 10.03% of residents living in cities. The demographics reveal a significant representation of Scheduled Castes (25.2%) and Scheduled Tribes (5.7%).

HP has a higher life expectancy of 71 years compared to the national average. Health indicators show that Himachal Pradesh ranks second in human development in India, with low maternal and infant mortality rates. However, challenges remain, such as high rates of anaemia among women and stunting and wasting among children. The healthcare system includes numerous health centres, but there is a shortage of doctors and specialists.

The state has a high gross enrolment ratio, particularly for girls, and a low drop-out rate. However, outcomes data from the Annual Survey of Education (ASER) report for HP for 2022, only 61.3% of standard V students could read simple English and only 42.6% could do division of numbers. The percentage improved to 88.0% and 52.3% by standard VII, still showing a significant learning deficit, particularly among government school students, who accounted for two-thirds of the enrolment. Another point to be noted was the damage done by the COVID-19 pandemic and consequent school closure. Not only were the reading and arithmetic attainment levels in 2002 lower than 2018, but also these were also even lower than 2014 levels, showing the extent of setback.

People in mountain villages face challenges of quality education and healthcare and inadequate access to services such as housing, water supply, electricity and road connectivity. In absence of basic facilities in villages, many of them are forced to migrate. This causes break up of families, with older people, women and children being left behind.

HP had 45,973 SHGs making about 0.50% of all India, which was slightly less than the population percentage. There were many cooperatives, indicating a strong tendency to organize among its population. The local governance structure includes Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs), which are responsible for executing development schemes and managing public services. The state has received significant financial support for local governance, but challenges in resource allocation and implementation persist.

Based on the Governance Performance Index (GPI), for 2001 and 2011, by Mundle, et al, Himachal Pradesh stood at the 9th and the 11th ranks respectively among 19 states which were ranked. Adjusting for GSDP per capita, the development adjusted governance index (DAGI) for HP put it at the 14th rank in 2011, lower than the 11th rank in that year for raw GPI. This indicates the overall performance of governance institutions in the state was below par. Unfortunately, we could not find any more recent ratings for GPI or DAGI for HP.

The historical context of Himachal Pradesh's institutional development is marked by, noting the state's transition from being a part of Punjab to becoming a Union Territory, to a state. The next state was marked by land reforms, enhancing public access to health and education, and the promotion of horticulture in driving economic growth. However, recent changes in land use and infrastructure development have led to environmental degradation and social unrest.

While there is a need for continued efforts to address health, education, and governance challenges while fostering inclusive growth and social cohesion. There are disturbing trends of drug abuse among youth and breach of communal harmony. According to a report in The Tribune on 14th Oct 2024: "The youth of Himachal Pradesh are facing a grave threat from the increasing drug menace, once confined to urban centres, the drug problem has now permeated even rural areas." Recently, communal tensions are causing social disturbances hitherto never seen in the tranquil state. As per *Frontline*[1]: "On September 11, members of Hindu organisations took out a march from Malyana to Sanjauli and submitted a list of demands, which included the abolition of the State Waqf (Muslim Charitable Trusts) Board, and the demolition of the "illegal" mosques."

1.1.3 Status of economic development and challenges

The economy of Himachal Pradesh is relatively small compared to most Indian states, both because of its small population as well as large area under mountains and snow cover. The Gross State Domestic Product (GSDP) for FY 2023-24 was estimated at ₹2,07,430 crore, with a growth rate of 8.2% over FY 2022-23. Agriculture, horticulture, manufacturing and tourism are its main sectors. The primary sector's contribution to GDP has decreased over the years, while the tertiary sector has seen an increase. The manufacturing sector has grown significantly, contributing nearly 32% to the GSDP by 2022-23.

HP had a projected population of 77.40 lakh, with a per capita income of ₹2,18,788 for FY 2022-23, which was higher than the national average. Rural poverty declined from 36.8% in 1993-94 to 8.5% in 2011 in terms of headcount as per monthly per capita consumption expenditure. The household consumption expenditure survey shows that rural areas have a per capita monthly consumption of ₹5,573, while urban areas have ₹8,083. A significant portion of this expenditure is on food items, suggesting a potential for food self-sufficiency strategies to enhance local employment and income. The state has also seen a decline in the multidimensional poverty index, indicating improvements in living standards.

In terms of employment, HP had an estimated labour force of 46.8 lakh persons in 2024. The labour force participation rate (LFPR) was 60.5%, which is higher than many neighbouring states. However, there are challenges in matching employment with skills and sectors. The employment status is predominantly self-employed, especially among females, who face significant income disparities compared to males.

Agriculture remains the dominant employment sector, accounting for 58.71% of the workforce, significantly higher than the national average. The construction sector also plays a vital role in employment generation.

[1] https://frontline.thehindu.com/social-issues/himachal-pradesh-muslims-mosque-demolition-shimla-protests-communalism/article68735759.ece

Despite the growth in secondary and tertiary sectors, they engage only 43% of the workforce, indicating a mismatch between employment and economic contribution.

The average earnings in HP vary widely, with self-employed individuals earning significantly less than those in regular wage/salaried jobs. The gender wage gap is pronounced, with women earning much less than men in both rural and urban settings. The informal sector dominates employment, with a large portion of the workforce engaged in low-paying jobs.

Unemployment rates in Himachal Pradesh are relatively low at 4.5%, but this figure does not account for those not actively seeking work. Youth unemployment is particularly high, especially among educated individuals. The employment landscape is uneven across districts, with certain areas having higher concentration of government jobs while others lag.

The governance and fiscal health of the state have been assessed through various indices, indicating areas for improvement. The banking and financial services sector is developing, but there is a significant gap in credit availability, which hampers economic growth. The state has a low credit-deposit ratio, indicating that a large portion of deposits is not being utilized for local credit needs.

In summary, while Himachal Pradesh has made strides in economic growth and poverty reduction, challenges remain in employment generation, income disparities, and access to credit. Strategies focusing on enhancing the agricultural sector, improving youth and women's employment opportunities, and addressing regional disparities are essential for sustainable development.

1.2 What is required for inclusive and sustainable growth of Himachal

The present economic development model of Himachal is not able to generate enough jobs for the increase in the working age population, despite a moderately high GDP growth rate. This is referred to as "jobless growth". A bigger problem than unemployment is inadequate wages and incomes of most of those who are employed. Further, environmental degradation is leading to erosion of existing jobs in apple horticulture and tourism services, both of which are large employers.

After a good early start in the 1960s, when Himachal achieved both increase in per capita incomes as well as in human development indices through better health and education, the state has started to stagnate in both aspects.

The present strategies for development have many shortcomings. To begin with, nature's abundance has been over-exploited to the point that natural resources – jal, jangal, jameen – water, forest and land – are no longer able to support the demands of the people dependent on them. Coupled with the effects of climate change, which is not necessarily caused by the local people, the situation is becoming alarming. Not only are the peoples' livelihoods threatened, in agriculture and animal husbandry, due to erratic rainfall and temperature patterns, but even tourism-based services livelihoods are also facing a question mark due to both manmade factors like congestion and pollution but also due to natural causes like landslides and extreme weather events.

Thus, our proposed strategy puts Nature regeneration as the topmost priority. This means ensuring conservation of the sources of water – glaciers, upper reaches of river basins, intermediate spring sheds, mid altitude watersheds, and groundwater aquifers near the foothills and in valleys. It also means efforts to increase the area under tree cover and regenerate the dense forests.

At the same time, pastures and grazing lands will have to be restored to support animal husbandry. Soil will require restoration of humus content, organic carbon and nutrient balance, which has been disturbed by the increasing use of chemical fertilisers and intensive farming.

The second shortcoming of the present development strategy is that the government is seen by the people as the main driver of development, and the stance of the people themselves has become that of beneficiaries of state largesse. This situation will get worse unless the sense of agency is restored to the people – they change their stance from being beneficiaries to active citizens, aiming to improve their lives first with their own efforts, and then through collaboration with the other people. The role of the state should be a residual third, after self and community.

Thus, our proposed strategy lays a lot of emphasis on social development – both as it affects individuals – through nutrition, health, education and vocational training; and as it enables collaboration among individuals through building trust and cohesion, and formation of a large number of local community groups and voluntary associations.

Only when citizens learn to work in these together can the representative institutions all the way from panchayats in rural areas to municipalities, *zilla parishads* (district councils) and the state assemblies, can offer good governance or *suraaj*.

The third shortcoming of the present development strategy is the mismatch between the demand for employment in government and organised private sector jobs versus the number of jobs available. At the same time, employment in traditional occupations like agriculture, animal husbandry and handicrafts are diminishing or unremunerative.

Jobs in construction, trade, transport, and general services are there but casual and low-paying. Inclusive growth means higher per capita income, which can only be achieved if employment is created in small enterprises engaged in agro-processing, manufacturing of locally consumed products, housing construction and localised water supply and sanitation, solid waste management, decentralised generation and distribution of renewable energy and in new generation services such as digital commerce, adventure and eco-tourism, digital financial and business services, communications and entertainment.

Thus, the third plank of the proposed strategy focuses on Well-th creation, by meeting local demand, by entrepreneurs who set up and run such enterprises and availability of credit and inputs and infrastructure.

Taken together, **N**ature regeneration, **E**nabling social development, and **W**ell-th creation, or the NEW strategy will lead to Hara Bhara Suraaj – inclusive and sustainable development.

1.3 Scope and Methodology

As the title implies, the study is designed to be a comprehensive description and analysis of the state of the environment – both natural and social, the economy and the employment and livelihood situation of Himachal Pradesh. These are covered in Annexure 1, 2 and 3 respectively. Both qualitative and quantitative data were collected for analysis and interpretation using secondary sources through desk research and primary sources using field visits by members of the study team.

In the three annexures of this report, we try to decipher various factors responsible for the current state. The study focuses on delineating an alternative strategy for inclusive, sustainable growth of Himachal. The investment requirements for implementing that strategy are estimated and the likely benefits are also computed. The possible sources for investment are identified. The report ends with a call to action by various stakeholders.

Field visits include interviews of experts, villagers, policy makers, social workers, environmental activists and entrepreneurs along with field observation. Information collected through field visits was further used to corroborate and decipher qualitative data.

Based on this analysis of the causative factors behind the state of affairs, a set of recommendations have been developed for the consideration and action by various stakeholders – the citizens, civil society leaders, social and environmental thinkers and activists, political representatives at all levels, government officials, technical experts, entrepreneurs, and the media.

Chapter 2 (NEW Strategy for Sustainable Development) and Chapter 3 (Investment and Benefits and Level of Investment Required and Where to Mobilise it from) of this study report involve a lot of qualitative analysis and calculation. Analytical tables in this chapter give estimates required intervention to regenerate the natural environment, enhance social development and well-th creation for economic development in Himachal Pradesh.

We explain the intervention in the first column of each row, followed by the extent to which it is required in the corresponding units, the investment needed for regeneration/ rebuilding efforts for each unit of intervention, and thus the total investment needed in INR crores[2] in 2024 prices.

Tables in Chapter-3 give a summary of investment required under three major heads namely Nature regeneration, Enabling social, human and institutional development and Well-th creation, that word being spelled as such deliberately to underline the well-being rather than the material aspect of wealth. Moreover this table also estimates economic benefits from all types of investment in terms of jobs and employment. These calculations are based on average wage components under different categories and Incremental Capital Output Ratio (ICOR).

[2] As this paper is written for participation in wider Indian public discourse, for numbers we have used lakhs (100 thousand) and crores (10 million). One million is 10 lakhs and one billion is 100 crores. Miraculously, East meets West at a trillion, which is the same as one lakh crore.

Based on sectors for investment and type of intervention, we have estimated the share of investment across different stakeholders including individual citizens, government, philanthropy, CSR and banking and financial institutions. Table in Chapter-3 summarizes the source of investment based on these careful assumptions supported by fieldwork insights and experiences of domain experts.

Chapter 4 is a call to action to five levels of stakeholders:

- Individuals by themselves; as citizens, as activists, as thinkers and influencers
- Individuals by joining local community Social Groups; and by individuals joining organised NGOs/Civil Society Institutions
- Gram Panchayats/Zilla Parishads/Town Wards / Municipalities
- State and Central Government departments and specialised agencies
- International Cooperation at the Regional and Global level

This is followed by three Appendix chapters on the status and challenges of the environment, social development and economic development.

2 NEW strategy for sustainable development

It is evident that the economic growth of Himachal Pradesh in the last two to three decades has not led to improving social, economic and ecological wellbeing. Moreover, the increasing unemployment/under-employment in the state, rapidly depleting natural wealth and increasing social unrest, leads one to question its sustainability. Based on this observation, we propose a radically new strategy for addressing these. The normal strategies put macroeconomic GDP growth first, then worry about human development and well-being, and finally pay some residual attention to environmental aspects. We assert that the triad of employment crises requires us to adopt a radically different developmental strategy, which reverses the normal economic priorities. We need to put nature first, then human beings and then GDP growth.

We call this growth strategy Nature-regenerating, Enabling human, social and institutional development and Well-the (well-being not just income) enhancing. which makes the acronym NEW. As against the "business as usual" (BAU) strategy, which is exploitative of both nature and human beings, the new strategy nurtures both nature and human beings, through the following three prongs:

- **Nature Regeneration -** Invest in regenerating nature and conserving the environment: jal, jangal, jameen and jalvayu (land, forests, water and the climate), for reviving the agriculture, animal husbandry, fishery and forestry sectors. The further benefit of nature regeneration will be that additional income in these economic activities will generate demand for non-farm goods and services in rural areas, helping diversify the rural economy. New green activities such as generation of renewable energy, recycling of waste, and climate-change adaptive construction and services, eco-tourism, etc. can be taken up in a big way by setting up of many nature-care green enterprises. The rural jobs created by these will reduce rural-to-urban migration. Finally, the positive benefits of revived rivers, groundwater, forests and land/soil will spill over from the rural to the urban areas as well, improving the quality of life of city dwellers.

- **Enabling Human, Social and Institutional Development –** To generate more well-being for all species, we need to focus on services that carry out nature conservation and sustainable use, including agricultural and livestock extension services which teach sustainable practices. We also need to adopt a new paradigm of human development services – health services need to focus on nutrition and wellness instead of medical treatment. Education services need to focus on lifelong learning instead of cramming or tuition for passing exams and tests. Social welfare services need to focus on increasing social cohesion and capability for local participatory governance instead distributing doles to poor and the destitute. Financial services need to serve a human purpose first, and then worry about returns on shareholders' capital, which no doubt they should get. Police and Justice Delivery services need to serve the citizens and not the political masters or criminal elements.

- **Well-th Creation through Entrepreneurship** - Marginal and small farms as well as micro enterprises need to be upgraded into DECI farms and firms. DECI, pronounced "desi" farms and firms are local demand based, led by entrepreneurs emerging from collectives such as self-help groups, capitalised well and have adequate input linkages and infrastructure. The small percentage of larger farms and firms also need to grow in size and employment, becoming MESO farms/firms.

MESO pronounced "mee-so" stands for farms and firms which target Metro and Export demand, are led by Socially, Ethically and Environmentally Responsible (SEER) Entrepreneurs and have Skilled workers and are supported by an Organised Eco-system. This twin upgradation – from micro to DECI and from small to MESO will create crores of new generation jobs in agricultural, livestock, renewable energy, manufacturing, construction, and well-being service enterprises.

We deal with these three headings one by one. In each, we recommend certain interventions and estimate the extent to which these are needed and the unit investment cost. Then using assumptions about incremental capital output ratio (usually assumed to be 4:1, that is Rs 4 crore of investment would yield Rs 1 crore of output) and the wage share of output (usually 25-40%), we estimate the additional output (GDP) that will be generated as well as the additional employment.

We also pay attention to the environmental aspects and compute the extent of carbon dioxide that will get sequestered or GHG emissions that will be reduced. These are based on authoritative estimates by different experts. We call these AMSERs - Aggregated Micro-carbon-credits for Sequestration and Emission Reductions. We assume that a certain percentage of these can be sold in the global carbon markets to raise funds for the proposed intervention.

2.1 Nature regeneration- Jal, Jangal, Jameen and Jalvayu

HP and its more than 7 million peoples are endowed with rich natural resources that include 37,033 sq km forest land, 5.4 lakh hectare agricultural land, 800 glaciers, more than 2500 permanent snow fields, amazing landscape and biodiversity. This huge natural wealth is the basis of the lives of all in Himachal Pradesh. Moreover, it provides direct livelihoods to 58.37% workers in the state.[3]

This component of the strategy - regeneration of nature (note we do not call them natural resources, which is a narrow anthropocentric view) -water, forest and land/soil (Jal, Jangal, Jameen), and Jalvayu (climate), of course requires major public investments. We describe first what interventions are suggested by experts, to regenerate the water sources, the forests and the land and soil, and through this mitigate or adapt to the effects of climate change. Then we indicate the extent to which these works need to be undertaken, what these would cost and what employment and environmental benefits these would bring. The details of this are discussed below and then given in tables in each section.

2.1.1 Water

Himachal Pradesh has huge water resources in the form of glaciers, snow-belt, perennial rivers, lakes and underground water aquifers. However, due to forest degradation and climate change all these water sources are facing great threats. Most water streams/springs in mountains have dried up. Moreover, erratic rainfall, extreme weather conditions and vegetation degradation has increased surface runoff leading to low groundwater recharge.

[3] MoSPI, Periodic Labour Force Survey, 2022, https://www.mospi.gov.in/sites/default/files/publication_reports/AnnualReportPLFS2021-22F1.pdf

Glaciers are also melting due to increase in temperature. Many villages in mountains including cities like Shimla are already facing water scarcity. Therefore, there is an urgent need to revive these water sources in order to sustain life and livelihoods in the state.

The interventions proposed for surface water conservation are:[4]

- River rejuvenation – river basin-based soil conservation and water management to prevent erosion and other water borne disasters, , building small dams on rivulets,
- Restoration of defunct and damaged water bodies

For groundwater the interventions recommended are:[5]

- Recharge Shafts
- Injection Wells
- Sub-surface Dykes
- Check Dams
- Percolation Tanks
- Gabion structure
- Rooftop rainwater harvesting structures
- Springshed development

The table below provides estimated expenditure, employment and environmental benefits from restoration of water sources in the state.

Table 1: Estimates for Regeneration of Water Commons				
Interventions Proposed	Units	Number of units to be covered	Cost per Unit in INR at 2024 prices	Total Investment Over Five Years (INR crore in 2024 prices)
Surface water conservation				
River rejuvenation – treatment of river basin	Sq kms	53,311	2,500,000	13,328
Restoration of defunct water bodies	Numbers	12,146	1,000,000	1,215
Restoration of damaged water bodies	Numbers	75,871	500,000	3,794
Groundwater Recharge				
Recharge Shafts	Numbers	556	248,300	14
Injection Wells	Numbers	133	340,512	5
Sub-Surface Dykes	Numbers	460	638,186	29
Check Dams	Numbers	2,290	894,007	205
Percolation Tanks	Numbers	10,000	1,763,622	1,764
Gabion structures	Numbers	1,050	46,676	5
Rooftop rainwater harvesting	Numbers	108,118	34,666	375
Springshed /Watershed dev	Numbers	1,000	1,122,097	112
Regeneration of Water Commons				**20,844**

[4] Government of India, Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation (GoI-MJS, 2023). All India report of first Census of Water bodies. https://jalshakti-dowr.gov.in/document/all-india-report-of-first-census-of-water-bodies-volume-1/

2.1.2 Forests

Forest is the backbone of Himachal's mountain ecology and a nature-driven economy. The entire primary sector which employs around 60% of the labour force is indirectly dependent on forests. Over the years drastic changes were observed in the quality of forest in Himachal Pradesh. A very large area of the recorded forest is either categorized as open forest or moderately dense forest. The degradation forest has further enhanced the rate of soil and land degradation and desertification. To sustain rural livelihoods and increase jobs in rural areas, restoration of open and degraded forest is highly important. The main interventions planned in the forest under the Forest Department are

- Regreening of Open/scrub forest land through agroforestry and planted forests
- Restoring Moderately Dense forest forests - mainly through assisted natural regeneration

In addition to the above, there will be efforts to increase the green cover on wastelands and in village scrub lands and that has been covered under the Land section later. The table below provides estimated expenditure required, and the employment and environmental benefits from regeneration of forests in the state.

Table 2: Estimates for Regeneration of Forest Commons

Interventions Proposed	Units	Number of units to be covered	Cost per Unit in INR at 2024 prices	Total Investment Over Five Years (INR crore in 2024 prices)
Regreening of Open/scrub forest land through agroforestry and planted forests	Lakh Hectares	5.1	94,187	4,804
Restoring Moderately Dense Forest forests - mainly through assisted natural regeneration	Lakh Hectares	7.1	51,326	3,644
Regeneration of Forest Commons				**8,448**

2.1.3 Land and Soil

The decreasing soil productivity has burdened small and marginal farmers of Himachal Pradesh to rely on ever increasing agricultural inputs such as seeds and fertilizers. Moreover, records show that in the last two decades the agricultural productivity has remained stagnant especially for food grains and fruits. Over the years, the local consumption of food has increased due to increase in population. Further the increasing labour force is further accommodated by the same agricultural land with stagnant productivity.

Agriculture has become very unsustainable. Therefore, more innovation in agriculture is required to meet local consumption demand and job aspiration of young people.

[5] Government of India, Ministry of Jal Shakti, Department of Water Resources, Central Ground Water Board Master Plan for Artificial Recharge to Groundwater In India – 2020
https://jsactr.mowr.gov.in/Public_Dash/download/Master%20Plan%20to%20GW%20Recharge%202020.pdf

Such demand requires restoration of land and soil in the state as a prerequisite, particularly for land affected by water erosion. In addition, all the agricultural land, whether single cropped or multiple cropped, needs restoration of soil organic carbon and microbial life.

The table below provides estimated expenditure required for regeneration of common and private lands in the state and the employment and environmental benefits therefrom.

Table 3: Estimates for Regeneration of Land - Common and Private				
Interventions Proposed	**Units**	**Number of units to be covered**	**Cost per Unit in INR at 2024 prices**	**Total Investment Over Five Years (INR crore in 2024 prices)**
Of land affected by Water erosion	Hectares	200000	30,000	600
Of soil nutrients in single cropped land		525000	10,000	525
Of soil nutrients in multiple cropped land		372000	25,000	930
Regeneration of Land - Common and Private				**2055**

2.1.4 Jalvayu parivartan - Climate change

Climate change is impacting the lives and livelihoods of people in Himachal. On the one hand, apple orchards have to increasingly move to higher altitudes, as the lower altitudes get too warm for growing apples. On the other hand, tourism is getting disrupted due to erratic weather. Thus, the regeneration of nature will do all-round good to Himachal. The interventions in Jal, Jangal Jameen mentioned above will collectively help mitigate the adverse effects of Jalvayu Parivartan. This is summarised in the table below.

