Livelihood Development Framework, Suggestions and Strategy

Dr Lal Singh

lalhrg@gmail.com

www.hrg.org.in

HIMALAYAN RESEARCH GROUP (HRG)

Core Group-SEED, Department of Science & Technology (DST)

UMESH BHAVAN, CHOTTA SHIMLA

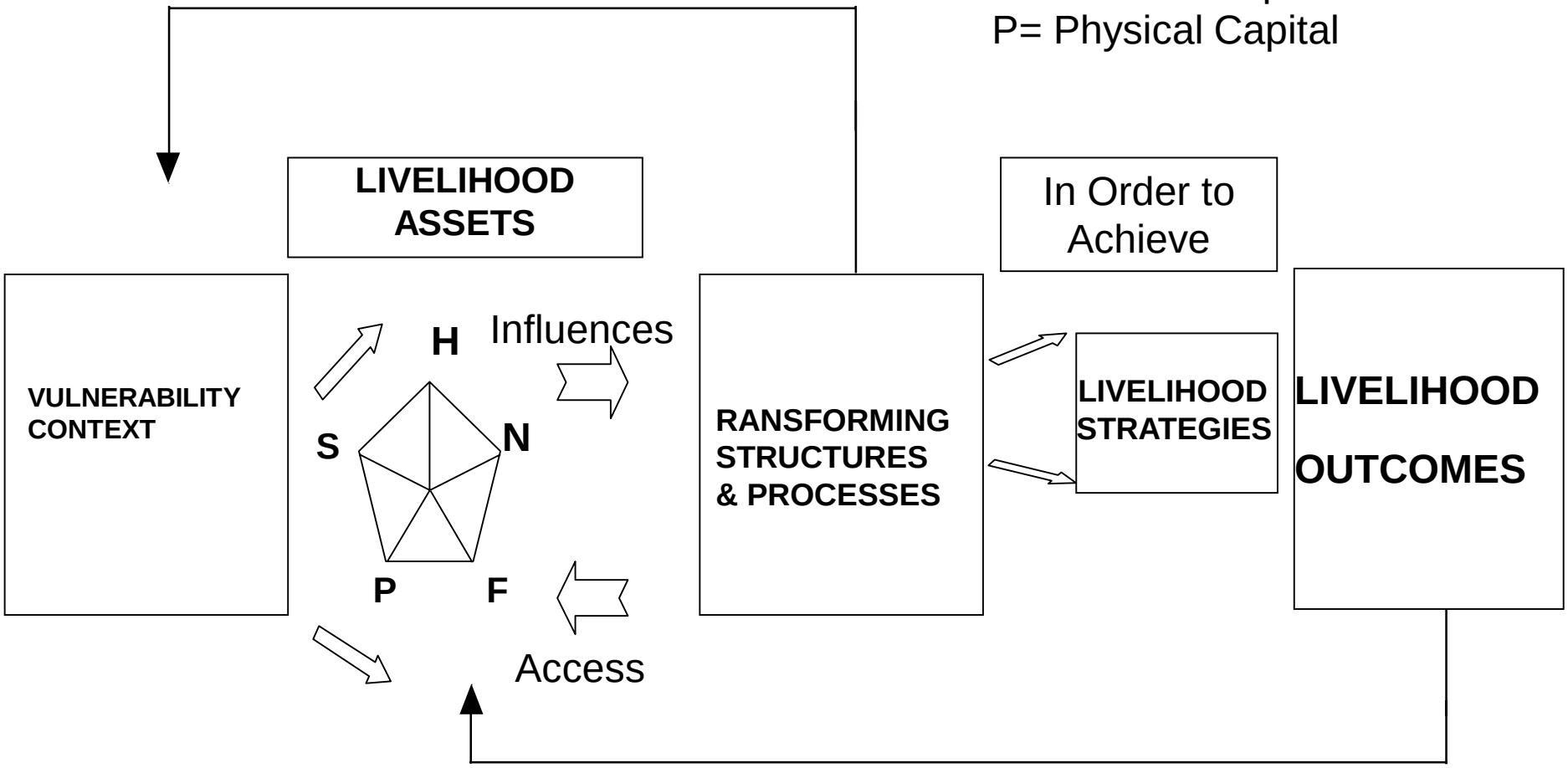
SHIMLA-171002 H.P. (INDIA)

“A livelihood comprises the capabilities, assets and activities required for a means of living”.

