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CII
Confederation of Indian Industry

VISION DOCUMENT
HIMACHAL PRADESH@2047

Preface and Introduction

Himachal Pradesh is located in the northern region of India. The state is surrounded by Jammu and Kashmir on the north, Punjab on the west and the south-west, Haryana on the south, Uttar Pradesh on the south-east, and China on the east.

At current prices, Himachal Pradesh's gross state domestic product (GSDP) is estimated to be Rs. 1.92 trillion (US$ 24.84 billion) in 2022-23. The state's GSDP (in Rs.) increased at a CAGR of 7.70% between 2015-16 and 2022-23. The tertiary sector witnessed the fastest growth at a CAGR of 10.76% between 2011-12 and 2020-21.

Total exports from Himachal Pradesh stood at US$ 1,940.34 million in FY22 (until February 2022).

As of March 2022, Himachal Pradesh had a total installed power generation capacity of 4,532 MW, comprising 2,003.26 MW under private utilities, 1,062.21 MW (state utilities) and 1,466.53 MW (central utilities). Himachal Pradesh has immense potential for hydropower as it is naturally blessed with abundant streams and rivers flowing down from towering mountains.

In May 2022, the Himachal Pradesh government announced plans to allot 27 hydro power projects in the state's Chamba, Kangra, Lahaul-Spiti, Kullu, Shimla, and Kinnaur districts, with a combined tentative generation capacity of 722.4 MW. Proposals from 'eligible bidders' have been invited for the implementation of these projects in the private sector on a Build, Own, Operate, and Transfer (BOOT) basis.

The State Government of Himachal Pradesh offers a wide range of policy and fiscal incentives for businesses under the Industrial Policy, 2017. The state has also undertaken other policies such as Tourism Policy 2005 and IT Policy 2001 for upgradation of these sectors in the state. Himachal Pradesh has announced a Revised Solar Policy 2016, under which it plans to establish 700 MW of solar photovoltaic cell capacity.

Himachal Pradesh will have the world's longest and highest tunnel by 2025, which will connect Zanskar Valley in Ladakh to Lahaul in Himachal Pradesh, and will be 4.25 km in length.

According to the Department for Promotion of Industry and Internal Trade (DPIIT), the cumulative FDI inflows in Himachal Pradesh were valued at US$ 160.74 million between October 2019-December 2021.

The need for state specific vision document was discussed at the CII Planning and Theme Setting Meeting held on 6 May 2022, as was done in 2008; wherein 17 State vision Documents were drawn; these collectively were evolved as the National Vision Document titled "India@75 - The People's Agenda".

It has been decided to adopt a similar approach again; however, the differentiator this time will be that the vision will be for 25 years with a provision for validation / course correction every five years.

Inputs from various stake holders from the State of HP were captured under the respective vision themes for collation and drawing up of the Himachal Pradesh Vision Document Himachal@2047. Collation of inputs received from this state along with other state and outcomes of the similar macro level exercise at center will enable CII and India@75 Foundation to evolve a comprehensive National Vision Document for India@100.

1. VISION THEME: EDUCATION AND SKILL DEVELOPMENT

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   a. By 2047, one of the key aspirations and target is that the literacy rate in Himachal Pradesh should reach 100%.

   b. The higher literacy rate will enable the industry readiness level of Himachali youth to climb up the ladder of success.

   c. Farmers of Himachal Pradesh should be fully equipped and technologically advanced to yield large volumes of sustainable fruits and vegetables ensuring that the state continues to be the fruit bowl of the country.

   d. Climate-controlled agriculture to be fully functional in Himachal Pradesh, making it an exemplary state of India and role model for other states to follow.

   e. School Pass Outs and ITI students to be Skill- Advanced in different technologies. This would be possible by ensuring that the ITI Faculty is thoroughly trained in newer technologies and the ITIs are equipped with state-of-the-art training equipment.

   f. More emphasis on small start-up-based Entrepreneurship which will lead to job creation rather than the job seeking population being dependent on the state for employment.

2. **The challenges to meet the aspirations**

   a. Less awareness among the residents of the state

   b. Restrictions of funds in the procurement of raw material/ equipment.

   c. Less availability of Technologically Advanced equipment in the state

   d. Connectivity to remote areas given the hilly topography of the state

   e. Seasonal climatic variations and lack of storage space for Sustainable and Organic Farming.