Table 4: Investment and Benefits of Nature Regeneration						
Interventions Proposed	**Total Investment Over Five Years Rs cr**	**Additional GDP pa due to this invest-ment after 5 years Rs cr**	**Employment in person years on an ongoing basis after 5 yrs**	**Additional Wage Income for the state after Investment Period Rs cr pa**	**Average wage or earning per worker in Rs lakh pa**	**AMSERs in Rs Cr pa**
Regeneration of Water Commons	20,844	5,211	130,274	3,127	2.40	990.3
Regeneration of Forest Commons	8,448	2,112	60,390	1,449	2.40	307.4
Regeneration of Land - Common and Private	2055	514	17,125	411	2.40	83.5
Nature Regeneration	**31,347**	**7,837**	**207,789**	**4,987**	**2.40**	**1,381.3**

AMSERs = Aggregated Micro-carbon-credits for Sequestration and Emission Reductions

2.1.5 Funding and Implementation – Climate Finance and Green Enterprises

As a large part of the nature regeneration activities will have to be undertaken on common property resources – rivers, springs, lakes, ponds, forests, common pastures and grazing lands. Thus, the funding for this will have to be largely from public resources; This can, however, be significantly supplemented with revenues from AMSERs as the global funding mechanisms for climate change adaptation measures improves after COP29 in Baku, where USD 300 billion per annum was promised for this. If India gets even 10% of this, as it is the third largest contributor of GHG emissions, then USD 30 billion or Rs 2.5 lakh crore will become available for this task. If Himachal gets only 1% of this, it will be Rs 2500 crore per annum, or about 40% of the outlay we have recommended.

On implementation, there is adequate capacity built up due to decades of experience in implementing land, water and forest regeneration using the ground capability built under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). This can be supplemented by mustering additional technical expertise required from state level knowledge and technical institutions. Strengthening local citizens' groups, panchayats and Zilla Parishads will also be helpful in ensuring good implementation of nature regeneration projects and making it into a broad-based movement. (Mahajan, forthcoming 2025).

As some of the smaller water bodies, private forests and most of agricultural lands, are in private hands, their revival will require bank financing. This may require refinance from NABARD's Rural Infrastructure Development Fund (RIDF). Implementation will have to be done by specialised green enterprises with necessary expertise. After the revival stage is over, green enterprises can focus on upkeep services for private water bodies, private forests and farms. They can run renewable energy and solid waste management projects.

2.2 Enabling social development – Building human and institutional capability

The dominant systems of economic development have created deep divides between haves and have not. The economic inequality created by the current developmental approach has further affected health, nutrition, education, livelihoods, and overall well-being of people in general. Often these inequalities and deprivation manifest in the form of social conflicts and violence. Under the NEW strategy we also focus on human's wellbeing and social cohesion and cooperation. Therefore, equal importance must be given for investments in human and social development.

2.2.1 Ensuring Nutrition, Health Care

Nutrition is the basis of health from infancy onwards. The WHO (2024) defines stunting as low height for age, reflecting chronic undernutrition; wasting as low weight for height, indicating acute undernutrition; and underweight as low weight for age, a composite measure encompassing both stunting and wasting.

The data from NFHS V which is described in more detail in the Appendix Chapter-8, shows that 30% of children under five in Himachal were stunted and 16% were wasted, indicating the need for better nutrition treatments despite decent healthcare. Further, 53% of 15-49-year-old women were anaemic, a source of concern. Treatment for stunting and wasting is primarily addressed through the Mission Poshan 2.0, focuses on maternal nutrition, infant feeding, and addressing severe acute malnutrition, with a combination of facility-based and community-based interventions.[6]

Himachal cannot afford to waste this human potential, particularly as expenditure for supplementary feeding and corrective programs is rather small. Thus, we are recommending a program for identification of every stunted child and ensuring supplementary feeding for them. Similarly, every wasted child must be identified for a corrective community-based interventions.

Health is a basic human right. It is also the basis of making a human being economically productive and participate in the social life of the community. Thus, health is an important pillar of human and social well-being. Moreover, as holistic health understanding has improved, the "One Health" approach developed by the WHO (2017) and recognizes that the health of people, animals, and the environment are closely linked and interdependent. The UN Environment Program (UNEP, 2024) also recognises the intimate connection between health and the environment. The Government of India also established the One Health Mission in July 2022,[7] and a National Institute for One Health has been established at Nagpur in 2024.

The data from NFHS V which is described in more detail in the Appendix Chapter-8, shows that many new types of life-style diseases are beginning to occur among the people of the state. This needs to be countered through a campaign of public education and decentralised care.

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[6] https://pib.gov.in/PressReleasePage.aspx?PRID=1988614

[7] https://www.psa.gov.in/innerPage/psa-initiatives-covid/pm-stiac-meetings-2019-2021/3678

Under the NEW strategy we propose upgrading the health system in Himachal, increasing the outlay on public health education and preventive care. For improving medial services, we recommend increasing the number of health care professionals and improving health infrastructure. The purpose of health care upgradation is to ensure universalisation of the health care system and ensure equal access to quality health care systems.

2.2.2 Education and vocational training - REPAIR, PREPARE & COMPERE

REPAIR for Employability

As per the findings of the ASER – Annual Status of Education Report, for Himachal for 2022, only 61.3% of standard V students could read simple English and only 42.6% could do division of numbers. The percentage improved to 88.0% and 52.3% by standard VII, still showing a significant learning deficit, particularly among government school students, who accounted for to-thirds of the enrolment. Another point to be noted was the damage done by the COVID-19 pandemic and consequent school closure. Not only were the reading and arithmetic attainment levels in 2002 lower than 2018, but also these were also even lower than 2014 levels, showing the extent of setback.

In light of the above, the education sector needs to focus on a program of "REPAIR", that is Re-Educating Persons Already In labour force for Remunerative employment. This program would target those who have dropped out or finished school (or even college) without having capabilities commensurate with their paper certificates. Often this dropping out is due to economic reasons. Many NGOs, such as the MV Foundation, Hyderabad, have established residential bridge courses, where children (some of whom have grown up since they dropped out of school), catch up to the educational level commensurate with their age and inherent ability in just a few months. We have assumed that nearly 50% of persons who have studied up to 8th standard or less, will need this remedial education. Classes run by VOs or local citizens groups or individuals, with no or minimal fee, can play a big role in this.

Program for Employment Practice through Apprenticeship and Re-skilling (PREPARE)

Given that as per the ASER survey, about one in three youth between 14 to 18 (40.3% of males and 28% of females reported doing work other than household work, but only 5.6% are getting any form of vocational training, there is an urgent need to "PREPARE", a Program for Employability Practice through Apprenticeship and Re-skilling. Under this, crores of young people would learn vocational skills which will prepare them for employment. In view of increasing innovation, digitalisation, automation, artificial intelligence and machine learning, PREPARE will also re-skill existing workers in newer skills.

This will comprise vocational skill training and work experience, for all new entrants in the labour force, a one year-long paid engagement in a public or private enterprise, in agriculture, manufacturing or services. For agriculture, the school curriculum should include agriculture /horticulture practices to equip youth to adapt and respect the family vocation. For non-farm apprenticeships, any enterprise which employs 10 or more persons will have an obligation to hire at least one apprentice for every 10 workers it has. This will require amendments to the Apprenticeship Act, 1961.

The other new entrants would work in medium farms and firms, and large Farms, Livestock and Green enterprises. While rural youth who wish to stay on in rural areas or nearby small towns would be best suited for medium farms and firms, college-educated and technically qualified young entrants in the employment market would be sent as apprentices to Green and Large Enterprises. As part of PREPARE, there will be a continuing education or re-skilling component, for existing workers in new generation skills in this age of increasing innovation, automation, artificial intelligence and machine learning.

One of the characteristics of current economic strategy is that much needed human services are not widely available, which puts the burden of providing such services largely on women within the households, leading to low female LFPR. As the joint family system breaks down, and even the nuclear family is getting disrupted due to a large number of worker population migrating without family, there is a need to accept that care-giving services (for children, the elderly, the disabled, the sick, etc.) will become paid services.

Fortunately, social norms related to this are changing and thus a large number of employment opportunities will be generated in care-giving services (for children, the elderly, the disabled etc.). A large proportion of these jobs will go to women. That will increase both the female work participation rate, as well as incomes of women, which is a necessary though not sufficient condition for social empowerment. Another advantage of women working in these services is the greater likelihood that the caregivers will be more humane and conscientious about their roles. Nevertheless, as the services move from in-family, unpaid to out-of-family, paid services, a certain degree of quality and norm-setting will have to be done and light-handed regulations established, with community-based monitoring, so that neither the caregivers nor the care-recipients get unfair treatment.

There are many states, most notably Kerala, and many metros including Mumbai and Delhi, which are facing an aging population. They have a severe shortage of younger people and thus immigration has opened up in several of these countries for jobs in elder care specifically, but also many other activities which require more physically active workers. While most of these workers may go for a few years and then return, some may settle down there. They would still be a source of remittances for family members back home.

‘Compere’ the Talent among the People - Find and Valorize

Finally, there is a need to “COMPERE” the hidden or ignored traditional knowledge and skills among various communities and then curating and presenting those to the world. For example,

- the “jadi bootis” (medicinal plants) known by the Kinnauri tribals,
- the folk medicine and curing practices of Vaids,
- the beautiful floral and geometric designs of Kullu shawls and Himachali caps
- the legendary dishes of Dham, Siddu, Chha Gosht and Turkiya Bhaat, or
- the music and dance forms of Dev Nati, Rakshasa, Kayang Mala and the Kikli of the tribals in Spiti.
- The festivals of Dussehra in Kullu, the Sazo of Kinnaur valley, and the Losar among the Tibetans community

These 'hidden" skills and knowledge are also there among others – the fabled "grandmother's recipes and home remedies", the grand-uncles' stories and jokes, the expert mechanic by the street side of Shimla who can fix your car at one tenth the cost and much faster than the "authorised service centre", the neighbourhood beautician of Dharmsala who makes any young lady look charming and the barber from Manali who not just cuts hair but gives advice and even spiritual guidance!

Many of these "compere"-d workers can be employed in green nature-care enterprises, in green and responsible tourism and in well-being enhancement services.

Due to congestion and deterioration in the environment quality in urban areas, there is a huge urge among urbanites to get out, even if it is for short weekends. There is already an upsurge of religious tourism which generated crores of jobs in pilgrim destinations.

There is a need to encourage this to become green and responsible, so that urban dwellers can leave their destination behind them as clean as before they arrived. This will generate additional jobs in transport, hotels & restaurants, local food, textiles and handicraft production and performing artists.

2.2.3 Build social capital at the local level

The purpose of the sector on social cohesion is to ensure protection of wellbeing of all vulnerable sections. Further it aims to create and strengthen societal systems to sustain care giving, community cooperation and strengthening bonds of trust across communities.

Women's self-help groups (SHGs) are a relatively easy to form as compared to other community level institutions such as youth and men's groups or specific-function groups such as Forest Protection Committees and Watershed Management Committees.

In urban areas, Resident Welfare Associations and Town Market Committees are the building blocks of citizen participation. The lead role in this work of forming and building the capacity of community level institutions will have to be played by civil society institutions or NGOs, Another benefit of building social capital at the local level will be to curb recent trends of drug abuse among the youth and politically fomented tensions with the minority communities.

2.2.4 Local institutional development

In addition, we recommend building local scientific and technical research institutions to build knowledge and best practices to deal with various challenges that arise. We also suggest an investment in this sector to strengthen institutions like the Panchayats, Zilla Parishads and Municipalities. This investment will also create additional jobs. Gram Sabhas and Ward Sabhas must be held with full seriousness and the people made aware of the various government schemes and funds available. The panchayat development plans, and ward work proposals must be discussed and approved there. Annual accounts and audit reports thereon must be presented to the members. This will also enable citizen participation to ensure institutional accountability.

Table 5: Enabling Human, Social and Institutional Development				
Interventions Proposed	**Units**	**Number of units to be covered**	**Cost per Unit in Rs**	**Total Investment Over Five Years Rs cr**
Strengthening Individual capacity through better nutrition and health care	50% of popln in Lakhs	39.20	10,000	3,920.0
Strengthening Individual capacity through educational REPAIR/PREPARE/COMPERE	25% of popln	19.60	20,000	3,920.0
Strengthening Individuals Health and Education	NA	NA	NA	**7,840.0**
Physical improvements in water, sanitation, ventilation, etc.	Lakh hholds	17.42	50,000	8,711.1
Strengthening capacity of local groups like SHGs, RWAs to build social cohesion and citizen participation	Numbers	39,200	20,000	78.4
Strengthening Social Development	NA	NA	NA	**8,789.5**
Strengthening capacity of local self-government bodies	Numbers	3,920	1,000,000	392.0
Building local scientific and tech research institutions and civil society institutions	Numbers	39	20,000,000	78.4
Strengthening Institutional Capacity	NA	NA	NA	**470.4**
Enabling Social Development	NA	NA	NA	**17099.9**

2.3 Well-th creation through entrepreneurship

Well-th creation is broadly possible through enterprises in agriculture, horticulture, construction, manufacture of locally demanded products and services including tourism.

2.3.1 Upgrading farms to DECI agricultural enterprises

Recall that DECI stands for Demand, Entrepreneurship, Capital and Inputs/Infrastructure. Thus, we begin by looking at each of these components before recommending a strategy to promote DECI farms and firms.

Demand

Table 6: Projected demand for food and non-food products and services in HP

Item of expenditure	Rural MPCE Rs	Urban MPCE Rs	Rural total consumption Rs crore pa	Urban total consumption Rs crore pa	HP total consumption Rs crore pa
Cereals & cereal subs	200	268	1686	252	1938
Gram	16	20	135	19	154
Pulses	101	110	852	103	955
Sugar	42	40	354	38	392
Salt	3	3	25	3	28
Milk	629	686	5303	645	5948
Veg	271	314	2285	295	2580
fruits fresh	132	189	1113	178	1291
fruits, dry	64	113	540	106	646
eggs, fish, meat	135	122	1138	115	1253
edible oil	133	145	1121	136	1258
Spices	99	124	835	117	951
beverages & processed foods	587	932	4949	876	5825
Food sub-total	**2412**	**3066**	**20335**	**2882**	**23217**
pan, tobacco, intoxicants	167	170	1408	160	1568
fuel, light	345	422	2909	397	3305
Toiletries	205	266	1728	250	1978
other hh consumables	124	134	1045	126	1171
Education	293	61	2470	57	2528
med-hospitalization	86	141	725	133	858
med- other	249	264	2099	248	2347
Conveyance	409	588	3448	553	4001
consumer services	323	485	2723	456	3179
Entertainment	40	77	337	72	410
Rent	65	728	548	684	1232
Taxes	1	2	8	2	10
Clothing	332	480	2799	451	3250
Footwear	85	116	717	109	826
Durables	425	495	3583	465	4048
Non-food-total	**3149**	**4429**	**26549**	**4163**	**30712**
Total	**5561**	**7495**	**46884**	**7044**	**53929**

Source: Household Consumption Expenditure Survey, 2022-23, NSSO, 2023.

Given above is the projected demand for various food products in Himachal, based on monthly per capita consumption expenditure survey. As can be seen, the total demand for the year is about Rs 23,000 crore, with the largest value item being milk and milk products. All these can be produced in the state and can cater to local demand, both rural and urban within the state. Thus this is a ready market for small farmers who want to break out of subsistence farming and become DECI farmer entrepreneurs.

The production of food grain in Himachal Pradesh has decreased in the last two decades from 1612 thousand tons in 2004-05 to 1442 thousand tons in 2022-23. The area under total food grain has also decreased from 838 thousand hectares in 2004-05 to 688 thousand hectares in 2022-23. The degradation of soil, increasing cost of inputs including fertilizers and seeds has made agriculture a costly occupation. This explains why 36% of the area of operational holdings is not under any agricultural operation, despite low holdings per household.

This creates an opportunity for employment. Using a combination of natural farming techniques, or at least switching to low input intensive agriculture, diversifying into climate change resilient crops such as millets and setting up protective irrigation facilities, establishing net-based greenhouses for vegetable cultivation, and establishing fruit orchards these households can increase their productivity per unit of land possessed and their incomes.

Entrepreneurship and Skilled Workforce Development

Not all small farmers are entrepreneurial. Agricultural revival needs a new generation of Entrepreneurs. They may be from farming families who have studied in agricultural universities or business schools and who want to come back to the family farm or apple orchard. Those who are, need to be selected carefully to have attributes of who are social, ethically and environmentally responsible (SEER) entrepreneurs. They should be mentored properly. Of course, to produce some of these items, which these enterprising farmers may not have done earlier, they will need some skill training. That is why we recommend many more Krishi Vigyan Kendra to be opened and agricultural extension workers to be hired and deployed by the government. Technology options would be adopted to reduce dependence on labour in agriculture /horticulture considering labour shortage in agriculture.

Capital and Credit

While working capital is available to farmers through the Kisan Credit Cards, the problem is in raising investment capital for farm upgradation. The upgradation of small farmers into DECI farmers and medium and large farmers into MESO farmers will require investment. This will be for land development, water resource development, irrigation facilities, greenhouses, agricultural equipment, storage, etc. The State Credit Plan[8] for 2022-23 already provides for Rs 5023 crore of agri term loan. We expect that NABARD will be able to persuade banks through refinance as well as policy guidance to make the necessary term-credit available for these investments. We have made a number of assumptions to compute the total investment required to transform agriculture in Himachal.

[8] https://pib.gov.in/PressReleasePage.aspx?PRID=1988614

Inputs and infrastructure

The other main constraint in transforming agriculture in Himachal is inputs and infrastructure. Inputs can be improved seed varieties, which are climate resilient, or new apple variety rootstock, or mushroom spawn. Infrastructure is things like bulk milk coolers, warehouses, packhouses, transport to end markets, etc.

As we show in Chapter 5, section 5.3, the table 22 on Distribution of Operational Holdings in Himachal 2018-19, almost 58% of the rural agricultural households have less than 1 acre of land and another 30% are marginal farmers with less than 2.5 acres. Another 9.7% are small farmers with less than 5 acres. Only 0.3 % have more than 5 acres of land. Not all small farmers can transform into DECI farmers, nor can all medium and large farmers become MESO farm enterprises. We are therefore recommending the following interventions:

- For sub-marginal (below 1 acre) holdings to be converted to flowers, medicinal plants, mushroom and bee-keeping.
- Marginal and small farms to become DECI Farms - enhancing productivity through soil and water conservation, irrigation, greenhouses, growing cereals and vegetables for local markets.
- Medium sized farmers also become DECI Farms - growing cash crops, with controlled irrigation, polyhouses, aggregation and urban market access.
- Some small and medium farmers become livestock enterprises - enhancing productivity through breed improvement, stall feeding, biogas digesters, etc.
- Large farmers become MESO Farms -aimed at metro and export markets, with polyhouses, packhouses.

Given below are some interventions that can be used to meet the local demand, in the process increase incomes of farmers and generate employment.

Table 7: Interventions and Investments Needed to Upgrade the Farm Sector in HP

Interventions Proposed	Units	Nos	Cost per Unit in INR at 2024 prices	Total Investment Over Five Years (INR crore in 2024 prices)
Sub-marginal (below 1 acre) holdings to be converted to flowers, medicinal plants, mushroom and bee-keeping	Number	630,467	50,000	3,152
Marginal and small farms to become DECI Farms - enhancing productivity through soil and water conservation, irrigation, greenhouses, growing cereals and vegetables for local markets	Number of marginal and small farms	945,700	100,000	9,457
Medium sized farmers to transform into DECI Farms - growing cash crops, with controlled irrigation, polyhouses, aggregation and urban market access	Number of medium farms	36,200	1,000,000	3,620

Large farmers become MESO Farms – aimed at metro and export markets, with polyhouses, packhouses	Number of large farms	4,800	5,000,000	2,400
Some small and medium farmers become livestock enterprises – enhancing productivity through breed improvement, stall feeding, biogas digesters, etc.	5% of number of all farms	49,335	500,000	2,467
Agricultural Enterprises	NA	NA	NA	21,096

Source; Computations by the authors' team.

The level of investment proposed is in the range of Rs 4500 crore per annum. This needs to be compared to the investment credit for agriculture from banks, which was Rs 2072 crore in 2021-22. NABARD itself has projected Rs 5616 crore of investment credit for agriculture and allied activities in 2024-25 in its State Focus Paper for Himachal for 2024-25 This is including agriculture infrastructure and ancillary activities which is not part of our projections here. Thus, our projections are reasonable and within reach of the banking system.

2.3.2 Promoting non-farm manufacturing and service enterprises

As per the Annual Survey of Unincorporated Sector Enterprises (ASUSE), 2023[9] there were 6,45,595 enterprises in Himachal in 2022-23. Their breakup by size and activity is below:

Table 8: Type of Enterprises in HP

Type of Enterprise	Rural	Urban	Total
Own Account Enterprises (OAE) in Manufacturing	110,474	6,649	117,123
Own Account Enterprises (OAE) in Trade & Services	400,216	53,270	453,486
Hired Worker Enterprises (HWE) in Manufacturing	6,909	2,853	9,762
Hired Worker Enterprises (HWE) in Trade &Services	44,243	20,981	65,224

Himachal has 5.6 lakh own account enterprises, which is enterprise which do not have even a single hired worker – only the owner and family members work in the enterprise. In general, OAEs are much more numerous, almost seven times as many. We suggest that the problems of unemployment can be addressed by transforming some of these micro-enterprises into what we call DECI and a smaller number into MESO enterprises. As can be seen from the above, enterprises with hired workers, in manufacturing, are the least in number.

[9] Annual Survey of Unincorporated Sector Enterprises (ASUSE), 2023, pdf p 489-521

The term DECI has been coined for micro enterprises which have potential to meet the market demand and create jobs. DECI stands for Demand-local or locally expressed, Entrepreneurship, Capital/Credit and Inputs/Infrastructure.

The term MESO has been coined for larger enterprises that can cater mainly to Metro and Export demand, are run by Socially, ethically and environmentally responsible entrepreneurs with a Skilled workforce; and have an Organised supportive ecosystem.

It should be noted that entrepreneurs are central to both the levels of enterprises – DECI or MESO. We assert that Himachal should encourage a new generation of entrepreneurs, who are social, ethically and environmentally responsible (SEERs). Only when SEER entrepreneurs become the normative majority will Himachal be able to avoid the negatives of industrialisation – worker exploitation, systematic corruption and environmental degradation.

Not all OAEs can transform into DECI enterprises nor can all HWEs transform into MESO enterprises. However, by following appropriate promotional policies and ensuring the availability of credit from banks, it will be possible for a proportion of these enterprises to transform and generate employment for a more skilled workforce at a higher wage rate.