Livelihoods framework

Key

H= Human Capital
S = Social Capital
N = Natural Capital
F=Financial Capital
P= Physical Capital



Characteristics of Livelihood or Income Generation Activities (IGAs)

- Objective of an IGA is to produce for the market and furthermore it can be called micro or small-scale enterprise, whether it is managed at individual or group level.

- One of the main criteria to choose an IGA should be its **profitability.**

- Women work in the home and produce goods for **domestic consumption not for the market.**

- Therefore, **training & skills** plays major role in developing the individual or group activities for business as small enterprise.

- JICA Forestry Project is providing assistance to these small group IGAs to establish **enterprises.**

- Emphasis must be on orientation of SHGs from the **social welfare** perspective towards the provision of **business development** services In order for this strategy to succeed.

- It is essential that a clear distinction be made between the **social welfare assistance and a development strategy that focuses on tapping the economic potential of SHGs.**

Main steps of the IGA setting

a) identification

- The participants should ask themselves how they can obtain **income** from an activity, and identify the factors contributing to **the success** of IGAs.
- They need to be aware of own skills when they consider embarking on an activity. (**Trainers or promoters should allow participants to express themselves freely and note all suggestions at this stage**).

b) Technical feasibility

- This involves finding out whether the women suggesting the activity have the required **technical skills** and, if not. whether they can acquire them rapidly.

c) Economic and financial profitability,

In addition to being technically feasible, the IGA should be profitable

d) Planning

Once the activity has been carefully chosen all the operations should be scheduled and a timetable should be drawn up to avoid delay.

e) Plans for marketing

Products should be of good quality and competitive. Potential markets should be surveyed and investigated.

f) Ways of financing:

JICA Forestry project providing capital and revolving fund

Economic Returns

Marketing

Indentified Potential income generating activities

- Handloom
- Mushroom Cultivation
- Preparation of dairy and poultry products
- Agricultural production
- Honey Bee Rearing
- Food drying. processing and preservation
- NTFP and Products e.g. Leaf Plate Making (Patal), Medicinal Plants, Wild Mushrooms, Vegetables & Bamboo
- Other activities relevant to agricultural and livestock production
- Sheep, Goat Rearing
- Vermicomposting
- Weaving, Tailoring & Stitching

JICA Project identified 24 IGAs till now for groups in different areas

Livestock

Fodder Practices

IMPORVED FODDER GRASS PLANTATION ON BUNDS

Fodder Development and Processing

Nutritional Analysis of Silage and Dry Maize Stems

Nutritional Constituent (%)	**Green Maize Silage**	**Dry Maize Stem**
Moisture	70.83±0.95	17.86±2.01
pH	4.23±0.00	6.14±0.01
Protein	20.58±4.34	8.46±1.08
Carbohydrate	20.00±0.0	14.00±5.47
Fat	1.26±	1.36±
Fibre	34.00±1.00	44.33±4.61
Ash	7.61±0.03	8.18±0.91
Nitrogen (N)	1.90±0.36	0.81±0.15
Phosphorus (P)	1.0±0.00	1.0±0.00
Potassium (K)	3.24±0.15	2.94±0.41
Energy Value (Kcal/100g)	81.63±5.47	66.41±3.98

Outcome of Fodder Technology

- Reduced fodder wastage 40-70% through fodder cutters and improved stall feeding
- Enhanced fodder nutrition (protein 8.46% to 20.46%) through silage
- Increase and sustain milk quantity and milk fat contents 0.5-1.0% with improved cattle nutrition and fertility status
- Reduction in women drudgery and fire hazard due to storage of dry fodder at household level

Vermicomposting

Peregrine species

Highly adaptive and widely distributed e.g. *Eisenia foetida (shown in picture)*, *Eudrilus eugeniae*

Survive -4^{o}C -40^{o}C

Surface feeder

Top to Bottom Digestion Pattern in biomass heap on Raised platform

Dung favorite Food

Endemic Species

Less adaptive and restricted to natural homes

Organic Matter Recycling Potential of Earthworms (*Eisenia foetida*)

Average Weight of erthworm-1 g
No. of Earthworms in 1 Kg-1000
Average digestion of organic matter/earthworm-1g/day
Average Digestion by 1 Kg earthworms/ Day -1Kg

Reproduction

Time to Double Population	-9 week (~2 months)
1Kg earthworms (1000No)	-2 Kg (2000 earthworms in 9 weeks)

Distributed 2.5-3 Kg earthwomrs/farmer

2.5 Kg earthworms (2500 No)	- in One year will be 320 Kg.
Digestion After one year /day	-320 Kg biomass
Average Annual Digestion	-1,16,800 Kg=1168 Quintal =116.8 MT