3. **How can we bridge the gaps to achieve our aspirations for HP?**

What technological/policy interventions can help State to get from here to there? (strategy)

a. State Government can be a catalyst to generate the funds for various Projects/Equipment, Skill development programs so that a joint effort of the State along with the CII Industry members, NR Committee on Skill Development and Premier Educational Innovative institutes like IIT Mandi can raise the future of Himachal Pradesh into a technologically advanced state. A tripartite push from the State Govt, Educational Institutions and Industry led by CII can work on this to turn around the State Education that will ultimately result in sustainable economic growth in the state.

b. More awareness programs can be organized in State Government/ Semi-Government organizations to motivate the youth to join various Skill development courses, ToT course can be organized by CII in collaboration with IIT Mandi, other premier institutes and industry led by CII.

c. Skill Based Jobs can be planned and generated in the State to ensure near 100% employment.

2. VISION THEME: HEALTH CARE

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100?**

Himachal Pradesh was the first State to fully vaccinate 100% of its adult population against COVID-19. However, one of the biggest gap in the developmental endeavours in Himachal Pradesh, is healthcare. The state urgently needs disproportionate improvement in health care support at the point of care. This takes into consideration both diagnostic and therapeutic support. The hilly topography of the state with relatively sparse infrastructure poses a challenge in this area. However, even with the sparse population model it is still possible to improve the health care facilities in HP. The following are the possible aspirations with respect to health care:

a. Point of care diagnostic and therapeutic support for every individual in every village of the state.

b. Basic screening and monitoring devices in every home. This will help in preliminary diagnosis for early treatment to avoid worsening of any ailment if diagnosed

c. Primary health care centres in every village.

d. Secondary health care centres in every town.

e. Tertiary health care in every district headquarter.

f. Statewide tele-health network. This will drastically improve the health infrastructure as most of the remote hilly areas could be connected to the super specialists with the help of technology.

g. Rapid transit of every individual to secondary and tertiary health care centres in case of any medical emergency.

h. Critical care medicines for first aid in every primary health care centre.

i. Apothecaries in every village.

j. One well qualified medicine doctor for every 200 people in the state. This is a huge target and a jump from current 1 doctor per 1500 persons. More doctors are needed in Himachal due to difficult topography.

k. Health care education for all and basic education for preventive health care.

l. Emphasis on critical care support such as cardiological and neurological support.

m. Distribution of proper drinkable water to every house in the state.

2. **The challenges to meet the aspirations?**

   The poor health care comes primarily because of the sparse population distribution of the state. However, there a good number of other challenges as well that needs to be taken into consideration. Some of them are mentioned below:

   a. Sparse distribution of population that do not match the economics of the country in terms of patient-to-physician ratio.

   b. Difficult terrain and road infrastructure to mobilize patients to the hospital at times of critical health care needs.

   c. Inhospitable climate at some places posing difficulty for

specialist doctors to stay throughout the year.

d. Lack of good high schools for kids, higher education institutions which do not set up the ecosystem for specialist doctors to settle.

e. Connectivity is extremely poor with the rest of the country which makes it difficult to transfer patients to medical hubs at bigger cities for specialized health care.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/ policy interventions can help state to get from here to there?**

A lot of interventions and effort needs to be put in to reach to our dream destination for Himachal Pradesh in 2047. The state needs to mass procure point of care testing easy to use portable gadgets and distribute them at nominal cost to every house and may be even free of cost for every individual below the poverty line. Telemedicine infrastructure must be set with effective broadband data communication network to connect every home with primary health care centres, primary health care centres with secondary health care

centres, secondary health care centres with tertiary health care centres. A lot of investments need to be done with respect to procurement and inventory control of critical care medicines. Apothecaries with basic medicine stock needs to be set up in every village. Heli-ambulance needs to be used for rapid transit of critical patients to tertiary health care centres. The citizens need to be educated about possible health hazards and precautionary measures to be taken to avoid such hazards. Also, health care education needs to be integrated as a part of school education. People also need to be educated about hygiene of drinking water and keeping the surrounding places clean and green.

3. VISION THEME: AGRICULTURE / HORTICULTURE

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100?**

a) Develop a masterplan and achieve scaleup production of top horticultural (Apples,

Plums, Peach, Pears, cherries etc) and other economic crops (Potato, peas, grains, other vegetables etc) of Himachal Pradesh

b) Develop and adopt solutions that eliminate or minimize crop loss during storage and transportation

c) Focus on value addition, processing, and sustainable packaging of Agro-produce further strengthening HP as a key player

d) Adopt smart agriculture technologies associated with precision farming - Water, Soil, Climate, seeds, Package of practices etc to achieve sustainable farming

e) Develop predictive Climate change models and devise preparedness strategies for crisis and risk Management in Agriculture and Horticulture

f) Focus heavily on climate resilient and climate-controlled Agriculture and Horticulture for Himalayan region

g) Map every field of Himachal Pradesh digitally along with the crop yield data and extend support at grassroot level

h) Establish robust soil analytics facilities for ensuring health of every field of Himachal Pradesh

i) Invest in research and control strategies of major crop pathogens and pests

j) Adopt proven technologies for sustainable Agricultural market linkages

k) Sustained focus on Science, Technology and Innovation in Agriculture and Horticulture – farm machinery, enhancing shelf life etc

l) Strengthen startup-ecosystems and Public private partnership in Agriculture and Horticulture

m) Create adequate and quality human resources specifically for Agriculture and Horticulture