2.3.3 Promoting Green Enterprises

Green enterprises are those which can undertake the regeneration, and later upkeep of common natural resources including damaged river basins, eroded watersheds and spring sheds, over-exploited aquifers, degraded forests, over-grazed pasture and land which is being subjected to water or wind erosion and any form of degradation. Most of them would have some experience from undertaking small such works in MGNREGA or under the National Watershed Development Program. With additional capital and technical expertise, they can perform the larger tasks that we have recommended under nature regeneration. Mostly these would be publicly funded works. We have proposed 10,000 green enterprises for HP with an investment outlay of Rs 5000 crore.

In addition, green enterprises can work for private clients by providing services such as

- Building small water harvesting structures in private lands
- Private pond digging. deepening, maintenance and repair
- Building private groundwater recharge structures
- Agro-forestry and pasture development in private wastelands
- Soil conservation. Land levelling and drainage through contour bunding, etc.
- Establishing composting facilities, regular and vermicompost

- Setting up green houses and drip irrigation facilities
- Custom hiring of agricultural equipment
- Establishing sorting, grading centres and packhouses
- Establishing warehouses and cold storages
- Providing warehouse finance and market linkages for agricultural produce
- Providing crop insurance and livestock insurance

The above can all be done by DECI enterprise. However, larger MESO green enterprises can engage in activities like

- Generation and distribution of renewable energy (solar/ biomass/biogas/hydel/wind)
- Solid waste management and waste recycling
- Green construction and retrofitting existing homes into eco-tourism homestays.
- Moreover, by switching to renewable energy, practicing material recycling and energy efficiency, existing firms can also generate environmental benefits.

A large number of these transformed enterprises will be in services. These have been shown in the table below. As can be seen we are suggesting a relatively modest amount of Rs 15,000 crore per annum to be invested. This level of investment of Rs 15,000 crore per annum should be compared to NABARD's target of Rs 13,000 crore in 2024-25.

Table 9: Interventions and Investments Needed to Upgrade Non-Farm Sector in HP

Interventions Proposed	Number of units to be covered	Cost per Unit (in INR lakh) at 2024 prices	Total Investment Over Five Years (INR crore in 2024 prices)
OAE in Manufacturing to be upgraded to DECI mfg enterprises	100,000	10	10,000
OAE in Trade and Services to be upgraded to DECI service enterprises	450,000	6	27,000
HWE in Manufacturing to be upgraded to MESO mfg enterprises	4,000	500	20,000
HWE in Services to be upgraded to MESO service enterprises,	6,000	50	3,000
Green enterprises	10,000	50	5,000
Non-farm Enterprises			**75,000**

Source; Computation by the authors' team

3 Level of investment required, its benefits and sources

3.1 Investment required

The summary of interventions proposed, investment required, and benefits therefrom is shown in Table 10. As can be seen, a total of Rs 144,600 crore of investment is needed in the proposed interventions over a period of five years. Of the proposed investment, 21.6% will go into Nature regeneration, 11.8% into Enabling human, social and institutional development and 66.6% in Well-th creation through agricultural and non-farm enterprises. We maintain that unless the first two sets of investment are made - in nature and people, investing in enterprises will not succeed, and to the extent it does, it will serve only the top few percent of the population.

Table 10: Summary of Interventions Proposed, Investment Required and Benefits

Interventions Proposed	Total Investment Over Five Years (INR crore in 2024 prices)	Additional GDP per annum after 5 yrs due to this investment (in INR crore at 2024 prices)	Employment in person years on an ongoing basis after 5 yrs	Additional Wage Income for the state after Investment Period Rs cr pa	Average wage or earning per worker in Rs lakh pa in 2024 prices
Regeneration of Water Commons	20,844	5,211	130,274	3,127	2.40
Regeneration of Forest Commons	8,448	2,112	60,390	1,449	2.40
Regeneration of Land - Common and Pvt	2055	514	17,125	411	2.40
Nature Regeneration	**31,347**	**7,837**	**207,789**	**4,987**	**2.4**
Strengthening Individuals Health and Education	7,840	1,960	32,667	1,568	9.60
Strengthening Social Development	8,790	1,768	29,327	1,415	12.00
Strengthening Institutional Capacity and Accountability	470	1,908	30,539	1,527	5.00
Enabling Social Development	**17,100**	**5,637**	**92,533**	**4,509**	**4.87**
Agricultural/allied Enterprises	21,096	7,032	147,782	5,626	3.81
DECI & MESO Manufacturing and Service Enterprises	70,000	8,806	111,172	7,045	6.34
Green Enterprises	5000	1667	55,567	1333.6	2.4
Well-th creation through Enterprises	**96,096**	**17,505**	**314,521**	**14,005**	**4.45**
Total	**144,543**	**30,979**	**614,843**	**23,501**	**3.96**
As percent of GSDP of HP in 2024 over 5 yrs					70.9%
As percent of GSDP of HP in 2024 each year					**14.2%**

Source: Computations by the authors' team

3.2 Benefits of the investment

The NEW strategy will ensure that benefits of the investment accrue in terms of:

- Economic Growth (GDP will grow in five years by Rs 29311 crore, which is about 14% of the 2024 GDP over and above the normal growth) and will be wider and more inclusive.

- Employment (almost 5.6 lakh new jobs, all of them at a remuneration level which at the minimum will be the prevailing per capita income in 2024 – approximately Rs 20,000 per month, and for many of the jobs, much higher remuneration.

- Social Development – Health and Education improvements which will greatly enhance citizens' quality of life and increase in healthy active life years. In addition, the social energies released, and institutional effectiveness increase would lead to collective action on many fronts that impact citizens' lives and also the environment.

- Environmental benefits in terms of more availability of clean water, less impact of monsoon failure or other adverse events, increase in green cover, production of more nutritious food crops with less chemical intensity, and reduction in carbon dioxide and GHG emissions as also carbon dioxide sequestration, which if aggregated and sold in the global carbon markets will fetch Rs 3,300 crore per annum.

3.3 Where to mobilise investments from

As stated earlier, a total of Rs 144,543 crore of investment is needed in the proposed interventions over a period of five years. This is a substantial amount, being 75% of the Himachal GSDP in 2024. Though we are suggesting these investments to be made over a five-year period, the annual investment target is still 15% of the 2024 GSDP and about 50% of the government expenditure budget for 2024, which was about Rs 58,000 crore. Obviously, we are not expecting all of this to come from the government.

The financing sources identified are numerous. This includes community contributions, bank loans taken by individual farmers and entrepreneurs, climate finance and philanthropic/CSR funding. As a result, the government is expected to contribute only about 23.4% of the investment on an annual basis, which comes to about 12% of the government budget in 2024. A vast majority of this will go for Nature regeneration and Enabling social development. Most of the investment in upgradation of farm and non-farm enterprises and setting up green enterprises will be done using bank financing.

Table 11: Investment Required and Where to Mobilise it From

Interventions Proposed	Total Investment Over Five Years (Rs crore)	Own private funding by individual, or community	Bank/FI loans taken by individuals/ pvt entities	Philan-thropic foundations and CSR funds	Individual giving, resource sharing and volunteering	Climate finance against AMSERs with sovereign guarantee	Balance from the state and Central Govern-ment
Nature Regeneration	31,347	1,567	2,101	2,610	5,219	210	19640
Enabling Social Development	17,100	2,815	-	2,244	855	1247	9,939
Well-th creation thru Enterprises	96,096	26,737	55,583	-	-	9,615	4219
Total	**144,543**	**31,077**	**57,528**	**4,914**	**6,071**	**11,130**	**33,823**
%age of total	100.0%	21.50%	39.80%	3.40%	4.20%	7.70%	23.40%

Source: Computations by the authors' team

4 A call to action

The message is clear: both the natural environment and social institutions are at a serious level of deterioration and require urgent action for regeneration/revival. There are five levels at which action will have to be taken:

1. Individuals by themselves; as citizens, as activists, as thinkers and influencers
2. Individuals by joining local community Social Groups; and by individuals joining organised NGOs/Civil Society Institutions
3. Gram Panchayats/Zilla Parishads/Town Wards / Municipalities
4. State and Central Government departments and specialised agencies
5. International Cooperation at the Regional and Global level

We give below some suggestions for action at each of these levels, broadly covering environmental, social, and economic aspects.

4.1 Individual actions

4.1.1 Environmental aspect

Every individual will have to become mindful of their ecological footprint, in terms of carbon dioxide emissions contributing to global warming and in other ways in which we damage the environment – whether by excessive use of fossil fuel energy, for heating or transportation, or by polluting the environment with untreated effluents and solid waste.

While it may appear that the contribution of each individual is miniscule and cannot make a difference to large trends like global warming, we must recognise that the effect of our individual actions gets multiplied by the population of the village/district/state or country. So, at the level of India, each ton of carbon emissions saved by an individual over a year will add up to 1.5 billion tons of carbon dioxide emission reduction. Of course, this is a fraction of the over 37 billion tons globally.

There are two ways in which individuals in Himachal can impact the environment – first by cutting their own emissions and second by persuading others to do so. For example if the individual is a rice farmer, she should adopt techniques such as system of rice intensification (SRI) which, involves cultivating rice with as much organic manure as possible, starting with young seedlings planted singly at wider spacing in a square pattern; and with intermittent irrigation that keeps the soil moist but not inundated, and frequent inter cultivation with a weeder that actively aerates the soil.

Another environmental action that the farmers of Himachal can take is to ensure that no land is left fallow or unused in their small farms. As per land use data, as much as 15% of cultivable land is at present not cultivated. Using water harvesting structure and polyhouses can obviate some of the causes for keeping land unused.

Another major individual action can be by adopting a largely vegetarian diet since meat-based food requires a lot more energy and its production emits a lot more methane from animal excreta. To the extent animal dung is produced, it should be used in bio-digesters where the methane can be used a fuel. Methane is 84 times more harmful than carbon dioxide in a 20-year period. Methane is the second most important greenhouse gas contributor to climate change, after carbon dioxide and accounts for about 16% of emissions. For those who keep cattle for dairy purposes, setting up a biogas plant would both benefit the environment, as also lead to savings on purchase of kerosene, LPG or fuelwood.

Individuals living near forests in Himachal should ensure that forests fires do not get started due to rash actions, would be an important contribution. Not only these fires damage the forest where the fire burns, but the ashes get deposited over the glaciers and cause those to melt much faster due to greater heat absorption.

4.1.2 Social aspect

Individual actions at the social level include ensuring that one interacts adequately with one's neighbours and local community. Merely interacting with one's own kind is not enough as it builds strong bonds with "people like us" but alienates others. Thus, social interaction should cut across gender, age, caste, religion, language and class. Only this can establish the basis for harmony among those with diverse backgrounds. It is only when we understand and may be even try out some of the ways of others – in terms of food, dress, festivals, ways of looking at the world and so on, that we can appreciate diversity and its benefits.

As a more assertive level, individual social action can be to firmly oppose any attempts at exclusion, injustice or disharmony, merely on grounds of gender, age, caste, religion, language and class. If for example, one finds some people excluded on the grounds of caste or others on the basis of religion, this should be raised and discussed. These discussions can then be used to bring about a greater awareness among fellow beings in the community about the importance of the values embodied in the preamble of our Constitution – justice, liberty, equality and fraternity, along with sovereignty, secularism and socialism.

In the context of Himachal, those who live in the foothills or the lower altitudes can visit the distant districts of Lahaul-Spiti, Kinnaur and Sirmaur and develop friendly relationships with people living there. These can later lead to mutually profitable business relationships as well. Moreover, all Himachalis who believe in the Constitution's Preamble value of fraternity, need to assert the right of Muslims to live in the state like any other citizen and condemn any attempts to communalise politics.

4.1.3 Economic aspect

Individual actions at the economic level include ensuring first of all one's own steady income through a job or self-employment of any kind. If one wants a certain type of job, getting qualified for it in terms of education and skill acquisition should be one's prime concern.

If no suitable jobs are available, then one should try self-employment in an activity in which there is local demand for the product or service. For this one may have to also acquire both business and technical skills and move out of one's zone of comfort.

Yet, as we know, many people establish micro-enterprises. Data from the Annual Survey of Unincorporated Enterprises (ASUSE), 2024 highlight report[10] just released shows that in the one-year period 2023 to 2024, Himachal Pradesh had 5,18,709 such enterprises, which increased to 5,38,350 in ASUSE 2023-24. So 20,000 new enterprises came up in a year.

Many young people are unwilling to stay back and work in rural areas as they think they will have to do traditional farming which is not very remunerative. As it happens there are now a large number of opportunities in diversified agriculture which includes organic farming, production of bio-inputs, mushroom cultivation, horticulture, floriculture and ornamental plants, medicinal and aromatic plants, dairy, poultry, fishery and bee-keeping. In addition, lots of jobs will arise in green enterprises, for the regeneration of jal jangal, jameen and jalvayu as well as in renewable energy as well as recycling of materials. For women who want to work part of the time because of home care duties, there are jobs opening for running home stays in rural areas.

The NEW strategy will lead to over 6.15 lakh sustainable new jobs in HP at a remunerative wage rate. This will be adequate to take care of current unemployment as well as the incremental work force.

4.2 Social groups, NGOs and Civil society institutions' actions

4.2.1 Environmental aspect

Individuals can be more effective by joining environmental action groups / NGOs to undertake clean ups of solid waste, tree plantation and spreading awareness. These groups can also be used to influence organised public systems such as panchayats and municipalities to do more for conserving the environment such as banning leaf fall burning, composing food and organic waste, recycling plastic and other solid waste, treating sewage with minimum methane emissions, prohibiting dumping of solid waste and sewage in rivers, establishing green belts, renovating water bodies for water harvesting and recharging groundwater. Polluting industries should be taken to task and citizens should report them.

4.2.2 Social aspect

As per CAMS report[11] 0.9% of persons between 6 to 18 years of age in Himachal have never attended school. That comes to roughly 12,000 persons in HP. For them individuals can join local social groups or NGOs and volunteering for conducting classes in simple literacy.

[10] https://www.mospi.gov.in/sites/default/files/publication_reports/Factsheet_of_ASUSE_2023_24.pdf

[11] https://www.mospi.gov.in/sites/default/files/publication_reports/CAMS%20Report_October_N.pdf

For those who are literate, classes could be conducted in financial or digital literacy, career counselling for youngsters, helping with a community library or cultural centre, or arranging support services for the elderly and the disabled, and those temporarily unwell, or organising community celebration of the important festivals of all communities – Holi, Diwali, Id, X-Mas, Gur Purab, Buddha Purnima or Mahavir Jayanti. All these activities build mutual familiarity, trust and collaboration – all of which are the building blocks of social capital.

Any functioning society needs widespread mutuality, trust and collaboration, all of which come in useful whenever there is an adverse event – whether for an individual, a family, a neighbourhood, a city or a region, as has happened at the time natural disasters with increasing frequency. COVID taught us that eventually it was the courage and forbearance of affected individuals, the kindness of other individuals, and the big-heartedness of organised communities and civil society which saved us from the inaction and ineptitude of the "authorities" at various levels of government.

4.2.3 Economic aspect

Joining a group –whether an informal self-help group or an organised NGO or a cooperative or a farmers' producer organisation can greatly strengthen individual economic progress.

Coming together even in informal groups is a great incentive for saving regularly. Women from lower-income households organised in SHGs can save in SHG Savings in banks is the next step, taking advantage of the fact that 97.7% women in HP have bank accounts, as per the CAMS Report, 2022-23. In contrast, people in HP do noy borrow much from banks.[12]

As per CAMS Report only 7.3% of persons in HP were borrowers as against 18.3% for all India. Borrowing for productive purposes can be encouraged. Also, as per the CAMS Report, the average per household medical expenditure per annum was Rs 3564 in urban HP and Rs 2936 in rural HP, which is a significant part of the annual per household incomes.[13] Thus, taking insurance cover against unforeseen adverse events – be it health incidents or accidents or fire and theft – should be encouraged.

4.3 Gram Panchayats/Zilla Parishads/Municipalities

4.3.1 Environmental aspect

Public representative bodies such as Gram Panchayats and Zilla Parishads need to do more for conserving the environment. Under the 11th Schedule of the 73rd Amendment to the Constitution, PRIs have been assigned the function of taking care of the basic natural resources of the village – jal, jangal, jameen – or water, forest and land.

[12] Ibid.

[13] Ibid.

They also get funds under the Integrated Watershed Management Program and the MGNREGA Program to undertake projects to conserve or regenerate these natural resources, which are critical for the livelihoods of the rural population and indirectly even for the urban population as many of these resources (or their absence) affects urban populations too.

As part of the Panchayat Development Plans (PDP)[14], each panchayat should make a comprehensive five-year plan for regenerating their water, forest and land resources in their jurisdiction and they must be required to submit a report on the progress made.

Likewise, under the 12th Schedule of the 74th Amendment to the Constitution, Urban local bodies or Municipalities have been assigned the function of taking care of land use planning, water supply, sanitation, solid waste management and public health. They must thus prohibit dumping of solid waste, sewage and untreated industrial effluent in rivers and ban leaf fall burning. They must encourage composing food and organic waste, recycling plastic and other solid waste, treating sewage, establishing green belts, renovating water bodies for water harvesting and recharging groundwater.

They receive funds for these activities under the Swacch Bharat Mission and have been empowered to impose fines and take other civic action to prevent environmental damage. Each ULB should be required to come up with a five-year City Development Plan[15], as was done under the Jawaharlal Nehru Urban Renewal Mission (JNURM) in 2009-10, for the land and water resources and infrastructure development for public services in their jurisdiction and they must be required to submit a report on the progress made.

4.3.2 Social and economic aspects

Under the 11th Schedule of the 73rd Amendment to the Constitution, PRIs have been assigned the function of taking care of poverty alleviation and welfare of the weaker sections in the panchayats, as well as run schools and primary health centres. Likewise, under the 12th Schedule of the 74th Amendment to the Constitution, Urban local bodies or Municipalities have been assigned the function of taking care of slum upgradation, poverty alleviation and welfare of weaker sections.

Programs have increasingly been funded for this like the National Social Assistance Program which provides pensions to the aged, the disabled and to widows. Under the Indira Awas Yojana, the rural poor are assigned housesits and given built houses. Under the PM Awas Yojana the urban poor are given subsidised long term housing loans. The National Rural and Urban Livelihood Missions are there to promote income generating activities for the rural and urban poor respectively.

The issue has been that these are all run by state government officials and the Panchayats are treated as last mile contractors. PRIs and ULBs must be given the power over the funds and functionaries to perform the functions assigned to them under the Constitution.

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[14] People's Plan Campaign **https://gpdp.nic.in/**

[15] City Development Plan Toolkit. https://localbodies.up.nic.in/Toolkit/CDP.pdf

4.4 State and Central Governments

Since the 1972 United Nations Conference on the Human Environment in Stockholm, a lot of progress has been made in environmental knowledge, legislation, regulation and preventive and promotional programs. Yet the fact of the matter is that the overall environmental situation has deteriorated since then. This may be due to the rising population, multiplied by rising per capita consumption levels and one could ask counter-factually what the situation would be if even the extant environmental knowledge, legislation and regulation was not there. Be that as it may, additional efforts will have to be made, and urgently to tackle the environmental crisis, both of global warming triggered climate change as also pollution and degradation caused by human and industrial activity.

The Central Government would have to significantly shift its policies from dragging status quo as far as possible to championing change, as it has done in some aspects such adoption of renewable energy. The fact that over 46% of India's energy generation capacity is now from renewable sources, though in terms of actual generation it is still only 22% is a good example. By dragging its feet over transition from coal, the Indian government wants to be on both sides of the fence. By adopting 2070 as the date when India will become net zero in GHG emissions, when in 2024, the Earth has breached the 1.5 Celsius mark for global warming, India lost its moral standing while arguing for more funds for mitigation and adaptation at the COP29 at Baku recently for example. No amount of preaching adoption of an environmentally conscious lifestyle under the Mission LiFE cuts no ice in front of the fact that India is now the third largest emitter of GHGs. While we should continue to fight for climate justice, we cannot continue to add to the problems. It is our common future after all.

The state governments have an important role to play both as key implementers of these programs as well closer to the ground monitors of the environmental situation. For this they have to get off the view that higher GSDP growth rate is an unmitigated virtue. They must assess every growth proposal for what it does to the environment and what it does for jobs. The Environmental Impact Assessment reports should not be seen as mere formalities that have to be gone through to expedite "development", not should environmental activists be dubbed as anti-development. In addition, the state pollution control boards need to be better equipped and empowered to monitor and if necessary, penalise polluters. Investments in municipal and panchayat capacity in solid waste management and sewage and drainage, must be made.

4.4.1 Social aspects

That brings us to the social aspects. The budget outlays need to be increased for human development – nutrition, health, education and vocational training – as well as on institutional capacity building all the way from SHGs and cooperatives. We have estimated the outlay required for this in detail in the Table 35 above.

The hill states have always been the abode of peace and tranquillity, and people came here for self-discovery and spiritual solace. Now, however, the erstwhile pilgrimages have become crowded tourism hotspots and the minority community, miniscule in number is being hounded out with hate speeches, concocted accusations and fomented riots.

The politics of divisiveness in pursuit of electoral gains must be eschewed. While the ruling party and the central government must ensure that the constitutional rights of all individuals are respected, the operationalization of this has to be managed by the state government.

4.4.2 Economic aspects

The Central Government should use the opportunity to massively increase investments in regeneration of jal, jangal, jameen – water, forest and land. Elsewhere we have estimated that Himachal would need to invest Rs 31,347 crore in this. If it does that however, in addition to the environmental benefits, there are benefits in terms of generating employment for crores of people, particularly in rural areas, and of enhancing agricultural productivity and rural incomes, and reducing rural-urban migration. And to top it all, if the government chooses to establish a mechanism to aggregate the carbon sequestration and emission reduction credits that will arise from lakhs of households, farms and micro-enterprises, then some of the finance could also be raised from the international climate finance market.

The state governments have to promote industry and service enterprises in sectors and size that is in tune with the natural, human and financial resources of the state. Certain type of manufacturing has got located, usually in the foothill districts, under the earlier regime of "backward area" incentives. These included pharmaceuticals, auto components and assembly units. There is a need to diversify both sectorally and spatially, such as in the IT sector and in renewable energy generation.

Himachal should add Apple to apples

Taking advantage of the reach of the telecom signal anywhere, as also the plentiful availability of solar energy and hydel power, and an educated youthful population (though it will need further specialised training) the remote districts can be made into software hubs. For example, artificial intelligence-based computer applications consume large amounts of energy and telecom data bandwidth. The remote districts can build a competitive advantage for these, provided investments are made first in educating the local youth to perform the technical tasks, and in the energy and telecom infrastructure.

Himachal has been known for apples – an entire eco-system has come up over the years to support this sector, from a research university to sapling nurseries to orchard management equipment to transport and cold storage.

As global warming is disrupting the apple economy, the government can take steps to help move the orchards to higher altitudes. However, alternatives need to be thought of. It is time now for Himachal to transition to Apple – the brand is merely being used as a reminder that the computer software and hardware field is the new growth sector that the state needs to focus on.

