

Research Report on "Agroforestry and Allied activities to Solve the Problem of Migration in the Himalayan Region"



Submitted to

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As this assignment has been made during lockdown so I was not able to fetch literature from library and other books and I was solely depend on internet for sources of literature.

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Abbreviations

CMAP - Centre for medicinal and aromatic plant ,Dehradun

CAP- centre for aeromatic plants

- FRLHT - Foundation of Revitalization of Local Health

Traditions,Banglore

- HRDI- Herbal research and development Institute,

Gopeshwar,Uttatakhand

- NMPB- National Medicinal Plant Board,New Delhi

- SMPB - State Medicnal Plant Board

- TEERI- The Energy and Resource Institute,New Delhi

- UCOST - Uttarakhand State Council for Science And

Technology,Dehradun

- UNDP - United Nation Development Programme

Introduction

मादू हमरू, पाणी हमरू, हमरा ही छन यी बाँण भी... पितरों न लगाई बाँण, हमुनही त बचौण भी।

Soil ours, water ours, ours are these forests. Our forefathers raised them, it's we who must protect them.



It is just a an extract from the speech of a leader from "Save the Tree Movement" of 70s in Uttarakhand. It just show how the natives of the region has sustained themselves from years to live in harmony with nature and amidst the forest for livelihood.

The topic of study in itself is concerned with livelihood, environment centric development and Natural Resource for poverty eradication. Migration is a phenomena as old as human civilization but sometime it is forced and cause of many socio-economic problem. The region of study in Hinalaya region of Uttarakhand state. The region is gifted with sceric landscapes, water and natural resource but forced migration is a prominent phenomena in this region of the state specially middle and upper Himalayan region. The activity migration is mostly within the state toward the plains regions of the state. Aggroforestry and allied activities like agro-tourism could be solution to this problem.

Some journeys are based on choices, but few are forced displacement. In this research study I will try to find the solution and to arrive at a conclusion best suitable to address the aforesaid problem.

Objective

The major objectives of studies are-

- **Aggroforestry and allied activities to solve the problem of migration in Himalayan region.**
- **How other allied activities can be used along with Aggroforestry to make it an income generation and a business activity in large scale.**

The minor objectives of studies are -

- 1. Exploring on the possibilities of taking the topic of study as an enterprenurship in future.**
- 2. How it is more sustainable business and good for Environment and People**

Methodology

As during this assignment I was not based on the location of the study thus it was not possible to explore on primary data for study. But I have done a small online survey on native people of the region which may be considered as a primary source.

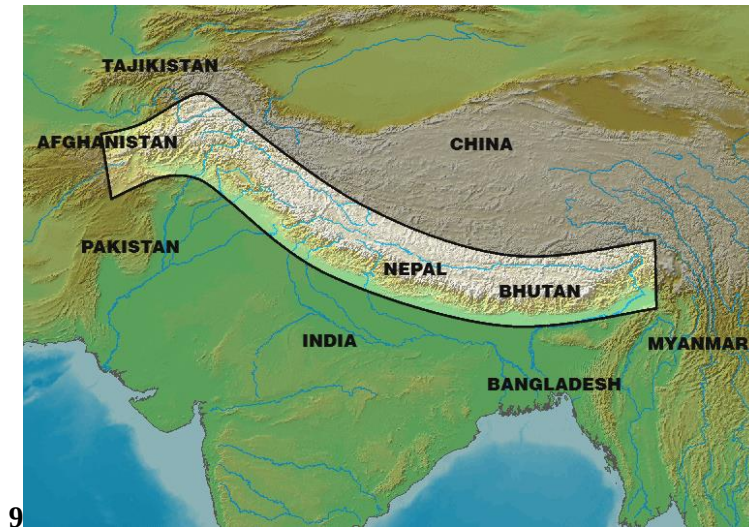
Mostly I have used secondary data from reports of a UNDP Project, HRDI, SMPB

Thus ,during the whole work of this research project the key points on which this research study is based are as follow-

- **A small survey on native people(online through Google Survey app)**
- **Major part of study was based on secondary data from SMPB report,google, and HRDI templates on agro practices**
- **As I was studying and working on this subject from a long time I had taken overview of agri scientist in CAP,Pantnagar(Uttarakhand) and field visit three year back in a hilly village of Uttarkhand.**

Lastly , I will say that the methodology adopted by me to write this report is mostly based on secondary DATA but I have spend major part of my life in the hilly part of this Himalayan region and thus this report has pinch taste of primary data based on my observation and experiences.

