



# **GUIDELINES FOR LIVELIHOOD COMPONENT OF WATERSHED DEVELOPMENT PROJECTS (WDC-PMKSY 2.0)**



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Ministry of Rural Development  
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## Contents

Sl. No.	Title	Page No.
1.0	Introduction	4
2.0	Framework for Livelihood Approach	4
2.1	Capital Assets for livelihood	6
2.2	Major risks posed to livelihood	6
2.3	Governance Framework	6
2.4	Livelihood Outcomes	6
3.0	Livelihood Component under WDC-PMKSY 2.0	7
3.1	Objective of Livelihood Promotion	7
3.2	Key Features	7
3.3	Guiding principles of Livelihoods Improvement	8
4.0	Planning and Implementation	8
4.1	Livelihood Planning	8
4.2	Mode of Operation	9
5.0	Livelihood Sustainability	9
5.1	Social Mobilization and Formation of Self Help Groups (SHGs)	10
5.1.1	Budget Allocation	10
5.1.2	Seed Money for SHGs	11
5.1.3.	Funding of Major Livelihood Activities for SHGs	11
5.1.4	Criteria for Revolving Fund to SHGs	12
5.1.5	Funding of Major Livelihood Activities for SHGs	12
5.1.6	Seed Money for Enterprising Individuals	12
6.0	Support through Convergence of Schemes	13
7.0	Capacity Building:	13
7.1	Key Elements of Capacity Building Strategy:	14
8.0	Livelihood Development Process	14
9.0	Project Monitoring	15
	Annexure-I : Indicative list of livelihood options under PMKSY-WDC 2.0	17
	Annexure 2: List of Institutes	21

# **Guidelines for Livelihood Component of Watershed Development Projects (WDC-PMKSY2.0)**

## **1.0 Introduction**

The watershed approach has been seen as the most effective tool for development of the rainfed/degraded areas. The Watershed Framework recognizes a balanced use of five capital assets namely human, natural, financial, social and physical resources. Community participation and securing livelihoods have emerged as important dimensions in planning, implementation and management of the current generation watershed projects. Effective watershed development relies on the bottom-up approach at various levels of the project cycle involving local community and their integration with other employment generation and poverty alleviation programmes for generating more livelihood options.

The WDC-PMKSY 2.0 is being implemented in 28 States and 2 UTs from 2021-2026. The objective of watershed projects under WDC-PMKSY 2.0 is to maintain the social, economic and ecological functions in a balanced manner, and thereby to contribute to the sustainable development. One of the key features of the program includes focus priority on livelihood activities for landless/ assetless persons. Fifteen percentage of the total project cost has been assigned to support the livelihood activities for landless/ assetless households. This component aims to maximize the utilization of potential generated by watershed activities, creation of sustainable livelihoods and enhances income for households within the watershed areas. This will facilitate inclusiveness through enhanced livelihood opportunities for the poor through investment into assets, improvements in productivity & income, and excess of the poor to common resources and benefits and augment the livelihood strategy at household level.

Based on this new generation guidelines, a revised broad livelihood guideline has been prepared for adoption in the country. The revised livelihood guidelines is an inclusive way for expanded livelihood approach to the categories of landless/asset less persons. This will also facilitate to achieve higher incomes for farmers.

## **2.0 Framework for Livelihood Approach**

“A livelihood *comprises* the capabilities, assets, and activities required for a means of living. It is deemed sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities, assets, and activities both now and in the future, while not undermining the natural resource base”.