2. **The challenges to meet the aspirations**

a) Given the research advances made in the last decade, all these challenges can be met.

b) Hurdles could be in terms of policies to bring in public-private partnerships, funding for infrastructure (like cold storages, processing, farm machinery etc) and research (Precision farming, Smart

agriculture, climate-controlled agriculture and horticulture etc)

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

a) Bring in together all stakeholders to create a clear road map.

b) Empower key stakeholders and ensure transparency and accountability.

c) Prioritize and invest in the agriculture sector as per roadmap – research, processing, transportation, packaging, market.

d) The goals set must be achievable.

4. VISION THEME: MANUFACTURING

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   Himachal Pradesh can be a front runner for manufacturing in pharmaceutical industry and polymer-based products. Manufacturing of sustainable composites using natural fibres from forests of Himachal Pradesh can also be an aspiration.

2. **The challenges to meet the aspirations**

   Key challenges include availability of stable skilled manpower and infrastructure in the state. Any manufacturing facility will require excellent connectivity to other parts of the country.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

   a) Skill development programs leveraging technical institutes of the state

   b) Train the Trainer programs for ITIs can be custom designed and run by CII Himachal Pradesh and CII Northern Region Committee on Skill Development in collaboration with the premier institutes like IIT Mandi, IIM Sirmaur and NIT Hamirpur.

   c) Workshop on Apprenticeship to be organised by CII in the Industry in collaboration with the Department of Industries in HP to create awareness in the industry on the benefits of this scheme.

   d) Programs on Industry Academia Collaboration to be designed and run by CII to prepare the students with the skills that are in tune with the industry requirements.

   e) International and National Learning missions for University professors, ITI principals and faculty to be organised by CII to learn the

best practices in the professional institutes / industry being followed by other states / advanced countries.

f) Connectivity infrastructure; roads, railways etc with national highways and corridors.

g) Encouraging enterprisers to invest in the state even beyond residents of Himachal Pradesh

5. VISION THEME: ARTS AND MEDIA

Arts and Entertainment have played a role in human life and society since time immemorial. As a form of expression, it has portrayed human reality and experiences as well as reflected social reality and issues. On one hand, arts and entertainment offer happiness and amusement to the masses, on the other hand, it can educate and inspire us to be morally better, promote social, physical and mental well-being.

Several studies have been conducted to investigate the impact of arts on health and well-being. There is evidence that engagement with arts can help reduce adverse physiological and psychological outcomes. Moreover, art activities can promote kindness and unity in society, boost community empowerment as well as forge individual identity. Some of the arts activities include playing musical instruments, singing, painting, drawing, dancing, acting, and performing.

Himachal Pradesh is well known for its ancient and traditional weaving, carving, painting, wood and metal craft as well as *Pahari* painting, *Nati* dance, and folk music. *Nati* dance was listed in the Guinness Book of World Records as the largest folk dance in the world in the year 2016, which is an accomplishment for the state and the country.

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   a. The state must work towards preservation, promotion and dissemination of all forms of art and culture. In order to achieve this, the state must undertake the maintenance and conservation of heritage, historic sites and ancient monuments, take steps to Promote literary, visual and performing arts and create cultural awareness from the grass root level to the national and international cultural exchange level.

   b. Our mission should be to promote other art forms and share helpful information on creating,
   marketing, and selling art for artists of all levels so as to help them achieve their goals. At the

same time, we should aspire to transform young audiences into creative, curious and compassionate adults. Our responsibility should be to reach out to children and artists who may not otherwise have access to artistic training and experiences. Our goal till 2047 should be to create an environment that values creativity of everyone so that everyone has a chance to flourish and has access to a wide variety of cultural experiences. Through investment in arts and culture, we will be able to transform the local communities and strengthen the position of the state as a culturally rich region. In addition, we should also aim for a closer relationship with and involvement by industry stakeholders.

2. **What are the challenges to meet the aspirations?**

   a. Most of the traditional art are preserved and passed on from one generation to another within families. Currently, though there have been a few initiatives by the government to preserve our art, however we do not have any organized and self-sustainable system by the state to provide a robust model of preservation for such traditional art.

   b. Resource allocation to rural and remote locations can prove to be a challenge. We may be missing out on talents who cannot have access to proper training and experience. Moreover, arts and culture have experienced economic setbacks from COVID-19, the full scope and scale of which is hard to assess at the moment.

   c. Marketing and sales of the performative arts is another problem that we face since entertainment is understood as a business model within the industrial discourse.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

   a. To achieve our ambition, we need to invest smartly and strategically. We need to grow the skills, knowledge and networks of our local and

national stakeholders in order to forge new partnerships and connections. We must explain and understand the value of arts and creativity and their role in society. To this end, we need help from individual actors, local authorities to support positive change and innovation. We will also adopt new technologies and promote research and development in this area to ensure a dynamic, collaborative, inclusive and relevant outcome.