Vermicompost Practical Training to the Community

Vermicompost Technology for Digestion of Organic Matter
Selected Species (*Eisenia foetida*)

Vermibed

Vermiculture

Vermicompost Sheds

Vermicompost Sieving

Mushroom Enterprise for Livelihood and Employment

Dhingri Mushroom Enterprise for Livelihood and Employment

Shiitake (*Lentinula edodes*) Mushroom Cultivation

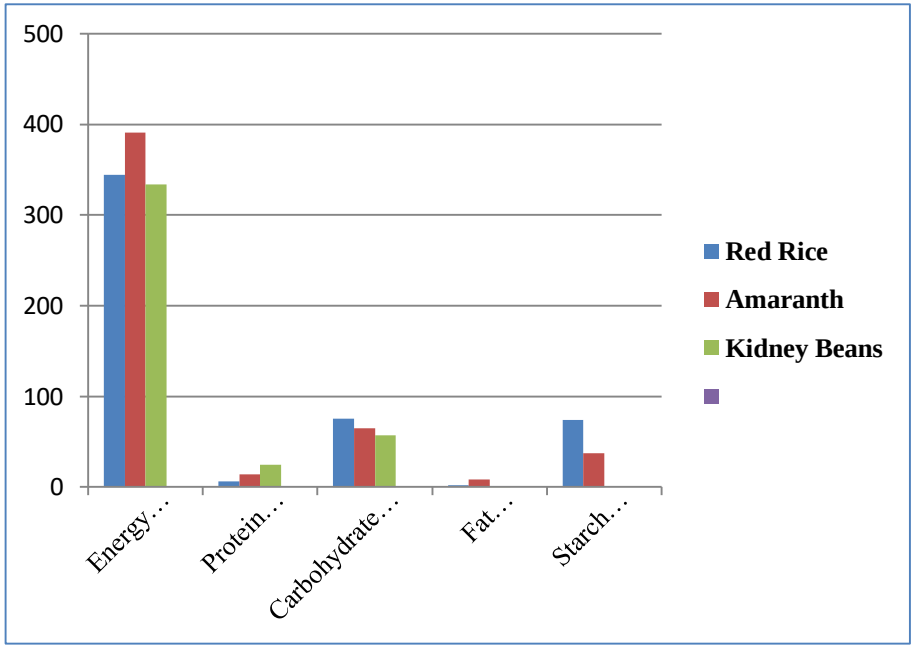
Mainstreaming of Traditional Mountain Agriculture

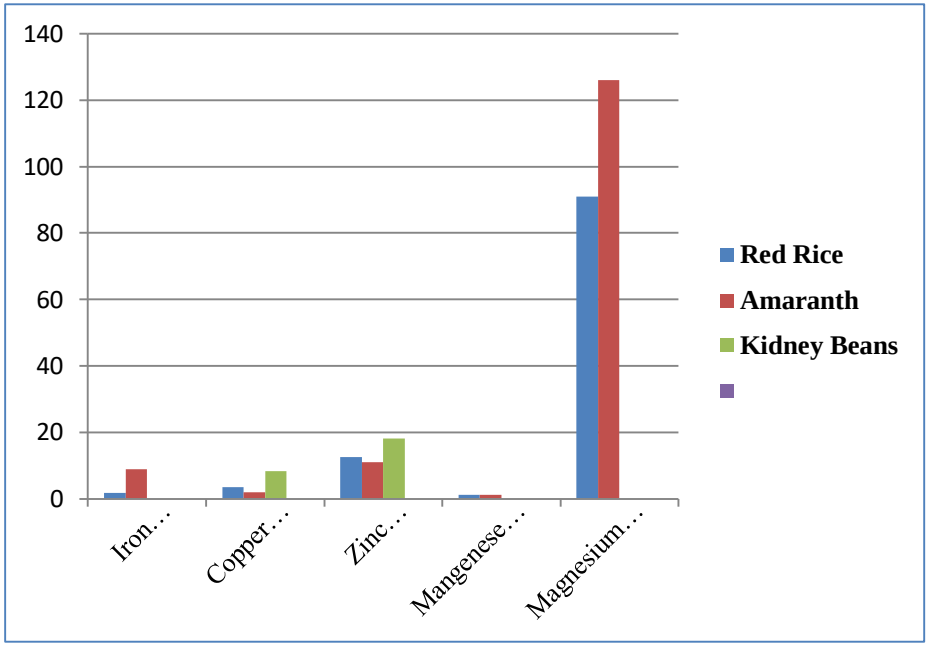
- These crops offers important **therapeutic activity** against diabetes, hypertension, asthma, obesity, post menopause breast cancer etc.
- Farmyard manure from forest biomass/agri residues and animal excreta is source of soil organic carbon.
- Traditional crops can increase resilience in the areas of soil and water, biodiversity, landscapes as well as community knowledge systems and has potential to mitigate Green House Gas emissions.

