

Strengthening Skill & Entrepreneurship (E&S) Landscape in Indian Himalayan Region

By
Working Group 4 on Sustainable Development in Mountains of Indian Himalayas Region



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Executive Summary

The Indian Himalayan Region (IHR) cover 10 mountain states and four hill districts of India that make up our north and north-eastern borders. It stretches from the mountains in the northern states of Jammu & Kashmir, Uttarakhand, and Himachal Pradesh to north eastern states of Sikkim, Arunachal, Meghalaya, Manipur, Mizoram, Nagaland and Tripura, also covers the hill districts of Dima Hasao and Karbi Anglong in Assam and Darjeeling and Kalimpong in West Bengal. The IHR is characterised by diverse demographic, economic, environmental, social and political systems.

It presents both challenges and unique opportunities in skilling and building an entrepreneurial culture. The region has distinct advantages of forest and biodiversity richness, sacred destinations, landscapes of unparalleled beauty, multiple tribes and their distinguishing culture, crafts, agro-ecosystems and niche products, and several other territorial specificities that present opportunities for nurturing sustainable development and entrepreneurship. Literacy rate in the IHR is well above the national average. IHR has an impressive population of mountain youth, which aspires for dignified employment. Nevertheless, an increasing trend of migration of men/families provides both challenge as well as opportunities. Utilisation of mountain specific resources, with focus on women and youth, can generate income for mountain economies while opening up new opportunities for skilled employment and entrepreneurship. The need for skill and enterprise development is associated with the Sustainable Development Goals (SDGs), particularly as targets in Goals 1, 2 and 8.

Mountain Specificity of in accessibility, fragility and marginality bring several challenges to skill development in the IHR had been identified, such as lack of infrastructure, lack of quality training centres, lack of subsidised hostel facilities in the ITI, lack of quality assessors and trainers, lack of internet connectivity, lack of sync between quality of training and prescribed industry standard, limited awareness regarding about skill development programmes as well as wage and self-employment opportunities, and absence of job preference for ITI graduates. Also many of the emerging priority sectors identified for the Indian Himalayan Region fall in non-conventional domains, the Occupational Standard and Qualification Packs are yet to be fully developed. Similarly, enterprise development is constrained due to difficult terrain, fragmented land holdings, weak infrastructure, and low economies of scale, limited local demand and lack of market access.

With an overarching role of Ministry of Skill and Entrepreneurship Development, some of the key schemes and programs addressing S& E landscape in IHR include, Pradhan Mantri Kaushal Vikas Yojana (PMKVY.2), Deen Dayal Upadhyaya Grameen Kausalya Yojana (DDU-GKY), Skilling initiatives under MNREGS Similarly, entrepreneurship development is being supported by SIDBI, MUDRA, DIPP, MHRD, and specific schemes of Central and State Govt. as well as private sector. In addition to leveraging central support, various state governments in the IHR have launched skill development and enterprise development schemes and programmes.

Entrepreneurship and skilling in Himalayas need to be taken up on an unprecedented scale to further the employability of mountain people. Niche mountain products from agriculture, forestry, horticulture, livestock, and handicrafts based skills and entrepreneurship has distinct comparative advantage in mountains. This coupled with sectors such as tourism, entertainment, horticulture, health care, renewable energy & infrastructure, integrated watershed management,

IT and ITES, logistics and transport hold great deal of potential for strengthening Skill and Entrepreneurship landscape in IHR.

4 Focal Areas for strengthening Skill and Entrepreneurship landscape in IHR: Drawing upon some of the existing research in IHR, as well as response of IHR states on gaps in skill and entrepreneurship in IHR, the working group identified 4 focal areas

a) New age agri-entrepreneurship building on niche mountain products and infusing traditional skills with modern technology needs to be developed as sub sector within larger agriculture sector. The products include off-season vegetables, medicinal and aromatic plants, spices, health food, mountain handloom and handicraft, as well as food processing. Skills for developing end to end value chains, including package of practices, and the training modules for upskilling and entrepreneurship for next generation of farmers will be the key focus.

b) Sustainable mountain tourism: Taking advantage of a very impressive growth in the sector and there is huge opportunity of developing /strengthening a very rich repertoire of tourism products in IHR states, within sustainability parameters. The products include adventure tourism, culture & heritage tourism, wildlife tourism, rural tourism including craft weave circuits and religious/sacred circuits. Skilling in hospitality, homestays, adventure tourism, nature guides, product branding and marketing will need to be taken many notches higher in partnership with community, private and public institutions. Standards and Certification for the tourism industry including environmental & social auditing will also provide new opportunities of entrepreneurship to youths as “service providers” requiring set of skills.

c) IT enabled services & digital health: There is a huge opportunity for creation of skilled employment opportunities for the local youth, by promoting IT/ITES Industry particularly by setting up the BPO/ITES operations. Also data dissemination services have good potential for skilled employment and entrepreneurship.

d) Skilling in infrastructural projects including hydro power, solar, road, buildings etc: In the absence of formal skill development and certification, career prospects of construction workers remain limited. Recognition of Prior Learning (RPL) and up skilling of those engaged in the construction sector should be key plank of the skilling strategy with clearly identified job roles.

e) Skilling for migrant workers and returnees: Internal and international migration are likely to remain a significant part of rural livelihoods in India, including the IHR, well into the future. There is a need to develop appropriate policies to maximize benefits from migration and reduce risks associated with it. This could involve supporting the migrant workers and/or their households to access to decent employment, access information, develop skills (including soft skills) and support development of entrepreneurship among returnees.

Building capacity for Skill and Entrepreneurship:

- a) A Network of Training Centres: One of the key challenges in building /strengthening skill and entrepreneurship landscape pertain to inadequacy of training centres and trainers in most of the Himalayan states. There is a need to carry out a comprehensive gap assessment of skilling in IHR including target population, requirement of skill centres, curriculum, trainers, and resource requirement for both emerging priority sectors, as well as for conventional/formal sectors for skill and entrepreneurship. Based on the comprehensive assessment, develop a network of skill centres in IHR including ITI, ATI, and Multi Skill Institutes on PPP mode,

and Kaushal Vikas Kendra (KVK). The Regional Training Institutes to support state and district and cluster level skill centres in concerned region. A tactical move would be to explore strategic partnerships with the private sector in building skills and capacities. Harness partnerships with the private sector in establishing skill development centres as well as tailor made training modules at varying levels of competency and expertise to enhance the ‘marketability’ of skilled youth from the IHR. Existing norms and standards need to be reviewed for setting of the skill centres in mountainous region. This is important given the fact that many of the remote mountainous regions have low population densities.

- b) A cadre of Trainer and Assessor: It is important that the master trainers, preferably local training providers are trained for deep hand holding with quality pedagogy and content, virtual classrooms, mobile based training content, and Job specific curriculum/content. The trainers should also be able to give domain skills, languages skills, market linkages, financial linkages. It is important to develop a team of assessors along with trainers and groom them. At the same time, assessment criteria and testing needs to be reviewed and more practical exercises for traditional skills need to be developed
- c) Enabling Program for Skilling and Entrepreneurship: Short term (3-6 months) targeted residential training programs with stipend/sustenance allowance during the training should be the norm to improve outreach to the most marginalized population, particularly the women. It is difficult for students to commit to 3 years for training programs. Focus should be given to self-employment and entrepreneurship components in the different skill development training programs and linkage to MUDRA, START up India and other financial institutions for financial support. Placement/entrepreneurship incentive to be provided to students including: travel cost for the interviews/joining an organization.
- d) Skilling for migrant workers and returnees to the IHR needs to be given priority as the remittance has been one of the key drivers of livelihood economy in many of the states.
- e) Integrate Vocational Education as part of the regular curriculum in the schools from class 9th onwards. Make relevant QP/ NSQF aligned skill based program as mandatory credits (which is already notified by UGC under the Choice Based Credit System) to college going students in the area of their study
- f) Stronger public–private partnership and development of ‘qualification packs’ and ‘national occupation standards’ (NOS) is a necessity, particularly in the unconventional sectors. Relevant Sector Skill Councils be encouraged to develop QPs and NOS for skills/entrepreneurship for the priority sector mountain specific job roles, particular in non-conventional sectors.

Convergence and leveraging of resources for strengthening S&E landscape:

The executive committee of skill mission at Center and similar committee of the State Skill Mission be suitably empowered to ensure convergence /leveraging with both Central and State schemes /programs/projects /missions that can boost up skill & entrepreneurial initiatives. It must foster private sector partnership for win-win situation. Given the unique challenges of the Himalayan states, a larger role of the central government is required to ensure that the critical issues of connectivity , infrastructure, skill centres are taken care of on priority basis.

Demand–supply link up

Development of skills to read the market and the capacity to respond to market signals is the key to success, for which development of human resources at all levels is important. Creating directory of self-employment opportunities, reinventing employment exchanges as public private institutions in organising Job Melas, Huner Haats , Counselling and one stop shop for local and migratory employment and innovative mobile app based platform for skill demand – supply links, are some of key elements to bridge information gap and meet market demand and supply.

The Policy Arena:

The policies should widen the scope and coverage of the definition of enterprise, which are farm-based, off farm, non-farm or service based. The IHR States be encouraged to develop state policy on skill and entrepreneurship building on the uniqueness of mountain states. System of incentives (including tax incentives) for setting up service /manufacturing enterprises in IHR States merit due consideration.

Background

The Indian Himalayas cover 10 mountain states and four hill districts of India that make up our north and north-eastern borders. It stretches from the mountains in the northern states of Jammu & Kashmir, Uttarakhand, and Himachal Pradesh to north eastern states of Sikkim, Arunachal, Meghalaya, Manipur, Mizoram, Nagaland and Tripura, and also covers the hill districts of Dima Hasao and Karbi Anglong in Assam and Darjeeling and Kalimpong in West Bengal. The Indian Himalayan Region (IHR) is marked by diverse political (some states marked by unrest and disturbances); economic systems (with different agro-ecological Zones and production systems) as well as different levels of development and infrastructure.

The Himalayan Range has had an overwhelming effect on India as a nation. The region flaunts the advantages of fertile soil, mineral affluence, forest richness, multiple tribes and their distinguishing crafts, holy destinations and several other territorial specificities which present opportunities for nurturing sustainable development and entrepreneurship. Despite these obvious advantages, the drawbacks of the mountains far outweigh the advantages. Mountain communities continue to deal with challenges pertaining to disaster risk, agriculture and bio resources management, and environmental degradation, often resulting in migration patterns (both in and out migration) which has its own challenges.

It is in this context that in a meeting on ‘Sustainable Mountain Development’ of Indian Himalayan Region (IHR) was held on 15th June, 2016 to identify key areas for intervention. This was followed by SDG consultation for Himalayas at Guwahati from 13-14th December 2016. Following these discussions, NITI Aayog took the decision to set up 5 thematic working groups for sustainable development in mountains of Indian Himalayan Region and passed an order of constitution of 5 Working Groups with terms of references along with names of lead institutions as convener of the working groups. Among these five working groups, working group number 4 deals with Strengthening Skills & Entrepreneurship Landscape (E&S) in Indian Himalayas Region. Ministry of Skill Development and Entrepreneurship was identified as the lead institution for working group no 4 under the convenorship of Jyotsna Sitling, Joint Secretary, Ministry of Skill Development and Entrepreneurship and also included representatives from

- i. Ministry of Environment, Forest and Climate Change (MoEFCC)
- ii. Ministry of Rural Development (MoRD)
- iii. Ministry of Development of North Eastern Region (DoNER)
- iv. North-Eastern Region Community Resource Management Project (NERCORMP)
- v. Entrepreneurship Development Institute of India, Ahmedabad (EDII)
- vi. International Centre for Integrated Mountain Development (ICIMOD)

In order to broaden the ownership of the document and make it more inclusive, the following institutions were added to the working group:

- i. Tata Trusts
- ii. Integrated Mountain Initiative,
- iii. Synergy Technofin Pvt. Ltd.

The terms of reference provided to the working group 4 outlined the following:

- i. To assess magnitude of the problem including youth unemployment and migration, with due consideration for gender.
- ii. To review policy/best practices built around unique/niche mountain goods and services to build E&S landscape. Also assess new industrial policy to see how it addresses mountain specificity.
- iii. To identify potential scalable unconventional areas for skilling and entrepreneurship in Himalayas. This may also include software/IT based options in addition to unique mountain goods and services.
- iv. To suggest strategies/actions for development of Qualification packs and National Occupational Standards (NOS) in niche mountain goods and services.
- v. To identify ways of strengthening Public-Private Partnership and Networks of skill /entrepreneurship centres across Himalayas.

Following the above guidelines, the working group under its convener Jyotsna Sitling, held its first meeting on 12th August 2017. Based on the deliberations, the working group agreed to suggest a conceptual framework that allows a policy and practice gap analysis, planning and implementation deficits, and factors in the impending challenges of promoting enterprise development so that IHR can benefit from set of actions and recommendations. A draft concept note was prepared in collaboration with the WG members and a discussion on the same was held on 24th August 2017.

During the meeting, the WG members felt the need for consultations with IHR states in order to develop a comprehensive document. As part of follow up, a letter along with a questionnaire was sent to Chief Secretaries of all the Mountain States to provide information on key topics including:

- i. Key policies on skills and enterprise development in the state and how it addresses mountain specificity.
- ii. Investments planned in key portfolios in each state for the next 10 years which could determine the future skill sets required for employment.
- iii. Current and future resources and opportunities in every state that can be tapped for enterprise development and skill gap

Information with varying degree of details was received from the states and this has been included in this document.

Chapter 1: Introduction

1.1 The Himalayan mountain system is one of the most fragile and complex ecosystems in the world. It is a repository of natural and cultural resources and opportunities not just for those living in the mountains but for those living in the north and eastern plains of India. However, its fragile nature makes it difficult to implement conventional development initiatives which mean that the pace of development of the Indian Himalayan Region (IHR) has been slower when compared to the rest of the country. For example, the statistics from North East (based on Donor Vision 2020) show that

- i. School dropout rate is higher than the National average of 62.6% and it ranges from 80.9% in Meghalaya to 60.5% in Manipur.
- ii. Gross Enrolment Ratio (GER) compares unfavourably with National rate of 9.97% and it ranges from 4.7% in Nagaland to 6.94% in Assam.
- iii. Only 1.3% of the youth undertake any formal training
- iv. Average number of colleges per lakh population is much lower than the National average
- v. The number of ITIs / ITCs are very low in the region with majority of them present in Assam,

1.2. A large population in the Indian Himalayan states living in remote villages still remain without basic amenities such as electricity, water, broadband connectivity, roads, education and sanitation. There are low employment opportunities (particularly in the non-farm based sector) within the region. They continue to be dependent on subsistence agriculture and forest resources and struggle to raise their income and quality of life. Even the traditional skills like weaving are facing challenges due to the uncertainties related to climate change and market volatility. There is a limitation to the effectiveness of these traditional skills and knowledge in isolation. These have to be supplemented by customized knowledge and new skills. This situation has been further exacerbated by Land degradation, deforestation, and deterioration of natural resources increasing the threats to the livelihoods of communities residing in the mountains (Saxena et al. 2001).

1.3. This situation has led to significant migration from IHR in large numbers to the urban and industrial regions in the plains in search of employment (Maikhuri et al. 2011; Negi et al. 2011). While migration trends varies from one IHR state to the other, on the whole it remains a major concern.

1.4. Internal migrants account for 37 percent (453 million) of the country's population as per the 2011 census of India. Compared to internal migration, the stock of emigrants was 15.5 million i.e., about 1.2 percent of India's population (UN, 2015) Increasing urbanization and development of growth centres in urban locations are contributing to internal migration in India. Rural to urban migration has been contributing substantially to urbanization and the rural-urban demographic composition of households. The rural households are increasingly dependent on urban resources and off-farm jobs as urbanization has been shaping rural-urban relationship through various flows of goods and services, financial flows, and movement of people. Several parts of the Indian Himalayan region have been urbanizing fast, which influences mobility of labour (Mohanty and Bhagat, 2013; Lusome and Bhagat, 2013). Increasing urbanization is also

accompanied by a change in mobility among women. Although women predominantly migrate due to marriage and family related reasons, a significant proportion of them are now joining the workforce after migration (e.g., domestic work and construction sector). A large number of placement agencies are involved in the recruitment process (Neetha, 2003; Srivastava, 2012)¹.

Table1: Percentage of households with at least one migrants in Himalayan and non-Himalayan region in India

| | Himalayan | Non-Himalayan | India |
|--------------|-----------|---------------|-------|
| Intra State | 17.58 | 18.58 | 18.54 |
| Inter -State | 9.13 | 7.09 | 7.17 |
| Emigrants | 0.32 | 1.48 | 1.43 |

1.5 Emigration from the Indian Himalayan region is lower compared to that from the plains. The emigration is largely influenced by a higher socio-economic status, a network of emigrants and emigration infrastructure (Bhagat, Keshri and Ali, 2013). On the other hand, inter-state migration from the Himalayan region is higher than that from the plains.

1.6 India is the world’s largest remittance recipient. As per the World Bank, in 2014 India received USD 70 billion, which declined to USD 62 billion in 2016². The survey-based estimates show that household remittances sent by internal migrants in 2007-2008 were twice those sent by international migrants for the same period (NSSO, 2010). Further, in the Indian Himalayan region a relatively higher proportion of households (12 percent) received remittances compared to the non-Himalayan part of the country (9 percent), according to NSSO 64th conducted in 2007-2008. Despite these patterns of mobility and remittances, very little has been done to improve the potential of the migrants to exploit the opportunities in the place of destination or to tap the remittances for productive use.

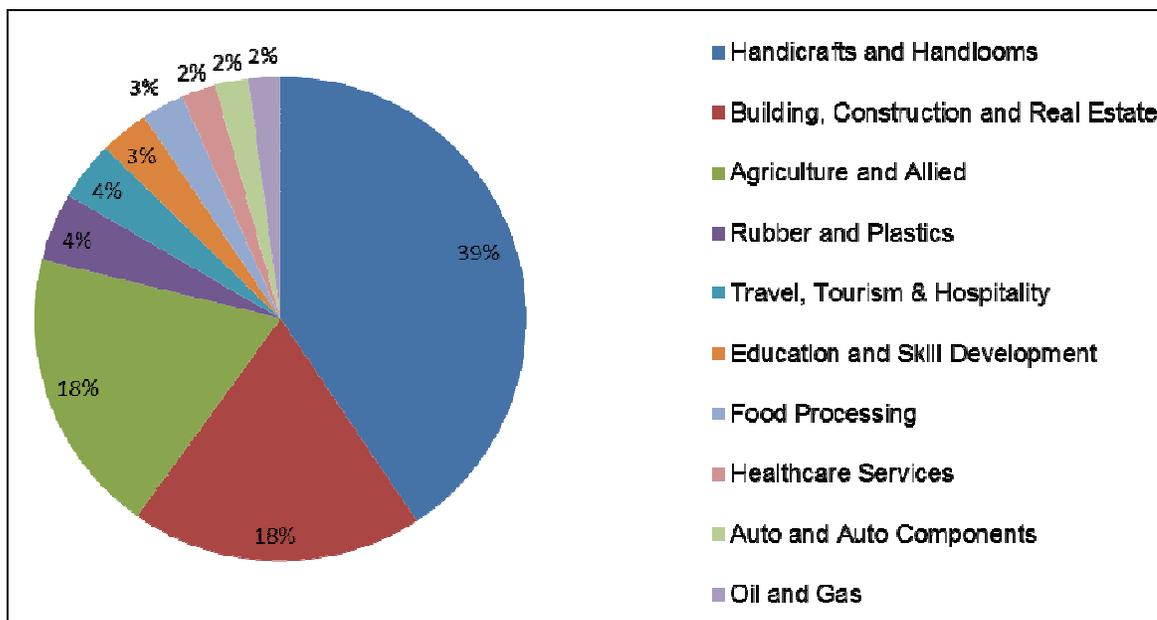
1.7 In this context, the Central and State Governments have realized the urgency and importance of socio-economic development of hill people together with environmental regeneration/conservation in mountain ecosystems. There is further acceptance of the fact that to improve the lives of the communities living in the mountains as well as the much larger population living in the adjoining downstream, the IHR plans and policies need reshaping to bring in the “mountain perspective”. A focus area that has emerged as a recurrent concern that demands urgent attention and relevant action over the years (particularly, in light of rapid out migration and changing aspirations of the people especially the youth) is skill development. The need is felt for skills that not only provide sustainable means of livelihood but also address some of the above issues.