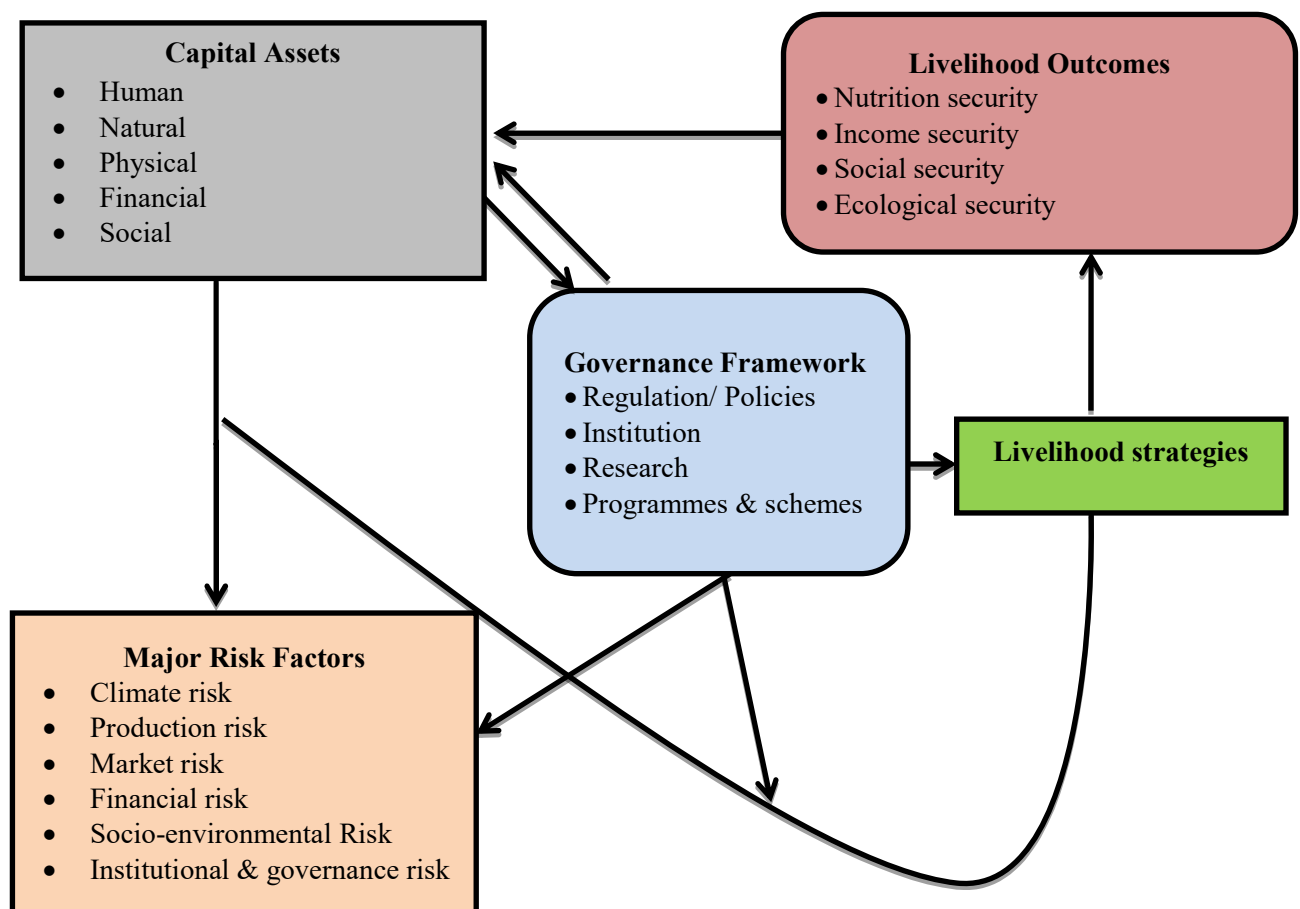
Sustainable livelihoods *refer* to people’s capacity to generate and maintain their means of living, and enhance their own well-being as well as that of future generations. Households have sustainable livelihoods when they can cope with and recover from shocks and economic stress, and can maintain their capabilities and assets without undermining their natural environment.

The sustainable livelihoods *approach* is based on evolving thinking about the way the poor and the vulnerable lives their lives and the importance of policies and institutions. It helps formulate development activities that are:

- People-centric;
- Responsive and participatory;
- Multilevel;
- Conducted in partnership with the public and private sectors;
- Dynamic; and
- Sustainable

The sustainable livelihoods approach facilitates the identification of practical priorities for actions that are based on the views and interests of those concerned but does not replace other approaches such as participatory development, sector-wide approaches, or integrated rural development.

Livelihood *strategies* bring out how people access and use these assets, within the aforementioned social, economic, political and environmental contexts form a livelihood strategy.