Among services, tourism has been heavily promoted. Mass tourism has brought some income but also a lot of problems including over-crowding, defacing of hill-stations and tons of solid waste. It is time to diversify tourism, particularly to the more remote districts. This will also bring in higher end tourists and open up local jobs through home stays and support services. Even the mid altitudes can offer "experience tourism" such as plucking apples.

4.5 International Cooperation – Regional and Global

Many of the problems of India's hill states are beyond their control and require not just support from the Central Government, but in some cases, most notably climate change, need international support. There are some issues such as water sharing of transnational rivers, which require regional cooperation.

4.5.1 Environmental aspect

Natural phenomena do not know humanly drawn boundaries. Climate change sweeps across national borders, just as cyclones and hailstorms, heat waves and earthquake tremors cross these without a visa. It becomes necessary therefor to seek international cooperation – in monitoring, research, in prevention and mitigation where possible, and in disaster relief when adverse events do happen.

The most evident case for regional cooperation is about sharing of waters which flow across countries. Tibet is regarded as the roof of the world, is the source of two major southwest flowing rivers – Indus and Sutlej and three east/southeast flowing rivers – Yangtze, Brahmaputra and Mekong. The Tibetan plateau frequently experiences earthquakes as it is located over the tectonic plates. Construction of major dams by China, such as the Three Gorges dam and recently approved what will be the "largest dam in the world" on the Brahmaputra close to the Indian border,[16] can disrupt the seismic balance of the fragile Himalayan range. In this case India is the lower riparian state and thus has to seek China's cooperation.

The Indus Water Treaty of 1960 between India and Pakistan was hailed as an example of international cooperation and accommodation, though it has been re-examined now on the ground that India yielded too much. These issues will have to be resolved through regional cooperation. India for example, can use the Shanghai Cooperation Organisation (SCO) as a forum where it can raise the issue of the appropriate treatment of the Tibetan Plateau on environmental grounds.[17]

Due to the impact of global warming, many of the glaciers, which are critical freshwater resources are rapidly melting, according to the IPCC..."the Hindu Kush Himalaya could face the potential loss of more than two-thirds of Himalayan glaciers by the end of this century. The UN declared 2025 as an International Year of Glaciers' Preservation an international conference is going to be held on the topic in Tajikistan. As the conference announcement[18] says: "The ultimate objective is to ensure that individuals reliant on glaciers and snow, as well as those directly impacted by the Earth's cryospheric processes, receive hydrological, meteorological, and climate services specifically tailored to their needs. These services should acknowledge the vital role of mountain regions as the cradle of the cryosphere and the primary source of global freshwater and ecosystem services for the entire world.

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[16] https://www.thehindu.com/news/international/china-defends-plan-to-build-worlds-largest-dam-over-brahmaputra-river-in-tibet-says-will-not-affect-lower-reaches/article69034001

[17] The SCO is an intergovernmental organization founded in 1996 by China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan for regional cooperation. India was granted observer status in 2005 and became a full member in 2017. In 2022, India served as the President of the SCO

[18] International Conference on Glaciers' Preservation, 2025
https://sdgs.un.org/partnerships/international-conference-glaciers-preservation-2025

4.6 Conclusion

This study was an attempt to take a comprehensive look at the environmental, social, i and economic situation of Himachal Pradesh and the lives and livelihoods of its inhabitants. Though there are numerous positives, there are several worrying trends.

At the environmental level, the biggest threat is the 45% decline in glacial surface area, which is bound to cause reduction in the river flow and the resulting water shortages will have far-reaching effects. Research must be conducted on how to minimise the effect of global warming on glacial melt. In addition, to augment water supply, there is scope for establishing many water conservation structures and also recharging underground sources such as hill springs.

The dense forest area is being maintained but overall, there is scope for increasing the area under forest cover. The forest outside of the jurisdiction of the forest department, constitutes 31% of the actual forest in the state and this requires special care so that the tree cover is maintained. The government must come up with policies that incentive the owners of private forest to preserve them. The soil quality in cultivated area is deteriorating and needs farmyard manure and leaf compost.

We have recommended a program for investing in the regeneration of Jal, Jangal Jameen and the government must act on it. We have recommended an investment over five years of Rs 20,844 crore in the regeneration of water commons – glaciers, rivers, lakes, ponds; Rs 8448 crore in the regeneration of forest commons including pastures and Rs 2055 crore in regeneration of common and private. A large part of this will have to come from the government budget. The justification for this expenditure is that it will lead to increase in the GSDP by Rs 7837 crore pa and generate employment for 2.08 lakh persons.

One new source of funds for environmental regeneration suggested by us is the sale of AMSERs or Aggregated Micro-carbon-credits for Sequestration and Emission Reductions. We have estimated that Rs 1381 crore can be raised per annum from the sale of AMSERs in global carbon markets. This is nearly 20% of the proposed expenditure of Rs 6270 crore pa.

On the social front, the education system is in good shape except that the vocational component needs to be seriously enhanced from the present capacity of 6000 per annum to about ten times as much. In addition, specialised skill programs must be organised for sectors such as organic agriculture, renewable energy, waste recycling, electronic manufacturing, software including artificial intelligence applications, and eco-tourism. In the health system, the shortage of specialist doctors outside big towns must be made up through a chain of telemedicine outlets. Lifestyle improvements must be part of the public health messaging as diabetes and hypertension seems to be affecting a significant part of the population. Panchayats, Zilla Parishads and Municipalities must become more participatory, transparent and accountable and civil society institutions will have to take the lead in this.

We have recommended an investment of Rs 17,100 crore over the next five years social development. Of this, Rs 7840 crore is for upgrading of nutrition, healthcare, education, skill development services; Rs 8790 crore is for strengthening social capital by investing in households, neighbourhood communities and local participation institutions such as self-help groups and resident welfare associations' and Rs 500 crore for institutional development of panchayats, zilla parishads and municipalities.

This investment will rebuild the eroded social capital in rural areas, impacted by the environmental and livelihoods crisis leading to migration. It will also help to build afresh the social capital badly needed to run the cities in the state as it urbanises. As cities tend to have a much more diverse and mobile population, deliberate efforts must be made to build social capital. This will positively impact the governance of municipal bodies as also most of the newly created sectoral institutions which are mostly located in urban areas.

For the third prong of the NEW strategy, Well-th creation, we argue that both the agriculture and allied sector as well as the manufacturing and services sector in Himachal will have to upgraded significantly so that they can cater to changing local demand and also to demand from metro and exports. This will mean new products and services, which will need more capital equipment, more skilled manpower and a supportive eco-system.

For agriculture, we have recommended investment of Rs 21,000 crore over five years, largely funded by bank loans, to upgrade approximately 10.3 lakh farms in Himachal. As the state has nearly 9,5 lakh sub-marginal (below 1 acre) holdings, we have recommended that they be encouraged to cultivate flowers, medicinal plants, mushrooms and bee-keeping. For this an investment of Rs 3,152 crore has been recommended. Marginal and small farms need to be assisted in enhancing productivity through soil and water conservation, irrigation, greenhouses, growing cereals and vegetables for local markets. For this an investment of Rs 9,457 crore has been recommended.

To make Himachal agriculture more commercial, we recommend that the 36,000 medium sized farmers to transform into commercial farmers - growing cash crops, with controlled irrigation, polyhouses, aggregation and urban market access. For this an investment of Rs 3,620 crore has been recommended. Finally, the 4800 large farmers grow crops aimed at metro and export markets, with polyhouses, packhouses. For this an investment of Rs 2,400 crore has been recommended. In addition, 5% of small and medium farmers become livestock enterprises - enhancing productivity through breed improvement, stall feeding, and setting up biogas digesters, producing compost etc. For this an investment of Rs 2,467 crore has been recommended.

The collective impact of these interventions and investments would be to transform Himachal's agriculture and allied sector into something that is reliant in face of climate change, market-oriented but trendsetting, offering healthy food ingredients grown without agrochemicals, and mainly by small famers.

To accelerate the transition of employment from agriculture to the non-farm sector, the MSMEs of Himachal will have to helped to move to the next orbit of productivity as well products. We have recommended that 5.5 lakh own account enterprises (OAEs) which employ only the owner-entrepreneur and their family members, be upgraded with better equipment, quality ingredients and more skilled owner-entrepreneurs.

This will also require a lot of technical inputs, support services as well as market linkages, all of which will create more jobs and more income. For this an investment of Rs 37,000 crore has been recommended, largely from banks and own funds.

In addition, Himachal has about 64,000 hired worker enterprises (HWEs), of which only 4000 are in manufacturing while the rest are in trade and services. These HWEs will have to be upgraded with better equipment, quality ingredients and more skilled workers. For this an investment of Rs 38,000 crore has been recommended, largely from banks and own funds. In addition, we assert that Himachal should encourage entrepreneurs who are social, ethically and environmentally responsible (SEERs). Only when SEER entrepreneurs become the normative majority will Himachal be able to avoid the negatives of industrialisation – worker exploitation, systematic corruption and environmental degradation.

The NEW strategy will ensure that benefits of the investment accrue in terms of:

- Environmental benefits in terms of more availability of clean water, less impact of monsoon failure or other adverse events, increase in green cover, production of more nutritious food crops with less chemical intensity, and reduction in carbon dioxide and GHG emissions as also carbon dioxide sequestration, which if aggregated as AMSERs and sold in the global carbon markets will fetch Rs 1380 crore per annum.

- Social Development - Health and Education improvements which will greatly enhance citizens' quality of life and increase in their healthy active life years. They will be more productive and thus be able to earn more. In addition, the release of social energies and institutional effectiveness increase would lead to collective action on many fronts that will positively impact citizens' lives and also the environment.

- Economic Growth – We estimate that due to these investments, the GDP will grow by about 1/7th above the normal growth, so say 8% pa in place of 7% pa and more importantly it will be more diversified sectorally and geographically and be more inclusive covering a greater proportion of the disadvantaged – women, the marginal farmers and landless, and micro-entrepreneurs. The NEW strategy will lead to over 6.15 lakh sustainable new jobs in HP at a remunerative wage rate. This will be adequate to take care of current unemployment as well as the incremental work force.

We have ended the report with a call to action at five levels:

- Individuals by themselves; as citizens, as activists, as thinkers and influencers
- Individuals by joining local community Social Groups; and by individuals joining organised NGOs/Civil Society Institutions
- Gram Panchayats/Zilla Parishads/Town Wards / Municipalities
- State and Central Government departments and specialised agencies
- International Cooperation at the Regional and Global level

We have given some suggestions for action at each of these levels, broadly covering environmental, social, and economic aspects, in the last chapter.

We have no doubt that if the NEW strategy is adopted, Himachal will see the ushering in of Inclusive and Sustainable Development, which we term in Hindi as **Hara Bhara Su-raaj** - green, fulfilled and well-governed.

5 Appendix 1 - Status of the environment and challenges

Himachal is endowed with rich natural resources that include 37,033 sq km forest land, 5.4 lakh hectare agricultural land, 800 glaciers, more than 2500 permanent snow fields, amazing landscape and biodiversity. This huge natural wealth is the basis of the lives of all in Himachal Pradesh. The degradation of natural wealth and deprivation of masses has direct economic consequences. These two factors are crucial for ensuring equity and harmony in society and economy. However, with degradation of natural wealth all primary sector livelihoods are in bad shape and that is why no growth has been observed in it for the last two decades. Moreover, the concentration of wealth has helped big business and disproportionally harvests natural capital such as Jal, Jangal and Jameen. Major impact of ecological degradation and social deprivation are as follows:

5.1 Jal - state of water resources

The entire Himalayan mountain range is more vulnerable to global warming compared to other mountain ranges in the world. An assessment of the ICIMOD in 2019 revealed that the temperature of Hindu Kush Himalayas are rising faster compared to the global average.[19] The IPCCC report had also found that the warming has occurred in the Himalayan mountain range that has changed the snowline, glaciers and precipitation in the Hindu Kush Himalayas.[20] HP is one of the important states in the western Himalayan region that has global responsibility to protect the Himalaya. A recent study by scientists of IIT Hamirpur found that the total glacial area of HP has decreased from 4020 sq km in 1994 to 2198 sq km in 2021.[21] Apart from snowlines and glaciers the impact of global warming is now visible on other natural resources such as degradation of forests, land and drying of water sources.

HP is endowed with five major river networks namely Satluj, Beas, Ravi, Chenab and Yamuna. Satluj has the largest catchment in the state followed by Beas and Chenab. 90% of river catchment in the state is part of the Indus River basin. However, the Yamuna River which shares nearly 10% of the total catchment in the state is part of Ganga River basin.[22] This complex network of rivers and their tributaries is a significant source of water in HP.

The state also has a huge deposit of snow in the form of glaciers and permanent snowfields. The seven major river catchments of the state have 800 glaciers spread in 3,124 sq km area. Moreover, 2,679 permanent snowfields spread in a 1,775 sq km area feed these river basins. The Chenab river basin has the highest number of glaciers (457) and Satluj River has the highest number of permanent snowfields (857).[23] The snow deposit in the higher altitudes of the state feeds a number of perennial rivers and hundreds of springs in the state.

[19] ICIMOD, 2019, The Hindu Kush Himalaya Assessment, https://doi.org/10.1007/978-3-319-92288-1

[20] International Panel on Climate Change (IPCC) https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Mountains.pdf

[21] Sharma et al, 2022, Glacier retreat in Himachal from 1994 to 2021 using deep learning, Remote Sensing Application- Society and Environment, Vol. 28, https://www.sciencedirect.com/science/article/abs/pii/S2352938522001781

Table 12: Major Water Statistics of HP

Number of major river catchments	Number	04
No of Glaciers	Number	800
Number of Permanent snowfields	Number	2,679
Number of Traditional water sources	Number	10,512
Number of villages with springs	Number	2,597
Groundwater recharge worth area	Sq. Km.	3,468
Annual Groundwater recharge	BCM	1.11
Number of groundwater sources	Number	8,186

Source: Compiled from various government sources

Perennial springs, lakes and other traditional water sources also contribute significantly in providing water to local communities for various usages. According to a survey conducted in 1991-93, there are 33,350 water sources meeting water demands in rural Himachal Pradesh. The survey has also enumerated 8,186 ground water sources in the state.[24] Yet another study commissioned by NITI Aayog in 2017 found that 2,597 villages of the state have springs.[25] As per the census of water bodies released in 2023 by the Ministry of Jal Shakti, HP has 88,017 different kinds of water bodies such as ponds, tanks, lakes, reservoirs etc.[26]

Table 13: Census of Water Bodies- HP

Type of Water Body	Number
Pond	3,247
Tanks	56,583
Lakes	106
Reservoirs	249
Water Conservation structures	893
Other	26,939
Total	**88,017**

Source: Compiled from various government sources

[22] T E R I, 2015. Green Growth and Water in Himachal Pradesh. New Delhi https://www.teriin.org/projects/green/pdf/HP -Water.pdf

[23] HP State Centre for Climate Change, Directory of Water Resources in Himachal Pradesh, https://hpccc.hp.gov.in/SCCC%20Reports/Water%20Sources%20in%20Himachal%20Pradesh.pdf

Groundwater is important to meet water demand in valleys and lower altitudes. According to the assessment of the Central Ground Water board, HP recharges 1.11 BCM per year and it has potential to extract 1.01 BCM groundwater per year. The report further observed that all its monitored areas are in the safe category and the cumulative water draft of the state is 34.95%. Groundwater is used majorly in districts like Kangra, Sirmour, Mandi, Solan and Una. In total 0.35 BCM groundwater was extracted in the last assessment year for irrigation, industrial and domestic usages. Irrigation is the highest consumer of groundwater (0.18 BCM) followed by domestic use (0.12BCM) and Industrial (0.05 BCM).[27]

5.1.1 Water challenges

HP seems to have high availability of water from a variety of sources ranging from groundwater to glaciers. However, various studies have found that all types of water sources are facing challenges leading to shortage of water, drying of landscape and extreme weather conditions such as drought and flooding. Moreover, the demand for water has grown exponentially in the last couple of decades. The Human Development Report (2002) of HP estimated that the total water requirement of the state would increase from 454.5 Million Litre per Day (MLD) in 1999 to 726 MLD in 2021.[28] The Energy and Resource Institute (TERI) projected that the water demand of the state will go up to 1,000 MLD in 2030.[29] The major supply side challenges faced by the state are as follows

5.1.2 Receding of glaciers and threat of glacial lake overflow floods

A study conducted by scientists of IIT Hamirpur in 2022 found that glacial area in HP is decreasing at the rate of 67.84 sq km per annum. The study calculated that the total glacial area has decreased from 4,020 sq km in 1994 to 2,198 sq km in 2021.[30] As per The Tribune, 24 Feb 2025,[31] "The threat of glacial lake outbursts due to rising temperatures and accelerated melting of glaciers looms large over critical infrastructure like dams, roads and bridges... Glacial lakes like Vasuki in Kullu and Sangla in Kinnaur are especially at risk."

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[24] Himachal Pradesh Development Report, 2002, Department of Planning, http://164.100.161.239/plans/stateplan/sdr_hp/sdr_hpch2.pdf

[25] NITI Aayog, 2017, Inventory and Revival of Springs in Himalayas for Water https://dst.gov.in/sites/default/files/NITI-Aayog-report-Springs-29Dec2017-FINAL.pdf

[26] Ministry of Jal Shakti, 2023, First Water Bodies Census, Vol. 1 https://cdnbbsr.s3waas.gov.in/s3a70dc40477bc2adceef4d2c90f47eb82/uploads/2023/04/2023040672.pdf

[27] GoI, CGWB, 2023, Dynamic Groundwater Resources of India, 2023, https://cgwa-noc.gov.in/LandingPage/LatestUpdate/NCDGWR2023.pdf

[28] Govt. H.P. Human Development Report, 2002, https://planning.hp.gov.in/plg_Reports/HP HDR-02.pdf

[29] TERI, 2015. Green Growth and Water in Himachal Pradesh. New Delhi. The Energy and Resources Institute. 14 pp. https://www.teriin.org/projects/green/pdf/HP -Water.pdf

[30] Sharma et al, 2022, Glacier retreat in Himachal from 1994 to 2021 using deep learning, Remote Sensing Application- Society and Environment, Vol. 28 https://www.sciencedirect.com/science/article/abs/pii/S2352938522001781

[31] https://www.tribuneindia.com/news/himachal/studies-indicate-high-threat-of-glacial-lake-burst-in-kullu-lahaul/

5.1.3 Drying up of water sources

Drying up of water sources such as ponds, tanks and spring is a serious issue in the state. A report of NITI Aayog published in 2017 observed that nearly 60% of springs have dried in the Indian Himalayan Region. The Census of Water Bodies released by the Ministry of Jal Shakti in 2023 observed that 12,146 out of 88,017 water bodies are not in use in the state. Of these nearly 8,000 water bodies are not in use because either they are dried or destroyed.

5.1.4 Pressure on underground aquifers

While the groundwater is not a very significant source of water right now, dependency on it is expected to increase in future due to shortage of surface water. The latest report of CGWB reveals that nearly half of wells monitored by it observe a decrease in water level.

5.2 Jangal – State of forests in HP

5.2.1 Forests in the Western Himalayan States

The Indian Himalayan region is divided into two broad segments: eastern and western Indian Himalaya. Western Indian Himalayas consist of the states of Himachal Pradesh, Uttarakhand and UTs of Jammu & Kashmir and Ladakh.

The entire Indian Himalayan region is highly fragile and sensitive to both natural calamities and anthropogenic activities. Earthquakes, Glacial Lake Overflow Floods (GLOFs), river Floods, Forest Fires are major devastating Himalayan disasters which get accelerated due to the high rate of anthropogenic activities in the region.

Forests in the Western Himalayan region play an important role in preventing the devastating impacts of disasters and improving regional climate change resilience. In the last two decades the total forest cover of the Indian Himalayan region has increased from 59,535 sq km in 2001 to 63,516 sq km in 2023. It accounts for an absolute increase of about 4000 sq km of forest cover in the region.

Table 14: Forest Cover in Indian Himalayan States

State/UT	2001(Area in sq km)			2023(Area in sq km)		
	Dense Forest	Open Forests	Total Forest Cover	Dense Forest	Open Forests	Total Forest Cover
Ladakh	NA	NA	NA	511.34	1,774.58	2,285.92
Himachal Pradesh	10,429.00	3,931.00	14,360.00	10,397.89	5,182.46	15,580.35
Jammu & Kashmir	11,848.00	9,389.00	21,237.00	12,215.35	9,131.04	21,346.39
Uttarakhand	19,023.00	4,915.00	23,938.00	17,784.21	6,519.62	24,303.83
Sub Total (West Himalayas)	41,300.00	18,235.00	59,535.00	40,908.79	22,607.70	63,516.49
Sub Total (East Himalayas)	82,043.00	52544	134587	84,615.33	48389.87	133005.2
Grand Total (Himalayas)	1,23,343.00	70,779.00	1,94,122.00	125,524.1	70,997.57	1,96,521.69

Source: ISFR, 2001 and ISFR, 2023

While the western Himalayan region has observed increase in the total forest cover between 2001 and 2023 its quality of forest cover has deteriorated. The dense forest (comprising of very dense and moderately dense forests) in the western Himalayan region has decreased from 41,300 sq km in 2001 to 40,908.79 sq km in 2023.

The degradation of dense forests in Uttarakhand is significantly high, while for Himachal it has been marginal. However, J&K saw a moderate increase in the dense forest area in the same period.

5.2.2 Forests, actual forests and missing forests

Out of the total geographical area of 55,673 sq km of the state, 37,948 sq km is recorded as forest under various central, state and local laws. In other words, little more than 68% of the total geographical area of the state is recorded as forests. Details of forests according to their management are given in the following table.

Table 15: Forests by Category

Forests according to Management	Area (in sq km)
Reserved Forests	1,898
Protected Forests	33,130
Unclassified Forests	2,005

Source: State Forest Department, H.P.

Himachal has a huge network of national parks and wildlife sanctuaries to manage its forest. The state has five national parks, 26 wildlife sanctuaries and four conservation reserves. The largest national park of the state is Great Himalayan National Park (905 sq km) and largest wildlife sanctuary (WLS) located in Lahaul Spiti is Kibber WLS (2220 sq. km.).

While the legally recorded forest of the state is more than 68% of its total geographical area, the actual forest is very less compared to its recorded forest.

The latest India State of Forest Report (2023) observes that out of a total 37,033 sq km recorded forest the actual forest is only 10,705 sq km. The ISFR does not give account of as large as 26,328 sq. km (71%) forest land of the state. Presumably a large part of this is permanently snow-covered.

According to the ISFR-2023 the total forest cover of the HP is 15,580 sq km out of which a significant forest area of 4,873 sq km is outside of the recorded forest. This forest outside the recorded forest includes forest owned by individual and private agencies.

The forest outside of recorded forest constitutes 31% of the actual forest in the state. Details of the forest cover are given in the following table.