6. VISION THEME: SPORTS

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   a) The state of Himachal Pradesh as a hub of research and development in Physical Education and sports.

   b) Himachal Pradesh to be the destination number one for sports coaching in India.

   c) Himachal Pradesh to have a strong Olympic movement and the largest winners of Olympic medallists in India.

   d) Himachal Pradesh should have the best professional sports development program to provide a high standard of living for sportsmen and sportswomen.

   e) Himachal Pradesh should be the number one state to have physically fit and healthy citizens.

   f) Himachal Pradesh will be a drug-free state.

   g) Himachal Pradesh will have the highest happiness quotient of its entire population.

2. **The challenges to meet the aspirations.**

   a) Lack of awareness about the benefits of / career in professional sports among the citizens.

   b) Poor standards of school-level physical education and sports curriculum.

   c) Poor standards and trainings of the Physical Education Trainers / coaching staff

   d) State does not have sufficient organized sports coaching programs at the grass-root level across the state.

   e) State has insufficient research-based organized coaching schemes to collect authentic data to monitor longitudinal sports development.

   f) Common citizen does not have consistent access to standard sports facilities.

   g) There is no scientific database for coaches' performance evaluation system.

   h) Huge sporting talent is aspiring

to join the army, police and forest services.

i) Sports as a profession is not accepted as a noble profession among the higher strata of society.

j) Professional sports development is not a high priority for the government of Himachal Pradesh.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

   a) Create standard infrastructure to conduct physical education and sports development programs.

   b) Create a high-level Research centre to scientifically monitor the sports development programs in different schools and colleges.

   c) Develop modern academic institutions to educate physical education teachers who can carry out the programs on a scientific basis.

   d) Develop advance level institutions to prepare high-standard coaches for different games and sports.

   e) Establish the schemes for talent search based on standard scientific norms.

   f) Organize an extensive number of National and International coaching on a longitudinal basis for aspiring children.

   g) First-level professional tournament to create inspiration among children to become a profession in sports.

   h) Create a simple procedure for children to access the standard sports facilities.

   i) Develop high-paying professional sports leagues to expose the aspiring children.

   j) Develop a strong and large-reach sports programme to regularly involve youth and middle age state population in active recreational programme

k) Create a large chain of modern coaching centres for sports.

l) Create a system for continuous enhancement of knowledge of coaches by organizing refresher courses.

7. VISION THEME: TOURISM AND HOSPITALITY

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   Presently 7% of GDP comes from Tourism in Himachal Pradesh, and it is not among the top 10 states visited by domestic and international tourists. This also indicates that less than 2.7% of domestic and less than 4.2% of foreign tourists visited Himachal Pradesh. Therefore, by the year 2047, the objective must be to be amongst the top 10 states visited by domestic and international tourists. In addition, The USP of Devbhoomi can be protected only if tourism goals also lead towards a commitment of creating sustainable and robust mechanisms without hitting hard at the heart and soul of this earthly paradise. Areas that need to be focussed upon are:

   a) Religious / Spiritual tourism
   b) Medical tourism
   c) Historical / Heritage tourism
   d) Wildlife tourism
   e) Ecotourism
   f) Sports tourism
   g) Educational tourism
   h) Homestays

2. **The challenges to meet the aspirations**

   a) Complex topography and landscapes
   b) Inaccessibility to certain regions due to heavy snowfall during winters and landslides during rainy season
   c) Airport connectivity of tourist destinations in HP with other cities is minimal.
   d) Tourists are not sensitive to the natural environment, causing pollution and littering the tourist places
   e) The adventure tourism sector is not regulated leading to multiple accidents frequently

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

   a) Traditional medicines based on Ayurveda sciences can be promoted after thorough clinical trials and checks as they have been the backbone of remote areas for ages. Therefore, the

establishment of specialized institutions is imperative.

b) Promote medical and wellness tourism by inviting various wellness trainers to organize camps. Since connectivity may be challenging for inbound and foreign tourists visiting for medical assistance, investment in developing such centres should be in areas with proper connectivity.

c) The hospitality segment needs a push where more opportunities can be created for the locals by providing them with subsidies in rough terrain to provide facilities like Airbnb in remote locations. In addition, more focus should be centred around creating eateries focused on local cuisines promoting indigenous food culture.