**Fig 1. Sustainable livelihood concept in integrated watershed management area**

## 2.1. Capital Assets for livelihood

<b>Human capital</b>	Education, training, skills, knowledge, and ability to work
<b>Natural capital</b>	Land, soil, water, forests, apiculture and fisheries
<b>Physical Capital</b>	Infrastructure relating to roads, electricity, agricultural production processing, post-harvest & marketing, ICT, livestock, fisheries, handicraft and other primary processing and secondary agriculture
<b>Financial Capital</b>	Grant, credit, savings, income, remittance, seed money
<b>Social capital</b>	Social resources, informal networks, membership of formal groups, trust based relationships and co-operation for socio-economic activities

## 2.2. Major risks posed to livelihood

<b>Climate Risk</b>	Drought, flood, cyclone, Forest fire, landslide, incessant rains, Hail storm, unseasonal snow, deforestation, desertification, salinization, etc.,
<b>Production Risk</b>	Pest and diseases, substandard input, Inappropriate production practices, low productivity, Soil degradation, poor quality soil, water contamination, and other climatic factor risk etc.,
<b>Market Risk</b>	Low Price, Volatility of Price, Lack of demand, low shelf life etc.
<b>Financial Risk</b>	Lack of access to finance, High interest rate, Requirement of high collateral, non-performing assets
<b>Socio-environmental Risk</b>	Riots, Law and order, Pandemic/epidemic, National emergencies
<b>Institutional and Governance Risk</b>	Unpredictable changes in polices / regulations, sudden change in tax laws, etc.

## 2.3. Governance Framework

<b>Regulation/ Polices</b>	Laws, polices, acts, rules etc.,
<b>Institutions</b>	Government (State/Central), Local self-government, NGO, Financial Institutions, NBFCs, Private corporate, Village level institutions etc.
<b>Programs and Schemes</b>	Central and state government schemes and programs, CSR etc.

## 2.4 Livelihood Outcomes

<b>Nutrient security</b>	Higher and sustainable production / productivity leading to higher per capita consumptions of nutritional food, etc.
<b>Income security</b>	Basic universal income, Growth in disposable income, reduction in expenditure and production cost, savings, etc.

<b>Social security</b>	old age pension, Health and life insurance, property / crops insurance, Accidental protection, disability benefits, survivor benefits, etc.
<b>Ecological security</b>	Conservation of soil, water and other natural resources, Conservation of bio-sphere, combating and reversing land degradation, reduction of green-house gases and improve soil organic carbon etc.

***Sustainable livelihood system optimally integrates various capitals around the rural eco-system to leverage the potential, for improving the income as well as social life.***

### **3.0 Livelihood Component in WDC-PMKSY 2.0**

The Guidelines for new generation watershed development projects (WDC-PMKSY 2.0) which was issued during 2021 shows a transition from the predominant practice of mechanical treatments to farmer and environment friendly approaches to ensure sustainable, equitable and economic development. It emphasizes on the importance of creating farm and non-farm- based livelihood options. A provision of 15 percent budget has been made for livelihood component. This provision is made to increase the income of rural poor focussing on their livelihood aspects related to farm and non-farm activities. The revised guidelines provide inclusive ways to expand the livelihood options of the landless/asset less inhabitants and other marginal communities of the watershed.

#### **3.1. Objective of Livelihood Promotion**

- a) To support the landless / assetless poor, SC / ST, marginalized communities and women, etc., with sustainable livelihoods opportunities for their socio-economic development.
- b) To improve household income, participation and division of labour, access to information, knowledge, appropriate technologies and resources leading to their empowerment.

#### **3.2. Key Features**

- a) One member (preferably a woman) from assetless rural poor household would be brought under the Self Help Group (SHG) network. SHGs would be federated at village level and higher levels to provide space, voice and resources and to reduce dependence on external agencies.
- b) Training and capacity building of the SHG member, particularly in relation to managing the institutions, livelihoods, credit absorption and credit-worthiness.
- c) Provision of Community Investment Support Fund (CIF) to the SHGs through the Federations to advance loans and/or undertake common/collective socio-economic activities.

- d) Convergence with various departments and agencies dealing with poverty reduction of rural poor.
- e) Close involvement of various line departments, banks and public sector institutions is essential for monitoring the flow of credit, its utilization and recovery.
- f) Integration of SHGs with collectives and producers' cooperatives, ATMAs, KVKs and corporate agencies to provide them an access to information, credit, technology, markets etc. for promotion of livelihood activities in watershed areas.

### 3.3. Guiding principles of Livelihoods Improvement

The guiding principle for livelihood improvement rest upon the integrated and participatory approach and encompasses the natural resources and ecological conservation for ensuring nutritional security, income security and ecological security for the targeted beneficiaries in the watershed areas.