Table 16: Forests as per recorded status

Forest Status	Area in sq km
Total Geographical Area of HP	55,673
Total Recorded Forest	37,033
Actual Forest Cover in Recorded Forests	10,644
Un Accounted Forests (missing forests)	26,398
Actual Forest cover in Forest outside Recorded Forests	4,799

Source: ISFR, 2021

The state is struggling with deterioration of its quality of forests. In the last two decades the total forest cover of the state has increased by 8.5% from 14,360 sq km to 15,443 sq km. However, the data shows that the dense forest in 2021 has decreased compared to 2001 by 166 sq km.

The ISFR data also reveals that from 2011 to 2021 the state lost 61 sq km of dense forest with canopy density more than 70%.

Forests in HP have been the backbone of local subsistence and a significant source of state revenue. It is highly diverse which ranges from dry scrub forests at lower altitude to alpine pasture at higher altitude. The FSI has recorded 38 different forest types in this small Himalayan State.

Table 17: Quality of Forest in HP

Year	Total Forests	Dense Forest (Canopy Density more than 40%)	Open Forest (Canopy density between 10 to 40%)
1991	11,780	8,911	2,869
2001	14,360	10,429	3,931
2011	14,679	9,605	5,074
2021	15,443	10,263	5,180
2023	15,580	10,397	5,182

Compiled from ISFR, 2021

As the altitude increases the density of forest cover also increases in the state up to 3000 meters. More than 58 percent of dense forest of the state is located between 2000 to 3000 meters and more than 60% of open forest is located between altitudes of 500 to 2000 meters. Details of forest types in the state are given in the following table. The Himalayan Moist Temperate forests are also known as oak forest which has high importance to support local subsistence along with alpine pasture land. The oak forest provides resources like fuel, fodder and alpine pasture land supports sheep rearing.

Table 18: Forest and Pasture Types in Himachal

Type	Area (sq km)
Tropical Moist Deciduous	208.63
Northern Tropical Dry Mixed Deciduous	2,848.42
Subtropical Pine	2,841.11
Himalayan Moist Temperate	7,079.16
Himalayan Dry Temperate	502.51
Sub Alpine Forests	661.47
Moist Alpine Scrub	58.05
Dry Alpine Scrub	335.7
Himalayan Temperate Pastures	1,004.58
Alpine Pasture	3,271.73

Source ISFR, 2021

According to statistics of HP government, Himalayan Moist Temperate Forest is largest forest category in the state, which includes tree species such as Cedrus Deodara, Quercus leucotrichophora, Quercus dilatata, Quercus semecarpifolia, Rhododendron arboretum, Pinus wallichiana, Abies Pindrow and Picea smithiana.[32]

As can be seen from the table below, forest resources like fodder (both grass and leaves) fuel wood and bamboo and small timber are used by the people on a regular basis and degradation of forests adversely affects the people who are dependent on these.

Table 19: Forest Resources Used by the People

Forest Resources	Quantity (in Tonnes)
Fuel wood	5,92,761
Fodder	32,55,579
Bamboo	593
Small Timber	11,264

Source ISFR, 2021

5.3 Jameen: State of land in HP

The state covers 55,673 km_2. The geography of HP is divided into four agro ecological zones and nine sub zones. The Sub Humid Mid Hill agro ecological zone is the smallest and Dry Temperate High Hill zone is the largest agro ecological zone of the state.

Table 20: Agro Ecological Zones of Himachal Pradesh

Agro Ecological Zone	Area (% of Total)	Soil Type
Sub Montane and Low Hills	18.5	Sandy Loams and Loamy Sand
Sub Humid Mid Hills	8.4	Sandy Loam- Clay, Silt Loam-Loam
Wet Temperate High Hill	16.5	Mainly Loamy Shallow- acidic
Dry Temperate High Hill	56.6	Sandy Loams Sends and Pebbles

https://agriculture.hp.gov.in/en/agro-climatic-zone/

[32] Himachal Pradesh Development Report, 2002, Department of Planning, http://164.100.161.239/plans/stateplan/sdr_hp/sdr_hpch2.pdf

Desertification and land degradation is very high in HP compared to other Himalayan States. According to the Desertification and Land Degradation Atlas 43.11% of the total geographical area of the state is under degradation and desertification.

The land under degradation in the state has increased from 38.46% in 2003-05 to 43.11% in 2018-19. Major causes of land degradation in HP are vegetation degradation (32.27%), Frost Shattering (5.97%) and Water Erosion (4.83%).

Nearly one third (32.8%) of the landmass of the state is open and permanent grazing land.[33] The size of agricultural land is about 10 percent of the total geographical area of the state. In the last two decades some changes were observed in the land use pattern of the state.

The area under non-agricultural use has increased by 50%. This is largely a result of urbanisation and diversion of agricultural land for housing, civic amenities, roads, and also for industries, though these are largely in the foothill districts.

Table 21: Classification of Land of HP (000 Hectare)

Year	Land Not available for Cultivation			Other Uncultivated Land Excluding Fallow Land	Total Fallow Land	Net Area Sown	Cropped Area
	Area under Non Agricultural Use	Barren and Unculturable Land	Total				
1998-99	238.5	909.7	1,148.3	1,671.1	84.5	549.4	970.1
2008-09	467.8	653.9	1,121.7	1,706.1	79.1	539.4	946.1
2018-19	358.3	774.4	1,132.8	1,692.4	83.9	542.3	914.0

https://data.desagri.gov.in/

Unlike water and forest resources, which are mostly common property resources and are mostly managed by state government departments or smaller ones by the village panchayats, land is substantially privately owned and therefore managed by individuals who possess it.

Based on the NSS Survey[34] in 2018-19 in Himachal, it was estimated that of the 14. 84 lakh rural households in the states, 10.28 lakh were agricultural households (earned at least Rs 4000 pa from farming and allied activities and had at least one person self-employed in agriculture) in Himachal.

[33] Himachal Pradesh, 2008, Annual Season and Crop Report – 2007-08, Govt pf Himachal Pradesh, https://himachal.nic.in/WriteReadData/l892s/13_l892s/1695123930.pdf

[34] NSS Report No. 587: Situation Assessment of Agricultural Households and Land and Livestock Holdings of Households in Rural India, 2019

Table 22: Distribution of Operational Holdings in Himachal 2018-19

Size of holding in ha	No of Agricultural households	As % of total	No of Non-Agricultural households	No of All rural households	Income in Rs per month (2018-19) per household
<0.01 (landless)	200	0.0%	28,700	289	8396
0.01 -0.4 (sub-marginal)	585,700	57.0%	360,000	945,700	11072
0.41-1.0 (marginal)	304,300	29.6%	67,800	372,100	12363
1.01-2.0 (small)	97,200	9.5%	0	97,200	17051
2.0-4.0 (medium)	35,900	3.5%	300	36,200	16019
> 4.0 (large)	4,800	0.5%	0	4,800	26034
Total	**1,028,000**	**100%**	**456,800**	**1,484,800**	

Source: (NSS Report no 587, Land p. A-90-93, pdf p 270, Income at p. A-880, pdf p 1058)

Of these, 585,700 households or 57% of total agricultural households possessed less than 0.4 ha (1 acre) of land and 304,300 households or 29.6% possessed between 0.4 to 1 ha (marginal farmers). Only 9,200 or 9.5% owned between 1 to 2 ha (small farmers) and 35,900 or 3.5% possessed between 2 to 4 ha (medium large farmers) and only 4800 or 0.5% of total agricultural households possessed above 4 ha (large farmers). As per the same survey, agricultural households had operational holdings with an average area of 0.57 ha per holding, of which on an average only 0.37 ha was under any operation. This was 64%, as against the all India average of 92%. So the first issue is how to ensure fuller utilisation of each holding.

Table 23: Area under principal crops in HP (in thousand hectares)

Year	Wheat	Maize	Rice	Pulses	Total Foodgrains	Fruits	Vegetables
1993-94	375	305	88	42	855	182	-
2000-01	363	298	82	31	815	217	45
2005-06	385	295	79	07	777	187	46
2010-11	357	296	77	34	795	211	65
2021-22	320	263	66	15	711	235	92

Source: https://iasri.icar.gov.in/

5.3.1 Soil challenges

Soil in low hills and dry temperate high hills are neutral and low to medium in Organic Carbon (OC), Cation Exchange Capacity (CEC) and Water Holding Capacity (WHC). Mid hill soil is moderately acidic and high in OC, CEC and WHC. The variation of agro ecological conditions available in the state diversifies its agricultural practices from production of basic grains such as wheat & rice to apples, kiwis, vegetables and flowers.

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Both natural and anthropogenic interventions have contributed to degradation of soil in Himachal Pradesh. The soil in the state is majorly facing two challenges namely soil erosion and loss of natural soil nutrient due to excessive use of fertilizers. These two threats are briefly described in the following section. In 2021-22, HP consumed 56,000 tonnes[36] of chemical fertilizers and 454 tonnes of chemical pesticides.[37] The consumption of bio fertilizer in the state was just 5 tonnes. The table below shows that in the last three decades the per hectare consumption of chemical fertilizer has doubled from 30.08kg/ha in 1993-94 to 64.68 kg/ha in 2020-21. The exponential growth was observed in use of Phosphatic and Potassic chemicals in these three decades.

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[35] Himachal Pradesh Biodiversity Board, https://hpbiodiversity.gov.in/Pdf/Soil%20types%20of%20HP .pdf

[36] Ministry of Agriculture and Farmer Welfare, Agricultural Statistics at a Glance, 2022, GoI, https://desagri.gov.in/wp-content/uploads/2023/05/Agricultural-Statistics-at-a-Glance-2022.pdf

[37] Lok Sabha Unstarred Question No. 1069 Answered On 13th December, 2022, https://sansad.in/getFile/loksabhaquestions/annex/1710/AU1069.pdf?source=pqals

Table 24: Fertilizer Consumption per Unit of Gross Cropped Area in HP

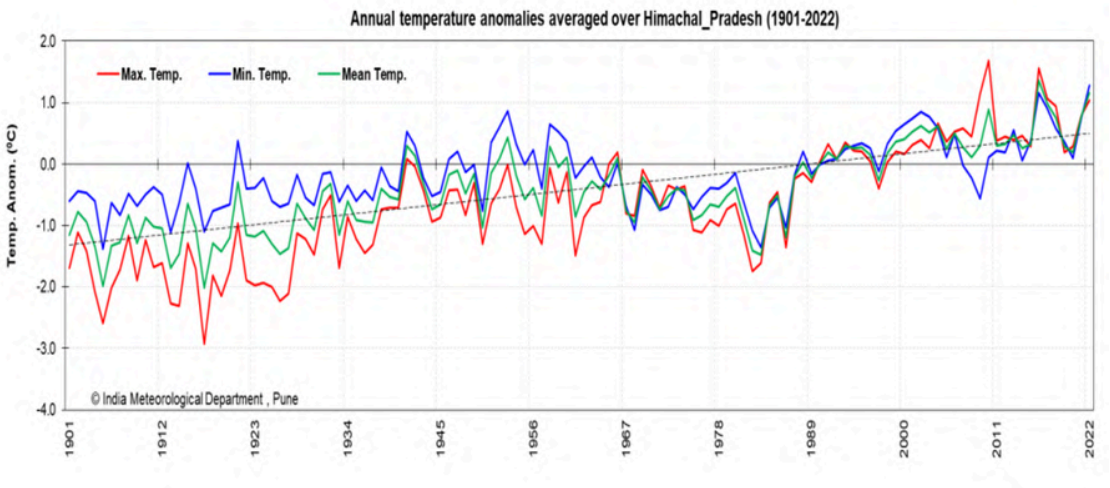
Year	Nitrogenous (N) (kg/ha)	Phosphatic (P) (kg/ha)	Potassic (K) (kg/ha)	Total (NPK) (kg/ha)
1993-94	25.79	02.55	01.74	30.08
2003-04	32.35	09.11	07.53	48.5
2020-21	41.20	12.28	11.20	64.68

Source: https://desagri.gov.in/

Soil erosion is yet another problem HP is facing due to a number of reasons such as sharp slops, continuous degradation of forests, large non vegetative area, increase in extreme weather conditions such as long dry spells and flash floods. A study carried out in 2014 had estimated that 54% landmass of HP is prone to soil erosion. Out of this 98% is due to surface runoff. Furthermore, the Land Desertification and Land Degradation Atlas of India reported that as high as 43.11% of the state is under degradation and desertification.[38] Part of this area is under glaciers and the total glacial area of HP has decreased by 45.3% between 1994 and 2021. The details of this are given below in the section 2.4.1 on climate change.

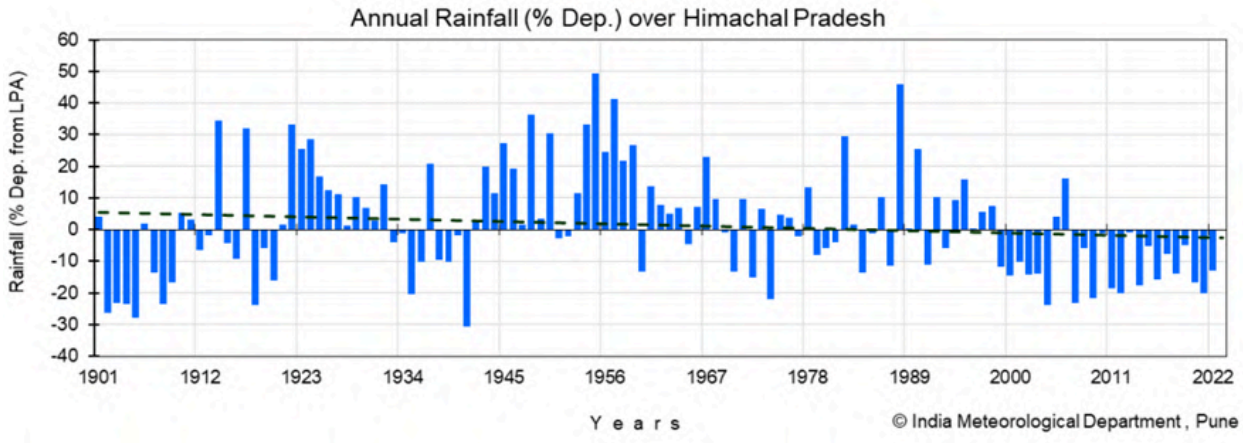
5.4 Jalvayu Parivartan - Climate change in HP

Within the Western Himalayan Region the diversified landscape and climatic conditions have distinguished its climate, shaping its rich ecology, economy and culture from time immemorial. The change in global temperature and local anthropogenic pressures have adversely affected its climate and thereby increased vulnerability of natural resources of the state. A compilation of temperature over HP from 1901 to 2022 by IMD reveals that the annual mean temperature during the period significantly increased at the rate of 1.5 degree centigrade per 100 years. The maximum temperature also increased at the rate of 2.18 degree centigrade per 100 years during the period.



[38] Space Application Centre, Govt of India, 2021, Desertification and Land Degradation Atlas of India, https://vedas.sac.gov.in/static/atlas/dsm/DLD_Atlas_SAC_2021.pdf

Both the rainfall and the temperature of the HP have significantly changed in the last 100 years and more importantly the rate of change has gradually increased in the last 2-3 decades. This change in climate has further changed the quality and quantity of other natural resources in the state. HP receives 59% of its rainfall during south-west Monsoon (June- September) and 19% during winter (Jan-Feb). The IMD data reveals that in both seasons HP gradually moved from average excess rain in the early 1900s to rain deficient in the last 2-3 decades.[39]



5.4.1 Impact of climate change on natural wealth of HP

Glaciers

The entire Himalayan mountain range is more vulnerable to global warming compared to other mountain ranges in the world. An assessment of the ICIMOD in 2019 revealed that the temperature of Hindu Kush Himalayas are rising faster compared to the global average.[40] The IPCCC report had also found that the warming has occurred in the Himalayan mountain range that has changed the snowline, glaciers and precipitation in the Hindu Kush Himalayas.[41] A recent study by scientists of IIT Hamirpur found that the total glacial area of HP has decreased from 4020 sq km in 1994 to 2198 sq km in 2021,[42] which amounts to a 45,3% reduction. Apart from snowlines and glaciers the impact of global warming is now visible on other natural resources such as degradation of forests, land and drying of water sources.

As per the Himdhara report (2017),[43] "The Hydropower development that is being undertaken in Himachal and the entire Himalayan region of India is based on the Run-of-the-river technology which produces electricity by checking and diverting river flow. The diverted water is made to flow through underground tunnels in the mountains and released downstream on the turbines that spin generators before returning the water back to the river.

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[39] India Meteorological Department, 2022, Statement on Climate for the State of Himachal Pradesh, https://mausam.imd.gov.in/shimla/mcdata/cli_hp.pdf

[40] ICIMOD, 2019, The Hindu Kush Himalaya Assessment, https://doi.org/10.1007/978-3-319-92288-1

[41] International Panel on Climate Change (IPCC) https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Mountains.pdf

[42] Sharma et al, 2022, Glacier retreat in Himachal from 1994 to 2021 using deep learning, Remote Sensing Application - Society and Environment, Vol. 28,https://www.sciencedirect.com/science/article/abs/pii/S2352938522001781

It is important to note that the projects using this technology are being built in a cascade form on a river basin. This means that at the tail of one project, the head of the next is located. A series of these projects are being built bumper to bumper on the streams and rivers to harness the capacity of the rivers to produce power to its maximum.

In the Satluj River Basin alone the total length of tunnels once all the planned hydro projects are built will be 185 kms. If all the planned projects across the Himalayas are constructed there will be hundreds of kilometres of tunnels underneath the mountains in this region.

Diversion structure breaks the longitudinal connectivity of the river which checks the migration of fish and also fragment the fish population in isolated patches. The river bed virtually gets dry in the lean season which adversely impacts riverine ecology. There are many studies which indicate that the fish population has declined due to construction of projects. The diversion of rivers and streams and tunnelling have affected the water flows and aquifers crucial not just to the river fauna but to the local inhabitants dependent on the streams and springs for irrigation, drinking, running watermills, fishing, etc."

With continuous deterioration of quality of forest, landslides and flooding the catchment areas of various rivers have degraded. Moreover, river pollution has also increased in recent times. According to a report of the Central Pollution Control Board, nine rivers of the state namely Ashini, Khad, Bald, Giri, Markanda, Pabbar, Ratta, Shikari Khad, Sirsa and Sukhana are critically polluted with respect to BOD criteria.[44]

There are other ways in which rivers are being contaminated. Urban habitations release untreated or partially treated sewage in these rivers. Industrial effluents are released without full treatment. Urban solid waste and construction debris is dumped by the river banks. Sand and gravel is mined from the river beds.

Forest Degradation

Successive FSI report on India's State of Forest Reports reveals that the very dense forests are gradually declining even though total forest cover is increasing in the state. Moreover, the latest ISFR report of 2021 observes that the entire forest cover of the state will experience an increase in temperature more than 1.5 degree centigrade and more than 20% rain deficient/excess by 2030.

If the situation persists the report further estimates that by 2085 the nearly 93% of the state's forest will experience an increase in temperature by more than 5.1 degree centigrade and more than 38% rainfall departure.[45] These climatic changes are sufficient to completely change the ecosystem and local biodiversity.

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[43] Himdhara Environment Action and Research Collective. Dried and Dusted- State of the Rivers Report, Himachal-Pradesh, 2017. https://www.himdhara.org/wp-content/uploads/2017/10/State-of-the-Rivers-Report-final-2017-Himachal-Pradesh.pdf

[44] CBCB, 2022, Polluted River Stretches for Restoration of Water Qualities, GoI, https://cpcb.nic.in/openpdffile.php?id=UmVwb3J0RmlsZXMvMTQ5NF8xNjcxNzc3ODg2X21lZGlhcGhvdG8xODc0Ni5wZGY

[45] FSI, 2023, India Sate of Forest Report, Govt of India, https://fsi.nic.in/isfr-2021/chapter-11.pdf

Successive Forest Survey of India (FSI) reports on India's State of Forest Reports reveals that the very dense forests are gradually declining despite the fact that total forest cover is increasing in the state. Moreover, the latest ISFR report of 2021 observes that the entire forest cover of the state will experience an increase in temperature more than 1.5 degree centigrade and more than 20% rain deficient/excess by 2030. If the situation persists the report further estimates that by 2085 the nearly 93% of the state's forest will experience an increase in temperature by more than 5.1 degree centigrade and more than 38% rainfall departure.[46]These climatic changes are sufficient to completely change the ecosystem and local biodiversity.

Desertification and Land Degradation

According to the Desertification and Land Degradation Atlas 43.11% of the total geographical area of the state is under degradation and desertification. The land under degradation in the state has increased from 38.46% in 2003-05 to 43.11% in 2018-19. Major causes of land degradation in HP are vegetation degradation (32.27%), Frost Shattering (5.97%) and Water Erosion (4.83%). Desertification and land degradation in HP is higher compared to other Himalayan States.

[46] FSI, 2023, India State of Forest Report, Govt of India, https://fsi.nic.in/isfr-2021/chapter-11.pdf

6 Appendix 2 - Status of social development and challenges

In this chapter we look at the building blocks of society – at one level, individuals and at another their ways of living and working together – institutions. The status of individuals are sought to be understood through demographics, then their nutrition and health status, their education and vocational training, aspirations and belief systems.

The status of institutions is looked at all the way from informal self-help groups and local voluntary associations to formal institutions of representation such as panchayats, municipal councils, zilla parishads and the state assembly, to institutions providing various services to citizens such as law and order, justice, water, electricity, transport, telecommunication and financial services.

6.1 Demographics

According to the 2011 Census, Himachal Pradesh had a population of 68.6 lakh, and in 2024 it was projected to be 78.4 lakh, which was 0.54 percent of India's population. In 2011, HP had an average population density of 123 people per square kilometre as against the national average population density of 382. Himachal was very largely a rural state - only 10.03% of Himachal residents lived in cities and 89.97 percent in rural areas.

Of the total population in HP in 2011, as per the Census, 25.2% were from the Scheduled Castes (SCs), higher than the national average and 5.7% were from the Scheduled Tribes (STs), lower than the national average. However, STs were largely concentrated in the higher altitude districts like Lahaul-Spiti and Kinnaur. Other back ward classes (OBCs) constituted 13.5%. Of the remaining, 50.72% are from the Hindu upper castes, 32.7% being Rajputs and 18% Brahmins. About 4.5% are from other religions.

In 2020, the life expectancy was 71 years, which is higher than the national average of 67.5 years. The crude birth rate declined from 20.0 in 2005 to 15.7 in 2018. The crude death rate remained constant at 6.9.

The sex ratio at birth is 930 females per 1,000 males, which is higher than the national average of 899. There are 972 females per 1000 males in HP, higher than the national average of 943. HP's child sex ratio (under 6 years) is 909, lower than India's 918. The age-wise population of Himachal in 2020 was estimated to be 10–19 years 16% of the population; 20–59 years: 58% of the population and 60 years and above: 13% of the population.