1.8 In the globalized economy, competition has become intensified among firms and industries in developing and developed countries alike, requiring their workers to have higher levels of skills. While India has a well-institutionalized system of vocational training, it has not sufficiently prepared its youth with the skills that today’s industries require and its presence in the mountain states remains limited. In addition, Indian women and girls suffer from various forms of inequality at every stage of their lives.

¹ This section is drawn from Chapter 15: Migration in the HKH Region: Governance, Drivers, and Consequences, Himalayan Monitoring and Assessment Programme (HIMAP), ICIMOD.

² <http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS>

1.9 There is an urgent need to upgrade the skills to fulfil the shortage of skilled labor. Matching skills with labour demand is highly important. For example, the sector wise labour demand (2011-2021) in North Eastern Himalayas, as reflected in the pie chart below clearly show the skill gaps. Most of these skills are required to be provided to leverage the potential of the people and the resources of the Mountain States for a livelihood. Handloom, agriculture, construction sectors contribute to 75% of skill gap



1.10 The need for skill development is directly related to the SDGs which are recognized as a universal 17-goal plan of action for people, the planet and prosperity for all countries. Apart from several other SDGs, Mountain specific skill and enterprise development is directly included in the SDGs as a target in Goals 1, 2 and Goal 8:

- a) Goal 1, on the need to “Eradicating poverty in all its forms everywhere” includes target 1.b “create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender sensitive development strategies, to support accelerated investment in poverty eradication actions.
- b) Goal 2, on the need to “ Eend all forms of hunger and malnutrition , achieve food security and improved nutrition and promote sustainable agriculture” includes as target 2.3 - “by 2030 double the agriculture productivity, and incomes of small scale food producers, in particular women, indigenous peoples, family farmers, pastoralists, and fishers including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.”
- c) Goal 8, on the promotion of “sustained economic growth, higher levels of productivity and technological innovation, inclusive and sustainable economic growth, full and productive employment and decent work for all” includes as Target 8.9 "By 2030, devise

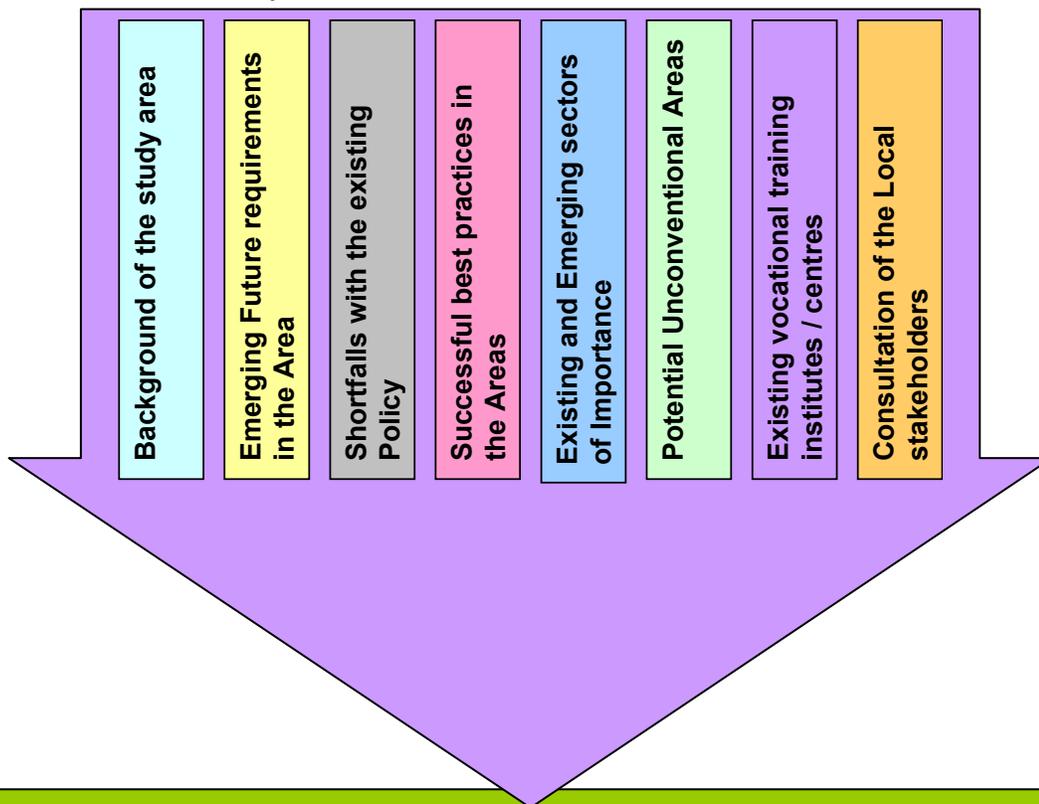
and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products".

1.11. The SDGs require all stakeholders to act in collaborative partnerships. There is a need for an innovative, entrepreneurial and contextualised approach towards skill development with respect to the Indian Himalayan Region (IHR) for improving livelihoods within the mountains.

1.12. Entrepreneurship and skilling in Himalayas (in particular, non-traditional skills practiced by mountain people) need to be taken up on an unprecedented scale to further develop for employability of mountain people. Natural product based skills and entrepreneurship has distinct advantage in mountains. Along with entrepreneurship, markets and capital need critical focus especially in the case of traditional skills. New age sectors require skill development to be provided such as tourism, entertainment, horticulture, health care, renewable energy (Solar), integrated watershed management, media, construction, agro and food processing, power (especially hydro power), logistics and transport. It also calls for stronger public-private partnership and development of 'qualification packs' and 'national occupation standards' (NOS). There is also a need to strengthen IT based services in creating jobs.

This document lays down the framework for promoting skills and enterprise development in the Himalayan region.

Strategy Framework for Analysis and Action



Strategy should identify

1. Requirements to address policy gaps at Central and State level;
2. Institutional arrangements promoting at local level efforts;
3. Financial framework for
 - (i) implementation of the programme as a whole;
 - (ii) easy access to finance and banking facility at individual level;
 - (iii) support for market creation at local level;
4. Technology support for creating e-commerce / e-business options;
5. Protection of geographic indication /trade mark of products;
6. Protection & sustainable use of biodiversity, natural resources and sound management of environment;
7. Providing supports at individual and group level (Hand holding and guidance)
8. Outreach programme for general awareness
9. Role of Private Sectors

Chapter 2: Magnitude of the problems – major issues and challenges

2.1 The Indian Himalayan Region (IHR) has many advantages in terms of availability of distinctive natural resources, tribes and community-specific products/crafts, pilgrimage destinations, low-cost workforce, and several other territorial specificities which present opportunities for nurturing sustainable development and entrepreneurship. However, developmental policies and programmes are challenged by certain conspicuous disadvantages of the mountainous region which overshadows the advantages that the region so uniquely portrays.

2.2 Compared to the plains, the mountains are characterised by additional dimension of ‘slope and altitude’ that obstructs the applicability of developmental or other experiences of plains to the mountains. Because of slope and altitude, and associated conditions and characteristics, mountains are often considered to be relatively difficult environments to live in and in which to replicate development experiences accumulated in the plains (Jodha, 1990). The important condition characterising mountain areas which for operational purposes separate mountain habitats from other areas are called mountain specificities (Jodha, 1990). The three important mountain specificities are inaccessibility, fragility and marginality which directly affect the livelihood of the mountain people. According to Jodha inaccessibility, fragility and marginality are defined as under:-

a) Inaccessibility

Due to slope and altitude, overall terrain conditions, and periodical hazards (landslides, snow storms etc.) inaccessibility is the most known feature of mountain areas (Price 1981; Hewitt 1988 cited in Jodha 1990) its concrete manifestations are isolation, distance, poor communication and limited mobility.

b) Fragility

Fragility can best be understood as the diminished capacity of a social or ecological system to buffer shocks. Ecologically, mountains are fragile due to low carrying capacity, slope and relief. It limits the farmers’ capacity to with stand even a small degree of disturbance. Fragility has social dimensions as well, because people live precariously on scattered, scarce and periodically unavailable livelihood resources. The sustainability implication of this mountain characteristic or not difficult to perceive.

c) Marginality

Marginal entity in any context is the characteristic that counts the least with reference to the mountain situation. This may apply to physical and biological resources or conditions as well as to people and their systems of sustenance. The basic factors, contributing to such a status, in reference to any area or community, are remoteness and physical isolation, fragile and low productivity resources and several man-made handicaps, which prevent participation in the mainstream patterns of activities. In a mountain system marginality is often very evident and is created by slope/altitude, low resource productivity and reinforced by lack of social and political capital. Mountain communities are often faced with difficulties in securing tenancy rights over land and forests and gaining access to social services (e.g. credit, education, and health), partly because of the

problem of the tough terrain and partly due to their inadequate representation in policy-making bodies.

2.3. It is important to note that these characteristics are not only interrelated in several ways but within the mountains they show considerable variability. For instance, all locations in mountain areas or not equally inaccessible, fragile or marginal. However, a clear understanding of these specific cities is a crucial prerequisite for correcting the approach to mountain problems and for the initiation of relevant development interventions to handle them.

2.4. Developmental constraints and risks resulting from mountain specificities

Mountain and hill states constitute almost 20.3 percent of India's total land mass. Approximately only 4 percent of the Indian population live in the mountain states. Many of the Mountain States may have sparse and dispersed population.

| States | Area (km 2) | Population |
|---------------------------------------------------------------|-------------|------------|
| Arunachal Pradesh | 83743 | 1382611 |
| Two Hill Districts of Karbi Anglong and Dima Hasao in Assam | 15322 | 1170415 |
| Two Hill Districts of Darjeeling and Kalimpong in West Bengal | 3149 | 1842034 |
| Himachal Pradesh | 55673 | 6856509 |
| Jammu & Kashmir | 222236 | 12548926 |
| Manipur | 22347 | 2721756 |
| Meghalaya | 22720 | 2964007 |
| Mizoram | 21081 | 1091014 |
| Nagaland | 16579 | 1980602 |
| Sikkim | 7096 | 607688 |
| Tripura | 10492 | 3671032 |
| Uttarakhand | 53566 | 10116752 |

Moreover hilly terrain means that many of the villages in these areas are remote. Tough weather conditions often mean that the villages are cut out from the rest of the country for months at times.

The above condition deeply affects skill development in mountain states:

- i. Lack of good infrastructure makes it economically impractical to have training centres in remote areas. As a result most of the centres are found in state capitals. Lack of quality

training centres in remote areas coupled with lack of subsidised hostel facilities (as boarding and lodging is not paid under PMKVY scheme) in the existing centres make them further inaccessible to those coming from remote areas. Outreach through policies, programs and information remains a challenge.

- ii. There is a huge dearth of quality trainers in the identified sectors, also observed discrepancies in the assessments of the trainers (remoteness of the areas; means that the assessors do not always personally do the assessments). Hence the number of genuine certified candidates could be very less.
- iii. Lack of internet connectivity also affects the ability of uploading data and regular monitoring of the training centers.
- iv. There is an overall supply-driven set of skill-building/training courses that are not in sync with the problems and challenges IHR is facing (e.g. Youth migration, Women as Key target group, Unchartered economic avenues)

2.5. Challenges in enterprise development

- i. Difficult terrain, fragmented land holdings, and weak infrastructure makes input and output movement unreliable and expensive, making competitive production difficult.
- ii. Maintaining the balance between fragile environmental concerns and development needs often results in dearth of industries primarily because of the forest reserve and logistical/connectivity issues leading to limited business opportunities. All this results in inability of the mountain states to generate sustainable work opportunities (particularly non-farm based opportunities).
- iii. Low population density and physical isolation also means low economies of scale, limited local demand and disconnect with the markets. Markets and Capital need far more focus especially in the case of traditional skills.

Key challenges articulated by the IHR States:

Assam

- The quality of training provided in the skill development projects is unable to meet the prescribed industry standards. The lack of efficient trainers and quality infrastructure.
- Placement outcomes are rarely achieved as per the objectives of the program.
- The state of Assam has witnessed many political disturbances and instability.
- The youth of the state does not find the right trade/sector as per their aspiration and aptitude.
- They have very limited awareness regarding both wage and self-employment opportunities.
- Most of the placements are available in locations outside Assam. Comparatively fewer such opportunities are available within Assam.
- The industrial sector in the state has been centralised around some major industries, i.e., tea, jute and oil.
- Low salary levels for placements offered outside the state.
- Non-availability of openings for placement within the state for some trades.

Arunachal Pradesh

- Inadequate hostel accommodation for trainees.
- Communication bottle neck: Road and telecommunication.
- Less number of ITIs compared to vastness of the area.
- No job preference/opportunities for ITI graduate.

Himachal Pradesh

- Lack of awareness about SD courses.

Jammu & Kashmir

Skill development

- Lack of quality assessors.
- Lack of industry presence.

Enterprise development

- Lack of market linkages.
- Conservation of traditional skills and crafts.

Manipur

Skill development

- Drop-out rate is high.

Enterprise development

- Lack of regional entrepreneurship development institute.

Meghalaya

- The lack of quality infrastructure and efficient trainers.
- There is a high attrition rate among the candidates who migrate outside the state for job due to limited placement opportunities within the state.
- Lack of internet connectivity also effects the industry linkages outside the state and becomes the major challenge to set – up industry within the state.

Mizoram

- Infrastructure development like land development and building connectivity, power supply and water supply.
- Lack of internet connectivity also effects the industry linkages outside the state and becomes the major challenge to set – up industry within the state.

Nagaland

- Lack of training providers within the state.
- In the absence of major industries, implementing apprenticeship program is a challenge for the State. The existing small industries through which the Apprenticeship Program is being implemented do not have the capability to register under National Apprenticeship Promotion Scheme portal.

Tripura

Skill development

- Drop-out rate is high.

Enterprise development

- Lack of regional entrepreneurship development institute.

Uttarakhand

- Mobilization and retention of youths in hill areas.
- Insufficient training providers in hill areas.
- Lack of residential training centres in hill areas.
- Transportation in hill areas.
- Adverse climatic conditions.
- Norms and standard of centrally sponsored schemes are sometimes not conducive as the requirements of hill regions are different, due to which desired success rate is not achieved.

Sikkim

- Lack of awareness about skill development programmes in local residents.
- Lack of convergence among various department running skill development program in the state also deeply affect the skill development.

Chapter 3: Schemes and programmes for skill and enterprise development

There are multiplicity of schemes and program across various ministry and departments at the level of Government of India and State Govt. to cater to skill and entrepreneurship needs across country. Many of the schemes /programs have huge relevance to Himalayas.

3.1 Skill development schemes by Government of India³

Ministry of Skill Development and Entrepreneurship (MSDE)

1.1. Pradhan Mantri Kaushal Vikas Yojana

Under this scheme, the trainees will be offered a financial reward and a government certification on successful completion of training and assessment. This scheme is applicable to any candidate of Indian nationality who undergoes skill development training in an eligible sector by an eligible training provider; receives certification during the span of one year from the date of launch of the scheme by approved assessment agencies; and avails the monetary reward for the first and only time during the operation of this scheme. Average reward amount for fresh training is Rs. 8000 per candidate and for recognition of prior learning candidate is Rs. 2,200. The scheme will be implemented through the National Skill Development Corporation (NSDC). Target is to benefit 24 lakh youth at an approximate total cost of Rs. 1500 crores.

1.2 National Apprenticeship Promotion Scheme (NAPS)

The main objective of the scheme is to promote apprenticeship training and to increase the engagement of apprentices from present 2.3 lakh to 50 lakhs cumulatively by 2020. This scheme will cover all categories of apprentices except the Graduate, Technician and Technician (Vocational) apprentices, which are covered by the schemes administered by Ministry of Human Resource Development. An employer will be eligible for this scheme if the person/ entity engage apprentices in a band of 2.5 percent to 10 percent of the total strength of the establishment; is registered with EPFO/ ESIC/ LIN/ UDYOGAADHAR; has a TIN number, and is registered on apprenticeship portal. An apprentice must have completed 14 years of age and fulfils other requirements of the Apprentice Act 1961; has registered on the portal; has an aadhaar number; and must possess minimum age, educational and physical qualification prescribed for the trade. Government/ Private ITI will automatically get selected as a Basic Training Provide if they have spare seats (within the overall affiliation) for running the basic training. RDAT will organize physical inspection of BTP by a committee constituted for this purpose.

1.3 Craftsmen Training Scheme

This scheme is offered through a network of 13,104 Government and Private Industrial Training Institutes (ITIs). Candidates with minimum of 14 years could apply for this scheme.

1.4 Craftsmen Instructor Training Scheme (CITS)

This scheme aims to train instructors in the techniques of transferring hands-on skills, in order to train semi-skilled/ skilled manpower for industry. It is offered through one Central Training

³ For details please refer “Skill Development Scheme” from National Skill Development Agency.

Institute, ten Advanced Training Institutes (ATIs), two Advance Training Institutes for Electronics for Process Instrumentation (ATI-EPI), Foremen Training Institute (FTI), fifteen Regional Vocational Training Institutes (RVTI) exclusively for women and twelve private institutes for Training of Trainers (IToT).

1.5 Pradhan Mantri Kaushal Kendra (PMKK)

Each PMKK will have an assured training mandate for three years, under the PMKVY scheme, subject to capacity and utilization of the centre. Trades chosen should reflect the local employer's manpower requirements. The centre shall not be allowed to operate any other central- or state-government sponsored skill training programme apart from those under the purview of MSDE. These centres are intended to be established in every district of the country. The PMKK shall accept a trainee who meets eligibility criteria of the applicable skill programme like PMKVY, or any scheme of MSDE at the time of admission.

Ministry of Rural Development

2.1 Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

This scheme aims to provide skill training opportunities to the poor rural poor in the age group of 15-35 years. The upper age-limit for women candidates, candidates belonging to Particularly Vulnerable Tribal Groups (PVTGs), Persons with Disabilities (PwDs), Transgender and other Special Groups (e.g. rehabilitated bonded labour, victims of trafficking, manual scavengers, trans-genders, HIV positive persons) will be 45 years. It identifies a guaranteed placement of a minimum of 75% of trained candidates and moving towards minimum mandatory certification as outcomes. It also envisages to establish a larger ecosystem that supports trained candidates secure a better future (e.g. post-placement support, migration support and alumni network). Under this scheme, there will be special regional focus on **Jammu and Kashmir** (HIMAYAT), **northeast states** and 27 left wing extremist districts (ROSHINI). Furthermore, there will be mandatory coverage of socially disadvantaged groups (SC/ ST 50%, Minority 15%, Women 33%).

The HIMAYAT project under DDU GKY program have the objective to train and place unemployed youth of **Jammu and Kashmir**. It is 100 % funded by central government unlike others where the Central- State funding patterns are at 60:40 The project is unique as it covers youth across rural and urban areas including BPL and non-BPL category. MoRD has approved Action Plan of Jammu and Kashmir for skilling 190000 candidates under DDU-GKY during 2016-19 and the approved total outlay for the same is Rs. 1581.10 crores. As on June 2017, 7509 candidates have completed training, of which 80 % are gainfully employed.