d) Using electric vehicles shall be promoted and subsidized for transportation by tourists. Infrastructure supporting EVs such as charging points in required numbers and at relevant places need to be developed to cater to this. In addition, use of

h) such as river rafting, paragliding, etc. This is very critical as addressing this will not only

alternative fuels shall be promoted to preserve the environment and mellow down costs.

e) Wildlife tourism is already a hit of devbhoomi but needs a promotional touch through security and safety checks as they are in Corbett and other national wildlife parks across the nation.

f) Concretisation and modernization of the cities can be checked. Help from other countries can be sought to build sustainable buildings. E.g. Shimla and Manali are being overcrowded often with high-rise buildings and constructions, which not only put the cities at risk but also destroys their USP. This, even though Shimla is located in seismic zone V and VI, the entire hill-state is highly vulnerable to earthquakes. Experts say that areas such as Shimla, Dharamshala, Kinnaur, Kullu and Chamba are the most prone to earthquakes

g) Regulatory frameworks need to be defined for various activities improve the safety of tourists but will also promote the

adventure tourism as an industry in the state.

8. VISION THEME: DIGITAL PLATFORMS

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   a) Himachal Pradesh with its rich natural ambience, biodiversity, and many well-preserved cultural and traditional aspects, has the potential to accept technological progress in a balanced manner, to maintain the proverbial "best of both worlds". While the location-based tourism is already thriving, there is definite scope of further inculcating aspects such as biodiversity and cultural aspects, such that the modernization of tourism does not overburden such important aspects.

   b) HP also has the potential to contribute as a state by catering to physical, mental and spiritual well-being by the development of various spiritually oriented wellness centres across the state, and further encouragement to the existing ones. This is particularly important given that there is an ever-increasing concern for physical and mental health in the country, and Himachal can serve as a beacon of rejuvenation activities in this respect.

   c) On the other hand, the diverse terrain and environment in Himachal Pradesh is already attracting many adventure activities. Thus, cashing in on these, Himachal Pradesh can progress towards maintaining world-class standards and facilities for such activities, and with the use and even indigenous development of modern technology tools, which can be beneficial for adventure tourism.

   d) Given the remote and isolated locations, Himachal Pradesh is an excellent setting where there is an immense potential of telemedicine infrastructure and the development of related technology and policy matters for telemedicine. Again, many prominent hospitals and Technology institutes in the state, can aid in this matter.

   e) Finally, given that the state of HP is also prone to natural disasters, well-distributed and

scalable, early warning technologies will have a great impact on saving lives, minimizing damages, and optimizing rescue operations.

systems for disasters such as landslides, avalanches etc., but these need to be scaled up and further diversified with more players.

2. **The challenges to meet the aspirations**

   a) Low awareness about various lesser known and equally interesting tourist places

   b) Low awareness about cultural aspects and biodiversity aspects. Currently, most of the tourism is location-based rather than culture-based, resulting in domination of modernization over cultural preservation.

   c) There are various wellness centres, but these can be improved and strengthened with technological support.

   d) Safety, standardization, training, regulation, and facilities in adventure sports.

   e) Lack of telemedicine frameworks which can be easily built over the existing 4G and upcoming 5G network infrastructure. AIIMS and private players should be roped into this to make it feasible.

   f) There are some efforts in the development of early warning

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)**

   a) Virtual tourism not only caters to well-known places but importantly also enables virtual access to lesser-known destinations so as to serve the dual purpose of increasing popularity and redistributing the tourist load. Such virtual tourism can be via websites and apps, or via centres equipped with VR AR systems across the state for a richer experience.

   b) Further, as a part of virtual tourism, some cultural aspects (e.g. virtual interactions) and biodiversity aspects (e.g. wildlife experience) etc. can be included so as to add more inclusivity and preservation of such important facets of HP.

   c) Spiritual and wellness centres equipped with modern

techniques for neurological, physiological and cognitive assessments (e.g. CII can help to provide the relevant expertise to develop such technologies). Such well-equipped centres can further increase foreign participation, and thus the benefits from such wellness centres, in the perfect natural settings of Himachal Pradesh, will be world renown.

d) Development and regulation of a strong telemedicine consultancy framework, development of low-cost diagnostic or screening devices which can be used at PHCs and can be integrated with the telemedicine systems, and regulated medical vending machines at remote areas.

e) Use and development of indigenous tools for safety,

tracking, and aiding in adventure activities in the state. Well-equipped training facilities having VR AR-based training for workers involved in adventure activities.

f) On the aspects of biodiversity, technological aids can be further used to strengthen the forest management, and biodiversity assessment. For instance, automatic AI-enabled camera traps, data automated analytics for wildlife census, GPS based alerting for poaching etc.

g) Encouragement for the development of the early warning systems for landslides, flash floods, earthquakes, avalanches etc.