Instead of giving data on literacy as per the last Census in 2011, we note from the NSSO's comprehensive annual modular survey (CAMS) 2022-23, that 87.9% persons are able to read and write short simple statements in their everyday life with understanding and also able to perform simple arithmetic calculations as against 81.2% for all India.[47]

[47] https://www.mospi.gov.in/sites/default/files/publication_reports/CAMS%20Report_October_N.pdf

6.2 Health and nutrition and healthcare facilities

6.2.1 Health indicators

HP ranks highly in human development indicators, being the second-best performing state in India after Kerala. In recent decades, the life expectancy in Himachal Pradesh has seen a notable increase, now reaching 72 years, which surpassed the national average.

HP had a maternal mortality ratio (MMR) of 50 deaths per 100,000 live births, below the national average, due to efficient maternal health initiatives and high institutional delivery rates. The infant mortality rate was 19 per 1,000 live births, lower than many other states. Due to better prenatal care, immunisation coverage, and institutional deliveries, the Under-Five Mortality Rate (U5MR) was 23 fatalities per 1,000 live births, below the national average. Immunisation and Integrated Child Development Services (ICDS) are key.

Himachal Pradesh's TFR is 1.7, below the replacement level, demonstrating good family planning and reproductive health awareness. Married women utilise contraception at 74%, among the highest in India. With nearly 90% of children immunised, Himachal Pradesh consistently ranks high in immunisation coverage. In rural and hard-to-reach areas, Mission Indradhanush has intensified immunisation efforts. Other health/disease indicators from NFHS-V are given below and show that while HP is better than all India average, its health indicators have come down in the last five years.

Table 25: Health Indicators as per NFHS V

Health Indicator	HP Urban	HP Rural	HP total 2020-21	All India total 20-21	HP total 2015-16
Diarrhoea	3.6	4.9	4.7	9.2	6.6
Acute respiratory infection	4.0	1.1	1.5	2.7	1.6
Women 15-49 anaemic %	51.0	53.3	53.0	53.1	53.5
Men 15-49 anaemic		22.4	22.1	22.7	25.0
Men with high blood sugar %	18.3	14.2	14.7	13.5	Not surveyed
Men with high BP%	29.1	23.6	24.4	15.6	Not surveyed

Another cause for concern is that the percentage of men with high blood sugar is higher than the Indian average and the percentage of men with high blood pressure is significantly higher than the Indian average.

6.2.2 Nutrition

The National Family Health Survey (NFHS-5) found that 30% of children under five are stunted and 16% are wasted, indicating the need for better nutrition treatments despite decent healthcare. Anaemia: 53% of 15-49-year-old women are anaemic, a source of concern.

6.2.3 Healthcare facilities

In Himachal Pradesh, one can find a total of 2,114 Sub Centres, 553 Primary Health Centres (PHC), and 98 Community Health Centres (CHC). In HP, there was a shortage of general doctors by 10% and surgeons/specialists by 98% as compared to the requirement. The comparable figures of shortfall for All India were 3.1% and 79.9% respectively. Thus, any form of specialist care required a visit to the district government hospitals or private hospitals.

Table 26: Availability or Shortage of Doctors, Surgeons and Specialists at PHCs, 2022

Himachal, 2022	Required	Sanctioned	In Position	Vacant	Shortfall
Doctors at PHCs	553	651	501	150	52 (9.4%)
Surgeons/Specialists	392	-	8	-	384 (97.9%)
All India 2022	**Required**	**Sanctioned**	**In Position**	**Vacant**	**Shortfall**
Doctors at PHCs	24935	39669	30640	9451	776 (3.1%)
Surgeons & Specialists	21924	13637	4405	9268	17519 (79.9%)

6.3 Education – School and higher education, extent and outcomes

Education is one of the important instrumentalities for achieving social justice and equality. The education system must be inclusive and equitable so that no child loses any opportunity to learn and achieve her/his potential because of circumstances of birth or background. These goals are measured through various parameters such as the gross enrolment ratio or the GER (Total enrolment in a particular level of school education, regardless of age, expressed as a percentage of the Population of the official age-group which corresponds to the given level of school education in a given school year.)

The Gender Parity Index (GPI) measured as ratio of GER of girls to GER of boys stood at above 1 at all levels indicating more proportionally higher participation of girls as compared to boys. At the national level, 26.9% students were from general category, 18% from SC, 9.9% from ST, 45.2% are OBC category and 15.8% were Muslims. The drop-out ratio of students at different levels like primary, middle, and secondary is also an important parameter. All this data is available state-wise from the Unified District Information System for Education or UDISE.[48]

6.3.1 School Education

In 2023-24, there were 17826 schools (of which 2710 were up to the higher secondary level) in Himachal. Of these, 15217 or 85.3% (vs 69.1% all India) were government schools. Himachal had 60.8% primary schools and 15.2% higher secondary schools, versus 50.0% and 10.8% for all India. Thus, the Himachal education system was focussed on both ends of the school years.

[48] Unified District Information System on Education, GoI, Ministry of Education, Dept of School Education and Literacy https://dashboard.udiseplus.gov.in/

There were 1,426,412 pupils and 101,131 teachers in Himachal. There were 1.87 lakh boys and 1.70 lakh girls in the foundational schooling level in Himachal, making a total of 3.57 lakh entrants to school.

The GER at the primary level was 106% (vs 93% for all India) and came down to 100% (vs 77% for all India) by the secondary level and then fell to 92% at the higher secondary level.

Incidentally, as per the Comprehensive Annual Modular Survey (CAMS)[49] conducted by the NSSO in 2022-23, only 88.6% of all children between 6 and 10 years of age in Himachal are attending school, as against all India average of 90.1%. This indicates that UDISE data being school reported may be overstating its achievements.

The Gender Parity Index was also better than all India at the higher secondary level at 1.08 vs 1.07 for all India. The proportion of students by social category was 25.7% (vs 25.2% in the population in 2011) for SCs, 5.9% (vs 5.7%) for STs, and 13.8% (vs 15.5%) for OBCs and 2.6% (vs 2.18%) for Muslims. This showed affirmative action in education for all.

The transition rate from preparatory to the middle level was 98.8% and from middle to secondary level 97.7%. The drop-out rate of Himachal was the second lowest in India after Kerala.

The pupil-teacher ratio in Himachal was at 14 as compared to an all-India average of 25. There were 37.7% schools with functional computers/laptops. This was higher than the national average of 32.2%. Similarly, the 99.0% of the girls/co-ed schools had functioning toilets for girls and this was higher than the national average of 93.4%.

6.3.2 School Facilities

We reproduce the Table below from the ASER for Himachal Rural 2022. As can be seen, most of the facilities such as electricity, drinking water, toilets, separate toilets for girls, mid-day meals with kitchen and library, were there in a high percentage of schools, usually 80-90%.

However, the disturbing trend is that in terms of actual usage and upkeep, the trend has been declining since 2014. For example, in 2022, 92% of the schools had separate toilets for girls but only 76.4% were usable and this had declined from 86.7 in 2014.

One facility which is notable lacking is computers. Only 9% of the schools had computers, and even worse, in only 2.3% schools were the children using computers.

In the 21st century when the world is moving towards Artificial Intelligence and the Internet of Things, this is a fatal gap that must be made up immediately.

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[49] https://www.mospi.gov.in/sites/default/files/publication_reports/CAMS%20Report_October_N.pdf

% Schools with selected facilities. 2010, 2014, 2018, 2022

% Schools with		2010	2014	2018	2022
Mid-day meal	Mid-day meal served in school on day of visit	98.0	93.8	93.1	91.1
	Kitchen/shed for cooking mid-day meal	82.5	97.1	99.3	99.2
Drinking water	No facility for drinking water	12.5	5.4	5.5	3.8
	Facility but no drinking water available	4.3	6.9	5.1	7.3
	Drinking water available	83.2	87.7	89.4	88.9
	Total	100	100	100	100
Toilet	No toilet facility	10.8	0.4	0.3	1.1
	Facility but toilet not useable	33.2	12.0	5.5	11.8
	Toilet useable	56.0	87.6	94.2	87.1
	Total	100	100	100	100
Girls' toilet	No separate provision for girls' toilet	31.1	1.6	5.5	8.0
	Separate provision but locked	10.6	3.6	2.1	11.4
	Separate provision, unlocked but not useable	19.6	8.5	6.2	4.2
	Separate provision, unlocked and useable	38.7	86.7	86.3	76.4
	Total	100	100	100	100
Library	No library	19.7	4.4	2.7	4.9
	Library but no books being used by children on day of visit	39.0	55.1	73.0	58.6
	Library books being used by children on day of visit	41.3	40.6	24.3	36.5
	Total	100	100	100	100
Electricity	Electricity connection			94.5	98.5
	Of schools with electricity connection, % schools with electricity available on day of visit			86.0	92.6
Computer	No computer available for children to use	93.3	94.6	93.5	88.7
	Computer available but not being used by children on day of visit	3.5	2.2	4.5	9.0
	Computer being used by children on day of visit	3.2	3.3	2.1	2.3
	Total	100	100	100	100

*Primary schools offer Std I-IV/V; Upper primary schools offer Std I-VI/VII/VIII.
**All schools include primary schools and upper primary schools.

Thus, we are recommending additional resources to ensure computers in every school along with computer trained teachers. As for ensuring the upkeep of facilities, we are recommending the strengthening of School Management Committees in all schools. For this specialised NGOs may be involved by the government.

6.3.3 Educational Outcomes

In terms of what schooling is doing for the children in terms of reading and arithmetic ability, let us refer to data from the Annual Survey of Education (ASER) report for HP for 2022.[50]

[50] ASER Report for Himachal Pradesh Rural 2022 https://img.asercentre.org/docs/

Reading in Std V and Std VIII. By school type. 2012, 2014, 2016, 2018, 2022

Year	% Children in Std V who can read Std II level text			% Children in Std VIII who can read Std II level text		
	Govt	Pvt	Govt & Pvt*	Govt	Pvt	Govt & Pvt*
2012	71.2	76.9	72.8	88.9	94.6	90.1
2014	71.5	82.5	75.3	90.5	94.8	91.9
2016	65.3	78.0	70.5	84.9	94.9	87.9
2018	74.5	80.4	76.9	87.4	95.4	89.9
2022	60.2	63.1	61.3	87.6	89.3	88.0

*This is the weighted average for children in government and private schools only.

Arithmetic in Std V and Std VIII. By school type. 2012, 2014, 2016, 2018, 2022

Year	% Children in Std V who can do division			% Children in Std VIII who can do division		
	Govt	Pvt	Govt & Pvt*	Govt	Pvt	Govt & Pvt*
2012	40.7	70.3	48.7	67.7	86.8	71.8
2014	37.9	63.9	46.9	55.9	74.2	61.8
2016	47.4	63.0	53.7	50.4	79.5	59.2
2018	51.5	64.0	56.6	54.7	74.4	61.0
2022	38.1	50.5	42.6	48.2	65.2	52.3

*This is the weighted average for children in government and private schools only.

Only 61.3% of standard V students could read simple English and only 42.6% could do division of numbers. The percentage improved to 88.0% and 52.3% by standard VII, still showing a significant learning deficit, particularly among government school students, who accounted for two-thirds of the enrolment. Another point to be noted was the damage done by the COVID-19 pandemic and consequent school closure. Not only were the reading and arithmetic attainment levels in 2002 lower than 2018, but also these were also even lower than 2014 levels, showing the extent of setback.

6.2.4 Higher secondary and college education

The retention rate is the percentage of students who finished education up to a particular level to all students who joined at the primary level. At the higher secondary level, where schooling ends, this was 78.9% for Himachal vs 45.6% for all India. Even more commendable was the fact the retention rate for girls at the higher secondary level was 82.1% in Himachal vs 47.5% for all India.

A large proportion of those who finish higher secondary join higher education – colleges and universities, and increasingly vocational and professional education. As per the AISHE Report, there were 261,653 students enrolled in regular under-graduate degree and diploma courses in Himachal in 2023.

The state has various universities, engineering, medical, and teacher-training colleges. The Central University of Himachal at Dharamsala, the Himachal Pradesh University at Shimla, the IIT at Mandi, and Dr. Yashwant Singh Parmar University of Horticulture and Forestry at Solan, are notable. There were eight medical, five dental and two engineering colleges in the state. As per the AISHE Report, there were 13,622 students pursuing post-graduate (MA/MSc/MBA/MCA), MPhil and PhD programs in Himachal in 2023.

Skill development centres train in hospitality, tourism, agriculture, and IT, matching the state's job opportunities. The Asian Development Bank-supported Himachal Pradesh Skill Development Project (HPSDP) improves vocational education. In 2023 there were 152 Industrial Training Institutes (ITIs) in Himachal, with 16,455 students admitted with about 5500 finishing every year. In addition, a total of 1926 students passed out from engineering and pharmacy colleges and polytechnics.[51] Given that there were over 335.000 children would enter school in 2023-24, the proportion of vocational education seats to this was very low at about 2% as compared to about 20% for general college education. The extent of vocational education needs to be increased significantly to ensure that there are possibilities of gainful and productive employment for Himachal's youth in the coming decade.

6.4 Inclusion, Cohesion and Collaboration

One the signs of an evolving society, is the extent to which people get together in "sukh-dukh" (in happy times and in adversity). While completely informal gatherings are common in neighbourhoods on occasions like births, marriages, deaths and so on, and across neighbourhoods and villages during religious festivals, the extent of formalisation of some of these can be assessed through data on certain formations such as women's self-help groups, and social organisations registered as Societies or Trusts. At the next level of formalisation, usually for commercial purposes are Cooperative Societies of farmers, weavers, and so on, and Farmers' Producer Organisations. Let us look at these one by one.

6.4.1 Self-Help Groups (SHGs)

Self-Help Groups of women living a neighbourhood are now common all over India, and it has become a nationwide movement for women's empowerment and enabling them to access financial services. As per the National Rural Livelihoods Mission (NRLM) portal on SHGs[52] as in Dec 2024, out of 91,75,483 SHGs in India under the NRLM umbrella, there were 45,973 SHGs in Himachal Pradesh, making about 0.50% of all India, which is slightly less than the population percentage.

Out of the 45,973 SHGs in the state, 40,474 had been provided a revolving fund for internal lending. The total revolving fund for the state was Rs 66.81 crore. Of these, 11,176 SHGs had graduated to the level of receiving community investment funds to the extent of Rs 56.6 crore. As many as 23,774 SHGs had been linked with banks for loans and had loans outstanding of Rs 298.1 crore.

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[51] Dept of Technical Education, https://techedu.hp.gov.in/sites/default/files/SKM_C224e23082420080.pdf

[52] GoI, Ministry of Rural Development: https://nrlm.gov.in/shgOuterReports.do?methodName=showShgreport

Within the state, the concentration is districts like Kangra with 8858 SHGs versus Lahaul-Spiti with only 197 SHGs. However, 33% of the SHGs covered the socially disadvantaged Scheduled Castes and Scheduled Tribes. This commendable performance is due to collaboration between NABARD, State Rural Livelihood Mission, Banks and NGOs.

6.4.2 School Management Committees (SMCs)

As per the Samagra Shiksha document[53] of the Govt of HP, School Management Committees (SMC) are mandatory in government schools to ensure the achievement/ progress for the implementation of Right to Education Act, 2009. The document goes on to assert that "SMCs have been constituted in all the government schools to ensure the community participation in the welfare of the students. The tenure of SMCs is three years."

However, as per a review by Dr Hem Raj (2018)[54] "there is a huge difference between the policy formulation and policy implementation. Mostly parents are unaware of the school management committees. They are unaware of how the fund is generated and where it is utilized. Most parents, even if they are the members, are not ready to participate actively in the meetings. They are insisted by teachers or other members to attend meetings if they held, as the members of the committee do not meet to plan for development. Being member of the SMCs most of times turn out to be a political issue rather than for the development of the schools. The unawareness about the policy and unavailability of resource is impeding the functioning of the committees."

It is obvious that merely providing for SMCs in the RTE Act is not sufficient, nor even going through the formality of constituting them. Their capacity will have to be built assiduously and for this Civil Society Institutions are most appropriate.

6.4.3 Civil Society Institutions

As per estimates from the Annual Survey of Unincorporated Enterprises (ASUSE)[55], 2022-23, there were 5709 registered societies/trusts functioning in Himachal as against 520,387 for all of India. Thus, Himachal had 1.1% of all functioning societies/trusts in India, as against a population of 0.54%. This shows a higher-than-average tendency to organise in Himachal. As per the NGO DARPAN[56] portal maintained by the Niti Ayog, Government of India, there were 282,040 NGOs registered in India and of this only 1299 or 0.46% were in Himachal. This was lower than the Himachal population share 0.54% of India. Even within the state, NGOs were concentrated in the districts of Kangra (291) and Shimla (215), while in Lahaul-Spiti there were only 55 and Kinnaur only 36. As only the larger and more active NGOs get registered on DARPAN, we see that the people's organisations are still at the level of informal SHGs or locally registered social groups which have registered on DARPAN.

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[53] http://samagrashiksha.hp.gov.in/homeContent/80/20

[54] https://old.rrjournals.com/wp-content/uploads/2018/08/37-40_RRIJM18030807.pdf

[55] https://www.mospi.gov.in/report-annual-survey-unincorporated-sector-enterprises-asuse-2022-23

[55] GoI, Niti Ayog, NGO Directory https://ngodarpan.gov.in/index.php/search/ Dec 2024

6.4.4 Cooperatives

As per the National Cooperatives Database,[57] out of 820,262 primary cooperatives in India, there were 5394 (0.66%) primary cooperatives in Himachal in 2024, which was higher than the state's population share of India These included 759 dairy cooperatives, 463 thrift and credit cooperatives, 353 weavers' cooperatives, including the Bhutti weavers' coop in Kullu famous for its woollen shawls, and 156 transport cooperatives, mainly of small truck operators carrying apples from orchards to the wholesale markets in Delhi and other big cities. HP also had 168 out 8875 Farmers' Producer Organisations registered in India by June 2024, which was again higher than the state's population share of India.

6.5 Representational institutions at the local level – PRIs and ULBs

The Constitution of India, after the 73rd and 74th Amendments in 1992, envisages a three-tier representational structure for the people. In rural areas, the Panchayati Raj Institutions (PRIs) there are elected Gram Panchayats at the village level; Mandal or Block Panchayats at the intermediate level of 25 to 100 villages; and Zilla Parishads at the district level. In urban areas, there are elected municipal or urban local bodies (ULBs) called Nagar Parishads for towns with population below 100,000 (in even smaller towns they are called Nagar Panchayats); Nagar Palikas or Municipal Corporations for cities with population above 100,000 and Mahanagar Palikas for metros. There are 4852 ULBs in India.

The framework of PRIs is meant to serve the essential function of local governance and accountability to the people. PRIs have been entrusted with the responsibility to execute development schemes, manage public systems, and tackle local grievances and issues. Under the Eleventh Schedule of the Constitution, 29 subjects have been given to PRIs to manage. These broadly cover land, agriculture, animal husbandry, fishery, forestry; rural, cottage and small industries, common services such as housing, drinking water and electricity, local roads, primary and secondary education and primary health; poverty alleviation, welfare and development of the inhabitants, particularly children, women and the socially disadvantaged groups. Likewise, Under the Eleventh Schedule of the Constitution, 18 subjects have been given to ULBs to manage including land-use and planning; infrastructure and socio-economic development; public services such as drinking water, sewage, sanitation, solid waste management and fire services; public health; parks and cultural facilities; slum upgradation, poverty alleviation and welfare of weaker sections and the disabled.

PRIs and ULBs are supposed to get funds for performing these functions from the State Government through a State Finance Commission mechanism. As many states have not been giving adequate finances to the PRIs and ULBs, since the Fourteenth Finance Commission, whose recommendations became effective from 1st Apr 2015, funds to the extent of Rs 287,436 crore were earmarked for PRIs and ULBs over the coming five years period. Under the 15th Finance Commission, wef 1st Apr 2021, the total grants to local bodies will be Rs 4.36 lakh crore including: (i) Rs 2.4 lakh crore for PRIs, (ii) Rs 1.2 lakh crore for ULBs, and (iii) Rs 70,051 crore for health grants through local governments. The last item was a direct result of the COVID pandemic.

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[57] https://cooperatives.gov.in/en/home/cooperative-list-reports/state/2

Of these funds, "basic grants" to the extent of 90% of the total allocated for PRIs and 80% for ULBs are released in June and September. The remaining 10% for PRIs and 20% for ULBs are "performance-based grants" released later in the years depending on expenditure quantity and quality.

In addition, PRIs get funds from major Centrally Sponsored Schemes rural programs such as (i) the Mahatma Gandhi National Rural Employment Guarantee Program; (ii) the Integrated Watershed Management Program; (iii) the National Rural Livelihood Mission, (iv) the Indira Awas Yojana for rural housing and (v) Swacch Bharat Gramin for rural sanitation.

Similarly, ULBs get funds under seven Centrally Sponsored Schemes: (i) Atal Mission for Rejuvenation and Urban Transformation (AMRUT) (ii) Pradhan Mantri Awas Yojana – Housing for All (Urban) (PMAY-HFA Urban) (iii) National Urban Livelihood Mission (NULM) (iv) Jawaharlal Nehru National Urban Renewal Mission (JNNURM) (v) Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) (vi) Smart City Mission (SCM) and (vii) Swachh Bharat Mission-U (SBM-U).

Under the Sabki Yojana, Sabka Vikas program, PRIs have been mandated for the preparation of Panchayat Development Plan (PDP) for economic development and social justice utilizing the resources available to them. The PDP exercise leads to the formulation of the Gram Panchayat Development Plan (GPDP).Trained Facilitators are appointed for this purpose. The GPDP guidelines have several themes including Poverty Free and Enhanced Livelihoods Village, Healthy Village, Village with Self-Sufficient Infrastructure, and Clean and Green Village, and Village with Good Governance. There are detailed guidelines on each of these themes and roles to be performed by each of the line departments, signed off by the Secretaries of the Union Ministries of various line departments. Likewise, the ULBs have been provided capacity building inputs to improve their ability to plan and execute programs.

6.5.1 Status of Panchayats and Zilla Parishads

Himachal has a total of 3615 Gram Panchayats (GPs) and 12 Zilla Parishads (ZPs). Since the Fourteenth Finance Commission (FFC), GPs have been receiving direct grants from the Centre, on a per capita population basis. In 2019-20, for example, GPs in Himachal received Rs 488 crore under the FFC grant and this gave an average of Ra 13.5 lakh to each GP. Given below is data on how much resources were there with PRIs and where did those come from. As can be seen, only 7.7% of the total resources of the PRIs came from their own revenue whereas 70.5% came from the Central government as grants or schemes.