- **Natural Resource Based:** Livelihood improvement initiatives should emphasize on natural resource based and activities and must conform to principles of equity, gender sensitivity and transparency.
- **Participatory approach:** Assess, plan, design, implement and monitor with the participation of affected communities, paying particular attention to gender roles, responsibilities, as well as the specific needs, vulnerabilities and capacities of men and women.
- **Integrated approach:** Recognize that needs for livelihoods, food security, health, shelter and water and sanitation are integrated suitably.
- **Quality assessments:** Take a holistic (whole) view of household and community vulnerabilities and capabilities that includes a sound analysis of their coping strategies and the external environment. These include SC/ST, landless/assetless people, women, etc., to be considered on priority.
- **Form good partnerships:** Recognize the expertise of others and include coordination with local authorities and opportunities for advocacy.
- **Respect the local context:** Build on National Society and community capacities.
- **Result Oriented:** The Livelihoods improvement initiatives should able to increase household income, participation and division of labour, access to information, knowledge, appropriate technologies and resources.

When livelihoods are sustainable, vulnerable people can better cope-up with and recover from stresses and shocks, maintain or enhance their capabilities and assets, and provide benefits to other livelihoods locally, and more widely, without damaging the natural resource base.

## 4.0 Planning and Implementation

### 4.1. Livelihood Planning

- i. The agency selected for implementing the watershed programmes will also be responsible to implement the livelihood component of WDC-PMKSY 2.0.



- ii. An awareness drive should be undertaken at Gram Sabha level for communication & sensitisation of the target beneficiaries.
- iii. A “Livelihood Action Plan” (LAP) will be a prerequisite for availing the funds under the livelihood component.
- iv. The LAP is to be developed within six months after the initiation of watershed development period of 4 years.
- v. The LAP should be prepared during the preparatory phase by the Project Implementing Agency (PIA) in consultation with WDT, WC and the members of SHGs, SC/ ST, women, landless/ assetless households. This plan should be an integral part of DPR. PIA may also take assistance of livelihood expert of the team/ agency specializing in livelihood sector who can be engaged on a time bound contract basis, expenditure on which may be incurred from Administrative component of the project. PIA should prepare livelihood action plan for the project area before the release of 2nd instalment.
- vi. To promote convergence, the PIA should work in close association with other employment generating programmes such as MGNREGS, NRLM, etc.
- vii. The livelihood action plan should analyse socio-economic conditions and existing livelihood capitals of the watershed village during the situation analysis by means of PRA and focus group discussion in order to facilitate collection of information to feed into the livelihood action planning process. Livelihood action plan should contain schedule of activities, interventions, no. of SHGs to be assisted and expected outcome. An illustrative list of Livelihood options are provided in **Annexure-I** for reference.
- viii. A copy of the livelihood action plan should also be made available to the concerned SHGs and Gram Panchayats.
- ix. The plan may be reviewed by the PIA, if need to be, and revised in consultation with the stakeholders.

#### **4.2. Mode of Operation/Implementation of Livelihood action plan**

- i. The livelihood action plan will be implemented through Self Help Groups and/or their federation/ FPOs/FPOs Federation.
- ii. Livelihood activities can be carried out either through the existing SHGs having good performance or new SHGs formed.
- iii. SHGs selected for implementing livelihood action plan should be homogeneous in-terms of their existing livelihood capitals, common interest and need.
- iv. SHGs can undertake any permissible activity jointly as a group or the group may decide to support individual(s) for the activities under the umbrella of the main SHG.

#### **5.0 Livelihood Sustainability**

In order to sustain the vulnerable SHGs and their livelihoods, the Revolving fund of WDC-PMKSY 2.0 will have final ownership with concerned SHGs/SHG federation at GP level for need based rotation to SHGs. The option of village council shall be considered for this purpose where GP is not present.

## **5.1. Social Mobilization and Formation of Self Help Groups (SHGs)**

Mobilising the socially and economically marginalized vulnerable communities into SHGs and imparting requisite capacity building is the first and foremost step in the livelihood improvement process. The Institutions of the poor – SHGs, their federations and livelihoods collectives - provide the poor the platforms for collective action based on the principle of self-help and mutual cooperation. They become a strong demand system and build linkages with mainstream institutions, including banks, and Government departments to address their core livelihoods issues and other dimensions of poverty. These institutions provide savings, credit and other financial services to meet their priority needs.