Traditional Crop Cultivation- Amaranth Cultivation

Traditional Crop Cultivation- Red Rice, Kidney Beans

Nutritional Profile ,Value Chain, Branding and Packaging with Community Seed Bank Development





Rice dehusking Machine and Products

Products of Red Rice, Amaranth & Kidney Beans

Seed Bank

NTFP Based Livelihood

Medicinal Plants in IHR- 1748

(Samant *et al.* 1998)

Traded Medicinal Plants in India- 960

Plants consumed > 100 MT/annum -178

Temperate Plants consumed> 100MT/ annum -21

(Ved and Goraya, 2008)

***Taxus wallichiana* Forest**

Dry Trees of *Taxus wallichiana*

Harvesting of *Taxus wallichiana*

Samant S S, Dhar U, and Palni L M S. 1998. *Medicinal Plants of Indian Himalaya.* Himvikas, GBPIHED, Kosi Katarmal, Almora pp 163.
Ved DK and Goraya G.S. 2008. Demand and supply of Medicinal Plants in India, Bishen Singh Mahendra Pal Singh, D.Dun

Medicinal Plants (Chirayita) Cultivation and processing

Chiryita Harvesting and Karu Planting Material Distribution

Cultivation of Picrorrhiza kurrooa Royle ex Benth.


JICA
Azadi Ka Amrit Mahotsav
Training on Commercial Cultivation of
Chirayita(Swertia cordata) and Kutki (Picrorhiza kurroa)
Sponsored by
H.P. Forest Department, Society for Improvement of Forest Ecosystems Management & Livelihoods in
Himachal Pradesh, Potters' Hill Shimla- 171005
Village Dhangiara, District Mandi H.P.
May 1, 2023
Organiser
Himalayan Research Group (HRG)
SEED-DST Core Group (SUNIL)
Umesh Bhavan, Shimla-171002 H.P.

Karu Farmer Started Supply of Planting Material and Paid Rs. 7,000/- for 2022 and will earn > Rs. 20000 in 2023

Distribution of 2nd Batch of Chirayita Seed to Women Groups Nachan Mandi

Aconitum heterophyllum Wall.

- **Family- Ranunculaceae**
- **Distribution (Altitude) 3000-5000m**
- **Herb**
- **Use of Roots/ Tubers**
- **Non toxic amorphous Alkaloid atisine used in fever, diarrhoea and dysentery**

Asparagus recemosus (Satavar)

Cultivation of High Value NTFPs (Medicinal Plants)

Angelica glauca

चोरा

Trillium govanianum,

नागछतरी

Paris polyphylla

Swertia chirayita

Outcomes of Medicinal Plants Cultivation

- ✓ **Cultivation of only selected species which provide high economic returns and do not interfere with traditional cropping pattern**

  Cultivation on high hill land abandoned due to wild animal menace, shortage of agriculture labour and ban on cultivation of narcotics

- ✓ **Quality material production for commercial utilization**
- ✓ **Conservation of cultivated species in natural habitat**
- ✓ **Addressing health security of rural people through low cost household herbal preparations to tackle common ailments**
- ✓ **Employment and livelihood for rural women and youth**

Leaf Plate- Patal Making

Boon for leaf plates, bowl makers in Himachal after ban of single-use plastic

Formation of self-help groups and machine installation with Japanese collaboration have improved the production of these eco-friendly products

VIKAS VASUDEVA
CHANDIGARH

The nationwide ban on single-use plastic has come as a boon for local folks, especially women in villages of the hill State of Himachal Pradesh, who are involved in making traditional leaf plates and bowls as the demand for these eco-friendly products is currently on the rise and fetching them improved returns.

To aid the makers of leaf plates and bowls, the Himachal Pradesh Forest Department, in collaboration with Japan International Cooperation Agency (JICA), is motivating community groups to prepare leaf plates and bowls using machines instead of doing it manually in order to meet the increasing demand for leaf plates. The ban of single use plastic items has been in place since July 1.

Under a project titled 'Improvement of Himachal Pradesh Forest Ecosystems Management and Livelihoods', the department is also ensuring that there's no shortfall in the supply of quality leaves, by planting specific species such as '*Bauhinia vahlii*' in the forest adjoining the villages of trained community groups.