There are special provisions under DDU-GKY for North-Eastern region; 10% of DDU-GKY budget is earmarked for North-east States including Sikkim; and the funding pattern between Central and State governments is 90:10 unlike other states where it is 60:40. This region has a total target of 140000 youths to be skilled and placed in productive employment between 2016 - 2019. In addition, MoRD plans to launch a special scheme under DDU-GKY in collaboration with Ministry of Development of North Eastern Region (DoNER) for skilling projects specific to the needs, requirements and the special characteristics of States in the north east.

2.2 Rural Self-Employment Training Institutes (RSETIs)

This scheme promotes self-employment among the unemployed rural youth, particularly those below the poverty line. RSETIs are promoted and managed by banks with active cooperation from state governments. Each RSETI offer 30 to 40 Skill Development programmes in a financial year. All the programmes are of short duration ranging from 1 to 6 weeks. The trainees are provided free food and accommodation.

2.3 Barefoot Technicians (BFT)

Under this program, 10th passed youth identified among MGNREGA workers are trained in basic engineering subjects related to measurements of works, construction technology, estimation of works, watershed concepts etc. This program has two main objectives. First, it intends to address the issues of quality of assets and the existing skills gap in MGNREGA; Second, skills enhancement results into horizontal and vertical mobility. Barefoot technicians are involved in identification of permissible works and in assisting Junior Engineer/Technical Assistance in conducting technical survey and in preparation of estimates under MGNREGA.

2.4 Project for Livelihoods in Full Employment under MGNREGA (Project LIFE-MGNREGA)

This is an initiative of the MORD to link MGNREGA with skill development. It was launched in April 2015 with an objective to improve the skills of the MGNREGA workers. Under Project LIFE-MGNREGA, candidates who have completed 100 days of work can go for (i) skilling for wage (ii) skilling for self-employment, and (iii) livelihood up gradation. As on March 2017, 71 candidates in **Assam** and 460 candidates in **Tripura** have completed training under Project LIFE-MGNREGA.

Ministry of Housing and Urban Poverty Alleviation

3.1 National Urban Livelihoods Mission (NULM)

The Employment through Skills Training & Placement (EST&P) Component under NULM provides skills to the unskilled urban poor as well as upgrades their existing skills. Out of the total beneficiaries, minimum 30% should be women, minimum 15% should belong to the minority community and minimum 3% of the candidates should be differently abled. The maximum cost support provided for training under EST&P is Rs. 15,000 per candidate (Rs. 19,000 per candidate for **north-east** and **Jammu & Kashmir**). The cost of training includes cost of candidate mobilization, curriculum design, trainer's fee, raw materials required for training, assessment & certification, placement linkage, MIS and post-placement tracking of the candidates.

Ministry of Textiles

4.1 Integrated Skill Development Scheme (ICDS)

This scheme aims to address the manpower requirement of the diverse textile industry. Funding is granted to the implementing agency to the extent of 75% of the cost of the project within an overall ceiling of Rs. 10,000 for each trainee who successfully completes training get assessed and certified and get employed in the textile industry as per the scheme guidelines. The

implementing agency contributes the rest 25% in cash or kind. Youth (broadly defined). Preference given to marginalized social groups (i.e. women, SC/ ST and handicapped persons, minorities and persons from BPL category). But all are eligible. Around 76 projects has been sanctioned under the scheme with the total training target of more than 11 lakh candidates across India. Around 3,250, training centre are spread across different Indian states, cities and rural areas including remote location, backwards areas, left wing extremist area etc. Out of the more than 5 lakh trainees trained so far, around 64% beneficiaries are women.

Ministry of Agriculture

5.1 National Food Security Mission – Farmer Field School

The objective of FFS is to provide first-hand information to the farmers in their fields to enable them to evaluate, fine tune and adopt the best crop production and crop protection technologies suitable to their location and resources for higher production and productivity. There will be a season long training of the farmers in their fields for a single day in a week or fortnight, organized on the various aspects of crop production technologies of rice, wheat and pulses. The financial assistance will be limited to Rs. 17,000 per training per FFS in the identified districts.

5.2 Agri-clinic and agri-business centres scheme

Under this scheme, selected trainees are provided agri-entrepreneurship training for a period of two months in identified Nodal Training Institute, free handholding support is also provided for one year to trained agriculture graduates in obtaining bank finance and setting up their business in their area. Thus scheme is available to agriculture graduates, diploma/ post graduate diploma holders in agriculture and allied sub-jects, biological science graduates with post-graduation in agriculture and allied subjects; degree courses recognized by UGC having 2 Revised Agri-clinics and Agri-business Centres Scheme -2010; diploma/ post-graduate courses with more than 60 percent of course content in agriculture and allied subjects, after B.Sc. with Biological sciences; and agriculture related courses at the intermediate level with at least 55% marks. The training component is looked after by MANAGE. The credit linked capital subsidy @25% if the capital cost of the project funded through bank loan is also eligible under the scheme. This subsidy is 33.33% in respect of candidates belonging to SC, ST, Women and other disadvantaged section and those from **north-eastern and hill states**.

5.2 Extension reforms - Farm school

Farm school is operationalize at Block/ Gram Panchayat level. Demonstration in the farm school focus on Integrated Crop Management. These schools provide season long technical backstopping/ training to target farmers by having an interactive session once at least during each of the 6 critical stages in a cropping season.

Ministry of Micro, Small and Medium Enterprises

6.1 Entrepreneurship Development Programmes (EDPs)

This programmes are organized to train youth on various aspects of industrial activity required for setting up MSEs. The courses are designed to provide useful information on product/ process design, manufacturing practices, testing and quality control, selection and usage of appropriate

machinery and equipment, project profile preparation, marketing techniques, product/service pricing, export opportunities and finance and financial institution. Duration: 2 weeks. Fee: Rs. 100 for general candidate. No fees for SC/ ST and 50% fee from women and physically handicapped.

6.2 Entrepreneurship Skill Development Programmes (ESDPs)

This programmes are organized to upgrade skills of prospective entrepreneurs, existing workforce and also to develop skills of new workers and technicians of MSEs. The course conducted are in machine shop practice, heat treatments, electroplating, sheet metal, welding, tool & die making, glass & ceramics, industrial & art wares, herbal cosmetics, fashion garments, hosiery, food & fruit processing industries, information technology, hardware maintenance, soap and detergents, leather products, servicing of household electrical appliances and electronic gadgets, gem cutting & polishing and engineering plastics. Duration: 6 weeks. Fee: Rs. 200 for general candidate. No fees for SC/ ST and 50% fee from women and physically handicapped.

6.3 Management Development Programmes (MDPs)

These programmes are devised for owner-cum-manager and supervisory level personnel of small-scale industries. Duration: One week for full time and two weeks for part time. Fee: Rs. 400 for general candidate. No fees for SC/ ST and 50% fee from women and physically handicapped. Rs. 100 for candidates from Andaman & Nicobar, Lakshadweep, **NE States, Jammu & Kashmir and Sikkim.**

6.4 Assistance to Training Institutions Scheme

Scheme for providing establishment of new institutions (EDIs), strengthening the infrastructure for EDIs under ATI scheme. The assistance is provided in the form of capital grant for creation/ strengthening of infrastructure and programme support for conducting entrepreneurship development and skill development programmes. For the **North Eastern region (including Sikkim)**, Andaman & Nicobar and Lakshadweep, maximum assistance on matching basis would be Rs. 270 lakhs or 90% of project cost, whichever is less. Maximum assistance per trainee per hour for entrepreneurship development and skill development programmes is Rs. 60 for **North Eastern region (including Sikkim)**, Andaman & Nicobar and Lakshadweep.

Ministry of Tourism

7.1 Scheme of capacity building of service providers

Training programmes under the guidelines – skill development in general for fresh candidates, specialized skill development, including language courses for fresh as well as existing service providers, training of teachers, administrators and planners, basic skill-upgradation in general for existing service provides, training of trainers programmes, awareness programmes, and awareness of tourism benefits in rural areas. This training is provided free of cost. Wage loss compensation is given to the trainees (i.e. Rs. 300 per day).

7.2 Hunar Se Rozgar Tak Initiative

Training effort specific to only four hospitality trades, namely food production (eight weeks), food & beverage service (six weeks), bakery (eight week) and housekeeping (six week), was opened up for implementation by private bodies. The following programmes are offered in non-

hospitality trades: a six-week training programme for event facilitators, tour assistants, transfer assistants and office assistants, golf assistants/ caddies, and tourist facilitators; an eight-week programme for security guards for the travel/ tourism/ hospitality industry; a 35 working days training programme of training to impart skin care & spa therapy; a 45 hours duration training programme for driving; and a four weeks training programme for stone masons. Prospective candidates should be in the age group of 18 to 28 years with course specific minimum educational qualification.

Ministry of Human Resource Development

8.1 Apprenticeship scheme

This scheme provides opportunities for practical training to graduate engineers, diploma holders (technicians) and 10+2 vocational pass outs in about 10,000 industrial establishment/ organizations. The apprentices are paid monthly stipend which is shared between the Central Government and the Employer on 50:50 basis.

8.2 Vocationalization of school education

It provide for diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provides an alternative for those pursuing higher education. The scheme provides for financial assistance to the states to set up administrative structure, area vocational survey, preparation of curriculum, text book, work book, curriculum guides, training manual, teach training programme, strengthening technical support system for research and development, and training and evaluation.

8.3 Scheme of community development through polytechnics

It aims to provide non formal, short term, employment oriented skill development programmes, to various sections of the community, particularly the rural, unorganized, & disadvantaged sections of the society by harnessing the Technological Infrastructure available with Polytechnics. The selected polytechnics receive financial assistance from MHRD to run short duration non-formal skill development courses. There is no restriction of age and qualification for the applicants from local communities.

Ministry of IT and Communication

9.1 Scheme for financial assistance to states for skill development in electronic system design and manufacturing (ESDM) sector

This scheme aims to facilitate skill development in ESDM sector focusing on students/ unemployed youth at 9-10th standard onwards, ITI certificate holders, Diploma holders, non-engineering graduates to increase their employability to work in 'Manufacturing' and 'Service support' functions. **Jammu and Kashmir** and **Uttarakhand** are among selected states in which this scheme is implemented.

9.2 Skill development in ESDM for Digital India

This scheme aims to facilitate creation of an eco-system for development of ESDM sector in the entire country for facilitating skill development for 3, 28,000 persons in ESDM sector. The target segment includes Class 8 onwards, school dropouts from 8th pass onwards, ITI certificate holders, diploma holders, and non-engineering graduates.

Ministry of Tribal Affairs

10.1 Vocational training for tribal youth

This scheme aims to upgrade the skills of the tribal youth in various traditional/ modern vocations depending upon their educational qualification, present economic trends and the marked potential, which would enable them to gain suitable employment or enable them to become self-employed. This scheme is exclusively for benefit of the **Scheduled Tribes** as well as PTGs and can be taken up anywhere in the country but priority will be given to remote tribal areas. A maximum assistance of Rs. 30,000 per annum per ST trainee. Non-recurring expenses @ Rs. 0.48 lakh per trade for five years is admissible under the scheme.

Ministry of Women and Child Development

11.1 Support to training and employment programme for women (STEP)

The STEP scheme aims to provide skills that give employability to women and to provide competencies and skill that enable women (age group 16 years and above) to be self-employed/ entrepreneurs. Assistance is available in any sector for imparting skills related to employability and entrepreneurship, including agriculture, horticulture, food processing, handlooms, tailoring, stitching, embroidery, Zari, handicrafts, computer and IT enabled services along with soft skills (e.g. spoken English). Training courses/ modules will necessarily be of shorter duration, with a maximum of 6 months for a course in exceptional case, and typically of 3 months duration.

Ministry of Development of North Eastern Region

12.1 Capacity building and technical assistance

This scheme aims to provide funding for skill development, enhancing employability and competencies and promotion of self-employment and entrepreneurship amongst youth. Various trades covered under this scheme includes hospitality & tourism, welding electronics, electrical, plastic engineering and computer aided designs & products. Duration: 3/ 6/ 12 months courses. Assistance includes course fees, boarding and lodging, and travel costs of trainees. This scheme has special focus on girls, women, disabled persons and youth from BPL background and from remote and backward districts.

Ministry of Home Affairs

13.1 UDAAN

The scheme aims to provide skills training and enhance the employability of unemployed youth of **Jammu and Kashmir**. It covers graduates, post-graduates, professional degree holders and three year engineering diploma holders. The scheme will be implemented through the National Skill Development Corporation (NSDC). Udaan trainees will be paid minimum Rs. 2500 per month as stipend during the training period.

Ministry of Minority Affairs

14.1 Seekho aur kamao

The scheme aims to upgrade the skills of the minority youths in various modern/ traditional vocations depending upon their educational qualification, present economic trends and the market potential. It is a 100% centrally sponsored scheme. The trainee should belong to minority community, be between 14-35 years of age, and have a minimum qualification of Class V.

14.2 Nai Roshini (The Scheme for leadership development of Minority Women)

This scheme aims to empower and instil confidence among minority women, including their neighbours from other communities living in the same village/ locality by providing knowledge, tools and techniques for interacting with government systems, banks and other institutions at all levels. It is a 100% centrally sponsored scheme. Any minority woman/ parent or guardian of woman having annual income not exceeding Rs. 2.50 lakhs from all sources would be given preference in selection. However, there will be no annual income bar. They should be between the age group of 18 years to 65 years.

Ministry of Social Justice and Empowerment

15.1 Financial assistance for skill training of persons with disabilities

This scheme aims to provide financial assistance for skill training for persons with disabilities. The financial assistance is provided by the way of grant-in aid to the training institutions for organizing training programmes.

3.2 A Summary of Entrepreneurship promotion schemes by Government of India

| Ministry | Scheme |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ministry of Micro, Small, & Medium Enterprise | <ul style="list-style-type: none"> a) Capital subsidy scheme for technology upgradation b) Scheme for Promotion of Innovation in Rural Industry & Entrepreneurship c) Financial Assistance on Marketing Support under Marketing Assistance Scheme. d) Scheme of Fund for Regeneration of Traditional Industries (SFURTI) e) Trade Related Entrepreneurship Assistance & Development Scheme for women (TREAD) f) Micro & Small Industries Cluster Development Programme (MSE-CDP) g) NSIC schemes for Single Point Registration h) Bank Credit Facilitation & Raw Material Assistance i) Prime Minister's Employment Guarantee Scheme (PMEGP) j) Seed Money Scheme implemented through DICs |
| Ministry of Minority Affairs | <ul style="list-style-type: none"> a) Seekho aur Kamao Scheme b) Upgrading the Skills & Training in Traditional Arts/Crafts for Development (USTAAD) c) Credit Line Schemes & marketing Assistance Schemes of National Minority Development & Finance Corporation d) Bank Credit under Priority Sector Lending to Minorities |
| Ministry of Commerce, Department of Industrial Policy & Promotion | <ul style="list-style-type: none"> a) Startup India b) Special Package schemes for Jammu and Kashmir, Himachal Pradesh & Uttarakhand for grant of incentives to new & existing industrial units for boosting industrialization in these states c) North East Industrial & Investment Policy (NEIIP) for promoting industrial development of North East d) Scheme for facilitating start-ups Intellectual Property Protection |
| Ministry of Human Resource Development | <ul style="list-style-type: none"> a) Interest Subsidy for Educational Loan Scheme of Banks for Technical & Professional courses |
| Niti Aayog | <ul style="list-style-type: none"> a) Atal Innovation Mission b) Tinkering Labs c) Sustainable Development Goals (supporting entrepreneurial initiatives thereunder) |
| Ministry of Science & Technology | <ul style="list-style-type: none"> a) Technology Development Programme b) Science for Equity Empowerment & Development (SEED) c) National Science & Technology Entrepreneurship Development Board (NSTEDB) d) Clean Energy Research Initiative |
| Ministry of Science & Technology, Department of Biotechnology | <ul style="list-style-type: none"> a) Biotechnology based Programme for Societal Development b) Special Biotechnology Programmes for North East c) Biotechnology Industry Research Assistance Council (BIRAC) and its various programmes like BIG (Biotechnology Ignition Grant Scheme) |
| Ministry of Social Justice & Empowerment | <ul style="list-style-type: none"> a) Laghu Vyavsay Yojna b) Ajeevika Micro Finance Yojna c) Micro financing Scheme d) Scheme for Disabled Young Professional of National Scheduled Castes Finance & Development Corporation (NSCFDC), National Backward Classes Finance & Development Council (NBCFDC) and National Handicapped Finance & Development Corporation (NHFDC) |

| | |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ministry of Rural Development | <ul style="list-style-type: none"> a) Aajeevika b) Swarnjayanti Gram Swarozgar Yojana c) Prime Minister's Rural Development Fellows (PMRDF) d) Provision of Urban Amenities to Rural Areas (PURA) e) Pradhan Mantri Gram Sadak Yojana f) Indira Aawas Yojna |
| Ministry of Agriculture | <ul style="list-style-type: none"> a) Assistance to NCDC Programmes for Development of Cooperatives b) Capacity Building to Enhance Competitiveness of Indian Agriculture and Registration of Organic Products Abroad c) Cold Chain, Cold Storage Unit - Basic Mezzanine Structure, Scheme for Cold Storage Unit - PEB Structure, Cold Storage Unit using Technology for Controlled Atmosphere Dairy Entrepreneurship Development d) Development Strengthening of Agricultural Marketing Infrastructure e) Grading & Standardization f) Scheme for Establishment of Agri-Clinics and Agri-Business Centres g) Fodder and Feed Development h) Gramin Bhandaran Yojana i) Horticulture for Post-Harvest Management Projects j) Scheme of Horticulture in Open Field k) Horticulture in Protected Cover l) Marketing Research and Information Network m) Post-Harvest Technology and Management n) Promotion and Strengthening of Agricultural Mechanization through Training, Testing & Demonstration o) Refrigerated Transport Vehicles p) Small Farmers' Agriculture-Business Consortium – Agriculture-Business Development q) Strengthening of Agmark Grading Facilities |
| Ministry of Food Processing | <ul style="list-style-type: none"> a) Schemes of Mega Food Park b) Cold Chain- Food Processing c) Modernisation of Abattoirs d) Research & Development, Quality Assurance, Codex, Promotional Activities e) National Mission on Food Processing (NMFP) |
| Ministry of Tourism | <ul style="list-style-type: none"> a) Capacity Building for Service Providers (Institutes) b) Hunar-Se-Rozgar Tak - Sena Ke Sahyog Se c) Marketing Development Assistance (MDA) d) Publicity and Marketing e) Rahul Sankrityayan Paryatan Puraskar Yojna f) Refresher Courses for Regional Level Guides, Stand-alone Restaurants, Tented Accommodation, Timeshare Resorts |
| Ministry of Skill Development & Entrepreneurship | <ul style="list-style-type: none"> a) PMKVY 2.0 under course module 'Entrepreneurship and soft skills' b) Pradhan Mantri Yuva Udyami Vikas Abhiyan (PM-YUVA) |
| Ministry of Finance, Department of Financial Services | <ul style="list-style-type: none"> a) MUDRA b) Stand Up India & other schemes of SIDBI c) Rural Godowns, Dairy Entrepreneurship Development & other non-farm schemes of NABARD |

3.3 Elements of entrepreneurship ecosystem and key government and non-government stakeholders

An enabling ecosystem in the form of culture, financing, infrastructure, skills and regulation is required for successful entrepreneurship. In India, various government ministries, departments and agencies are playing enabling roles across different parts of this enabling ecosystem. These are summarized in the Table below.