SHGs have proved successful across the country, particularly as centres of microcredit. Further, they have also taken up variety of livelihood activities in diverse fields. Promoting alternate livelihood activities being an important objective of a watershed project, conscious efforts should be made to make the existing SHGs as active partners in development strategy within the project area. While strengthening the existing ones, need based/resource based new ones may also be formulated. Efforts may be made to federate all SHGs to improve business opportunities.

### **5.1.1. Budget Allocation**

- i. 15 per cent of the total project fund is earmarked as the Livelihood Activities for the assetless persons, micro enterprises & business development under the livelihood component for the benefit of marginalized communities, including SC/ST, landless/assetless people, women, etc.
- ii. The provision for livelihood activities shall be taken out of the total project fund as a grant to Watershed Committee (WC) in its bank account, which in turn will be used to provide financial assistance, (seed money for revolving fund to SHGs and a grant -in -aid for enterprising SHGs/ SHG federations to undertake major livelihood activities). However, State/UT shall have the flexibility to implement the livelihood component of WDC-PMKSY 2.0 through State agencies implementing the NRLM programme of Government of India. In such cases, the beneficiary SHGs will be selected by concerned Watershed Committee from the watershed project area only and the funding shall be made to such selected SHGs / federations with the approval of respective Watershed Committee. The benefits should be extended within the financial limits prescribed in this Guidelines.
- iii. At least 60% of this livelihood fund will be used to support revolving fund for SHGs, and a maximum of 40% for supporting grant-in-aid to enterprising SHGs/ SHG federations.

The list of activities to be promoted in the watershed area under this revolving fund is indicated at **Annexure-1**. This is only an indicative list and not an exhaustive list. WC may also consider for financing for additional emerging activities based on the local agro-climatic and ecological environment.

### **5.1.2. Seed Money or Revolving Fund for SHGs**

Seed money or revolving fund may be provided to the eligible SHGs to enable them to meet the immediate credit requirements for sustenance; this mechanism will promote the entrepreneurial options among the SHG members.

This provision will facilitate the SHG members to inculcate the habit of thrift and accumulate their own funds to meet their credit requirements.

#### **Criteria for availing benefits:**

- i. Each SHG shall make an application for financial assistance to the WC. The WC in its regular meeting will consider these applications and pass resolution regarding its approval of financial assistance to SHGs based on merit of the case. The representatives of applicant SHGs may also be present in such meetings of the WC. The resolution will clearly rank the approved cases, based on the priorities and preferences, so that the support may be extended to all the eligible SHGs in order of ranking. In case, State/UT is implementing the livelihood component of WDC-PMKSY 2.0 through State agencies implementing the NRLM programme of Government of India, the beneficiary SHGs will be selected by concerned Watershed Committee and the funding shall be made to SHGs with the approval of respective Watershed Committee.
- ii. The initial amount up to Rs.50,000 may be given as seed money to a SHG as the revolving fund after their proposed activity(s) are approved by the WC in its meeting and included in the resolution.
- iii. The SHGs will return the seed money on monthly basis and that could be reinvested in the same or other SHGs as per the resolution passed in meeting of WC. The amount and number of monthly instalments may be decided by WC based on the type of activity, capacity of the group and their savings. The amount may be returned in a maximum of 18 to 24 months.
- iv. The payment will be made through Direct Benefit Transfer (DBT) in the beneficiary account after the respective SHG has opened a joint bank account with two signatories from the SHG members.
- v. The SHGs may use the amount for a combined activity and/ or shall provide the above amount to the concerned members as individual loan against a specific activity for improving income.

### **5.1.3. Eligibility of SHGs**

- The size of SHG should be as indicated below and not necessary to register:
  - 10 to 20 members in plain area projects.
  - 5 to 20 members in difficult/hilly areas and in IAP districts.
- From one family, only one person should be considered for membership.
- Members should have ideally the same social and financial background.
- The group should meet regularly (at least once a fortnight).

- Compulsory attendance (more than 80 per cent) by members with minutes book being maintained.
- Simple and clear books for all transactions to be maintained along with Savings and loan Register.
- Promote individual member saving passbooks.
- ‘Savings first - Credit later’ should be the motto of every group member.

#### **5.1.4. Criteria for Revolving Fund to SHGs**

Revolving fund is the seed money provided by WDC-PMKSY 2.0 program to the SHGs functioning under WDC-PMKSY 2.0 project. The revolving fund is provided only to the eligible SHGs as per the following terms and conditions.