"Under the project, each community group of average 15 people is being provided a capital cost of ₹1,29,000 for setting up the plate-making machine that makes 1,000 plates daily. Machine installation has reduced the drudgery of women in the manual making of these leaf items and improved their production capacity. So far, we have developed around 484 such self-help groups. In June this year, the community groups at Beindhar and Kangu villages in Mandi district prepared 8,000 leaf plates and 4,000 leaf bowls and earned ₹38,000 in one month in comparison to an average of ₹8,000, which is what a group of similar number of people used to earn monthly," Nagesh Guleria, Additional Principal Conservator of Forests cum Chief Project Director, JICA project, told *The Hindu*.

SPECIAL

Twenty-nine-year-old Kusum Devi, from Beindhar village is upbeat as the number of orders for her leaf plates and bowlsis gradually increasing. "Earlier we used to work independently and prepare the leaf plates manually. Five of our family members are engaged in making leaf plates. We used to earn around ₹3,500 monthly by selling the plates, but nowwe are working in the group and we are using machines to make plates-bowls. Our income has more than doubled now, though it keeps varying depending on the demand. This month, the demand is far better in comparison to previous months before the ban. The use ofplastic plates has stopped and hence demand for our leaf plates is rising. It's good for our business," said Ms. Devi.

Going green: Members of a self-help group involved in making leaf plates and bowlsa t Beindhar village.

Pointing out that so far, the marketing team of JICA has received an advance booking for the supply of 2.5 lakh leaf plates from across the State, Mr. Guleria said all group members are enthusiastic about the ban on single-use plastic and are anticipating a high demand in the upcoming wedding and festival season.

In Himachal Pradesh, usually the leaves of Tor (*Bauhinia vahlii*) are used for making leaf plate and bowl. These plants are found in tropical climate, found in relatively lower areas of the State including Mandi, Bilaspur, Hamirpur and Kangra districts. All over the State, fresh leaf plates are supplied mostly from manufacturers in the villages of Mandi district, and are used to serve food.

Market potential

Ramesh Chand Kang, the head of 'Jadi Buti' cell of the JICA project, points out that bio-degradable leaf plates possess a potential in national and international market, provided quality and standards are met. "Keeping this in view, we planned a holistic approach of setting up a mechanized facility to maintain standards in manufacturing, capacity building of the community groups, and planting of species like '*Bauhinia vahlii*' in the forest adjoining tovillages of trained groups for regular supply of quality leaves. *Bauhinia vahlii* is a vigorous climbing shrub, able to grow onto the top of trees in the forest.

"With increasing demand of leaves after the ban on single use plastic plates, we have started production of 6,000 seedlings in nurseries at Kamand and Bhawana villages in Mandi district for the community plantations, in forests and private land," he said.

Asserting that the invasion of factory-made plastic plates and bowls due to their cheap price and long shelf-life harmed the manufacturers of leaf plates, Mr. Guleria said, "Several local leaf-bowl manufactures had to abandon their traditional businesses of leaf plate and related items with time. Families, without any other option, continued to do the business on order and survived this so-called plastic boom, which has become a serious environmental and health problem."

"With ban on single-use plastic, the situation is also expected to improve environment in Himachal Pradesh better than any other States, keeping in view the many traditional alternatives to replace volumes of plastic plates and bowls with leaf plates and bowls prepared by the village women groups trained under JICA projects and other department initiatives for rural women empowerment," he asserted.

Conclusions…..

- ✓ IGAs can be seen as the initiation phase in the progression to small business development.

- ✓ It is difficult to make the transition from being unemployed and lacking in skills to being self-employed and capable of managing a business operation. The first step is to acquire specific technical skills.

- ✓ Once SHG members have his experience. the next step is to upgrade those skills and introduce women to basic business concepts and procedures.

- ✓ The transition from a social welfare to a micro and small enterprise approach is reflected by a market-driven approach.

- ✓ Each IGA (individual or at group level) should be considered as a project and beneficiaries should take part in all stages of the project, from the identification to the implementation according to the bottom up approach above described.

Conclusions

- ✓ Basket of Cost Effective/Low Cost Activities to ensure regular income and engagement of Group Members round the year
- ✓ Training modules for IGAs with Theoretical and Workable Practical demonstrations
- ✓ Market Survey around SHGs for comparison of products and sale
- ✓ Packaging with product details and mandatory registration etc.
- ✓ Regular followup data collection of IGA and returns
- ✓ Entry of SHGs members economic returns from plantation and IGAs in main proceeding registers

THANK YOU