| Ecosystem element | Key Government (Central and State) & Non-Governmental organisations |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>1. Entrepreneurial Finance</i> Availability of financial resources – equity and debt – for entrepreneurial activities (including grants and subsidies)</p> | <ul style="list-style-type: none"> • Government of India: Department of Financial Services, Govt. of India, through specialized institutions such as SIDBI, MUDRA Bank, DIPP, DST, MHRD, DBT. Different credit based schemes like Laghu Vyavsay Yojna, Ajeevika Micro Finance Yojna & various term loans, and micro financing Scheme. Atal Innovation Mission (supporting businesses being incubated therein), Tinkering Labs, Sustainable Development Goals (supporting entrepreneurial initiatives there under). Special Package schemes for J&K, HP & Uttarakhand for grant of incentives to new & existing industrial units for boosting industrialisation in these states. Credit Line Schemes & marketing Assistance Schemes of National Minority Development & Finance Corporation, and Bank Credit under Priority Sector Lending to Minorities. Trade Related Entrepreneurship Assistance & Development Scheme for women (TREAD). • Others: Non-Governmental Organizations, such as DeAsra, Venture Capitalists, Angel Investors, Impact Investors |
| <p><i>2. Government Policy</i> Extent to which public policies support entrepreneurship as a relevant economic issue and provide a tax and regulatory regime that is either size-neutral or encourages new enterprises and SMEs</p> | <ul style="list-style-type: none"> • Government of India: Ministry of Finance; NITI Aayog; Ministry of Skill Development and Entrepreneurship (MSDE); Ministry of Micro and Small Enterprises (MSME); Department of Industrial Policy and Promotion (DIPP), Govt. of India • State Government: Related State Govt. Departments |
| <p><i>3. Government Entrepreneurship Programs</i> Presence and quality of programs directly assisting SMEs at all levels of government (national, regional, municipal)</p> | <ul style="list-style-type: none"> • Government of India: Several Ministries/ Departments of the Govt. of India including DFS, NITI Aayog, MSDE, MSME, DIPP, DBT, DST, Swarnjayanti Gram Swarozgar Yojana, etc. • State Government: Related State Government Departments • Others: Regional and Local bodies and Institutions; Mentor Retired Entrepreneurs, Researchers, and Bankers. |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>4. Entrepreneurship Education</i> Extent to which training in creating or managing SMEs is incorporated within the education, training system at school level and higher education level (including vocational education and training) and for other potential entrepreneurs</p> | <ul style="list-style-type: none"> • Government of India: Department of School Education and Literacy, Ministry of HRD, Govt. of India; Department of Higher Education, Ministry of HRD, Govt. of India (bodies such as UGC, AICTE); Ministry of Skill Development and Entrepreneurship. 'Pradhan Mantri Yuva Udyami Vikas Abhiyan (PM-YUVA) in select Institutes of Higher Learning (Universities, Colleges and Premier Institutes), schools, Industrial Training Centres (ITIs) and Entrepreneurship Development Centres (EDCs). The Central Government Entrepreneur schemes for Tourism are Capacity Building for Service Providers (Institutes) and Hunar-Se-Rozgar Tak - Sena Ke Sahyog Se (Creating Employable Skills). Entrepreneurship Orientation Program (EOP) has been integrated into the flagship skill development training PMKVY 2.0 under course module 'Entrepreneurship and soft skills.' • Others: Academia—Schools and Colleges; Non-Governmental organisations & other bodies, such as Wadhvani Foundation, Entrepreneurship Development Institute of India (EDII), Ahmedabad, The Indus Entrepreneurs (TiE), etc. |
| <p><i>5. R&D Transfer</i> Extent to which national research and development will lead to new commercial opportunities and is available to SMEs</p> | <ul style="list-style-type: none"> • Government of India: Department of Science & Technology (DST); Department of Scientific and Industrial Research (DSIR); Department of Biotechnology (DBT); Department of Electronics & IT (DeITy) (Bodies such as NSTEDB, BIRAC, GITA, etc). • State Governments: Related State Government Departments |
| <p><i>6. Commercial and Legal Infrastructure</i> Presence of property rights, commercial, accounting and other legal and assessment services and institutions that support or promote SMEs.</p> | <ul style="list-style-type: none"> • Government of India: Department of Corporate Affairs, Ministry of Land Resources; • State Government: Related Departments of the State Governments. • Others: Non-Governmental Organizations, such The Indus Entrepreneurs (TiE), Bharatiya Yuva Shakti Trust (BYST), etc. |
| <p><i>7. Entry Regulation</i> Market Dynamics: the level of change in markets from year to year, and Market Openness: the extent to which new firms are free to enter existing markets</p> | <ul style="list-style-type: none"> • Government of India: Entry regulations are, to some extent, subject to regulatory environment of related govt. ministries/ departments |
| <p><i>8. Physical Infrastructure</i> Ease of access to physical resources—communication, utilities, transportation, land or space—at a price that does not discriminate against SMEs</p> | <ul style="list-style-type: none"> • Government of India: All transport, communication and energy ministries at both the national and state level |
| <p><i>9. Cultural and Social Norms</i></p> | <ul style="list-style-type: none"> • Government of India: Ministry of Skill |

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income | Development and Entrepreneurship (MSDE), NITI Aayog, DIPP <ul style="list-style-type: none"> • Others: Non-Governmental Organizations & other bodies, such as Entrepreneurship Development Institute of India (EDII), Bharatiya Yuva Shakti Trust (BYST), Sambhavami Foundation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

3.4 Skill and Enterprise development Initiatives in IHR States

The mountain states have their unique requirements in skill based training depending on the natural resources, industry and native trades. The governments of these states have embarked on skill development missions to meet the aspirations of youth through training, enhance employability and employment. Several training partners, academic institutions and vocational training centers are actively involved in a range of programs that enable livelihoods, increase productivity and income levels of people in the states. State-wise key skill and entrepreneurship development initiatives, emerging area of S&E as well as unconventional areas, which good potential for S&E are shown in the table below:

Skill and Enterprise development Initiatives in IHR States

| | Resource investment planned in key sectors | | Existing policies and projects | Emerging sectors with incremental job requirements | Unconventional areas for skill development |
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| Tripura | Transport sector is identified as a priority for investment (e.g. railway infrastructure, inland water transport, and airport modernization). | Skills | State government has approved a stipend of RS. 150 per day per trainee during the course of the training programme to ensure retention. | Construction sector is anticipated to be the largest sector in terms of estimated incremental employment and will also fuel growth of allied industry of real estate. Power sector is the thrust area within industry followed by education, banking and financial services, transportation and storage. | Panchkarma masseur; GST; Bamboo utility handicraft assembler; fishery and animal husbandry. |
| | | Enterprise | <p>Directorate of Skill Development is in the process of signing MoU with National Backward Classes Finance and Development Corporation (NBCFDC) to access funds for providing training to youth from backward class and establish linkages between banks and the skilled candidates.</p> <p>Swavalamban (Self Employment generation Scheme by Govt. of Tripura): Through this scheme a maximum subsidy of Rs. 1 Lakh. Trained & Certified candidates can apply to nearest DIC office or BDO office will have to undergo mandatory EDP training.</p> <p>Tripura Bamboo Mission (TBM): TBM, an initiative of the Department of Industries & Commerce, Government of Tripura to promote and develop the bamboo based industries and enable livelihood generation through bamboo based activities. TBM centres are equipped with modern machinery which are owned and managed by a team of highly skilled local craftsmen.</p> | The bulk of employment is expected to arise from Construction and Real Estate sector Within agriculture, thrust areas in entrepreneurship include horticulture, food processing, floriculture, bamboo, rubber and tea. In Services sector, sub sectors expected to show higher workforce demand include education (4.5%), banking and financial services (3.8%) and transportation and storage (3.4%). | |
| Jammu & Kashmir | | Skills | <p>1) National Policy on Skill Development 2009 by Ministry of Labour and Employment, Govt. of India.</p> <p>2) National Policy on Skill Development</p> | Skill requirements would be ascertained through micro level skill requirement mapping by a professional agency. | * |

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| | | | <p>and Entrepreneurship, 2015.</p> <p>The Udaan Project, which is the Special Industry Initiative (SII) for J&K is funded by Ministry of Home Affairs and implemented by National Skill Development Corporation (NSDC), started in 2011. It aims to address the needs of the educated unemployed in J&K who are graduates, post graduates and three year diploma engineers with an aim to provide skills and job opportunities to the youth and also exposure to corporate India towards the rich talent pool available in J&K. The target was to reach out to 40,000 youth in J&K over a period of 5 years so as to bridge the gap between, youth from J&K who are unable to find employment in many companies as either they are unaware of the opportunity in the companies or the companies which are unaware of the talent pool that exists in J&K.</p> <p>Himmayat scheme is specific to the youth of J&K, which is implemented by the Ministry of Rural Development.</p> | | |
| | | Enterprise | <p>Jammu and Kashmir Entrepreneurship Development Institute (JKEDI) has been established by the Government of Jammu and Kashmir in March 1997 to effectively enable entrepreneurship development in the state. The institute started its regular activities from February 2004 and has positioned itself as a learning centre par excellence with state of the art regional centers across Jammu, Kashmir and Ladakh.</p> <p>* The schemes implemented by JKEDI are Seed Capital Fund Scheme (SCFS), Youth Start up Loan Scheme (YSLS) and NMDFC.</p> | * | <p>Potential unconventional entrepreneurship sector - Traditional heritage craft like Kani Shawl tapestry, Cheshmish shawl weaving and wood craft.</p> |
| | | Skills | <p>Skill Development and Entrepreneurship providing support to Skill development in Sikkim in the following sectors :-</p> | <p>Horticulture – 74,159; Hospitality – 24,180; Construction - 13,956. Hydropower – 13500; Pharmaceuticals</p> | <p>Potential unconventional skill development – Adventure based tourism</p> |

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| Sikkim | | <ol style="list-style-type: none"> 1) 42 Government Livelihood Schools 2) Sikkim Institute of Capacity Building 3) Community College Scheme(CCS), Vocationalization of Higher Secondary Schools(VHSS), Polytechnics 4) NULM (EST&P) 5) MSME-EDP through Dev Institute 6) Capacity Building and Technical Assistance Scheme, 7) NERLP 8) Directorate of Handicraft & Handloom 9) Multi Sectoral Dev programme 10) VKY (Vanbandhu Kalyan Yozna), SCA to SCSP (Special Central Assistance (SCA) to Scheduled Castes Sub Plan), SCP to TSP (Special Component Plan (SCP) and Tribal Sub-Plan) 11) Capacity enhancement Plan, Digital India Scheme, Schemes of CDAC 12) SUTP, Cap Building for Youth. 13) Innovation centres. 14) Comprehensive RPL process. 15) Removing barriers for skilled workers who want to migrate overseas or returnee migrants who want to be recognized for skills gained overseas. 16) Skill training for persons with disabilities. 17) Equity program. 18) Chief Minister's Employment Scheme and Chief Minister's Self-Reliant Mission | <p>– 13,253.</p> <p>Homestays & Taxi operation.</p> <p>Cultivate medicinal plant (eucalyptus, lemon grass lavender) also extraction of the essential and medicinal oil in association of Indian Institute of Integrative Medicine (CSIR, Govt. of India), Jammu and FFDC, Kannauj).</p> <p>Organic farming.</p> | <p>(e.g. rock climbing; paragliding; trekking and mountaineering).</p> |
| | Enterprise | <p>Chief Minister Start-up Scheme (CMSS) for providing employment opportunities to unemployed youth. State government will give 25% to 35% up front promoter's contribution on sanction of a loan to a viable project up to 20 lakhs for development of entrepreneurship.</p> <p>Department of Skill Development and Entrepreneurship is also providing Hand holding support to Entrepreneurship and</p> | <p>The emerging sectors in entrepreneurship – Organic farming (Organic manure, microbial bio-fertilizer and microbial bio-pesticide); tourism (including adventure sports) and hospitality; breweries and distilleries; development of organic dye from tea and cardamom; handloom and handicraft.</p> | |

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| | | | functioning in 1) Development of organic manure, microbial bio-fertilizer and microbial bio-pesticide by imparting training and giving financial assistance to local entrepreneurs/farmers. 2) Development of organic dye from tea and cardamom as good quality of tea and cardamom is produced in Sikkim. | | |
| Himachal Pradesh | | Skills | Skill Development Policy of Himachal Pradesh. Himachal Pradesh Kaushal Vikas Nigam (HPKVN) is the skill mission of the state. HPKVN is implementing ADB financed project for training of 65,000 youth. | The top five sectors which have been identified as per aspirational survey are education, automobile, banking, defence and healthcare. | Solar energy; green jobs; and organic farming. |
| | | Enterprise | At present no exclusive entrepreneurship development policy has been framed by industries department. Industrial Policy and Package of Incentive for Himachal Pradesh. | The state has identified 5-6 major sector based on survey for training youth towards entrepreneurship development. These are tourism and hospitality; banking and financial services; healthcare; apparel; agriculture; retail; and IT/ITES. | State Specific and traditional craft like <i>Kangra</i> painting; cutting/pruning apple orchard; plucking grading and marketing of apples & other fruits and vermicompost producer. |
| Uttarakhand | Agriculture and allied sectors (agriculture, horticulture/ animal husbandry, and medicinal and aromatic plants). Tourism (adventure, nature, hospitality). Cottage industries (handicraft, handloom, traditional food and beverages). Ecological products and services. IT, logistics, and | Skills | State skill development policy – in progress Projects: 1) Deen Dayal Upadhyay Grameen Kaushalya Yojana (DDGUKY) 2) Pradhan Mantri Kaushal Vikaas Yojana 2.0 (PMKVY) 3) UKSDM-Entrepreneurship and Placement Linked Skill Training Program (EPLSTP) 4) EST&P-UTTHAN 5) Skill Development Training program by Urban Development Department. 6) PMeGP- Pradhan Mantri Employment Generation Program 7) AAJEEVIKA- Rural Development department training program 8) Vir Chandra Singh Garhwali Scheme for Self Employment | Infrastructure Development w.r.t Char Dham all weather road, Panchewar Dam, Dehradun-Rishikesh-Haridwar Metro Rail, Rishikesh-Karnprayag Railway Line, and Dehradun Smart City Project. Incremental job requirement by sector – food processing, tourism and hospitality, wellness and yoga, medicinal & aromatic plants, organic farming, handicrafts and handlooms. | APARN - Traditional Art from Kumaon region. Thulma - Carpet making from sheep wool. The state is in the process of identifying other unconventional/ traditional areas (e.g. High altitude fruits and vegetables, and traditional art and crafts). |
| | | Enterprise | MSME Policy 2015. Mahila Uyai Vishesh | Infrastructure (all weather road, dam, | Agriculture and allied sector |

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| | manufacturing. Cross border trade. | | <p>Protsahan Yojana 2015. Chief Minister Self-Employment Policy. Special Integrated Industrial Incentive Policy 2011. Mega Textile Park Policy 2014. Start-up Policy. Hill Industrial Policy. Mega Industrial Policy 2015. Udyamita Vikas Prashikshan Karyakram.</p> <p>State Government has integrated courses on entrepreneurship education in formal education and skill training curriculum in the state with inclusion in curriculum of ITI, Polytechnics and other higher educational institutions (General & Technical) course(s) on entrepreneurship education and skill training.</p> | metro rail, and railway line), yoga and naturopathy, organic farming, value addition to fruits and vegetables, and Dehradun Smart City Project. | (Horticulture/animal husbandry/medicinal & Aromatic plants) , Tourism (Adventure Tourism , Nature based Tourism , Hospitality, Tours and travel) |
| Nagaland | | Skills | <p>Skill Development Initiative Scheme (SDIS) of Govt. of India has been implemented successfully.</p> <p>State Govt. has plans to revive Skill development by “Re-energising” its partnership with colleges and schools that have vocational education as part of its curriculum.</p> <p>Skilling of youth of Nagaland has been made possible under Centrally Sponsored state managed component of the PMKVY Scheme to allocate 25% of the total training targets to the state government.</p> <p>The State Skill Mission under the nomenclature "Nagaland Skill Development & Entrepreneurship Society" has been formed to execute the Skill Development & Entrepreneurship programs. Nagaland has a target to train 33, 021 youths by 2020 under the State Manages Component of PMKVY.</p> <p>The 1st District Level Skill Gap Study for Nagaland has been prepared by National Skill Development Corporation (NSDC) through M/s. DELOITTE during 2015 – 16.</p> | Wood and bamboo carpentry units; iron and steel fabrication; micro level food processing units; micro level coal mining and stone craft units; micro tourism industry like cultural tourism, traditional, food, medicine eco- and adventure tourisms. | <p>i. Repairing of machinery required for road construction activities, masonry will enhance the employment potential of this sector.</p> <p>ii. Finance, insurance and communications.</p> <p>ii. Manufacturing and Construction Sector</p> <p>v. IT training for better expansion of Proper GPS mapping of areas with industry scope.</p> |

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| | | Enterprise | <p>Implementation of rural livelihood programme in each block of every district in Nagaland.</p> <p>Establishing of multi-disciplinary food processing training cum food testing laboratory as per standards specified by the Ministry of Food processing Government of India at Dimapur.</p> | <p>Development of Bamboo as an Enterprise , Organic Tea cultivation & processing units, handicraft and handloom sector</p> | <p>Nature/wildlife tourism, adventure tourism, cultural/heritage tourism, agriculture tourism, leisure tourism, international border tourism, traditional delicacies, and processing of medicinal plant.</p> |
| Meghalaya | | Skills | <p>Meghalaya State Skill Development Society (MSSDS), Some centrally sponsored schemes is under VTIP with world bank assistance, Upgradation of 1396 government ITI under PPP, Skill Development Initiative (SDI) based on Modular Employable Skills (MES) PMKVY (State Managed).</p> <p>Special Projects run in the State Meghalaya: The EST&P under National Urban Livelihood Mission (NULM) formerly known as the SJSRY (Swarna Jayanti Shahari Rozgar Yojana) was launched during 1997 to provide gainful employment to the urban unemployed or underemployed through the setting up of self-employment ventures or provision of wage employment. It is now part of National Urban Livelihoods Programme (NULP).</p> <p>1) Skill Development Initiative (SDI) of the Government of India</p> <p>SDI is a very innovative and novel scheme which has the potential to transform the skill development scenario in the country. It was designed to impart skills relevant to the industry to school-leavers at various levels by using existing vocational training and skill development infrastructure in the country.</p> | <p>Tourism, healthcare, education, handloom & handicrafts, food processing and IT. Also beauty and wellness sector is considered to be satisfactory in terms of retention and placement linked skill development.</p> | <p>State has not conducted any study on youth unemployment and migration but it is felt that ICT related services will be potential skill development areas in state.</p> |
| | | Enterprise | <p>Meghalaya Industrial Investment Promotion Policy (MIIPP) 2012</p> | <p>The following areas have been declared as the potential area in the promotion of</p> | <p>Tourism Sector, Health Sector , Agro and</p> |

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| | | | | industrial activities: Agro and horticulture processing unit; processing of plantation crops; development of traditional handlooms and Handicrafts; tissue culture and biotechnology; spices oleoresin and other essential oils unit; animal husbandry and meat processing industries; development of mineral based industries; electronics and information technology; bamboo/reclaimed woods based products. | Horticulture related services as per MIIPP |
| Mizoram | | Skills | The State is yet to formulate the State Skill development Policy. Projects adopted by the state - For Skill Development, the State utilised Skill Development initiative Scheme (SDIS) of the Government of India, apart from the Craftsmen Training Schemes (CTS) undertaken in the existing 3 ITIs. | IT sector, forest based products, and Food processing. Under PMKVY 2.0, the State specific job roles proposed are in the Agriculture Sector and Traditional Arts & Crafts. | The State can leverage Software which can be used for training in Communication Skills either in Hindi or English. Food Processing- to develop e-marketing for agriculture products. |
| | | Enterprise | NLUP (New Land Use Policy & NEDP(New Economic Development Programme) NEIIPP(North East Industrial and Investment Promotion Policy) Moreover Centrally sponsored schemes (under of Ministry of Textiles) ISDS for weavers under which 749 weavers completed training. | Handloom and tourism. | Traditional Mizo Garments (Puan) and other Weaving Trades. |
| Arunachal Pradesh | | Skills | MES under Skill Development Initiative. Capacity Building and Skill Development Programme under International Border Areas Development Programme. Industrial Training Institute (ITI) under Craftsmen Training Scheme (CTS). | National Skill Development Corporation and North Eastern Development Financial Corporation Limited (NEDFi) has conducted a comprehensive study on skill development in the state but no further information has been provided. | Construction; Hydropower/power; Tourism and Hospitality; Retail; Security Guard; Information Technology; Healthcare; Food Processing. |
| | | Enterprise | No information available. | Traditional craft can be promoted so to | * |