Overview of Himalyan Region



The Himalayas are inhabited by 52.7 million people, and are spread across five countries: Bhutan, China, India, Nepal and Pakistan. The Hindu Kush range in Afghanistan and Hkakabo Razi in Myanmar are normally not included, but they are both (with the addition of Bangladesh) part of the greater Hindu Kush Himalayan (HKH) river system.

Overview of the Specific Region



As the Great Himalyan Region is very vast,so in this project of study I will try to be specific about Uttarakhand Himalya(Western Himalyan Region).The same theme is applicable to other region of great Himlaya with some variation according to the specific region.

Further within the Western Himalyan region I will be focusing on Uttarakhand Himalya.

Archaeological evidence supports the existence of humans in the region since prehistoric times. The region formed a part of the Uttarakuru Kingdom during the Vedic age of Ancient India.

Uttarakhand – state in the northern part of India. It is often referred to as the Devabhumi (literally: "Land of the Gods") due to many Hindu temples and pilgrimage centres found throughout the state. Uttarakhand is known for its natural environment of the Himalayas, the Bhabar and Terai.

Rankings (amongst States and Union Territories of India)

by area: 19th

by elevation: 2nd

by population (2011): 21st

by population density (2011): 27th

by gross domestic product (GDP nominal) (2017–18): 19th

by gross domestic product (GDP nominal) per capita: 9th

by Human Development Index (HDI) (2017): 19th

by life expectancy at birth (2010–2014): 3rd

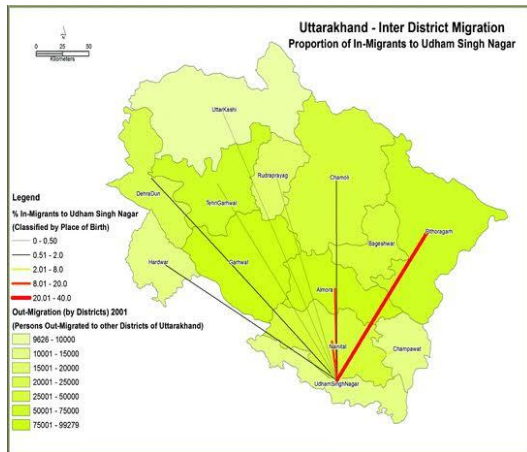
by sex ratio: 14th

by literacy rate (2011): 17th

Source : Wikipedia

Present Scenario

Presently the state is ranked 9th among the Indian states in terms of per capita income. Mainly large industrial activities started after separation from the state of UP with setting up of SIDCUL in the state. With advent of time SEZ was set up at Dehradun, Haridwar and Rudrapur. The state is enriched with forests and some scenic tourist destination.

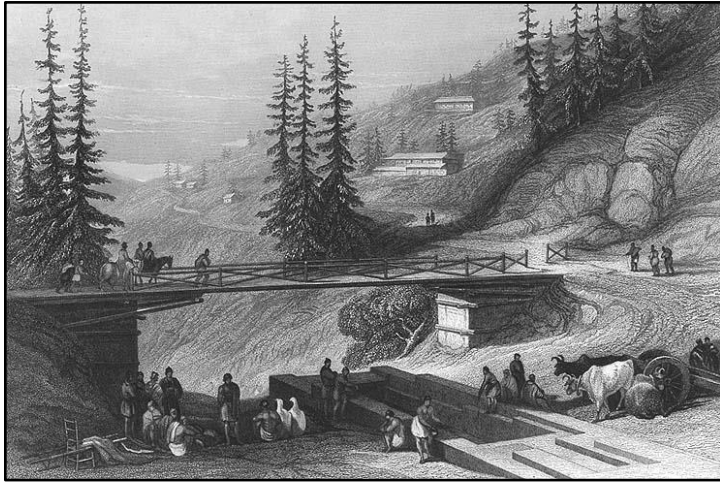


The event of forced migration became more prominent after 1980s. The phenomena was observed from hilly areas to the plain region of the state. The rate of migration was highest in 90s with some slow reduce in rate after 2005-06. But the event of migration is still prevalent.

It is well known and talked about phenomena in the state and governments have done many efforts but not with much success. And a topic of hot discussion during the election.

The state has great potential to become a herbal state and hub of Pharma Industry specially Herbal Pharma industry.

SWOT of the Region



Stength	Weakness	Opportnuity	Thread
Sceneric beauty	Terrain	Herbal farming	Natural disaster like landslide,cloud brusting etc
Favourable Climate for herbal farming,tourism,Aggr oforestry	infrastructure	Aggroforestry	Forced migration
Forest resources	Connectivity	organic farming	Animal Encorachment
Hyrdoelecteiciry,wate r resources	Dispersed population		

As it clear from the SWOT of the region and alyzing the strength of the region.

We can solve the problem of migration by focusing on the following major aspects.