9. VISION THEME: TRANSFORMATIVE TECHNOLOGIES

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

a) **Agriculture**

a. To produce safe & healthy agricultural and horticultural output to make the state self-sufficient and also make it a lead exporter.

b. Adoption of controlled agriculture / horticulture like polyhouses, hydroponics, aeroponics, etc.

b) **Environment**

a. To have a healthy and safe environment

b. Adoption of pollution monitoring and control technologies including single use plastic/vehicular and industrial pollution.

c. Safeguards from natural calamities like floods, landslides, etc.

c) **Healthcare**

a. Accessible healthcare

b. De-addiction from alcohol, tobacco, etc.

d) **Security**

a. Better and accessible law enforcement

e) **Tourism**

a. Environment friendly tourism

b. Travel options like airships, regional air travel

f) **Livelihood**

a. Environment friendly employment opportunities in emerging sectors like IT, Films & Entertainment, Gaming, Metaverse

g) **Equitability**

a. Equal access to all public/private services, infrastructure without constraints of caste, creed, race, religion, language, gender, physical status, etc.

2. **The challenges to meet the aspirations**

a) **Agriculture and Horticulture**

a. Technologies for controlled agriculture and horticulture and dissemination of knowledge of those

b. Development of AI/ML, IoT & other relevant technologies to improve agricultural practices, outputs and incomes for future

c. Skill development at grassroot level

d. Agro-entrepreneurship promotion

b) **Environment**

a. Lack of cost-effective pollution monitoring & control

technologies for air pollution, water pollution, single use plastic pollution.

b. Lack of technologies and infrastructure to minimize plastic usage and safe/effective disposal of the same.

c. Lack of effective warning and monitoring systems for calamities like cloudburst, floods, landslides.

c) Healthcare

a. Accessibility of healthcare services through mobile and other low cost devices.

b. Lack of easier solutions to tackle alcohol, tobacco addictions.

c. Lack of availability of sustainable menstrual hygiene products.

d) Security

a. Tools and infrastructure for predictive policing using AI/ML and other technologies.

b. Lack of a drone squads across the police and internal security services.

e) Tourism

a. Environment friendly tourism

   b. Travel options like airships, regional air travel

f) Livelihood

a. Lack of skilled manpower to attract, support and encourage industries in emerging sectors

like IT, Films & Entertainment, Gaming, Metaverse.

b. Lack of infrastructure and ecosystem to host these industries.

3. How can we bridge the gaps to achieve our aspirations for HP? What technological/policy interventions can help State to get from here to there? (strategy)

a) Agriculture and Horticulture

a. Set up agro-tech parks where entrepreneurs from anywhere in India should be able to set up controlled climate agriculture and horticulture units.

i. Set up 4-6 such parks across different zones in the state with capacity to support about 100 units each and 50% reservation for local Himachal entrepreneurs. These parks can be set up under by in collaboration with CII.

ii. Provide subsidies/grants to these units at par with state farmers.

iii. Provide cold storage facilities and air cargo export facilities nearby.

iv. Set up an institute to impart training in high tech agriculture in association with CII

b. Development of AI/ML, IoT & other relevant technologies to improve agricultural practices, outputs and incomes for future.

i. CII Himachal Pradesh can partner with state agricultural universities and develop custom solutions.

c. Skill development at grassroot level

i. CII in collaboration with iHub can design and manage such activities with participation from various specialist agencies.

d. Agro-entrepreneurship promotion

i. CII in collaboration with iHub would be able to manage these activities through the agro-tech parks mentioned previously.

b) Environment

a. Lack of cost-effective pollution monitoring & control technologies for air pollution, water pollution, and plastic pollution.

i. CII member IIT Mandi has the ability to develop cost effective monitoring tools, devices which can then be manufactured by local businesses under license.

b. Lack of technologies and infrastructure to minimize plastic usage and safe/effective disposal of the same.

i. CII member - IIT Mandi has developed the technology to safely process certain plastics which can be further developed to handle typical plastic disposal requirements of the state.

c. Lack of effective warning and monitoring systems for calamities like cloudburst, floods, landslides.

i. CII member - IIT Mandi has already developed a landslide monitoring system which has been implemented in some locations in the states and needs to be deployed widely.

ii. Development of similar sensors for cloudbursts, rain or floods can also be taken up.

c) Healthcare

a. Accessibility of healthcare services through mobile and other low cost devices.

i. Develop and deploy mobile apps, solutions for public health services.

ii. CII can help with cost effective ways of screening for genetic disorders, and deceases in children with mobile based

solution driven by AI/ML. State agencies can adopt it for a wider trial.

b. Lack of easier solutions to tackle alcohol, and tobacco addictions.

c. Lack of availability of sustainable menstrual hygiene products.

i. Sanitary pads are one of the worst pollutants which take over 300 years to decompose and are a threat to environment. The state agencies can work with CII can help spread environment friendly alternatives.