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| | | | | move towards entrepreneurship development in the state | |
| Assam | | Skills | <p>State Institute of Panchayat & Rural Development had implemented the self-employment oriented projects of the Government of India & State Government.</p> <p>Assam Rural Infrastructure and Agriculture Services Society (ARIAS) has formally launched the World Bank funded Assam Agri-Business and Rural Transformation Project (APART) on 10th January, 2018. The project was launched by the Chief Minister of Assam.</p> <p>Assam State Urban Livelihoods Mission Society: National Urban Livelihoods Mission is to reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self-employment and skilled wage employment opportunities</p> <p>Assam Skill Development Mission (ASDM) aims to extend its reach to the youth residing in the remotest of the areas. To achieve the same attempt has been made to establish Pradhan Mantri Kaushal Kendra (PMKK) in every district of Assam in collaboration with NSDC in PPP mode. Further attempts has also been made to set up training centres in each block. To achieve the same, ASDM has made provisions to provide specific incentives to the Training Partners who have their skilling facilities in these areas.</p> <p>There are about 25 private VTPs who are currently providing short term skill training with a minimum 35 days training to maximum 3 months training. The courses are Industrial Sewing Machine Operator (SMO), Sales & Retail, BPO, Welding, House/ Domestic Wiring, Driving, Spa Training, Oil Rig Drilling Training. Private</p> | <p>skill development in terms of creating employability in Karbi Anglong are:</p> <p>ITI in Karbi Anglong offer the following trades under National Council for vocational training and state council for Vocational training: Mechanic diesel engine; welder; Stenography; computer operator and programming Assistant; mechanic motor vehicle; fitter; electrician; wireman; Draughtsman civil; food processing sector</p> <p>Industrial training Institute in NC Hills offers: Electrician; Wireman; mechanic motor vehicle, welder; Plumber, mechanic diesel engine, pump operator cum mechanic, dressmaking, mechanic electronics, computer operating and programming Assistant</p> | <p>Assam – unconventional areas of skill development in the hill districts of Assam NC Hills - skill development on natural resource base – Agricultural products like food processing, livestock and poultry – pig rearing, Handloom and handicraft, Forestry including Forest products like timber, Cane, bamboo et cetera</p> <p>Unconventional areas for skill development in Karbi Anglong on natural resource base including: Minerals like limestone, china clay, feldspar, Coal, Agro-based rubber plantation citronella and alternative system of agriculture for Jhum cultivation, Horticulture to address the entire spectrum of horticulture from production to consumption through backward and forward linkages, Forestry including the major forest products consisting of timber, cane, bamboo. Rainwater harvesting</p> <p>The agro-climatic condition of Dima Hasao district is suitable for sericulture. A total of 180 villages in the district are involved in sericulture activities. The</p> |

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| | | | Security Guard training, Hospitality, Industrial Fitter and Machinist. Motor Mechanic, Bed Side Assistant (BSA). Electronics Service Engineer, VFX-Pro (Animation), Capacity building in Urban Organic Gardening – Production & Service Providers, Diploma in Reporter cum Photo Journalist, Media Sales Executive, Diploma in Beauty Care, Domestic House Keeping, Skill Up gradation of Existing Domestic Helpers, Child Care, Geriatric Care, Diplomas in licentiate, Drivers (LMV) training, Front Office, Food & Beverage Service, Housekeeping, Food Production, Bakery & Confectionery Mali Training. | | district has favourable agro climatic conditions for the development of various horticulture crops. The district has high potential for growth of citrus fruits, pineapple, areca nut, lemon, banana and coconut besides rubber and bamboo plantation. |
| | | Enterprise | Entrepreneurship Development training is being conducted by Bharatiya Yuva Shakti Trust (BYST) under the ambit of the Skill Mission. | Skilled Manpower required in following skills: Karbi Anglong Motor Mechanic, DTP Operator, Semi-skilled Workers Dima Hasao Mechanic Electrician, Motor Mechanic, Carpenter, Computer Operator Skills Not easily available Mechanic, Electrician, Motor Mechanic, Driver | * |
| Manipur | | Skills | State skill development mission was constituted in 2015 for formation of an action plan for skill development but no meeting of the mission has been organized. State Govt. Introduced Vocation training courses in 40 Colleges. It was a part of 100 days programmes of Government of Manipur, under Rashtriya Uchchattar Shiksha Abhiyan (RUSA), Ministry of Human Resources Development, (MHRD) Government of India | Handloom & Handicraft, Agriculture, Construction, Beauty-Wellness, IT & ITES, Automotive, Healthcare, Tourism & Hospitality and Telecom | Domestic IT Helpdesk attendant; Customer relation management domestic Non-voice; Customer relation management domestic Voice; Collections executive; Domestic Biometric data operator; Domestic Data entry Operator. |
| | | Enterprise | Industries Department has taken initiative to promote entrepreneurship through PMeGP, | Emerging Sectors ---health and paramedical sector , Information | Food Processing EDP Training, FPI sector |

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| | | | linking Mudra Scheme with the Handloom and Handicrafts sector to indirectly promote entrepreneurship. A new Textile Policy and Mineral Policy, 2017 have been revised taking into consideration the current aspirations of investors and entrepreneurs. | technology services, Forestry Sector, Plantations Industry, Apparel , Handloom and handicrafts , Furniture making and bamboo fabrication | Awareness programme, Fruit & Vegetables preservation. |
| West Bengal | | Skill | <p>a) Technical Education, Training and Skill Development (TET&SD) is the nodal department in West Bengal for Technical Education , Industrial Training, as well as all skilling interventions</p> <p>b) Employment Directorate in collaboration with the Ministry of Overseas Employment has been implementing skill up-gradation and pre-departure orientation of emigrant workers, wherein subsidized skill development training is provided by the state government.</p> <p>c) Utkarsh Bangla 2016 under the purview of the PBSSD for the entire non-institutional, non-project mode, short term Skill Development interventions to provide wage/ self-employment linked skills training to the residents of the State.</p> <p>d) West Bengal has been approved as an AP (Action Plan) state by the MoRD (Ministry of Rural Development) by the EC (Empowered Committee) to operate project-mode trainings under the DDU-GKY (Deen Dayal Upadhyaya – Grameen Kaushalya Yojana) scheme. PBSSD would act as the implementing arm for executing the scheme. As a part of the same, a training target of 73,514 has been sanctioned by MoRD to be achieved through this scheme over 3 financial years 2016-17 to 2018-19.</p> <p>e) The directorate of Vocational Education & Training has rolled out the CSS-VHSE scheme in 289 schools pan West Bengal in PPP mode. Under this scheme the interested students from class IX to class XII can opt</p> | <p>Emerging Sectors are as follows</p> <p>Tourism & Hospitality: catering; bartending; housekeeping; tour guide; cooking, etc.,</p> <p>Security: armed and unarmed security guard; security and CCTV supervisor; certified training assessor; physical security trainer</p> <p>Domestic Worker: child and elderly care; general housekeeping/cooking</p> <p>Retail: Cashier; stores operations; distributor salesman</p> <p>Healthcare: General duty assistant; emergency medical technician</p> <p>Beauty and wellness</p> <p>Electronics</p> <p>Furniture and fitting</p> | <p>Unconventional areas of skill development are as follows</p> <p>tour guide ,certified training assessor; physical security trainer</p> |

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| | | | for QP-NOS courses of Level 1 to Level 4. In addition to the 289 schools, operationalization of another 211 schools is in the process. f) Departmental Schemes: In collaboration of various departments the Paschim Banga Society for Skill Development (PBSSD) has rolled out multiple schemes for skilling. MsDP with a target of 26,000 has been operationalized in collaboration with MAME department. Pranisebee training has commenced as an initiative of ARD department. | | |
| | | Enterprise | Data Not Available | Beauty & Wellness: Beauty and wellness therapy including spa treatment; Hair styling; makeup artist; tattoo artist. Electronics: mobile phone hardware repair technician Furniture & Fittings: carpenter wooden furniture Micro-retail entrepreneur. | Tattoo artist & micro retail entrepreneur. |

3.4 Qualification packs and occupational standards at state level for mountain specific job roles

Occupational Standards (OS) defines one key function in a job role. NOS specify the standard of performance an individual must achieve when carrying out a function in the workplace. These Occupational Standards are combined to a set, which is called Qualification Pack (QP).

Qualification Pack certifies a person for a specific job role. QP's are approved by National Skills Qualification Committee (NSQC) through a process. As part of the approval, along with the QP, the SSC also has to submit the model curriculum, the notional hour to undergo training, the category of the job role also needs to be defined. For any government scheme the common norms pay the Training fees as per the notional hours and the defined category which is approved by the NSQC.

National Skills Qualification Framework and Qualification Packs/National Occupational Standards provide for the minimum hours of skilling however in the case of Mountain States it has been felt that deep handholding is required as the level of education, exposure and tribal culture doesn't permit them to be up to speed like regular students in main stream. This also means the funds that would be required for deep hand holding would need to be more for the same job role in the main stream. Making this distinction would be pertinent. There are very specific job roles which are very peculiar to the mountain states and

these job roles contribute to the State economy. For example: In West Bengal one of the important cash crop is Tea. Darjeeling (Mountain District) is globally recognised for tea plantation of the acclaimed Darjeeling Tea variety. West Bengal, the second largest tea-producing state in India, produced 329.3 million kg of tea in 2014-15, accounting for 27.8 per cent of the country's total tea production. There is a need to have specific job roles for the Mountain States so as to enable the youths of these region undergo training on those standards and participate/ contribute to the income generation activity of their respective state.

Other thing evident is that while northeast states are often clubbed together, in many cases, every state is different and among each state there is a wide differences; for example, Manipur's high poverty rate and Sikkim's prosperity. Hence it is important that state specific QP's needs to be developed. The below table provides an overview of the qualification packs and occupational standards developed/ process of developing for mountain specific job roles and the associated challenges in doing so:

| | QP and OS developed | challenges |
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| Tripura | <p>The state has prepared state specific course curriculum and shared with Sector Skills Council (SSC). These include:</p> <ul style="list-style-type: none"> • Domestic electrician; • Panchkarma Masseur, • pump operator, • Basic course of computer accounting and GST, Advanced course of computer accounting and GST. • Bamboo utility handicraft assembler). <p>State Government has entrepreneurship development module in the curriculum for all the students who gets them enrolled in it.</p> | <p>The state is willing to develop QPs and NOS for skills on niche mountain good and services with required support from relevant SSCs.</p> <p>Considering that the state requirements for job role are specific certain packages can be developed which recognizes the work of various tribes and communities.</p> <p>One of the major challenge in getting the approval of the State Specific QP's will be the validation from the 10 Large Scale, Medium Scale and Small Scale Industries. There is a possibility that Large Scale industries may not be present in the state.</p> |
| Jammu & Kashmir | <p>The department of technical education has identified in collaboration with respective associations the qualification packs for the following mountain specific heritage craft sector</p> <p>Finger magic shawl and Kani Shawl; Cheshmish shawl weaving Crewal work; Phulkari Arts (paintings); Kaleen Bafi; Gaba Sazi and Namda Sazi; Tapestry; Staple work; Chain stich; Kari kalamdan; Khatamband; wood carving; willow wicker</p> | <p>No challenges have been identified. New challenges will emerge when the skill survey is conducted.</p> |
| Sikkim | <p>The state has not developed any QPs. But the state is NSQF compliant and NSDC/SSCs/QP/NOS are being followed.</p> | <p>No challengers have been identified. Since Sikkim is a small state it looks at the competency of other states in development of QP and NOS which they are willing to follow.</p> |

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| Himachal Pradesh | <p>The state has identified 11 mountain specific job roles. These are – Kinnauri caps and jacket making; laholy socks, gloves and sweater making; handloom shawls weaving; , woodcarving; Chamba Rumal embroidery; Kangra paintings; Himachali metal craft; Kinnauri shawls; , Planting growing cutting pruning apple orchard; plucking grading packing and marketing of apple and other fruits; vermin compost producer.</p> <p>The concerned SSC has been requested QP/NOS for this job roles.</p> | <p>The state has recently initiated the process of developing QP/Job rolls with SSC for Agriculture, Handicrafts and apparel, Made-up and Furnishing with sector skills council. Currently there are no challenges as the process has just begin.</p> |
| Uttarakhand | <p>QP-NOS for mountain specific job role to be developed</p> | <p>The state mission had proposed to NSDA to create a job role for tourist guide in 2015.</p> |
| Nagaland | <p>No QP and NOS developed. However, the state has already constituted a core committee for NSQF for the purpose</p> <p>At the University some colleges have entrepreneurship Development Programme in the course curriculum. At present the state has Agriculture college which have Job oriented courses.</p> | <p>Lack of resources, especially in the area of skilled mentorship, infrastructure, technical know-how, and capital and the lack of innovation.</p> |
| Meghalaya | <p>The state has not developed any QP and NOS for any mountain specific job roles.</p> | <p>The main challenges being faced by the state to develop QP and NOS for mountain specific job role is shortage of human resources .They will hire devoted personnel for developing QPs and NOS for skills on niche mountain goods and services.</p> |
| Mizoram | <p>The State needs to develop Qualification Pack and National Occupational Standards in regard to Agriculture Sector & Traditional crafts, under the PMKVY 2.0, the State specific job roles proposed are: Agriculture (e.g. Dragon fruit, protected cultivation of vegetables, off-season cabbage and tomato, oil palm). Traditional Crafts (e.g. traditional bamboo hats, sieves, and baskets, cane flower vase maker and coat hanger maker).</p> | <p>The main problem faced in Mizoram is infrastructure development like land development ,Building Connectivity , Power Supply and water Supply which ultimately results in Lack of skilled and qualified man power</p> |

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| Arunachal Pradesh | No QP developed in the state as yet. The state is following the guidelines of the Union Ministry of Skill Development and Entrepreneurship (MSDE) | <p>Initiatives are yet to be taken in the state for development of QP and NOS for the mountain specific job roles:</p> <ul style="list-style-type: none"> • Identification of traditional job roles doe sustainable employment: • Centralization of various skill development schemes to avoid duplicities, redundancies and inefficiencies present in skill development ecosystem of the state: • Formulation of state specific comprehensive skill development policies; • Creation of state council for skill development, an advisory and regulatory body to look into the regulatory and quality aspects of various issues facing Skill development ecosystem. |
| Assam | <p>The states are encouraged to develop their own qualifications and align existing qualifications to NSQF as per NSQF gazette notification.</p> <p>Assam is running skill development various courses certified by SSC/NCVT and self. However, there is no report of development of particular course/qualification specifically for Hilly Areas.</p> <p>However, as the society is agrarian specifically growth of citrus fruits, development of such qualifications like pineapple growers under agriculture sector, canned fruit and vegetable processors under food processing, silk worm growers under sericulture would be encouraged.</p> | Main challenge faced by State in development of qualifications is shortage of human resources |
| Manipur | <p>The Department of University and Higher Education, Government of Manipur has introduced Vocational Training Courses .It was a part of 100 days programmes of Government of Manipur, under Rashtriya Uchchattar Shiksha Abhiyan (RUSA), Ministry of Human Resources Development, (MHRD) Government of India.</p> <p>The Department has identified 11 trades in collaboration with 13 Industrial Partners.</p> <p>At the initial stage, Level 4 is being introduced in the third Semester from the Academic Session of 2017-18 with the intake capacity of 30 each in all the 40 Colleges and Level 5 will be introduced in the fifth Semester from the Academic Session 2018-19 .</p> | <p>Also the State Govt. trying to rejuvenate the SSDM (State Skill Development Mission) as it has been lying defunct.</p> <p>The state has asked the SSC to prepare state specific qualification under the state component Manipur doesn't have any state qualifications</p> |

| | | |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| West Bengal | No mountain specific QP and OS is developed in the state for Hill Districts so far | <ul style="list-style-type: none"> a. Difficult geographical terrain & harsh weather b. Limited number of months available to impart skill development training c. Low level of awareness among the citizens about the various training programs d. Enrollment of candidates are low e. Limited presence of industry in the hill districts of West Bengal |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Some of the challenges in developing state specific QP's in general is the shortage of human resource and the procedure of getting the approval of the QP's. Getting Large Industry validation for each job role can also be a challenge. There should be a mechanism by which the State can choose NOS and add state specific NOS.

Chapter 4: Present context and emerging opportunities

4.1 The priority sectors in Himalayas for skill and entrepreneurship

The Himalayan Range has an overwhelming effect on India. The region flaunts the advantages of fertile soil, mineral affluence, forest richness, multiple tribes and their distinguishing crafts, holy destinations and several other territorial specificities which are present opportunities for nurturing sustainable development and entrepreneurship. Utilisation of mountain specific resources can add high-value products to the mountain economies, but it requires minimum standard of development as pre-requisites for enterprise development to succeed. This includes:

- a) Harnessing of abundant natural resource in the region could inspire projects in a big way. The most effective strategy for conservation of natural resources lie in, incentives for their regeneration through regulation and management. Dis-incentivise indiscriminate exploitation and incentivize sustainable use and regeneration of natural resources.
- b) Precursor to any effective development intervention are a bunch of research studies which may properly identify i) needs of the local population and industries, ii) gaps in the various factor markets, iii) products which need protection under GI Act, and iv) creation of Business Development Service. This step is essential for holistic development interventions in the Himalayan Region.
- c) The policies should widen the scope and coverage of the definition of enterprise which are farm-based, off farm, non-farm or service based.
- d) Focus on comparative advantages and niche products and potential services that mountain areas (and mountain communities) offer and develop a special incentive package for such products and services. For this purpose, support should be provided to undertake an extensive exercise for opportunity identification at regional and sub-regional levels to document new products, processes, technologies and designs, and evolve a system to disseminate the information among potential users.
- e) Extension and expansion of activity and enterprises is better sustained when the process is ‘horizontal’, from one or a few entrepreneurs to a larger set of similarly-based individuals or households. Introduction of products with external interventions and their ‘vertical’ extension has often failed. However, strategic linkages for vertical upgradation should also be harnessed as required, especially when managing value chain development.
- f) There needs to be sustained efforts in product development and market promotion in order to establish a strong foothold. This requires strengthening of research and development and widening market through improvement in accessibility and promotional efforts.
- g) A continuous process of adaptation, upgradation and change in packaging is needed to strengthen enterprise development. Development of skills to read the market and the capacity to respond to market signals is the key to success, for which development of human resources at all levels is important.

In this backdrop, Working Group for skill development and entrepreneurship promotion in mountains identified areas of focus for strengthening enterprise development:

- New age agri-entrepreneurship
- Sustainable Mountain Tourism
- Ecosystem based employment opportunities
- IT enabled services & digital health for employment
- Skilling in infrastructural projects
- Skilling for migrant workers and returnees

4.2.1 New age agri-entrepreneurship

This includes potential agriculture/ horticulture / forestry based value chains for mountain region. This section includes examples of value chains: Off-season vegetables, medicinal and aromatic plants, spices, handloom and handicrafts and health foods. These value chains have business potential for majority of the mountain states.

4.2.1. a Off-season vegetables

Development of improved and need based infrastructure is the key to improve all-weather access to regions that grow produce that has a demand in the market. Improving accessibility to remote areas through construction of pathways and ropeways as well as reducing perishability of produce through construction of ‘storage’ are essential. Similarly, establishment of collection centres within reachable pockets of growing areas will further boost the value chain.