(1)Innovative farming

(2) connectivity

(3) Water and forest managment

(4) Local Employment

(5)better Health and Education facilities

Reason for Migration

The reason of migration are very common. Employment, Health, Education, Infrastructure and reduction in farming activities due to many reason like animal encroachment are few of major reasons.



- (1) Employment-** As the region is mostly terrain so there are less opportunity of employment due to less industry and many other infrastructure barriers.
- (2) Health-** Lack of Health facility is one of the foremost reason for migration at such pace in this region.
- (3) Education-** Although some part of the state like Dehradun, Mussorie and Nainital are well known for education but it is concentrated in a specific area and larger part of the region lack it severely.
- (4) Infrastructure-** the region lack connectivity by road and other means but it is improving slowly.
- (5) Farming-** being a primary activity it is loosing its charm due to less interest, lack of encouragement by government, and due to less connectivity and lack of other infrastructure amenities.

A Sample of the proposed plan

Introduction : I am just giving an illustration of the proposed plan in a hypothetically named village but the facts, location and demography of the village are factual.



Alampur(hypothetical name) is a village in border of Almora and Pithorgarh district of Uttarakhand. The village is in hilly part of the state.

The village is a perfect example of rapid migration. Although the village has basic facilities like road connectivity, electricity, water connection but the village has witnessed rapid migration during 90s.

Prevailing problems Employment, education, Health and better facilities are few major reason for rapid migration in the village.

Animal encroachment has effected the farming activities of village a lot. Horticulture and other general farming practised has been discouraged due to animal encroachment. People in the village have lost the interest in farming and horticulture. Thus intensifying the process of migration.

Proposed plan: By suitable selection of allied activities and agroforestry techniques, the situation of the village can be improved. Taking 2-3 tree species (e.g Tezpat, Retha, Amla) of less gestation period along with allied activities like Animal husbandry or bee keeping .One option to tackle the problem of animal encroachment is farming of spices grown beneath the ground like Turmeric. There may be provision to

provide market through ICT or platform like Amazon/NAM. This plan is suitable taking in consideration climate and altitude of the village.

Story of an organic village in lapse of Himalya

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://yourstory.com/2018/02/dyo-organic-resort-kanika-sharma-kushika-sharma/amp&ved=2ahUKEwiykJXvt8rqAhXIXCsKHa-oDRUQFjAKegQIBhAB&usg=AOvVaw3c -xUDM2rpzP5prCamq1t&cf=1>

Why Aggroforestry

The terrain and location of the region is such that it is naturally suitable for organic farming,herbal and aromatic farming,aggroforestry ,agro-tourism and agro based industry.Although other industry could be set up there but it is more feasible to align with its area of strength

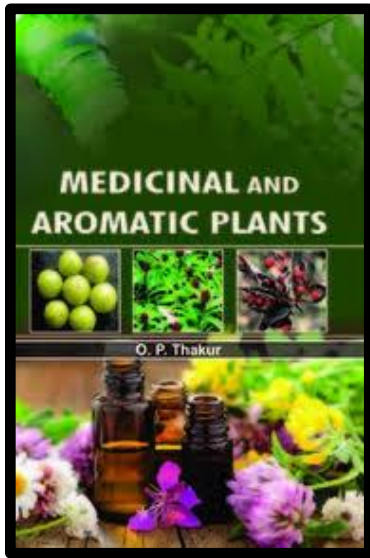


Following are the reason for choosing Agroforestry and Allied Activities to solve the problem of migration-

- 1. Terrain :terrain of the mountain region is more suitable for plantation.**

2. **Climate centric:** the climate is more suitable for growth of some rare herbal species like punarva,kutki etc used in treatment of many common and severe ailments.
3. **Alignment with tourism :**aggroforestry can lead to growth of agro tourism in the region as now people are more trending toward countryside visit and escape from city rush.
4. **Eco -friendly:** The activity in itself is eco-friendly and a method to create income generation by sustainable activities.
5. **Alignment with Animal Husbandry:** Due to terrain and other infrastructure reason ,animal rearing is a major income generating activity.Aggroforestry in it own way complement animal rearing.These two activities complement each other vice-versa.
6. **Raw material for other agro and pharma industry.**

How



The implementation plan for solving the problem is as follow-

The action plan need to be done in phased manner.In first phase on the basis of location ,the region must be divided into cluster based on climatic condition and suitable altitude.Each cluster must be attached to Krishi Vigyan Kendra or private agency.Then each cluster must be allotted a set of allied activities to complement the main activity of agroforestry.Development of capital and other basic infrastructure is part of phase one.

Second phase is related with development of cold storage and processing unit as per the requirement of cluster or group of clusters.