d) **Security**

a. Tools and infrastructure for predictive policing using AI/ML and other technologies.

b. Lack of a drone squads across the police and internal security services.

i. Dedicated drone squads should be set up with the agencies for rapid deployment across the state.

e) **Tourism**

a. Environment friendly tourism

b. Travel options like airships, regional air travel

i. State should consider supporting and funding alternate air travel option like airship for regional travel. Suitable policies, funding, subsidies should be made available to encourage private players to operate.

f) **Livelihood**

a. Skilled manpower is the most critical requirement for industries in emerging sectors like IT, Films & Entertainment, Gaming, Metaverse, Drone training.

i. CII can help with skill development programs to support the manpower requirements of similar businesses. The state agencies can subsidise the training/course costs for students/youths from the state.

ii. Set up game development parks and media parks where gaming companies and film & entertainment companies can set up their development studios, and offices.

b. Provide infrastructure and logistical support to these parks.

10.   VISION THEME: CLIMATE & SUSTAINABILITY

1. **The aspirations for Himachal Pradesh in the year 2047 when India will turn 100**

   a) To have a downscaled high-resolution climate change projection model in place for the state, mainly for

temperature and precipitation, should be the primary aspiration of the state to have a climate resilient and sustainable system to be in place.

b) From the perspective of sustainability and livelihood, HP should aspire to achieve full resilience in two sectors (both being climate-sensitive): Agriculture and Forest.

c) Agriculture is the main livelihood of the state and the sector faces significant challenges due to cyclonic storms, heavy rains, flashfloods, landslide, etc. The state needs to aspire to have a sustainable agricultural system keeping in mind the possible and unavoidable climate hazards. The agricultural system needs to be dependent more on the horticultural sector that are less susceptible to climate

hazards, a 100% coverage of institutional agricultural credit and insurance scheme, especially the weather-based schemes.

d) The state should also aspire to have a full implementation of the recommendation of HP crop diversification promotion project to generate a safety net against climate change.

e) Climate change is one of the most important triggers for forest fires that the state suffers from. The state needs to resort on high-res data, early warning systems, protection of forests from excessive exploitation and significant awareness building to sustainable management of forest fire.

f) Himachal hosts high biodiversity and climate change is a major deterrent in maintaining the same. The state needs to aspire to formulate designated policies in line with the protection of biodiversity.

g) A 100% deployment of the MGNREGA scheme should be another aspiration.

2. **What are the challenges to meet the aspirations?**

a) Prevalence of rainfed agriculture

b) Lack of weather-based crop insurance scheme

c) Increase in mean temperature leading to a continuous shift of apple cultivation to a higher altitude that may not be sustainable in longer term.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological / policy interventions can help State to get from here to there? (strategy)**

a) Government-academic collaboration to come up with a state-level climate model, as accurate as possible

b) The state should have a transparent deployment of agricultural credit and insurance mechanism and implementation of the MGNREGA scheme.

11. VISION THEME: INDIA'S POSITION IN THE WORLD

1. **What should be the aspirations for Himachal Pradesh in the year 2047 when India will turn 100?**

   a) By the year 2047, India should become a fully developed country with a permanent membership in the United Nations Security Council and membership in G7 (Group of Seven). Himachal Pradesh can contribute to this goal on two fronts. The first of these involves expanding the state's revenue generation potential to increase India's GDP and PCI. Sustainable development in tourism, including pilgrimage tourism, is a major way to contribute to the said goal. The second is to boost its industrial production capabilities to cater to a growing export economy, especially in high-revenue areas such as medical instruments and defence equipment.

   b) Currently, India fares poorly in the export of medical instruments with an annual export of only USD 2.51 billion. This is far behind countries such as the United States (USD 27.7 billion), Germany (USD 16.7 billion), Mexico (USD 10.6 billion), the Netherlands (USD 10.6 billion) and China (USD 10.0 billion). India needs to gear up to the emerging demand for medical instruments and become its largest exporter by 2047. Himachal Pradesh should contribute at least a tenth of the annual medical instrument exports from India.

   c) As far as the export of defence equipment is concerned, India doesn't figure in the top fifteen exporters in the world. The top five countries (the United States, Russia, France, China and Germany) together share 78.1% of the total global export of defence equipment with the United States alone contributing 39%. By 2047, India should be in a position to become one of the top five exporters of defence equipment in

the world with Himachal Pradesh producing up to 20% of exports.