Improve collection and packaging practices to further tune to market preference. For example:

- i. Improve post-harvest treatment of produce with regard to perishability, including cleaning, sorting, storing and grading of the produce.
- ii. Link harvesting schedules to ‘off-season’ demand (early or late in the season) in nearby markets and pre-planned collection times along set transport routes.
- iii. Promote climate smart agricultural practices among households to enhance their capacities to better manage climate risks.
- iv. Weigh and pack market acceptable quantities in an acceptable packaging form.
- v. Print appropriate marking to identify the produce; indicating grower, region, grade, and fixed quantity.
- vi. Maintain a system of registers and connected “pass book” system to maintain accounts for farmer’s goods accepted.
- vii. Maintain a system of registers and connected “pass book” system to maintain accounts for farm labour who are the mainstay of horticulture.
- viii. Monitor payment receipts and outstanding with link to farmer dues.
- ix. Develop a commonly acceptable view on wastage and returns.

- x. Promote gender-sensitive extension services and ICT based innovations to enhance capacities of households to manage climate and non-climate risks, particularly in remote and rural areas.

Given the challenges involved in integrating with larger markets, efforts should first be directed at encouraging production and saturating local markets before moving to external markets that may also incur higher costs and bring risks. Collective marketing needs to be planned carefully right from the stage of input support services to link producers with more distant markets (either wholesale or retail), by-passing the existing *mandi* system. Improve availability of credit to keep pace with heightened market engagement. Use ICT to facilitate production as well as flow of market information and an understanding of aspects of market functioning and their impact on prices. Change the system of trader coming to growing area to one of farmers reaching the market doorstep with produce gathered and packed in an acceptable manner. This step once carried out will help improve their bargaining ability and result in improved returns.

4.2.1.b Medicinal and aromatic plants

The forests and hills of IHR contain a wealth of medicinal and aromatic plants (MAP). These have a high value to weight ratio and are generally not particularly perishable, and so can be brought to market from distant production areas. Harnessing abundant natural resource through proper regulation and management, with incentives for their regeneration in the region, is important for enterprise development. Inability to do so can lead to failure in capitalizing on this opportunity. With the resources on MAP spent earlier in IHR states and elsewhere, there is little evidence of success from the efforts of state or non-state agencies to scale up production, processing or trading activities. This is partly because most profitable MAPs are endangered and threatened and their extraction was banned after India became a signatory to the CITES convention on trafficking in endangered species of plants and animals. However, over-regulation also led to widespread flouting of these regulations – which keeps a large segment of activity in the informal/illegal sector. It is important to dis-incentivise indiscriminate exploitation and incentivise sustainable use and regeneration of natural resources.

Traditionally, MAPs are collected from the wild, and they support and supplement farm income. Moreover, women and children are predominantly involved in MAP collection during lean periods of agriculture. As MAPs are critical to livelihoods of the poorest and most marginalized sections of society, particularly those living close to forests, they are important in terms of poverty reduction. Cultivation of these plants could legally supply the market while providing a good income to the communities involved.

The thrust areas identified by National Medicinal Plant Board (NMPB) should be aligned with and their support can be tapped through centrally sponsored schemes formulated for MAP activity. Furthermore, a cluster based approach will allow MAP of a substantial value to be cultivated and supplied on a viable scale, which will evoke the interests of buyers and make the operation economic. Once supply lines have been established over a few seasons, buyers may be approached to establish value addition facilities closer to growing areas - though it has been found that these serve little purpose unless community members set up their own market channels. This is so because the produce has high value and can bear transport costs, so an organised processor ends up with better utilisation of a plant than the grower-processor who may not be able to utilise their plant to the same extent.

The buyer community functions on cartel principles and the stakes being high, the rules of the game may need adapting and care will have to be taken in managing commitments and relationships. It is for this reason that it is important that the growers first increase their stakes and organise themselves, and thus are able to deal with market players.

Common Facility Centre (CFC) and Incubation Centre (IC) – As Part of Enterprise Development Infrastructure

The Himalayas region are not only rich in natural resources but is encased with local industry, which sources their raw materials from the bountiful nature to produce or manufacture products in micro and small enterprises; such products may not be found in other parts of the world. The small operating scales of these mostly household based units are not profitable and in a majority of cases the artisans are subsistence workers.

The concept of CFC based infrastructure development is i) identifying the critical common operating bottleneck amongst a cluster of MSMEs and ii) creating a public good – a CFC which will provide common services to a cluster of MSMEs in the region. The positive impacts of CFCs are many, some examples are generating social capital, innovations in marketing, common bargaining platform through associations, access to BDS (Business Development Services), raw material bank, common warehouse, showroom, and many other. The need is the driver of a CFC based solution for an MSME cluster.

An IC is a platform which gives opportunities to start-up entrepreneurs to set up a business, under controlled and supportive environment. The operating costs of business are reduced due to common sharing of infrastructure, facilities, MDP and EDP trainings add value to the entrepreneurial mind set, and counselling and mentoring are valuable services to the budding entrepreneur. The concept will be essential in the Himalayas region which lacks a systemic support for entrepreneurial development infrastructure.

4.2.1.c Spices

The NER region has a rich diversity of spices and these are already recognised and sought after by the market – bay leaf, cinnamon, green & black pepper, zanthoxylum (timur), turmeric, ginger etc. Spices can easily be grown in homegardens, rainfed upland agriculture, agro-forestry systems and therefore offer mountain farmers a good opportunity for growing products that are (a) non-perishable (b) high value (and low volume) (c) provide both a competitive as well as a comparative advantage (volume and scale required in other crops, can be dispensed with or takes less importance), and (d) offers a viable model for upland farming that overcomes the constraints of mountain specificities (limited land, fragility, slopes etc.). The promotion of spices requires skill enhancement at different levels, starting from simple sorting and grading to sophisticated processing of high value products extractable from the spices. Spices therefore, in the context of mountains can be forerunner in the new age agri-enterprises. With little investment, it is possible to process the spices by sorting, drying, converting to powders and pastes, and finally packaging in bulk or consumer packs for sale to markets as a generic or branded product. It may, therefore, be best if such an enterprise carried out intermediate processing (such as drying) and spices are sold in bulk to a company with an established brand and experience in managing consumer products. Key intervention in spices include:

- i. As spices are grown on a limited scale, seasonality of production and place within the overall cropping calendar needs to be planned.
- ii. Specific efforts need to be directed at seed preservation and storage. Ginger in particular needs much care since damaged seed fingers are bound to impact growth of the crop.

- iii. While varieties grown may be meeting local taste preferences, there may exist an opportunity to try out improved/new varieties. They could offer a shorter growth cycle, be more tolerant to agro-climatic conditions, offer improved adaptability to intercropping, or cause less damage to soil (as in the case of ginger).
- iv. Demand needs to be assessed to supply spices in a whole dried or powdered masala form. Later, depending on growing interest and establishment of quality (primarily taste) parameters, potential to market beyond the region could be explored and production up-scaled if found remunerative.
- v. Packaging need to be addressed as currently a large quantity that enters the market system is wasted. Green coriander is just bundled into large lots leading to damage. Ginger, when sold with fingers intact, commands a higher price than when fingers are damaged. As spices in their primary form are preferred by consumers when fresh, planning a regular supply in marketable lots can help minimise waste and loss of value.
- vi. Adulteration is an acknowledged problem with dried spice powder. A partnership with a private sector processor/marketer of spices could allow dried spices to be supplied in bulk by a community or producer organisation, with milling and consumer packaging being the responsibility of the private sector company.
- vii. As long as bulk/intermediate packing is involved, packaging does not need much attention beyond complying with buyer's needs. However if consumer sales develop, there will be need to evolve packing and distribution systems to reduce waste and cost.

Branding challenges of mountain niche products

Establishing a brand requires resources and ability to compete and cope with uncertainties of the market. Without a strong brand image, mountain niche products may not be able to take advantage of the value that an organic product from the mountains may bring. It is difficult for community or producer enterprises to establish strong brands, especially in distant markets.

Geographical Indication (GI) Tag for Protecting Intellectual Property Rights and Promoting Local Products can be used effectively to overcome some of the challenges related to branding. GI is "an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be." u/s 2 (3) (e) of the Geographical Indications of Goods (Registration and Protection) Act, 1999, which has come into force with effect from 15 September 2003 in India. The tag ensures that no individual other than those living in the particular geographical region may use the GI tag for their products. 'Darjeeling Tea', which is a product of the Indian Himalayas Region is the first product to be registered and protected with the GI status. The Himalayas region is rich in natural products and commodities and are renowned around the world for their geographical identity. Few examples are – Darjeeling Tea, Chamba Rumal, Uttarakhand Dann (carpets), Uttarakhand Tejpat, Tripura Pineapple, and many others. Local livelihood and industry depends on these products, which may not be produced or manufactured at any other place or region. Therefore, it is desirable to protect the geographical identities of these products and protect the livelihoods of the local industry. Promoting these products with their GI may boost the local industry considerably.

Mountain goods and products such as medicinal and aromatic plants and other non-timber forest products, mountain crafts, and ecotourism hold special values and have niche markets. Research organization may involve in marketing and brand positioning of mountain products can benefit mountain regions and help them get value for their products and efforts. Distinctive features and values of mountain products can be highlighted in novel ways such as through green certification and eco-labelling, access and benefit sharing initiatives, green marketing, and fair trade of mountain products.

4.2.1.d Traditional mountain crops as ‘health food’

Many of the traditional mountain crops are known to be highly nutritious and are increasingly sought after in the niche markets in urban metropolitans. Mountain buckwheat, millet, legumes, upland rice, tubers hold tremendous potential as ‘health food’. Promotion of this sub-sector within agriculture can be extremely rewarding, offering opportunities for business partnerships with the private sector while providing the much required impetus for agricultural development in upland areas. Skill development in this regard requires the development of high end products, and therefore, a capacity building in processing and product development. A natural complementarity for promotion of such products is also the linkage with tourism through the promotion of local cuisines in restaurants and hotels.

4.2.1.e Mountain handloom and handicrafts

Mountain communities in IHR, especially women, have been traditionally adept in handicrafts and handlooms. Mountain women across the Himalayas have traditionally been known for their skills in weaving and handlooms. This known also included a rich traditional knowledge repository on natural fibres and natural dyes. With the advent of technology, industrially produced yarn and dyes have resulted in commercial non-viability of traditional fibres and natural dyes and the resultant disregard for such fibres and yarn. Over the past few decades, with a growing consciousness of the ill effects of synthetic dyes and yarn, a rapid interest has grown on natural fibres and dyes resulting in traditional handloom and handicrafts, particularly those that are naturally dyed becoming highly sought after with a rapidly increasing market value for such products. Traditional mountain fibres, natural dyes and handloom products, therefore, need an immediate support for catering to this growing market. This can very profitable link conservation of mountain natural resources, promotion of mountain niche products and skills of mountain women as well as the economic empowerment of mountain women. While traditional skill sets already exist with the communities, an infusion of modern skills, particularly in upgradation of dye extraction techniques, modern looms, product designing and marketing need to be focused upon. Strong partnerships with the private sector, the National Institute of Fashion Design (and their regional branches) need to be established to promote this sector. In addition, a strong focus on promotion (and management) of natural dyes (plant and animal resources) should form the central focus of Forest Development Corporations of state governments, thus broadening their perspective from a narrow focus on medicinal and aromatic plants to other high potential NTFPs in the process.

4.2.2 Sustainable mountain tourism

“Tourism is the largest service industry in the country”. Its importance lies in being an instrument for economic development and employment generation, particularly in remote and backward areas (e.g. in IHR)”. Moreover, the 12th Five-Year Plan clearly recognizes pro-poor tourism for inclusive growth.

IHR represents one of the most sensitive and fragile human-environment systems, meaning that ecological carrying capacities are a critical factor that limit certain forms of tourism in IHR. Tourism development and promotion in IHR should therefore be built around the principles of sustainable tourism as opposed to mass tourism. Issues often linked to current models of tourism in IHR range from being a source of environmental damage and pollution, a threat to the socio-cultural heritage, a heavy user of scarce resources, to a potential cause of negative externalities in society. These internal tourism development dynamics, including impacts of climate change are

important drivers of change affecting sustainable tourism development in IHR. However, the tourism industry is also known to be fostered by business investment and profits that do not have equitable outreach to service and goods providers on IHR landscape. This is especially the case in the remote areas where local communities are not benefiting enough to promote sustainable tourism based on strengthened concept and services for entrepreneurship, sustained and all-season employment and other opportunities such as local handicrafts /self-employment linked to tourism value chain. Potential of tourism varies across the IHR. For example:

- i. Adventure tourism can include – camping, rock climbing, kayaking, rafting, mountaineering, winter sports, paragliding and other adventure sports.
- ii. Heritage tourism can include - historical, archaeological, cultural and natural sites (local festivals, Winter Festival).
- iii. Wildlife tourism and Ornithological circuits - Tiger circuit, wildlife safari, bird watching and angling.
- iv. Religious circuit – Char Dham Yatra, Buddhist circuit.
- v. Craft weave circuits

It is necessary to promote local skills and entrepreneurship for creating an enabling environment that generates local employment, and therefore creates interest and ownership of interventions among state/local stakeholders for fostering local economy through tourism.

Local prosperity: *To maximize the contribution of tourism to the economic prosperity of the host destination, including the proportion of visitor spending that is retained locally.*

Ensuring that economic benefits are secured at the place where costs are incurred is an important principle of sustainable development. As local communities have to meet a number of external costs associated with tourism, it is important that policies seek to maximize the economic returns to the local community. This is partly about securing reliable tourism growth, but equally about processes to maximize visitor spending per head locally and to reduce leakages, as well as developing long term linkages in the local economy. The fact that tourists, and the enterprises that serve them, make a very large number of purchases from a range of suppliers (tour operators, food and drink producers, transport services, guides, etc.) means that there are often many opportunities to strengthen the level of income retained locally. Local prosperity means ensuring that tourism is well integrated within the local economic interests and is developed alongside other sectors. It is also important to avoid over-dependency on tourism, while ensuring that it can provide a consistent and reliable source of income. Moreover, tourism projects that engage local communities directly in their planning and implementation are much more likely to be successful in delivering local benefits and to be sustained over time. Policy in this area is not, however, just about engagement through consultation processes, it is also about empowering communities to influence decisions about the developments and activities that will affect their future while enabling the needs of other legitimate interests to be taken into account.

Key interventions to enhance local entrepreneurship from tourism:

- i. Reducing leakages and make community interfaces transparent and equitable benefit sharing basis

- ii. Strengthening links between businesses to converge financial investments mitigating sustainability concerns
- iii. Influencing levels of visitor spending and its outreach to destination communities
- iv. Incubation funding: often, the initial few months/years require staying power. The initial losses need to be sustained to stay the course and states must support here
- v. Local control / diversity: this would need to be ensured through tourism enterprise development governance which would also ensure the quality of employment for local population especially involvement of under-represented sectors of society
- vi. Engage and empower local communities (e.g. indigenous and traditional communities, both in NER as well as in Western Himalayas) in planning and decision making about the management and future development of tourism (linked to their livelihoods and culture) in their area, in consultation with other stakeholders
- vii. A support system of networked volunteers / flexible consultants that are specifically mentored to ensure quality control (guest managers) or marketing support (social media champions). While some local enablers exist, they need to be given a boost by networking, branding/marketing inputs.
- viii. Operational integrity: A support system of experts: hospitality professionals / accountants / legal experts who ensure good operational protocol and processes. In today's world compliances are multi-dimensional and if we want IHR to come out of the "great intentions but zero implementation phase", then we would need to create enablers for this.

Based on above, simultaneously employment through entrepreneurship can be influenced by

Employment quality and social equity: *To strengthen the number and quality of local jobs created and supported by tourism, including standardized skill and entrepreneurship development, the level of pay, conditions of service and availability to all without discrimination by gender, disability or in other ways.*

Providing employment is one of the major ways in which tourism can contribute to the quality of life in host communities. This could be one key entry points to keep youth in IHR and use its potential for development on site. However, in spite of the importance of human resources in tourism and the sector's contribution to the IHR economy, tourism jobs are often quite lowly paid, with poor conditions, little security of employment (seasonality factor and family business) and linked to external investments. However, part-time and often family-based employment, often leads to service industry jobs that are non-professional or just casual work with limited skills needed (Tour Guides). There is a very high turnover of workers in some sectors of the industry. Improved conditions for workers can lead to better performance, increased staff retention, and greater efficiency and productivity. The resulting change in staff customer relationships can lead to greater satisfaction with the overall holiday experience. The tourism sector is particularly vulnerable to many kinds of crisis—including disease, natural disasters, economic downturn, conflicts and terrorism—that can occur without warning and have an immediate effect (e.g. J&K). Many workers including, but not only, the high numbers of part-time or casual workers may have no right to benefit or support when jobs are withdrawn.

In a region as vulnerable to climate-change and disasters such as IHR, many local communities engaged in tourism work in harsh, unpredictable conditions that sometimes result in terrible mishaps. Governments and businesses have often been caught unprepared to deal with such events (Uttarakhand disaster in 2013). Hence improving financial security in the event of mishaps/unemployment such as through higher medical insurance, better compensation for loss of life, unemployment allowance could pave the way for inclusive and sustainable development. This could be overcome by introducing contracts that require adequate provision for advance notice of termination of employment, severance pay, etc. Government policy on social security support for people made redundant is also relevant here.

Tourism policies concerned with social equity should seek to benefit disadvantaged people by delivering economic and social benefits to them. A particular focus should be on tackling poverty, an aim that is manifested in SDG 1. For example, in IHR, communities can be said to be historically disadvantaged, and there is often a need to improve the position of women and the income earning options open to them. This applies strongly to providing opportunities for unemployed rural youth. There are many reasons why tourism is well placed to reach disadvantaged people, mainly because it is a labour intensive service industry with relatively low entry barriers and an activity that takes place in situ within communities. In addition to bringing income, the interaction it entails between people can bolster dignity and self-esteem. However, this is also true that faster socio-demographic changes are taking place and rural economies and populations are under stress (e.g. due to migration of youth, work load increase on women, labour deficit).

Key interventions to improve employment opportunities with quality concerns

- i.* Revisit skills and entrepreneurship deficits and link to potential opportunities keeping socio-demographic and climate change aspects in view so that we plan for next few decades and invest accordingly to maintain local economic avenues.
- ii.* Arrange for public schemes and customized vocation training that fill the gaps of skills deficits especially for young and women entrepreneurs
- iii.* Ensure employment safeguards through improved norms and unemployment allowance mechanisms (e.g. based on voluntary contributions such as Provident Funds, Part time bonus)
- iv.* Adopt inclusive VC approach to seek a widespread and fair distribution of economic and social benefits from tourism throughout the recipient community, including improving opportunities, income and services available to the poor. (Pro-poor tourism)
- v.* Utilizing income from tourism to support local capacity building programmes (Hospitality, cookery, local architectural skills etc.) and for local investments.
- vi.* Link service sector to local youth and women through standard set of cooperation norms (targeted reservation e.g. engaging x % of local employees)
- vii.* Revisit norms of private sector engagement and create certification systems for business sector (e.g. CSR approach for tour operators, Hotels).

Promotion of standards and certification for the tourism industry: Tourism standards and certification can help to ensure a consistent quality of service, safety of tourists, enhance the reputation of the tourism destination and lead to greater visitor satisfaction. For example “Green”

standards and certification schemes aim to make tourism operations more sustainable by providing participating businesses with an action plan for improvement which is linked to market incentives. This can be backed up by a services sector that helps build new entrepreneurship sector.