Third phase is related with connecting market and producer.It may be through ICT or platform like Amazon.

How 2

As discussed earlier Aggroforestry and Allied Activities are the main foundation to tackle this problem. But without taking into consideration manufacturing and service sector we can not achieve development to its apex. So along with Agroforestry (which is the core strength of this region) ,respective agro processing plant and service industries must be developed .For example each cluster may have it's own processing plant for agro products produced in the cluster. Similarly 3-4 cluster may have a service industry supporting the industry and need of the region and paving way for employment of the people.



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Possible hindrance in execution of these initiative



- **Animal Encorachment**
- **Finance**
- **Market**

Animal encorachment- **appropriate finance and lack of market may be few possible hindrance in success of this project.**To solve the problem of Animal Encroachment we can take the help of experts. For example there are few aromatic plants like Lemon Grass which are not much effected by animal encorachment.

Similarly we can expect better solution from agri startup and connecting these to farmers.Encouragement by goverment and banks for subsidized finance to farmers is crucial but it must be backed by proper finance managment through facilitation startup.

The problem of market can be solved by giving techno friendly market channels like ICT,NAM,AMAZON .Thus a win win situation for producer as well as buyer.As the product of this project has huge demand in national and international Pharma and other industry ,it is not a big deal but a proper platform can be game changer.

List of Agroforestry and Allied activities to mitigate migration in the region

- **Aggroforestry**
- **Allied Activities- Animal Husbandry, Herbal farming, fisheries, SME for processing of various agro and herbal products, cold storage warehousing, Agro Tourism,**

Result and Discussion

I was studying on this subject before the event of Corona and Lockdown. But it was a unique experience for me to rethink on this subject with different prospective.

The major points of consideration for me during this assignment were -

- **solving problem of migration through natural resource managment**
- **sustainability, Rural Enterprenurship**
- **innovation and information for making life of people better**
- **development in allignment with environment.**

Recomedndation

The region must not blindly follow the league of industrial states and work on its area of strength like organic ,herbal farming and allied business activities to solve the problem of forced migration and consequences.

The world demand for organic and herbal product is huge and this part of Western Himalya is gifted to harness his opportunity for solving its problems.

References

- SMPB, Uttarakhand Report on Medicinal plants

https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.undp.org/content/dam/india/docs/broucher_gef_undp_goi_project_on_medicinal_plants.pdf&ved=2ahUKEwiTqOONpsrqAhVHfH0KHYIMApwQFjAEegQIAxAB&usg=AOvVaw3EGLQzFJ25R_fZVcG2pECf

- Sectoral profile of medical plant industry by CMAP and HRDI

https://drive.google.com/file/d/1RhlnTBaafa4bi3_Sgx26GBVx-VEjZSHZ/view?usp=drivesdk

- UNDP sponsored report on sustainable livelihood

<https://www.google.com/url?sa=t&source=web&rct=j&url=http://smpbuk.org/document/uk-final-mp-%2520strategy.pdf&ved=2ahUKEwi1vK-5q8rqAhWDbn0KHV6Ba8QFjAFegQIARAB&usg=AOvVaw2T-nBesyWTUNEiGSsX-qY>

- Prioritized list by State government for herbal farming

https://drive.google.com/file/d/1yg6_RYvRLtKgb6_SRLrt9OCmT004Ts4A/view?usp=drive_sdk

- Gsmpb list for herbal farming

https://drive.google.com/file/d/1FC1CSbSFb7mJmKPXur4ALx_uFVLIDNGA/view?usp=drivesdk

- HRDI Recommended agroforestry practise sample

https://drive.google.com/file/d/1orW3qnY6JibNE_KGcuPOS_sejYwoovAu/view?usp=drivesdk

- Aromatic Plants by UCOST

www.ucost.in › report › bssPDF

Aromatic Plants - UCOST

- A study report by Institute of human development ,New Delhi on Migration.

https://www.google.com/url?sa=t&source=web&rct=j&url=https://des.uk.gov.in/files/uttarakhand_human_development_report_.pdf&ved=2ahUKEwjs743ArMrqAhUTVH0KHduMBasQFjAEegQICRAB&usg=AOvVaw0jQzhw-Ph8eBtCCEigqRh_&cshid=1594647482874

- A coverage on organic farming by Better India

https://www.google.com/url?sa=t&source=web&rct=j&url=https://yourstory.com/2018/02/dyo-organic-resort-kanika-sharma-kushika-sharma/amp&ved=2ahUKEwiykJXvt8rqAhXIXCsKHa-oDRUQFjAKegQIBhAB&usg=AOvVaw3c_-xUDM2rpzP5prCamq1t&cf=1