Table 27: Source of Funds for PRIs in Himachal as per CAG Data

(₹ in crore)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Own Revenue	31.52	82.55	92.35	72.88	65.38
Grants from State Government	72.88	70.40	81.55	142.91	162.31
Grants from Central Government	113.15	131.16	202.07	167.04	197.87
GOI grants for CSS	735.20	488.57	163.68	511.86	403.36
State Government grants for State schemes	22.20	15.80	15.97	17.99	23.64
Other receipts	1.00	1.00	0.67	0.25	0.42
Total	**975.95**	**789.48**	**556.29**	**912.93**	**852.98**

Source: Director, Panchayati Raj and Rural Development Department, Himachal Pradesh and Economic Adviser, Economics and Statistics Department, Himachal Pradesh

In 2023-24, Gram Sabhas was held to discuss the GPDP in all the 3615 GPs, a 100% achievement against an all-India average of 955. In FY 2024-25, till end of Oct 2024, 1358 or about 37% of the Panchayats. This may appear low but we should compare to the national average of 36%, and zero for the neighbouring state of Punjab.[58] In terms of the results of these GPDPs, 64070 works were approved with an outlay of Rs 740.4 crore in 2024-25.

However, as per the dashboard of the Ministry, only 37.7 crore worth of works had been initiated by the end of October 2024, or only 5%. This needs to be compared to the all India average of 45.9%.[59]

At the level of the Zilla Parishads, or elected district councils, Zilla Parishad Development Plans (ZPDP) were formulated in all 12 ZPs and uploaded on the Ministry of Panchayat website. However, Zilla Parishads are still largely under the control of administrators.

6.5.2 Status of Urban Local Bodies

There are total 68 ULBs in 10 districts of Himachal Pradesh. The Shimla district has highest number of ULBs with 12 ULBs and the Sirmaur district has lowest number with 3 ULBs.

Given below is data on how much resources were there with ULBs and where did those come from. As can be seen, only 36.4% of the total resources of the ULBs came from their own revenue whereas 18.0% came from the Central government as grants or schemes. Thus while ULBs are more able to raise their own resources than the PRIs, the fact is that their own revenue is only a little more than one-third of the total.

[58] GoI, Ministry of Panchayati Raj: GPDP No. of GPs with Gram Sabha Held. https://gpdp.nic.in/distinctGSHeldReport.html

[59] GoI, Ministry of Panchayati Raj: Analysis of Aggregate of GPDPs (2024-2025) https://gpdp.nic.in/index.html#achivements

Table 28: Source of Funds for ULBs in Himachal as per CAG Data

(₹ in crore)

Sr. No.	Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
1.	Own Revenue		118.04	128.60	173.20	161.18	288.68
2.	Loan		0.03	0.43	0	0	0.01
3.	Finance Commission (FC) grants from Central Government (CFC)		22.52	24.55	34.87	30.98	17.92
4.	Finance Commission (FC) grants from State Government (SFC)		72.40	85.51	99.45	111.36	120.74
5.	Grants for Centrally Sponsored Schemes	Centre share	91.43	130.47	336.28	48.05	125.08
		State share	0.05	29.16	36.70	5.33	20.54
6.	State Government grant for state schemes		34.55	67.15	75.08	76.62	221.94
Total			**339.02**	**465.87**	**755.58**	**433.52**	**794.91**

Source: Director, Urban Development Department (UDD) and Economics & Statistics Department.

6.6. Status of Institutional Development

Himachal Pradesh was established on April 15, 1948, as a centrally administered territory through the amalgamation of 30 former princely states. During that period, the State comprised four districts: Chamba, Mahasu, Mandi, and Sirmaur, encompassing an area of 25,839 square kilometres.

Subsequently, in 1951, it was designated as a part "C" State, governed by a Governor and supported by a Legislative Assembly comprising 36 members, along with a cabinet of three members. In 1954, Bilaspur, a region within the 'C' State, was integrated into Himachal Pradesh, thus contributing an additional district encompassing an area of 1,167 square kilometres. The Assembly's strength was elevated to 41.

In 1956, notwithstanding the predominant recommendations of the State re-organisation Commission advocating for its amalgamation with Punjab, Himachal Pradesh maintained its distinct status. On the 1st of November 1956, it was once more designated as a Union Territory, governed by an Administrator known as the Lieutenant Governor, leading to the dissolution of its Assembly.

In 1960, a new border district known as Kinnaur was delineated from the Mahasu district. Subsequently, in 1963, Assembly experienced a resurgence, leading to the establishment of a widely supported Ministry. Until October 1966, the former Himachal Pradesh consisted of the six mountainous districts of Bilaspur, Chamba, Kinnaur, Mahasu, Mandi, and Sirmaur, encompassing an area of 27,007 square kilometres. The population stands at 1,351,144 individuals.

On November 1, 1966, the district was expanded through the amalgamation of Kangra, Shimla, Kullu, Lahaul-Spiti, the Nalagarh tehsil from Ambala district, certain areas of Una tehsil from Hoshiarpur district, and Dalhousie from Gurdaspur district of the former Punjab State. The merger resulted in an expansion of Himachal Pradesh's total area to 55,673 square kilometres. The population stood at 28,12,463 according to the 1961 Census. At present, it encompasses the Districts of Bilaspur, Chamba, Kangra, Kinnaur, Kullu, Lahaul-Spiti, Mahasu, Mandi, Shimla, and Sirmaur. On the 25th of January, 1971, Himachal Pradesh achieved the status of a state.

The reorganisation of the districts occurred on 1st September 1972, leading to the establishment of two additional districts, Una and Hamirpur, primarily due to the trifurcation of the former Kangra district. Additionally, new districts of Shimla and Solan were established through the reconfiguration of the boundaries of the previously existing districts of Mahasu and Shimla. Historically, Himachal Pradesh exemplifies a paradigm of communal harmony, where diverse communities have coexisted in a state of peaceful coexistence.

The state has attained significant economic growth, particularly in the past two decades, surpassing other Indian states in alleviating poverty. The per capita income in Himachal Pradesh ranks as the second highest in the nation, a notable accomplishment considering that over 90 percent of its population resides in rural areas. The reputation of Himachal Pradesh as a society characterised by stability and inclusivity is noteworthy.

The 68-member assembly has 20 reserved seats, 17 for SCs and three for STs. Despite the significant representation of traditionally disadvantaged groups, including the Scheduled Castes (SCs) and Scheduled Tribes (STs), which constitute approximately 30 percent of the population, inter-group disparities remain. There is a predominance of the indigenous tribal community particularly in regions such as Kinnaur and Lahaul-Spiti. The government allocates scholarships, implements job reservations, and establishes educational institutions for these areas, with an emphasis on enhancing socio-economic metrics.

As part of the WHEELS Study, the RGICS had organised a webinar with experts and activists from various hill states. Manshi Asher, a senior environmental justice activist in Himachal Pradesh in her address started with the model of development which was celebrated till late nineties at least in the Indian Himalayan Region. She further explained that this model systematically deteriorated and finally culminated in the form of a cycle of disasters today.

The development model of Himachal Pradesh was based on the following four strong pillars.

- Land reforms were very effective in Himachal Pradesh after independence. These reforms included land distribution and protection of agricultural land.
- People's access to public welfare schemes and good rural connectivity.
- Promotion of horticulture and cash crops to enhance income of rural farmers.
- More than 50% of salaried jobs in the organized sector were in government sectors in Himachal Pradesh, which was employing a large number of people.

These developmental pillars in Himachal Pradesh were having no internal and external conflicts till late nineties. Furthermore the federal relation of the state with the central government was also cordial as compared to many other Himalayan states at that time.

This Himachal model of development in the Himalayan region started changing in the early 2000s. This change was triggered by bringing change in land use patterns in the state and promotion of hydro power projects. Such changes led to deforestation, drying of water streams, acquisition of agricultural land for big infrastructure projects and restriction on use of common property resources.

These outcomes of the land use change in the state have adversely affected livelihoods such as agriculture, agro-pastoralism, horticulture, traditional trade, wool, handicrafts and weaving. These developmental changes in the state broke various livelihood linkages which were connected with forest, water, land and mountains. It also created unrest and discontent among people.

Manshi Asher (2024) linked all these historical changes in vision of development in the state to increasing incidents of disasters. She observed that Himachal Pradesh is now trapped in a cycle of disasters.

However, the solutions offered to disaster mitigation are more techno-managerial which is myopic in its approach. She suggested seeing these disasters in a more holistic way by including society, culture, livelihood and ecology in an integrated manner.

The political landscape in Himachal Pradesh has historically been characterised by the pre-eminence of two principal parties, the Bharatiya Janata Party (BJP) and the Indian National Congress (INC).

The INC ruled without interruption till 1977 when a Janata Party government came to power but the INC returned in 1980and ruled for that decade. Starting 1989, the BJP took three of the four and eventually by 2014 all four Lok Sabha seats.

The state assembly was dominated by the INC till the 1970s. The state's first Chief Minister (CM) was Dr Yashwant Singh Parmar, who led the State's early development. He was succeeded by Shri Ram Lal of the INC.

The INC lost to the Janata Party in 1977, Shri Shanta Kumar becoming the state's third CM. His ministry lasted for just three years and the INC power in February 1980 with Shri Ram Lal once again becoming the CM. He was replaced by fellow Congress leader Virbhadra Singh.

Ever since 1985, no incumbent party has managed to retain control of the Legislative Assembly, and power has flipped between the BJP and INC every few years.

The politics of the state is more associated with regional preferences, with - Upper Himachal consisting of Shimla, Sirmaur, upper Mandi, Kullu, Lahaul and Spiti, Solan, Kinnaur and Chamba, being more pro-INC and Lower Himachal consisting the districts of Kangra, Hamirpur, Bilaspur, Una and the lower region of Mandi district, being more pro-BJP.

This oscillation has resulted in a comparatively stable political landscape, although recurrent changes in power may influence the consistency of long-term policies.

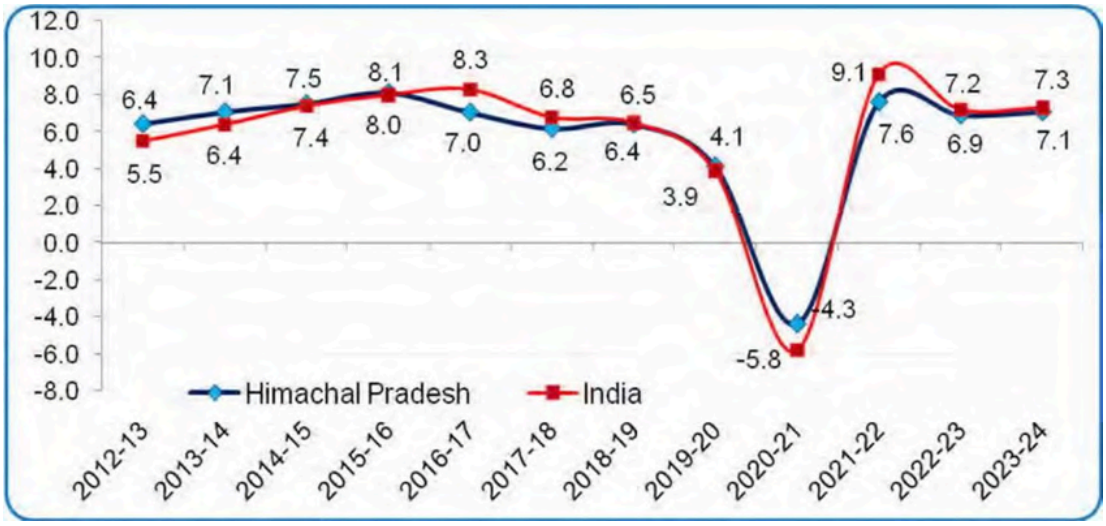
Over the years, the state government has implemented measures aimed at enhancing governance efficiency via digital initiatives. Legislative initiatives such as the Himachal Pradesh Public Service Guarantee Act seek to diminish bureaucratic obstacles and facilitate access to vital services, thereby promoting transparency and accountability.

7 Appendix 3 - Status of economic development and challenges

7.1 GSDP overall and by sector

The size of the economy of Himachal Pradesh is fairly small compared to other two major economies in the western Himalayan region namely Uttarakhand and Jammu & Kashmir. Himachal Pradesh's economy is diverse, with agriculture, horticulture, and tourism being its key sectors. The Gross State Domestic Product (GSDP) of Himachal Pradesh at current prices, for the Financial Year (FY) 2023-24 was estimated to be ₹2,07,430 crore, as against ₹1,91,728 crore in the FY 2022-23, with growth rate of 8.2 percent (at current prices) for the FY 2023-24 as against 11.4 percent for FY 2022-23.

Comparative Growth Rate of GDP and GSDP (at 2011-12 Prices)



Source: National Statistics Office (NSO), Ministry of Statistics and Programme Implementation

The share of the primary sector in the state's GDP declined from 25% in FY 2005 to 19% in FY2014, while the tertiary sector's share increased from 36% to 43% over the same period. The agriculture and construction sectors were major players in the state economy two decades ago. In 2004-05 the manufacturing sector was a marginal contributor in the state. In fact, the in the last two decades the manufacturing sector has cumulatively grown by 1952% in the state. Thus by 2022-23, it accounted for nearly 32% of the GSDP of the state.

Table 29: Gross State Value Added in Himachal Pradesh, Rs Lakh, 2022-23 prices.

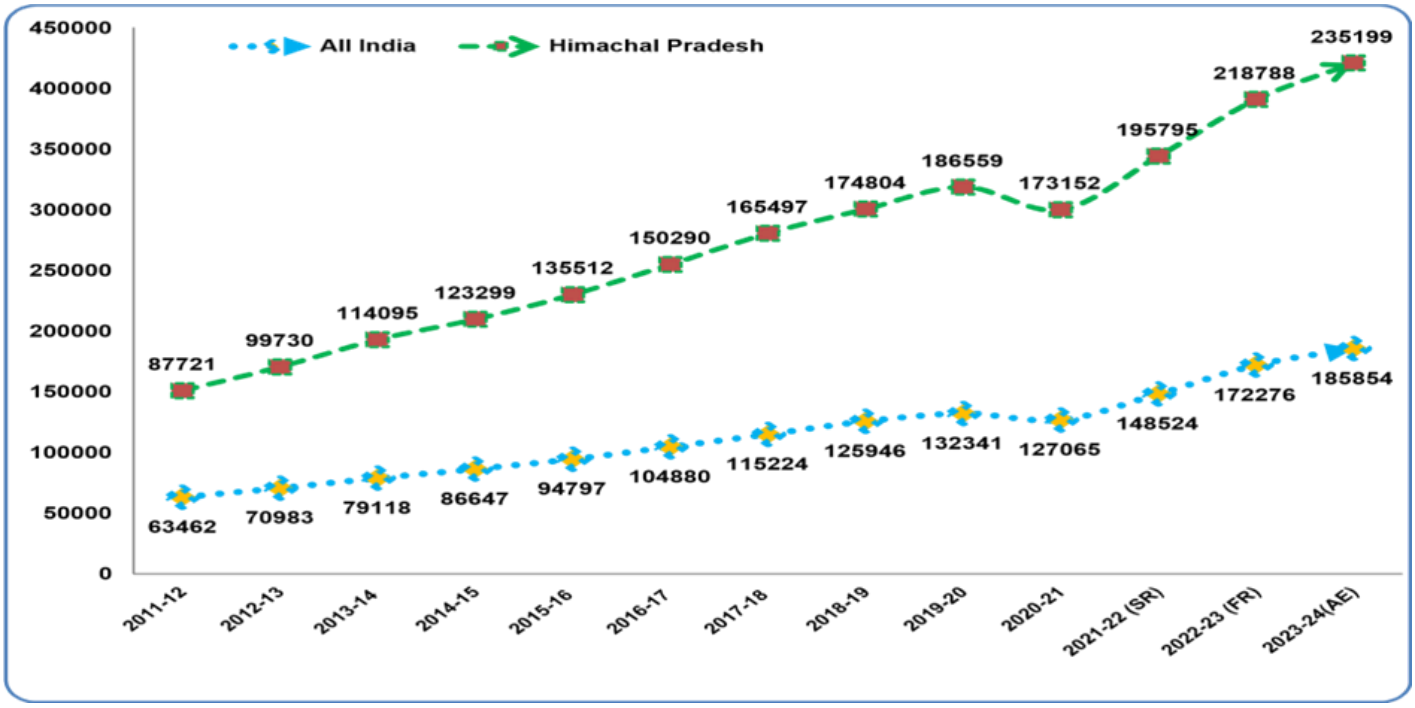
Sectors	2004-05	2022-23	Change	%change
Agriculture	4,74,739	15,56,089	10,81,350	227.78
Industry, including	9,24,020	79,28,468	70,04,448	758.04
Manufacturing	2,77,210	56,88,505	54,11,295	1952.06
Construction	4,60,050	11,58,938	6,98,888	151.92
Services, including	8,70,341	80,37,921	71,67,580	823.54
Banking & Insurance	72,783	5,42,070	4,69,287	644.78
Total	2,269,100	17,522,478	15,253,378	672.22

Source: Reserve Bank of India
https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook+of+Statistics+on+Indian+States

7.2 Per capita income and poverty

In absolute terms, Himachal Pradesh, with a projected population of 77.40 lakh, had an estimated per capita income of ₹2,18,788 for the FY 2022-23) compared to ₹1,72,26 at the national level for the same year. (Economic Survey 2023-24)

Fig: Per Capita Income at current price for last 13 years



Source: Economics and Statistics Department Himachal Pradesh

The poverty headcount approaches one-third of the national average. The decline in rural poverty is noteworthy, decreasing from 36.8% in 1993–94 to 8.5% in 2011, positively impacting all social groups across both rural and urban settings.

This trend has continued as can be seen from the decline in the multidimensional poverty index (MPI) from NFHS-4 (2015-16) and NFHS-5 (2019-21).

In the latter year, HP's headcount ratio at 4.93% was less than a third of the India average of 14.96% and MPI at 0.020 was less than a third of the India average of 0.066.

Table 30: Changes in Poverty Headcount and Intensity 2015-16 to 2019-21

	Poverty - NFHS-4 (2015-16)			Poverty - NFHS-5 (2019-21)		
	Headcount Ratio (%)	Intensity %	MPI	Headcount Ratio (%)	Intensity %	MPI
Himachal	7.59	39.44	0.030	4.93	40.22	0.020
All India	24.85	47.14	0.117	14.96	44.39	0.066

7.3 Household Consumption Expenditure

As per the Household Consumption Expenditure Survey, 2022-23, Himachal had a per capita monthly consumption expenditure of Rs 5573 in rural areas and Rs 8083 in urban areas, as compared to Rs 3860 for rural India and Rs 6521 for urban India.

Of the total consumption of Rs 5573 per capita per month in rural HP, the following were the main items: Cereals Rs 201, pulses and gram Rs 117, sugar Rs 42, salt Rs 3, Milk and milk products Rs 629, vegetable Rs 271, fruits Rs 196, eggs, fish and meat Rs 135, edible oil Rs 133, spices 99, beverages and processed foods Rs 582, pan, tobacco and intoxicants Rs 166, making a total of Rs 2412 for food items.

Non-food items included toiletries Rs 205, other household consumables Rs 124, clothing Rs 331, footwear Rs 85, fuel and light Rs 345, conveyance Rs 409, education Rs 293, medical Rs 335, other consumer services Rs 323, entertainment Rs 40, rent Rs 65, making a total of Rs 3149.

As can be seen from the above, about 43% of the consumption basket of the state's rural population, which is roughly 90% of the state's population, is of food items.

Most of these can be locally produced, with a few exceptions such as spices, tobacco and some beverages. Thus, a food self-sufficiency-based development strategy makes eminent sense for the state as it will also generate local employment and income.

7.4 Status of livelihoods and employment

Primary school enrolment rate in Himachal is over 100%. The education data enables us to compute the employment requirements in Himachal.

The existing labour force in HP is estimated to be about 46.8 lakh persons in 2024, given the population projections for 2024 and the LFPR measured by PLFS at 60% for all ages. Thus, the increment is about 2.6% per annum. This is about the percentage of the labour force that will retire or expire each year which is typically between 2.5 to 3% per annum. Thus, numerically there should be no problem.

The problem arises in spatial, sectoral, segmental, skill-level, status of employment, salary/security and sustainability matching. This is discussed in the last section in greater detail.

Table 31: Incremental Labour Force in Himachal across Educational Levels in 2024

Level of education	Number per annum in 2024	Assumed Labour force participation rate	Number per annum in 2024
School drop-outs	47,000	70%	32,900
Hr Sec pass/ Graduates (as almost all join college)	87,000	80%	69,600
Post-Graduate	15,000	90%	13,500
Technical	7,500	90%	6,750
Total	130,000	NA	122,750

7.4.1 Labour Force Participation Rate (LFPR) & Worker Population Ratio (WPR)

According to the PLFS 2023-24, the Labour Force Participation Rate (LFPR) of all ages for Himachal Pradesh (60.5) is higher than Uttarakhand (42.5), Punjab (42.3), Haryana (36.3) and India (42.4). For females, it is more than double that of all these states (except Uttarakhand) and all India.

Table 32: LFPR (in percent) according to usual status (ps+ss)

Age Group	Rural			Urban			rural + urban		
	male	female	Person	male	female	person	male	female	person
15-29 years	70.3	60.3	65.3	62.1	37.4	52.2	68.9	57.5	63.3
15-59 years	87.3	76.8	81.8	81.6	50.6	68.1	86.4	73.9	80
15 years and above	82.4	70.2	76	77.5	45.1	63.2	81.7	67.6	74.4
All ages	64.9	58.7	61.7	64.2	35.7	51.4	64.8	56.2	60.5

LFPR in Himachal Pradesh is higher than in other adjoining states because agriculture is still the mainstay of the State's largely rural economy, and predominantly agricultural economies tend to have higher labour force participation rates.

A significant aspect of this data is high female participation. HP had the highest share of women in the workforce in India, with 57.9% of the labour force being female, which is considerably higher than – more than double of the national average of 27.8%.

WPR is an indicator used for analysing the employment situation and knowing the proportion of the population actively contributing to the production of goods and services in the economy. WPR is defined as the percentage of employed persons in the population. Following table shows the worker population ratio in Himachal Pradesh and all India. The WPR of Himachal Pradesh in 2023-24 (63.8) is better than and India (53.7).

Table 33: WPR (in percent) 15 years and above)

State/UT	Rural			Urban			rural + urban		
	Male	female	Person	male	female	person	male	female	Person
Himachal Pradesh	73.8	56.7	64.8	73.6	35.4	56.8	73.7	54.5	63.8
All India	75.3	38.1	56.5	70.5	23.9	47.4	73.8	33.8	53.7

Source: PLFS 2024

7.4.2 LFPR and WPR – Rural vs Urban

The LFPR and WPR as published by the latest PLFS, 2023-24 there is significant difference in rural and urban areas. In rural areas the LFPR for all ages is 61.7 % against just 51.4% in urban areas. The LFPR in the age group of 15 to 59 in rural Himachal Pradesh is as high as 81.8%; however, it is just 68.1% in the urban areas. The WPR in rural Himachal Pradesh is also higher compared to urban areas of the state. The WPR in rural areas is 72.2% against just 57.5% in cities of the state. The high rate of LFPR and WPR in Himachal Pradesh is attributed to higher dependency on agriculture. The data looks impressive but higher dependency on agriculture leading to situations like under employment.