Environmental auditing of tourism service providers: Environmental auditing based on Environment Efficiency and Carbon generation and certification can enhance application of Environmental safeguards in the tourism industry. This provides opportunity to raise a service-oriented entrepreneurship where educated/trained youth from communities can build enterprises

Working with communities on the sensitive presentation and promotion of culture and traditions based on “Incentive based mechanisms (IBM)” (e.g. for good stewardship) need to be designed based on the tested eco-labelled or any other feasible sites. Greater respect and understanding for local cultures can be achieved through improved information for guests and hosts and interaction between. However, in all these activities, sensitivity is required and commodification or devaluing of local culture must be avoided. Utilization of Green bonus or “IBM” could be utilized for development of local eco-tourism entrepreneurship and associated livelihoods in the region.

The amount of solid waste those are being generated in the IHR is a matter of great concern. Solid wastes generated in the higher elevation areas have to be treated with utmost care. Therefore green practices in both the destination and site scale must be put in place based on the principle reduce, reuse and recycle. This management practice can be then linked to the concept of ‘**waste to gold**’ implemented and showcased that waste can be linked to local economy based on best practice entrepreneurship that are already being practiced at few places in IHR.

The updated capacity building packages and systems promoting sustainable tourism need to be blended within the curriculum and delivery design of trainings/education through institutions (e.g. vocational centres, universities) serving the host of actors and public/private sectors linked to tourism. Education for Sustainable Development (ESD) should be introduced in primary and secondary school curriculum and teacher training so that future job seekers are trained and ready for entrepreneurship/employment.

A support system of networked volunteers/flexible consultants that are specifically mentored to ensure quality control (guest managers) or marketing support (social media champions). While some local enablers exist, they need to be given a boost by networking, branding/marketing inputs. This has potential to create and sustain local jobs

Professional certification of all travel trade industry service providers on mandatory basis must be introduced for every group of tourism service providers such as tourist guides, porters, cooks, drivers, etc. Certified training programmes need to be offered by selected recognized institutions. This will ensure quality and sustenance of entrepreneurship created locally.

Standards and certification for accommodation sector & tour operators: The Sustainable Tourism Criteria for India and Indicators recently announced by the Ministry for accommodation sector and tour operators shall be taken up for ratification by the industry associations in the entire IHR.

HELP TOURISM is a network that also undertakes a lot of work in the areas of forest conservation and tourism. These initiatives could be scaled up with the support of Central and State funding. ACT (Association for Conservation & Tourism) was established by Help Tourism in 1996 and registered under Societies Act in 2001 as a non-profit organization to show the way to the Travel and Tourism industry, that, tourism can be a tool for sustainable development, peace and prosperity of rural landscapes of East Asia. The initiatives undertaken by Help Tourism-ACT till date have demonstrated how tourism has empowered the rural masses of the region to inherit the local natural, cultural and historical resources as their pride. The process has addressed issues like Climate Change, Poverty Alleviation, Heritage Preservation, and Cooperation through Convergence and Establishing Regional Peace through Common Tourism Circuits. ACT has been engaged in awareness about Rural Development through tourism with villagers, administration and Non-Government organizations, mainly through workshops, seminars, lobbying, destination development, training and policy interference. ACT has developed an extraordinary process of market linkage for the Rural Tourism initiatives, in the form of Rural Tourism Bazaar with the face of popular agricultural produce like Orange, Mango and Rice. Further, the Indian Association of Tour Operators (IATO) which is a National apex body of the tourism industry could be leveraged. It has over 4000 members covering all segments of Tourism Industry and has a large international acceptance. Similarly South Asia's leading travel show known as SATTE supported by Incredible India and based in Delhi also works a lot on North East Tourism. Connecting to such organizations would increase traction in tourism.

4.2.3 IT enabled services & digital health for employment

4.2.3.a IT enabled services

One of the biggest job generators for the Indian economy is the IT industry, which directly employs 3 million people and indirectly provides employment to another 9 million people.⁴ It has been suggested by the National Skill Development Corporation (NSDC) that there is a lack basic knowledge and skills of information technology among engineering graduates who join the IT and ITES sector.⁵ To equip fresh graduates with necessary skill-sets, the employers invest significant time and effort⁶

There is a huge opportunity for creation of employment opportunities for the local youth in NER by promoting IT/ITES industry, particularly by setting up the BPO/ITES operations. However, a report by NSDC (n.d.) mapped the skill gaps in different levels within the BPO sector in India. For example, this report indicated that executives (voice based) showed inadequate process compliance, lack of attention to details, lack of understanding of basic quality initiatives, lack of understanding information security and privacy issues (NSDC, n.d.). The North East BPO Promotion Scheme (NEBPS), envisaged under Digital India Programme, has generated employment opportunities in NER by setting up the BPO/ITES operations and promoting investment in this sector in NER. Under the pilot phase of Pradhan Mantri Kaushal Vikas Yojana (PMKVY), NIIT Yuva Jyoti, a joint venture of NIIT and NSDC, has enrolled 1,550 students across three sectors — telecom, retail & IT in Northeast, Jammu & Kashmir and Jharkhand.⁷

Though NER is one of the fastest-growing markets for online retailers⁸, efforts to build roads and improve airline connectivity have been impeded by the region's difficult terrain.⁹ Despite the

⁴ <http://www.financialexpress.com/jobs/skill-shortage-a-big-opportunity-for-it-sector/103898/>

⁵ ibid

⁶ ibid

⁷ ibid

⁸ <https://retail.economictimes.indiatimes.com/news/e-commerce/e-tailing/online-retailing-on-the-rise-in-north-east-india/32582545>

incentives and relaxation in norms of the BPO promotion scheme, inadequate civil infrastructure, poor connectivity and security-related issues have been identified as major challenges for private sector investment in NER.¹⁰

Rural e-commerce sector, which would connect wholesalers and retailers with rural customers through mobile applications, could be highly relevant for IHR (e.g. Storekey). It could create employment in the form of domestic IT helpdesk attendant, customer relation management, customer relation management domestic voice; collections executive; domestic biometric data operator; and domestic data entry operator. However, poor data connectivity and low private sector engagement in NER are major impediments to business opportunities through e-commerce companies.

The North East BPO Promotion Scheme

NEBPS seeks to incentivize establishment of 5,000 seats in respect of BPO/ITES operations in North East Region (NER). It provides financial support with overall ceiling of ₹ 1 Lakh/seat in the form of Viability Gap Funding (VGF) to eligible Companies based on performance, i.e. generation of new employment and new economic activity in IT/ITES sector, in the North Eastern Region (NER) through BPO/ITES operations. Besides this it also provides incentive for

Training Incentive: Up to 50% of training expenditure with cap of ₹ 6,000/employee for total regular employees up to the 1.5 times (employment target) the number of approved seats of BPO/ITES operation (e.g. For 100 seats BPO/ITES operation, training incentive can be availed for max. $1.5 \times 100 = 150$ regular employees).

Incentive for diversity & inclusion: Special incentive (% of eligible financial support) for Units providing employment to women and persons with disability will be provided as under:

| Inclusion & Diversity | Special Incentive (% of eligible capital support) |
|-------------------------------------------|---------------------------------------------------|
| 50% women employment | 5% |
| 75% women employment | 7.5% |
| 4% employment for persons with disability | 2% |

Incentive for providing employment beyond target: Special incentive (% of eligible capital support) for units providing employment beyond employment target (1.5 times the number of seats) will be provided as under:

| Employment generation | Special Incentive (% of eligible capital support) |
|-----------------------|---------------------------------------------------|
| 2 X no. of seats | 5% |
| 2.5 X no. of seats | 7.5% |
| 3 X no. of seats | 10% |

Incentive for promoting local entrepreneur: Special Incentive (5% of eligible financial support) for units setting up BPO/ITES operations as a consortium with local entrepreneur (Domicile of the State where BPO/ITES operations are being established).

⁹ <https://economictimes.indiatimes.com/industry/services/retail/north-eastern-states-fast-emerging-as-growing-markets-for-indias-e-commerce-players/articleshow/46126640.cms>

¹⁰ <https://economictimes.indiatimes.com/tech/ites/indias-ambitious-north-east-bpo-plan-turning-into-a-flop-show/articleshow/49805220.cms>

4.2.3.b Opportunity of skilling in digital health

The innovations in the health technology a growing leaps and bounds which are exhilarating the pace of growth in consumer and institutional healthcare delivery. Some prominent innovations are telemedicine, biosensors, electronic health records, wearable technology et cetera. Some innovative ways in addressing these opportunities are

- i. **Telehealth assistant:** Tele health is an example of the deployment of information and communication technology in providing remote healthcare. Tele health is now increasingly being deployed by more hospitals in the public and private sectors. Most institutions having Tele health infrastructure are unable to recruit personal with the necessary blend of technical healthcare and basic managerial skills.

Apollo met skills and Apollo telemedicine networking foundation will impart the Tele health assistant course endorsed by the National skills development Council of the government of India. This will provide entry-level formally trained personnel with skills to deliver and manage these new E healthcare delivery systems. The present time provides ample opportunity for creating a formal cadre of Tele health care facilitators. This program is intended for students after completion of 12 standard it is an 11 weeks of online classes and one week of contact programme.

- ii. **Medical coding:** Medical coding and billing profession provide opportunity with a unique set of job duties for the medical and paramedical students across the globe. Maintaining the electronic health record of patient so that they get paid off seamlessly by the insurance company is increasingly becoming a critical component of the healthcare industry. With the growth of insurance sector in India, the healthcare industry requires trained professionals with in-depth knowledge of medical coding. Because is eligible for any life science graduate or pharmacy graduate three months duration one week of contact programme
- iii. **Medical record technician:** Health care providers rely on the information in the patient's medical records in order to diagnose and treat the patient successfully. The position does not require any hands on patient care. Six month course is available for students after completion of 12th standard.
- iv. **Healthcare informatics:** Healthcare informatics is the science that underlies the fusion of healthcare, information technology, and business Administration. It focuses on the implementation and optimisation of the information systems that support clinical practice. Healthcare information takes is the rapidly developing scientific field that deals with the storage, retrieval and use of biomedical data, information and knowledge for problem solving and decision-making. The course is available to any graduate with six months online study and three days contact programme.

4.2.4 Skilling in infrastructural projects

The construction sector is the entry point to paid labour for many workers (ILO 2015), particularly those from rural areas. Over the past two decades, the construction sector has been a pillar of non-farm jobs in India. A recent article in the *Hindustan Times* estimated that the Compound Annual Growth Rate (CAGR) in construction sector employment was 9.1% between

2000-01 and 2010-11.¹¹ During the same period, the CAGR was estimated to be 2.7% in non-farm employment excluding construction.¹² However, the same article highlighted that value added per worker had started to decline for the construction sector from the middle of last decade.¹³ Moreover, the value added per worker in the construction and agriculture sectors was heading for a convergence.¹⁴

A large section of the construction workers – including most women workers – are daily wage earners (Ernest and Young LLP 2016, SEWA 2002). On some construction sites in India, women may represent up to 50 per cent of the workforce (SEWA 2002). Generally, these women construction workers are load carriers, helpers or perform semi-skilled work (including plastering or concrete mixing) (Kakkar 2014, SEWA 2002). Kakkar (2014) suggests that most workers available for key construction activities (e.g. masonry, carpentry, brick work) are either unskilled or have crude skills with limited relevant knowledge. Many workers also lack knowledge about machine operations (ILO 2015). Generally, there is a lack of safety orientation, general workplace skills and the ability to follow technical instructions among unskilled workers (ILO 2015). Their career prospects remain limited in the absence of formal skill development and certification (Ernest and Young LLP 2016). It is less likely that women construction workers get an opportunity to receive training in any trade (Kakkar 2014). Neither new technologies and work methods are utilised nor are the benefits of research and development absorbed in the traditional system of skill formation (Kakkar 2014).

Some of the key skills could be foreman formwork, foreman reinforcement, mason marble granite & stone, foreman wet finishing & flooring, mason, welder, mechanical & electrical maintenance and quality control lab technicians and heavy vehicle operators. Apart from upskilling of the existing workforce, it has been suggested that the skills and knowledge gained by individuals outside the formal learning system should be recognized and certified (Recognition of Prior Learning). The worker's ability to secure advanced employment and social recognition is hindered by the absence of an accepted certification of knowledge and skills (Ernest and Young LLP 2016). Besides, there are skill gaps also at the management level. For example, the NSDC identified the weak capacity to estimate project costs at the planning stage. The management skills could be a potential area for skill development among educated youth from rural areas who aspire for white-collar employment or mid-career construction workers with entrepreneurial competencies. Also, it is necessary to develop a guide on gender inclusive strategies to increase the participation of women in those areas within construction sector, which traditionally did not recruit women.

3.2.5 Skilling for migrant workers and returnees

Internal and international migration are likely to remain a significant part of rural livelihoods in India, including the IHR, well into the future. In places where the local employment generation capacity is limited (particularly in the non-farm sector), the option for employment elsewhere are considered. Interactions between demographic, economic, environmental, political, and social

¹¹ <https://www.hindustantimes.com/india-news/construction-sector-jobs-have-let-down-peasants/story-o3LR2tIGWpjx3FSY2A4NBM.html>

¹² <https://www.hindustantimes.com/india-news/construction-sector-jobs-have-let-down-peasants/story-o3LR2tIGWpjx3FSY2A4NBM.html>

¹³ Ibid.

¹⁴ Ibid.

drivers shape migration patterns (IPCC 2014). Migration as an outcome is not ensured by mere existence of these migration drivers. Along with the migration drivers, intervening factors, household characteristics and personal characteristics influence the migration decision (Black et al. 2011). Through various flows of goods and services, financial flows, and movement of people, urbanization has been shaping the rural-urban relationships. The rural households are increasingly dependent on urban resources and non-farm jobs (Siddiqui et al. *forthcoming*). Even for some of the poorest rural households, the low entry threshold in the informal sector in urban areas provides an opportunity to diversify their livelihoods portfolio (Banerjee et al. *forthcoming*). It is noteworthy that remittances from internal migrant workers account for a considerable proportion of the inflow into the savings accounts opened under the Pradhan Mantri Jan Dhan Yojana.¹⁵

According to the National Policy for Skill Development and Entrepreneurship of 2015, ‘national standards and quality for skilling’ need to be globally aligned so that Indian youth can aspire to national and international jobs (Government of India, 2015). Despite the contribution that migrant workers make to the national economy, they have little influence on their working and living conditions, especially where they migrate to other states (Deshingkar et al. 2008). Different forms of exclusion are experienced by migrants – particularly less educated, less skilled, and those employed in the informal sector – to urban areas. They lack access to social security such public distribution system and public healthcare. Due to the lack of housing entitlement in destination because they lack proof of identity and residence, many migrant workers and their families end up living in informal settlements that have limited access to public amenities. Such exclusions, not only limits benefits of rural to urban migration, but creates new risks for internal migrants and their families (Siddiqui et al. *forthcoming*).

There is a need to develop appropriate policies to maximize benefits from migration and reduce risks associated with it. At an operational level, institutions could extend support to these migrant workers and their families to better plan migration and its consequences. This could involve supporting the migrant workers and/or their households to:

- i. **Access to decent employment:** Assist migrant workers to identify employment opportunities that guarantee decent working conditions;
- ii. **Access to information:** Disseminate information about skill training and certification, employment opportunities, living and working conditions in popular destinations, recruitment agencies, travel documents and work permits through media (e.g. vernacular newspapers, FM radio channels and televisions);
- iii. **Soft skills training:** Orientation sessions and language training for the migrant workers could increase their acceptability in destination communities and make it easier for the workers to adapt to new conditions;
- iv. **Skill development:** Skilling in government and non-government institutions could consider market demand in nearby urban centres, other parts of IHR and elsewhere. Based on market survey in popular destinations and feedback from migrant workers and returnees, the skill development curriculum could be updated on a regular basis. The skill

¹⁵ <https://blogs.timesofindia.indiatimes.com/toi-editorials/janata-likes-jan-dhan-the-past-year-has-seen-a-rapid-growth-of-active-pmjd-accounts-across-all-geographies/>

training could provide certification that would be recognized by prospective employers within and outside the country of origin;

- v. **Access to finance:** Government could prioritize financial inclusion and literacy of migrant workers, women left-behind and youth. This could include easy access to financial institutions (especially in remote areas), simplified paperwork and customized financial products to encourage savings and long-term investment among migrant workers and remittance-recipient households.
- vi. **Support entrepreneurship among returnees:** There is also a need to introduce programs to reintegrate the returnee migrants – for example, the policies could support entrepreneurship development programmes for the family left-behind as well as returnees. Such a programme could include access to credit, access to professional networks, entrepreneurial training, business advisory services, access to market information and other incentives. It could have a special focus to include the marginalized populations and women.

Chapter 5: Key recommendations

The Indian Himalayan Region present both challenges and unique opportunities in skilling and building an entrepreneurial culture. The region has distinct advantages of forest and biodiversity richness, holy/sacred destinations, landscapes of unparalleled beauty, multiple tribes and their distinguishing culture, crafts, agro ecosystems and niche products, and several other territorial specificities which present opportunities for nurturing sustainable development and entrepreneurship. Literacy rate in the IHR is well above the national average. IHR has an impressive population of mountain youths which has aspirations for a dignified employment. Nevertheless, an increasing trend of migration of men/families provides both challenge as well as opportunities. Utilisation of mountain specific resources, with focus on women and youth can add high-value products to the mountain economies while opening up new opportunities for skilled employment.

However, in general, there are challenges of mountain specificity captured through remoteness, inaccessible areas, fragile mountain environment, climate change related issues and disaster proneness, infrastructural issues and investment challenges. Low population density and physical isolation also means low economies of scale, limited local demand and disconnect with the markets. Markets and Capital need far more focus especially in the case of traditional skills.

These challenges as well as opportunities need to be factored in while building/strengthening the skill and entrepreneurship landscape in IHR. The action agenda focusses on key priority sectors, capacity building needs, and institutional & policy imperatives. The action points build on the Magnitude of the problem (chapter 2), gap analysis and emerging areas (chapter 3) and further strategized in chapter (4).

5.1 The priority sectors in Himalayas for skill and entrepreneurship

Himalayan mountain system requires that the Skill and entrepreneurship harnesses the strength of unique mountain goods and services on the principle of sustainability. However, many of these niche mountain goods /services continue to be in the non-conventional sector, as far as the skilling is concerned. Strengthening skilling and entrepreneurial opportunities, on the principles of sustainability, could go a long way in harnessing immense potential of unique mountain products. Also there are new opportunities in IT enabled services for aspiring mountain youth. However, the bottle necks in terms of value chain infrastructure, markets, technological upgradation, connectivity, and private sector investment need to be addressed. Skill and Entrepreneurship landscape in IHR need to be bring added focus on the new and emerging sectors while continuing the conventional one.

a. **Promote new age agri-entrepreneurship culture infusing traditional skills with modern technology :**

Many of the traditional mountain crops are known to be highly nutritious and are increasingly sought after in the niche markets in urban metropolitans. Mountain buckwheat, millet, legumes, upland rice, tubers hold tremendous potential as 'health foods'. Similarly, there are immense opportunities in enterprises in organic farming, horticulture incl. floriculture, forestry, medicinal and aromatic plants, spices , off season vegetables, seed farming of mountain niche cereals, legumes and cole crops , organic dye from abundant tea and cardamom, and food processing as sun rise sector . Moreover Traditional skill of mountain women and men in weaving and handloom and traditional

art & craft, coupled with availability of natural fibre and dyes provides ample opportunities of skilled jobs and entrepreneurship. However, the development of subsector in mountainous region is hindered due to lack of infrastructure facilities like poor connectivity with national and international market, poor power supply and inadequate supply chains.