2. What are the challenges to meet the aspirations?

a) Connectivity / Infrastructure continues to be the greatest hurdle in promoting tourism. In recent decades, attempts have been made to expand the road networks and improve the transport infrastructure with varying degrees of success. The priority given to rail connectivity continues to be poor. Inter-state coordination and with central agencies for development of infrastructure need improvement. Plans are currently afoot to establish an airport in Mandi. As it turns out, the existing forms of air connectivity is not effective enough to address the problem of connectivity. A viable alternative is to make distant parts of the state easily reachable through helicopter services. Helipads have been built at a few places such as Mandi, but they haven't been functional. There seems to be a lack of initiative in promoting helicopter services in the state. Regular helicopter services can boost tourism in important ways.

b) Lack of political will seems to be the major challenge when it comes to the setting up of important industries such as the ones that cater to the high-income medical and defence markets. It is possible to establish these industries in the districts of Kangra, Una, Solan and Sirmaur which have extensive tracks of plain land and which are easily connected to major Indian cities such as New Delhi and Chandigarh.

3. **How can we bridge the gaps to achieve our aspirations for HP? What technological / policy interventions can help State to get from here to there? (strategy)**

The union government and the government of Himachal Pradesh must direct their planning initiatives in order to fulfill these aspirations. Existing government initiatives such as Make in India should be tailormade focusing on the state's strengths to attract major investors in the field of transport services, medical instruments and defence equipment.

12. VISION THEME: INFRASTRCTURE

What should be the aspirations for Himachal Pradesh in the year 2047 when India will turn 100?

Good infrastructure raises productivity and lowers production costs.

By the year 2047, Himachal Pradesh should have a fully developed infrastructure at par with an upper middle-income nation. The developed infrastructure will result in accessibility. This is both in terms of the local citizens, and for societies outside the region. For residents, developed infrastructure will bring in products and services like energy and raw materials, necessary for survival and economic sustainability. The development will also bring in the tourist, with possibilities of dramatic rise in societal incomes. For people outside the region, it opens new markets.

What are the challenges to meet the aspirations? How can we bridge the gaps to achieve our aspirations for HP? What

technological / policy interventions can help State to get from here to there? (strategy)

While the infrastructure development is more vitally required, it demands higher capital infusion. In a plain area, if there is absence of a road to the district centre, there is possibility of walking to it. In a hill terrain, it would take a day to walk to the next hilltop, where the next district centre may be, and the walk would be through inhospitable terrain. To overcome these natural obstacles, infrastructure provision ends up demanding a higher cost. The development of modern transport infrastructure, especially of roads and railways is a costly enterprise in general. Costs in mountains are even higher than in lowlands, for both construction

and maintenance, due to difficult topography, harsh climate, and the need for protection from hazards, such as avalanches, landslides, and rockfalls, as well as the need to secure road- and railside slopes.

The important sectors of infrastructure in which we would like to propose to for development of infrastructure are:

1. Energy

2. Transport

With Himachal Pradesh's vision of a high growth curve, it must be accepted that alternative means of transport must be developed, so that they can take the pressure off the roads. Otherwise, tourists will simply not be able to reach, and goods delivery schedules will go haywire.

The possibility of using ropeways, with abundant power supplies predicted in the future, must be evaluated as a serious option for point-to-point movement of horticulture produce like apples.

Helicopter services must also be extended to newer areas for better

- Geological disturbance

- Land degradation and soil erosion

- Interruption in natural drainage system

- Siltation of river basin

coverage. Cable car network for cities like Shimla is a must as there is a huge pressure of vehicles on road leading to frequent jams and delays. Cable cars are also a great attraction, and Himachal Pradesh needs to weave all these modes into a plan to encourage private participation in these sectors.

The road quality is not up to the mark for the industries too, causing unsafe conditions, slowing down transport throughout, and raising maintenance costs. The Ministry of Surface Transport, Central Road Research Institute, and the Indian Road Congress have laid down and circulated several technical specifications to be observed in road construction, including bridges and drainage practices.

Road design and construction in hills must be undertaken with environment preservation in mind. The parameters of concern are:

- Aesthetic degradation

One agency must be made responsible for maintenance or road. Multiple agencies cannot ensure that the roads are kept at their best.

Apart from the roads, the state also needs to ensure that the following areas in infrastructure is also developed to ensure a synergy:

a) Availability of adequate water.

b) Upgradation of power infrastructure to ensure 24x7 supply of quality power.

c) An effective and sustainable solid waste management plan

d) A civil hospital and a trauma centre in every industrial area of the state.

CII

Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, with around 9000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 286 national and regional sectoral industry bodies.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India completes 75 years of Independence in 2022, it must position itself for global leadership with a long-term vision for India@100 in 2047. The role played by Indian industry will be central to the country's progress and success as a nation. CII, with the Theme for 2022-23 as Beyond India@75: Competitiveness, Growth, Sustainability, Internationalisation has prioritized 7 action points under these 4 sub-themes that will catalyze the journey of the country towards the vision of India@100.

With 62 offices, including 10 Centres of Excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 350 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

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