7.4.3 Status of Employment

The employment status can be divided into three major categories (1) self-employed, (2) Regular wage/Salary receivers and (3) Casual labour). While a majority of males in Himachal are self-employed, and this proportion is higher than the all-India proportion of self-employed males, among females, the predominance of self-employed status at 86.5% is not just very high but considerable higher than the proportion for all India - 65.3%.

Part of this is due to very low proportion of females in casual labour – only 1.7%. According to Rukmini Srinivasan (2012), "patriarchal societal structures, social norms and expectations often assign women primarily to domestic duties, limiting their involvement in paid labour, including casual work., which may be perceived as less respectable or appropriate."

This gender-based explanation seems to be borne out by the fact that despite higher proportion of females getting secondary and higher education. only 11.9 percent of females in Himachal Pradesh are in status of regular wage /salary earner as compared to all India (16.5).

Table 34: Employment Status - Regular/Casual/Self-Employed % in 2022-23

State	Self-Employed (Male)	Self-Employed (Female)	Regular Wage/ Salary (Male)	Regular Wage/ Salary (Female)	Casual Labour (Male)	Casual Labour (Female)
Himachal Pradesh	58.90	86.50	27.10	11.90	14.00	1.70
All India	53.60	65.30	23.20	15.90	23.20	18.80

Source: PLFS Report, 2022-23

7.5 Employment by Sectors

Agriculture remains the dominant sector with 58.71 % for employment, particularly among rural women. The share of employment in the agriculture sector in the state is significantly higher than the national average (45.46%). More importantly, the share of employment in this sector has increased from 55.61% in 2017-18 to 58.37% in 2022-23.

Like in most of the states in India, the primary sector (agriculture and allied activities) still accounts for a majority of the state's employment.

Table 35: Sector wise Employment Share (2022-23)

Sector	Employment Share (%)	Key Contributions
Agriculture & allied	58.71	Crop production, horticulture, livestock
Industry	16.94	Manufacturing, hydroelectric power, MSME
Services	24.35	Tourism, IT, hospitality

Source: Economic Survey 2023-24

Besides the primary sector, the Construction sector is another major employment generator, which accounts for 18-19% of rural male employment and 12-22% for urban males. Service sector generates 43.6% of urban female employment, showcasing a shift towards service-oriented jobs. During this period the construction sector has observed sharp decline from employing 14.74% workforce in 1017-18 to just 8.41% in 2021-22.[60]

[60] MoSPI, PLFS, 2022, https://www.mospi.gov.in/sites/default/files/publication_reports/AnnualReportPLFS2021-22F1.pdf

In the last three decades the economic size of the secondary and tertiary sector has tremendously grown from 63% of GSDP in 1990-91 to 87% of GSDP in 2020-21, yet these two sectors together engage only 43% of the workforce. The size of the agriculture sector decreased in this period from 26.86% to 13.14% of GSDP yet remains a major source of employment for workers.[61]

7.5.1 GSDP to Employment Share Mismatch

More than 58% people in Himachal Pradesh are dependent on agriculture and allied sectors. However, it contributes only 14% to the GSDP of the state. The tertiary sector involving trade, hotels, transport, communication, financial services, real estate and professional services including public sector jobs employs only 24% in the state.

However, these tertiary sectors cumulatively contribute 44% in the state economy. The secondary sectors such as manufacturing, gas, water supply and other utilities contribute nearly 42% in the economy but contribute only 17% of the total employment in the state.

Table 36: Sector-wise Share of Gross Value-Added vs Share of Employment, Himachal and India, 2022-23

Sector	% Share in GVA		% Share in Employment	
	H.P.	India	H.P.	India
Agriculture and allied activities	13.6	19.0	58.4	45.8
Mining and Quarrying	0.4	2.0	0.3	0.3
Primary	**13.9**	**21.0**	**58.7**	**46.1**
Manufacturing	28.9	15.8	6.9	11.4
Elect, Gas Water supply and other utility	5.8	2.6	1.6	0.5
Construction	7.2	8.1	8.4	13.0
Secondary	**42.0**	**26.5**	**16.9**	**25.0**
Trade, Hotels Transport, Communication	12.3	16.9	12.2	17.5
Financial, Real estate and professional services	13.8	21.5	1.8	2.7
Public Administration and other services	18.0	14.1	10.4	8.8
Tertiary	**44.1**	**52.5**	**24.4**	**28.9**
Total	100.0	100.0	100.0	100.0

Source: Economic Survey 2023-24, Himachal Pradesh

[61] Govt of H.P, Economic Survey- 2022-23, https://secure.evidhan.nic.in/SecureFileStructure/AssemblyFiles/14/2/20230316/Documents/2_1.pdf

7.5.2 Wages and Income Level

According to the Economic Survey for 2023-24 for Himachal Pradesh, the primary sector – mainly agriculture and allied activities employed 58.71 percent of total workforce as compared to 45.76 percent for India. The share in GVA is 13.57 percent as compared to 18.97 percent in India.

The share of the workforce, employed in the secondary and tertiary sectors (16.94 and 24.35 percent respectively) is less than the share of GVA (41.98 and 44.08) which means fewer workers are contributing more to the GVA indicating the scope for workforce reallocation from agriculture to secondary sector so that disguised unemployment in primary sector is reduced.

In Himachal's context, the services sector has become extremely important not only in terms of contribution to GSDP but also as a key vehicle for employment generation.

The wages and earnings accordingly vary widely across the three sectors – farmers and agricultural workers earning the least while those in the service sectors earn the most. Himachal being a rural economy, where 58.71% persons are engaged in the primary sector, naturally, self-employment is one of the largest livelihood providers. But the earnings through self-employment are lower in comparison to wage/salary income.

Women in rural areas are mostly self-employed. So, they are the major sufferers. In most of the cases, they are engaged in family enterprises, which didn't provide them equal income like their male counterparts. This discrepancy is one of the major reasons for the lack of economic independence of females. The average earning of self-employed persons also varies widely, even in rural-urban, male-female dynamics.

Following is the average gross earning of self-employed persons in various states during the months of April-June 2024. One can see, there is a high disparity among male and female earnings as well as rural vs urban earnings. In Himachal, while rural self-employed males earn Rs 12,726 a month, the self-employed females earn only Rs 4,471 a month, which is almost one third.

Same happens in Urban areas, where males earn Rs 26,478, females earn only Rs 5,864, where the gap is even wider. There is a huge difference in rural and urban self-employment also. In rural, while self-employed earns Rs 8,729, in urban, it's Rs 21, 764. This only shows high gender disparity and disguised unemployment.

For females, most of the self-employed are engaged in their own or family business, farming, where they are either unpaid or get minimum income. So, we can safely confer that even in rural areas, females are employed in high percentage, in actuality, it's not that.

The Government should take initiatives to remove this gender and regional disparity by focusing on female employment. Also, it should create diversified livelihood opportunities in rural areas, to address the disguised unemployment as well as to stop migration from rural to urban areas.

Table 37: Average gross earnings during last 30 days (Apr-Jun 2024)

State \ UT	Regular wage/salaried employment			Casual labour work other than public works in CWS			Self-employment		
	rural+urban			rural+urban			rural+urban		
	Male	Female	person	Male	female	person	male	female	person
Himachal Pradesh	26475	19879	24647	484	445	483	14,061	4,804	9,574
all India	21478	15790	20095	459	306	433	16,723	5,803	13,900

Source: PLFS Report 2023-24

The statistics of LFPR and WPR in Himachal Pradesh are impressive but in terms of wages and level of earning the state is one of the low performing states in the region. For example, the self-employed, including people engaged in agriculture, constitute the biggest share of the employment in the state, but the average monthly earning of these people is just Rs. 9,574. This monthly earning is very less compared to wages and earnings of self-employed persons in other neighbouring states.

The earnings of the working population of the state in the category of regular wage/salaried employment and casual labour is comparatively better in Himachal Pradesh. Wages for women in these categories are also better compared to other neighbouring states and national average. However, self-employed women including those engaged in agriculture earn very less compared to other neighbouring states and national average. The wage gap between men and women in the category of self-employment is about three times in the state.

Nearly 58% employed in the primary sector belongs to the informal sector. Moreover nearly 12% employed in the construction sector also largely fall under the informal sector. Moreover, a substantial number of workers in the secondary and tertiary sectors are informal, which accounts to nearly 90% of the total workforce. The low growth of sectors engaging informal workers, ever increasing workforce and stagnant productivity and yield has resulted in deprivation of all informal sector workers.

7.6 Unemployment Situation

7.6.1 Unemployment among youth and women

As per the PLFS 2024, the unemployment percentage in Himachal is only 4.5% of the labour force. These percentage numbers appear low because unemployment is defined as those in labour force (willing and able to work) not getting work. But as the LFPR in HP is only 60.5%, the 39.5% who do not work are not counted as unemployed. To understand the unemployment situation better, we need to look at the PLFS data for unemployment among the different age groups, particularly those between 15 and 29 years of age.

HP witnessed the highest overall unemployment rate of 33.9 per cent, among the age group of 15 to 29 years in cities during July-September 2023, according to the Periodic Labour Force Survey (PLFS).

Urban areas experience higher unemployment rates, 14.1 % of the labour force, compared to lower rates in rural areas (3.5 %) in the age group of 15 years and above where employment is largely informal and self-sustaining. The unemployment rate among men in the rural areas of HP was 3.3% in 2022-23, while it was 5.1 % in urban areas. This further confirms that rural males have a higher employment rate compared to urban males. The youth unemployment rate in HP is significantly higher than the national average. Among educated youth, the unemployment rate was 25.7%, ranking third highest nationally, Among the registered unemployed, a significant portion consists of graduates and postgraduates, with over 44% being women.

Table 38: Unemployment Rate (UR) in usual status (ps+ss) age 15 years and above

Survey Period	Rural Male	Rural Female	Rural Person	Urban Male	Urban Female	Urban Person	Rural + Urban Male	Rural + Urban Female	Rural + Urban Person
2022-23	3.3	3.8	3.5	5.1	29.9	14.1	3.4	5.3	4.3
2021-22	4.5	2.6	3.6	4.9	17.3	8.7	4.6	3.4	4
2020-21	3.8	2.1	3	6.3	8.5	6.9	4.1	2.4	3.3
2019-20	4.5	2.3	3.4	4.1	9.7	5.9	4.4	2.8	3.7
2018-19	5.3	4.3	4.8	6.5	14.9	8.8	5.4	4.8	5.1
2017-18	6.2	3.9	5.2	7.4	13.7	8.7	6.3	4.3	5.5

Source: Economic Survey 2023-24

The youth unemployment rate in HP is significantly higher than the national average. Among educated youth, the unemployment rate was 25.7%, ranking third highest nationally, Among the registered unemployed, a significant portion consists of graduates and postgraduates, with over 44% being women.

As per the Comprehensive Annual Modular Survey (CAMS, 2022-23, p. A-34), 7.9% of males and 17.4 % females, (overall 12.6%) between 15 and 29 years of age were not in employment, education or training. The resulting gap between aspirations and attainment leads to a lot of tension among the youth as well as for their families.

7.6.2 Unemployment by Regions/Districts

The employment in HP is distributed unevenly across different districts. Kangra district has the maximum number of government employees with 30,120 (17% of total), followed by Mandi with 25,588 (15.4%) and Shimla with 24,836 (14.9%). Employment is concentrated in the northern districts of Kangra, Mandi and Shimla for government jobs, while Solan, Sirmaur and Una lead in industrial employment. The remote districts of Kinnaur and Lahaul & Spiti have the lowest employment levels.

As far as regional distribution is concerned, the highest number of job registrations occurred in Kangra district (23,248), followed closely by Mandi (23,166). However, job placements were minimal, with only 40 government jobs offered in Kangra and 91 in Mandi. In contrast, three districts—Sirmaur, Kullu, and Lahaul Spiti—failed to provide any government job placements to 13,967 registered aspirants.

7.7 Summary of the Employment Situation

The employment situation in Himachal Pradesh can be summarized as follows:

Absolute Numbers: In terms of numbers, given the projected population and estimated LFPT of HP in 2024, there 47 lakh persons in the labour force, so an unemployment rate of 4.5% means that 2.11 lakh persons were unemployed.

Growth less Agricultural Economy: Agriculture remains the backbone of Himachal Pradesh's economy, with a significant portion of the population engaged in farming activities. Over 58% of the labour force of the state is engaged in agriculture and allied activities leading to lower income and predominance under employment. This sector has not grown in the last two decades however the labour pressure is ever increasing. In the last five years people have moved from construction and industry sectors to agriculture in Himachal Pradesh making it more unsustainable.

High Female Labour Participation and Low Earnings: HP has the highest proportion of women in the workforce in India, with females constituting 73.9% of the labour force participation in the 15-59 age group in 2023-24 and 56.2 for all age groups during 2022-23, significantly higher than the national average of 31.7%. The state witnessed a 10.9% increase, the second highest in the country, in the LFPR among females aged 15 to 29 from 2021 to 2023. However, women are largely involved in agricultural and allied activities, which are not growing at all.

Lower Unemployment Rates High Income Gap: The state experiences lower unemployment rates compared to many other Indian states, standing at 4.0% as per the latest data. This favourable employment landscape encourages more individuals to join the labour force. However, there is huge income divided amongst workers in the state. self-employed workers, which includes all 58% who are involved in agriculture, earn one the lowest in India at the rate of Rs. 9574 per month. However, the monthly earnings of salaried and regular wage workers stand one of the best in the country. As per latest LFPR survey salaried worker in the state earns an average salary of Rs. 24,647 per month.

Gender Disparities: The labour force participation rate of women is comparatively low in the state; however, its LFPR for women in rural areas at 60.6% is one the best in the country. However, the PLFS data indicate that women in the state are largely engaged in low paying occupations. For example, the self-employed category of livelihoods in the state is one of least paying sectors in India. In this sector 84% of the total women labour force is engaged. High earning sectors such as salaried jobs and casual labour account for only 14% and 1.8% of women workforce respectively.

Social disparities: Here are the key statistics on labour force participation rate (LFPR) and worker population ratio (WPR) among different social groups in Himachal Pradesh: The WPR for SCs was 511 per 1000, i.e. 51.1 %, for STs was 568 (56.8%), for OBCs was 524 (52.4%), and for others was 508 (50.8%).

The existing labour force in HP is estimated to be about 46.8 lakh persons in 2024, about 60% of the population.

The additions to the labour force based on the birth rate 15 years ago and expected labour force participation rate, the increment is about 1.23 lakh persons or about 2.6% per annum. This is about the percentage of the labour force that will retire or expire each year which is typically between 2.5 to 3% per annum. Thus, numerically there should be no problem.

The problem arises in spatial, sectoral, segmental, skill-level, status of employment, salary/security and sustainability matching. This is discussed in detail below:

- Spatial mismatch occurs as people want jobs in urban areas, where there are not enough jobs. While at present only about 10% of the population is urban, in terms of the proportion of jobs being sought in urban areas, it may be over 70-80%.

- Sectoral mismatch is that people want jobs in the tertiary services sector, ideally in government service, whereas there is shortage of labour force in agriculture, horticulture and livestock sectors. The secondary sector - construction and manufacturing has enough applicants, but not enough for the skills they need.

- Segmental mismatch implies less than needed jobs for women, less than needed job for socially disadvantaged groups such as SC, ST and OBCs, and less than needed jobs for the disabled.

- Skill-level mismatch shows up in the paradox that while employers are constantly complaining of not having enough applicants with the skills the employers require, and high levels of educated applicants.

- Status mismatch - in terms of regular employment, casual employment and self-employment. As there are just not enough regular salaried/wage jobs that most people want, ideally with the government, the work force gets pushed towards casual wage employment or self-employment, which becomes an involuntary option. Ideally only those who have the right motivation and skills for it should opt for self-employment.

- Salary/benefits/security mismatch is aspirational - the level of earnings, social security benefits and continuity of employment that workers aspire for is not available in most jobs, which are casual, low-paid, without social security nor certainty about tenure.

- Sustainability mismatch implies that a lot of the jobs are damaging to the environment, to the worker's health and sometimes to the communities where the jobs are.

The strategy that we will suggest for Himachal will try to address these seven mismatches between employment demand and its supply.

7.8 Status of the Governance and Fiscal Health of the State

There have been several attempts made to measure the quality of governance of various states in India. One of the most authoritative studies was by Sudipto Mundle et al (2016). They had developed a Governance Performance Index (GPI) based on the following parameters.

Table 1: List of Indicators

Services	Infrastructure	Social Services	Fiscal Performance	Justice, Law & Order	Quality of legislature
Indicators	Road.	Health	Development Expenditure ÷ Total Expenditure (%)	Proportion of trials completed in less than 3 years (%)	Proportion of MLA's with serious criminal charges pending (%)
	Standard State Highway (in kms.) per 100 sq. km. of Area.	1. Infant Mortality Rate 2. Maternal Mortality Rate 3. Life Expectancy at Birth			
	Power	Education	Own Tax Revenue ÷ GSDP (%)	Rate of Violent Crimes (number per lakh population)	Proportion of women MLA's(%)
	Per capita consumption of electricity (kWh)	1. Literacy rate 2. Gross Enrolment Rate 3. Average Years of Schooling			

Source: Mundle, et al (2016) [62]

They had also developed a Development Adjusted Governance Inde (DAGI), which took into account the GSDP per capita to compare across states – based on the observation that generally GSDP per capita and governance performance tend to improve in a correlated manner. Thus, if a state is at a lower level of GSDP per capita, its GPI should be adjusted upward to make it comparable with another state with higher per capita GSDP.

Based on their calculation, for 2001 and 2011, Himachal Pradesh stood at the 9th and the 11th ranks respectively among 19 states which were ranked. Adjusting for GSDP per capita, the DAGI for HP put it at the 14th rank in 2011, lower than the 11th rank in that year for raw GPI. This indicates the overall performance of governance institutions in the state was below par. Unfortunately, we could not find any more recent ratings for GPI or DAGI for HP.

The RBI (2024)[63] released a study on one major component of governance - fiscal health. The period of the analysis was FY 2022-23. The study identified five major sub-indices to calculate the composite fiscal health index (FHI).

The five major indicators cover fiscal prudence in terms of the level of Deficit, Revenue Mobilization, Quality of Expenditure, Debt Index, and Debt Sustainability. Himachal scored somewhere in the middle with an FHI of 42. In contrast, the Niti Ayog recently ranked Odisha number one with an FHI of 67.8.

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[62] National Institute of Public Finance and Policy New Delhi Working Paper no 164, https://sudiptomundle.in/wp-content/uploads/2023/11/Governance-Performance-of-Indian-States-2001-02-and-2011-12-coauthor-NIPFP-working-paper-No.-164-March-2016.pdf

[63] RBI Bulletin June 2024. Fiscal Performance of Himalayan States/Union Territories,.P. S. Rawat, E.A. Yadav, Atri Mukherjee

As per an analysis by PRS India[64], for HP, the Revenue deficit in 2024-25 was 2% of GSDP (Rs 4,513 crore), The Fiscal deficit for 2024-25 is targeted at 4.7% of GSDP (Rs 10,784 crore). Total expenditure (excluding debt repayments) in 2024-25 is targeted at Rs 52,965 crore. This is proposed to be met through receipts of Rs 42,181 crore and net borrowings of Rs 7,430 crore.

7.9 Status of Banking, Financial Services and Insurance

In terms of banking infrastructure, Himachal is in a relatively good position, with population served per branch at 3058 even in 2011. Since then, things have improved even further. As on 31st Mar 2022, there were a total of 2245 bank branches in the state, of which 1736 or 77% were in rural areas.

Coupled with many "bank mitras" - small outlets away from bank branches, makes it easy to deposit and withdraw, make or receive remittances and payments. In addition, with the spread of mobile phone-based internet banking, transacting is not a constraint. The constraint is the availability of credit.

As on 31st Mar 2022, the total bank deposits in Himachal were Rs 154,984 crore whereas the total loan advances outstanding were Rs 54,315 crore, yielding a credit-deposit (CD) ratio of only 35%. Since banks must keep about 25% of their deposits in cash and statutory liquidity reserves, the CD ratio can be 75% (actually all India CD ratio is 79%).

The gap of 40% amounts to nearly Rs 62,000 crore - this is the amount of deposits of people from Himachal which could have been made available as credit in the state but has been leant elsewhere. This is roughly half the amount of investment we are recommending over the next five years to bring about inclusive and sustainable growth in the state.

Not only is the deprivation of credit by amount, but it is also by the proportion of persons availing credit. As per CAMS 2022-23, while for all India, 18322 persons were borrowers per 100,000 population of persons above 18 years.

For Himachal that number was merely 7268. In other words, the proportion of persons availing credit was about 40% of all India level, and incidentally only 12% of the state with the highest proportion of borrowing adults – Andhra Pradesh. Though it can be said that the ethic of "spending within one's own means" is a cautious ethic, that is true for consumption credit. The lack of credit for productive purposes – in agriculture or non-farm business activity, can be a serious constraint on output and can reduce potential growth of incomes and employment.

The ratio of bank credit outstanding to the GSDP of the state in the year is a measure of credit adequacy. For Himachal it is 28.3% in 2022-23, as against 90.1% for all India. This is another way of seeing how the Himachal economy is not capitalised enough. This then naturally has implications for lower than potential growth of incomes and employment.

[64] https://prsindia.org/files/budget/budget_state/himachal-pradesh/2024/HP_Budget_Analysis-2024-25.pdf

We can also see the sectoral variation in availability of credit. The state level credit plan for all the banks together was to disburse Rs 33,507 crore, of which 84.5% (as against RBI target of 40%) was in the priority sector. Of the Rs 28,306 credit to be disbursed in the priority sector, 49% was to agriculture (mainly crop loans), 35% was to MSMEs in services and manufacturing, and 7% was for housing. Thus, the credit profile reflected the low-equilibrium underlying economy of the state.

The awareness of investment avenues, such as in mutual funds or equities is still quite low in the state. As per the Association of Mutual Funds of India (AMFI), the total assets under management from Himachal was Rs 17,500 crore at the end of 2024.

Himachal along with J&K and the northeastern states, fared in the lowest bracket. Likewise, the use of insurance for risk coverage was limited in Himachal. As per the General Insurance Council data, the Insurance density which is defined as the Gross Direct Premium Income (GDPI) per capita in Himachal was just Rs 1696 in 2021, as compared to Rs 7912 in Delhi.[65]

In summary, the status of the BFSI sector in Himachal is still at an early stage. As the state moves to the next stage of development, this sector will have to be encouraged to grow.

[65] https://www.gicouncil.in/yearbook/2021-22/indian-non-life-insurance-industry-analysis/section-02-statewise-penetration-density/statewise-penetration-density/?stateName=10

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