- Promote the new age agri-entrepreneurship sub-sector within agriculture by developing end to end value chains. This will offer opportunities for business partnerships with the private sector while providing the much required impetus for agricultural development in upland areas.
- Identify skilling requirement for the sub sector value chains including packages of practices and training modules for upskilling as well as entrepreneurship skills especially related to credit, financials and markets.
- Infuse modern techniques, particularly in upgradation of dye extraction techniques, modern looms, product designing and marketing with traditional skills of weaving and handloom. Strong partnerships with the private sector, the National Institute of Fashion Design and their regional branches need to be established to promote this sub sector.
- Develop specialized management skills modules for Next generation of farmers, or home based entrepreneurs who maybe graduates but not keen on continuing with conventional agriculture. Special modules including pedagogy, curriculum, and content for modules that are basic minimum required to run a producer company i.e. logistics/Inventory skilling (inputs from Toyota lean management), Design/Diversity (inputs from NID/NIFT) and financial literacy skills (inputs from SEWA/Mannadeshi/ICIMOD) and Technology Skills (NASSCOM organizations) Marketing, Packaging and Branding skills. It is important to skill the Next Generation in running these entrepreneurs equipped with Capital and Markets.
- Address infrastructural issues, particularly, connectivity to national and regional markets, power supply and value chain infrastructure to make new age agri-entrepreneurship as sunrise zone in Himalayas. Creating linkages with major industry and having Hub and Spoke centres would be needed.

b. Promote sustainable mountain tourism

Tourism in India and in the Himalayas has become one of the fastest growing sector in comparison to other sectors, in terms of economic activity and industry transects. The sector was worth US\$ 22.9 Billion or 9.6% of GDP creating 40.343 Million jobs and 9.3% of total employment (World Travel and Tourism Council, 2016). The tourist arrivals in IHR is expected to touch 240 million by 2025 which is nearly 150% increase over the current arrivals of about 100 million. This immediately provides immense opportunity for employment and entrepreneurship to Himalayan youth. Tourism remains one of the largest employers' accounting for 9% of global GDP and accounts for one in every 11 jobs. However it also bring immense challenges, given the fact that IHR resident population is only about 60 million and many of its existing tourist destinations

are already bursting at the seam with serious environmental and socio cultural consequences and with lopsided economic gains. Some of the key actions will include:

- Document and Disseminate Best Practice cases in Sustainable Tourism to develop/strengthen tourism circuits in multiple tourism products including adventure , heritage , wildlife, religious/spiritual , wellness/yoga/aroma therapy/naturopathy , craft weave, rural tourism, cultural festivals etc.
- Ensure connectivity of promising tourist circuits on priority basis. Assess shortfall of tourism infrastructure including homestays, internet café etc.
- States should undertake branding of various tourism products under one umbrella and concerted efforts be made to make mountain states as hub of sustainable tourism. In addition to tourists in general special efforts be made to target corporate bodies for meeting and retreats etc.
- Skilling in hospitality, homestays, adventure tourism, nature guides will need to be taken many notches higher in partnership with community, private and public institutions.
- Standards and Certification for the tourism industry including environmental & social auditing should be pursued vigorously. This will also provide new opportunities of entrepreneurship to youths as “service providers” requiring set of skills.
- The capacity building packages and systems promoting sustainable tourism need to be blended within the curriculum and delivery design of trainings/education through institutions (e.g. vocational centres, universities) serving the host of actors and public/private sectors linked to tourism.
- Adventure Tourism should make use of Assam Rifle and ITBP forces who are specially trained to be deployed in high Altitude area and have specialized skills of mountaineering, living in camps, ability to cope in difficult terrain, etc. These Personnel’s are best fit for adventure tourism industry and can provide special focus to adventure sports training which will not only benefit the personnel but also promote safe adventure sports tourism in the country.
- Explore possibility of setting up of India International Skill Centre for preparing the youth of these states to work elsewhere in the world. Especially in the field of Hospitality, Beauty & Wellness, Retail, etc.
- To boost Tourism in north east, there is need to make the process of ILP easier. Provide subsidy support to home stays in identified destinations.

c. Harness potential of IT enabled services & digital health for employment

There is a huge opportunity for creation of employment opportunities for the local youth, by promoting IT/ITES Industry particularly by setting up the BPO/ITES operations. Similarly, the innovations in the health technology is growing by leaps and bounds which are exhilarating the pace of growth in consumer and institutional healthcare delivery. Also data dissemination services have good potential for skilled employment. However

poor data connectivity in Himalayan States/North East India continues to be an impediment to business opportunities.

- Promote setting up of BPO/ITES operations using incentives under Digital India Program. May use cable based or wireless system for BPOs in remote area of IHR to overcome connectivity issues. A good option for mountainous region could be cloud computing which allows for setting up of small units in the remote areas and transferring of the data on the large servers in lowland areas where large servers can help and where uninterrupted power supply is also ensured
- Key skill opportunities include skills needed for ITES job roles including payroll, human resources (HR), accounting and customer/call centre relations; domestic IT Helpdesk attendant; Customer relation management, Collections executive; Domestic Biometric data operator; Domestic Data entry Operator.
- Document and disseminate best practices for e.g. North East BPO Promotion Scheme (NEBPS), envisaged under Digital India Programme and other such initiatives.
- Introduce “Data Dissemination Service” under Digital India Initiative, which can provide opportunities to youth to get trained to access and download the data from data.gov.in and can charge for providing this service at local level. For example, a person gets trained under Digital India Initiative and gets a licence to open a “Data Dissemination Service Centre” in his/her village and starts providing service for local villagers as well as to local Govt. agencies at costs defined by the scheme.
- Harness emerging employment opportunities in digital health including tele-health assistant, medical coding staff, medical record technicians, health care informatics etc.

d. **Skilling in infrastructural projects**

Act East policy of GOI is supporting a large number of infrastructural projects such as Hydel power, Dams, Roads, Bridge construction by BRO with high potential for skilled employment. However, in the absence of formal skill development and certification, their career prospects remain limited. It is important to target this segment for skilling and certification by building up their technical know-how and upgrading their skills. Though a very small percentage of youth in the North East may be interested in such sectors, however, in the north part of the Himalayan range it would be more applicable. Projects such as UDAYAK, VARTAK, SEWAK, and SWACH BHARAT have requirement of skilled manpower.

- Mandate BRO and the Public Sector Hydel Power projects and other public sector undertaking to hire from the local skilled pool of certified workers.
- Recognition of Prior Learning (RPL) and up skilling of those engaged in the construction sector should be key plank of the skilling strategy with clearly identified job roles.

e. **Skilling for migrant workers and returnees**

Internal and international migration are likely to remain a significant part of rural employment in India, including the Himalayan region, well into the future. In places where the local employment absorption capacity is limited, the option for employment in outstations need to be considered. The skill requirements for these jobs are based on specifications provided by the ‘migration destiny’. Safe and value added Migration of unskilled workforce calls for support for a smooth transition from rural areas to urban centres. Often this support has been rather weak leading the youth to drop out of the employment. Following actions are listed to address the issue:

- Organize orientation and skill training for the migrant workers around opportunities identified for decent employment, as well language courses (to facilitate communication in the place of destination). The skill training should provide certification that would be recognized by prospective employers within and outside the country of origin; Disseminate information about travel documents and work permits;
- Remittances from internal migrant workers account for a considerable proportion of the inflow into the savings accounts opened under the Pradhan Mantri Jan Dhan Yojana. Hence it is important to promote investment of financial and social remittances to diversify the livelihoods of family left-behind by imparting knowledge & skills related to financial inclusion and literacy of migrant workers, including easy access to a financial institution, simplified paperwork, customized financial products, and improved outreach
- Introduce S&E programs to reintegrate the returnee migrants – for example, entrepreneurship development programmes for the family left-behind as well as return migrants. The programmes could have a special focus to include the marginalized populations, poor, and women.

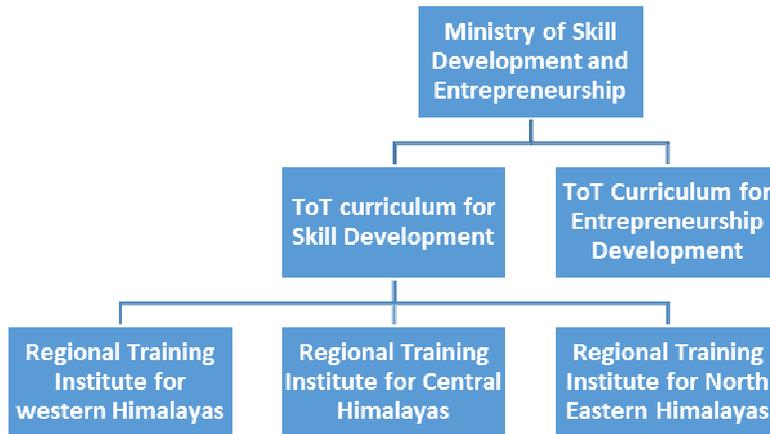
5.2 Building capacities for skill and entrepreneurship

Some of the key challenges in building /strengthening skill and entrepreneurship landscape pertain to inadequacy of training centres and trainers in most of the Himalayan states. Lack of quality training centres in remote areas coupled with lack of affordable hostel facilities in the existing Centres make them further inaccessible to those coming from remote areas. There is an overall supply-driven set of skill-building/training courses that are not in sync with the new and emerging opportunities in IHR. Also many of the emerging priority sectors identified for the Indian Himalayan Region fall in non-conventional domains, the Occupational Standard and Qualification Packs are yet to be fully developed. The action points therefore look into some of these core concerns:

a. Strengthen network of skill centres across the IHR, including setting up of regional centres

- Carry out a comprehensive gap assessment of skilling in IHR including target population, requirement of skill centres, curriculum, trainers, and resource requirement for both emerging priority sectors, as well as for conventional/formal sectors for skill and entrepreneurship. The assessment may look at the target population for skilling through gender, age, educational qualification and geographical locations disaggregated manner.

- In order to overcome this challenge it is impertinent that regional training centres are developed based on geographical contiguity and standardised training curricula and training is provided to the trainers.



- Based on the comprehensive assessment, develop a network of skill centres in IHR including ITI, ATI, and Multi Skill Institutes on PPP mode, and Kaushal Vikas Kendra (KVK). The Regional Training Institutes to support state and district and cluster level skill centres in concerned region.
- Partnership with the private sector: A tactical move would be to explore strategic partnerships with the private sector in building skills and capacities. Harness partnerships with the private sector in establishing skill development centres as well as tailor made training modules at varying levels of competency and expertise to enhance the ‘marketability’ of skilled youth from the IHR.
- Existing norms and standards need to be reviewed for setting of the skill centres in mountainous region. This is important given the fact that many of the remote mountainous regions have low population densities.

b. The trainers

- Trainer academies should be established in the region. Creating a new infrastructure would be a time consuming. Every State has good university both Public and Private which has not only good infrastructure but also relevant faculties. University to be advised to establish Training of Trainers (ToT) and Training of Assessors (ToA) Academy. University to be linked to Sector Skill Councils as per the areas of operations. The relevant faculties to be identified as master Trainers. Master Trainers to be trained by Sector Skill Councils or taken on demand. University to mobilize trainers for training through Training Partners ecosystem. Having the State Specific academies will also ensure that the trainers are trained and certified for the job roles which may be very peculiar to the state. This will also ensure that the local arts & culture is preserved and passed from one generation to other through a proper sustainable methodology
- It is important that the master trainers are trained for deep hand holding with quality pedagogy and content, virtual classrooms, mobile based training content, and Job specific curriculum/content. The trainers should also be able to give domain skills, languages skills, market linkages, financial linkages. It is important to monitor and evaluate the

performance with metrics of number of certified trainees/absenteeism/drop outs/placements/livelihoods. Annual Calendar of training to be defined and updated on website

- It is more important to identify local training providers who are familiar with local language, accustomed with the difficult terrain and have the necessary credibility within the communities to manage skill development.
- A refresher course after 2 years of training and monitoring needs to be undertaken. Mountain States could gain a lot if there is a structured trainer's program.
- It is important to develop a team of assessors along with trainers and groom them. At the same time, assessment criteria and testing needs to be reviewed and more practical exercises for traditional skills need to be developed.

c. Creating enabling conditions for skilling

- e) Short term (3-6 months) targeted residential training programs with stipend/sustenance allowance during the training should be the norm to improve outreach to the most marginalized population, particularly the women. It is difficult for students to commit to 3 years for training programs.
- f) The program should be grant based and not a reimbursement based with higher amount of student fee to be paid as grant (equalling SDI – per hour if possible).
- g) Boarding and lodging costs for students from remote areas to be paid to the training provider besides one time travel support from home town to training centre.
- h) Focus should be given to self-employment and entrepreneurship components in the different skill development training programs and linkage to MUDRA, START up India and other financial institutions for financial support.
- i) Placement/entrepreneurship incentive to be provided to students including: travel cost for the interviews/joining an organization; formal linkages to EDP program and incentivizing training provider to ensure the student goes through an EDP program with any reputed institute or by the training provider; SEED money for budding entrepreneurs particularly women.
- j) Integrate Vocational Education as part of the regular curriculum in the schools from class 9th onwards. Linking the same with apprenticeship scheme of the GoI so that post class 12th students can be apprentice and then once they attain the age of 18 years can go for employment if they desire.
- k) Address school drop outs as one of the key target groups in North East. The school dropout rate in north east is higher than the national average (DONER Vision 2020).
- l) Ensure Skill training for person with disability (e.g. Sikkim).
- m) Make relevant QP/ NSQF aligned skill based program as mandatory credits (which is already notified by UGC under the Choice Based Credit System) to college going students in the area of their study.

- n) Start programs like PM / CM Fellow for Skill Development which can be integrated with a reputed University Degree whereby the state can attract working professionals/ students from all the part of the country to work in the state.

d. Building QPs and NOS for mountain specific job roles

Himalayan States are in various stages of developing QP and NOS for mountain specific job roles in the emerging areas/priority sector. Shortage of qualified human resource has been the main reason for limited progress in development of mountain specific QPs and Job Roles.

- Relevant Sector Skill Councils be encouraged to develop QPs and NOS for skills/entrepreneurship for the priority sector mountain specific job roles.

5.3 Convergence and leveraging of resources for strengthening S&E landscape:

Inadequate coordination across multiple agencies/departments running skill and entrepreneurship schemes and programs ; limited convergence across govt. schemes and program as well as for public –private partnership, and inadequate awareness of multiple schemes & programs are some of the key challenges in strengthening skill and entrepreneurship landscape in IHR.

- The executive committee of skill mission at Center and similar committee of the State Skill Mission are mandated to solicit convergence of skilling activities across all the sectors in tune with mission objectives and skill gap findings. The committee need to be suitably empowered to ensure convergence /leveraging with both Central and State schemes /programs/projects /missions that can boost up skill & entrepreneurial initiatives. It must foster private sector partnership for win-win situation.
- be suitably empowered to ensure convergence /leveraging with both Central and State schemes /programs/projects /missions that can boost up skill & entrepreneurial initiatives. It must foster private sector partnership for win-win situation.
- . Some of the key ones include: Pradhan Mantri Kaushal Vikas Yojana (PMKVY); DDU-KVY, Employment through Skill Training and Placement (EST&P) under National Rural/ Urban Livelihood Mission, Skill Development Initiative of GOI, START up India, Pradhan Mantri MUDRA Yojana (PMMY), state level flagship schemes of launched by Chief Ministers of Himalayan States and the schemes of various financial institutions that could be availed of.
- While the skill development program must be implemented by the respective state government, however, given the unique challenges of the Himalayan states, a larger role of the central government is required to ensure that the critical issues of connectivity , infrastructure, skill centres are taken care of on priority basis.

5.4 Demand–supply link up

Lack of information/awareness on the market requirements and available resources could prove to be a serious road block. Monitoring of the flagship schemes is crucial .Some of the actions to overcome this would include:

- Create a directory of self-employment opportunities specific to the region. Create a digital platform where employer and employee can find job matching arrangements as well as for credit and market linkages.
- Institutionalize periodic Hyper Local Market¹⁶ scans that throws short, medium and long term job projections in the local economy. Create a repository of Hyper local Self-employment trades that has the market potential
- Tie up with major Institutions/ Universities for getting the professionals work in the state for minimum period of 1 year
- Strengthen Employment exchanges into a public-private institution in facilitating job Melas, Hunar Haats, Counselling and one stop shop for local and migratory employment
- Develop mobile phone apps to provide platform for connecting skilled workers for providing skilled services for public/business at large. A cue may be taken from Kushal Uttarakhand APP developed by Uttarakhand Skill Development Mission.
- Public Private Partnership platform that provides Market place (Digital & Offline) for service or product seekers and producers and for buyers and sellers with market and financial linkages.

Enabling policies:

National Policy on Skill Development and Entrepreneurship 2015 is a strategic document laying out pan India road map to boost up skill and entrepreneurship landscape in the country. However given the IHR specificity, having state specific policies would go a long way in building.

One of the major constraint pertains to limited industry participation in the mountainous region on account of infrastructure and market issues.

- The IHR States be encouraged to develop state policy on skill and entrepreneurship building on the uniqueness of mountain states.
- Build up a system of incentives (including tax incentives) for setting up service /manufacturing enterprises in IHR States

¹⁶ the process of targeting prospective customers in a highly specific, geographically restricted area

Chapter 6: Best Practices, some case studies

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| Tripura | <p>Skill (1) Directorate of Skill Development funded 13 line departments. A separate wing for skill development was constituted within each department. (2) Skill training and rehabilitation of surrendered militants.</p> <p>Enterprise 1) SWAVALAMBAN (Self-employment generation scheme). 2) Tripura Bamboo Mission (TBM).</p> |
| Jammu & Kashmir | <p>(1) Placement of skilled trainees (1560) in private sector through campus selection and job fairs organized by mission directorate. (2) Constitution of Self-Help Groups of ITI trainees (plumber; sewing technology; electrician; electronics mechanic; refrigeration and A.C). However, there is a need to register these groups by the state skill development mission to give them better market acceptability.</p> |
| Sikkim | <p>1) State Institute of Capacity Building (SCB). (2) Government Livelihood Schools.</p> |
| Himachal Pradesh | <p>(1) Entrepreneurship Development Programme on Fashion Designing. (2) B.Voc. Degree Programme.</p> |
| Uttarakhand | <p>1) Skill development training programme for prison inmates. (2) Uttarakhand Skill Development Mission had developed Android based application (Kushal Uttarakhand APP) to connect skilled workers with the public.</p> |
| Nagaland | <p>1) The state government declared 2016-2017 as Year of Construction Workers to enhance the skills of the existing construction workers in the state. (2) Collaboration with IIT Madras to enhance employability of the Diploma and Degree Engineers.</p> |
| Meghalaya | <p>(1) Placement Linked Skill Development in Hospitality and Beauty and Wellness.</p> |
| Mizoram | <p>1)NLUP(New Land Use Policy) 2)NEDP (New Economic Development Program)</p> |
| Arunachal Pradesh | <p>1) Job Melas-cum-Mobilization Campaign in the state as well as at district level 2) Capacity Building and Skill Development Training in remote far flung international border areas under Border Area Development Program to meet special needs of the people living in remote and inaccessible areas. .</p> |
| Assam | |
| West Bengal | <p>1) 77 new ITIs in West Bengal have been operationalized through PPP mode 2) e-Learning in Polytechnics has been introduced 3) 25 women hostels being constructed in various Polytechnics across the State @ total cost of Rs. 34.88 crores. 16 completed. 4) Trainings have been initiated with industry participation in the Security, Garmenting, Service and Manufacturing, Gems and Jewelry, Hospitality, Paint, Electronics Sectors etc. 5) Vocational training centers are being upgraded throughout the state in phases f) Setting up of Centers of Excellence in collaboration with industry as well as Chambers of Commerce and Industry.</p> |
| Manipur | <p>1) Food Processing Training Centre into a Multiline Training Centre by introducing Diploma courses in Food Processing technology, EDP/Training FPI sector Awareness programme etc. 2) Kula Women's College, Nambol, Bishnupur District, introduced a course on Food Processing Technology with the assistance of Ministry of FPI,</p> |

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| | <p>GOI, under Manipur University</p> <p>3) ITI, Imphal East & West is also introducing Diploma Course on Fruit & Vegetables preservation under World Bank assistance</p> |
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