- a) SHG or the village to which the particular SHG belongs to should stay within the project area.
- b) The 75% SHG members should be small, marginal and landless farmers and micro-entrepreneurs
- c) SHG should have undergone all the basic trainings along with the Entrepreneurial and skill trainings.
- d) SHGs should be under the fold of concerned Gram Panchayat Level Federation (GPLF) or Cluster Level Federation (CLF). SHG to give a undertaking that, it will use the revolving fund for initiating livelihood promotion activities.

#### **5.1.5. Funding of Major Livelihood Activities for SHGs**

- i. The funding for major livelihood activities will enable the enterprising SHGs/ SHG federations (with at least 5 enterprising SHGs) to avail a composite loan for undertaking major livelihood activities or to expand/upscale activities as recommended by the WC and approved by WCDC in consultation with line Departments and Bank.
- ii. For such activities, a composite loan (grant in aid and bank loan) can be availed depending upon the type of activity. The grant-in-aid will be 50 % of the cost of the activity or Rs. 4.00 lakh whichever is less . However, grant in aid shall not exceed 40 % of the livelihood component of the project.
- iii. SLNA may issue detailed modalities for payment of grant-in-aid for funding major livelihood activities.
- iv. SLNA should ensure that the interest earned by SHGs federations on the Grant-in-aid amount will be deposited in the WDF account of WC by the concerned SHGs federation.

#### **5.1.6 Seed Money for Enterprising Individuals**

- i. The enterprising individual shall apply for financial assistance to the WC, along with a viable livelihood proposal. While selecting beneficiaries under this component preference may be given to local artisans. WC in its regular meeting, will consider such applications and recommend to WCDC, through PIA. The amount is to be provided as seed money to

such individual(s) after their proposed activity(s) has been approved by the WC in its meeting and included in the resolution, based on the merits of the case.

- ii. The applicants may also be present in such meetings of the WC. The resolution will clearly rank the approved cases, based on the priorities and preferences, so that the support may be extended to all the eligible enterprising individuals in order of ranking.
- iii. The WC may release financial assistance to these enterprising individuals after approval by WCDC. Such individuals will return the seed money on monthly basis and that could be reinvested further as per the resolution passed in meeting of WC. The amount and number of monthly instalments may be decided by WC based on the type of activity and capacity of the individual. The amount may be returned in a maximum of 18 to 24 months. The returned amount will be deposited in the WDF account by the WC.
- iv. The amount for enterprising individuals is upto Rs. 20,000 per individual. Funding for this activity shall not exceed 2% of the revolving fund earmarked (60% of the livelihood component of the project) for the SHG.
- v. The payment will be made in the individual bank account through DBT.

## **6.0 Support through Convergence of Schemes**

Several government schemes are directed towards promoting the livelihood of the small, marginal, landless and marginalized rural population both at the central and state level. As the priorities of government both at the central and state level focuses on poverty alleviation, socio-economic development, social equity and nutritional security, there is need to leverage these relevant schemes in convergence to achieve these objectives in the watershed/springshed/desert/mountain areas including that of north east and Himalayan regions. There is also a need of convergence between various government schemes and institutional financing through Financial Institutions & NBFCs.

## **7.0 Capacity Building:**

- a) The capacity building needs of the beneficiaries for livelihood generation in the watershed areas should be included in the action plan prepared during baseline survey. The capacity building should aim at skill enhancement and not just knowledge and information. The capacity building component should be decided in consultation with WC for making necessary budgetary provision on annual basis.
- b) The expenditure for such trainings may be met from 3% of the budget provided for institution & capacity building in the project.
- c) The capacity building aspects will have field visits/ exposure visit to successful livelihood activities/SHGs and SHG Federations.
- d) The capacity building may relate to book keeping/financial management, post-harvest management and secondary agriculture, crafts development, marketing of minor forest products, packaging, branding, marketing, export promotion, organizational behaviour and development etc., as relevant to promoting activities of SHGs, entrepreneurs in the watershed areas.

### **7.1. Key Elements of Capacity Building Strategy:**

Following may be the key components of capacity building strategies:

- a) Dedicated and decentralised institutional support and delivery mechanism.
- b) Annual Action Plan for capacity building.
- c) Pool of resource persons.
- d) Well prepared training modules and text materials.
- e) Mechanism for effective monitoring and follow-up.
- f) E-resources and self-learning modules in the web.

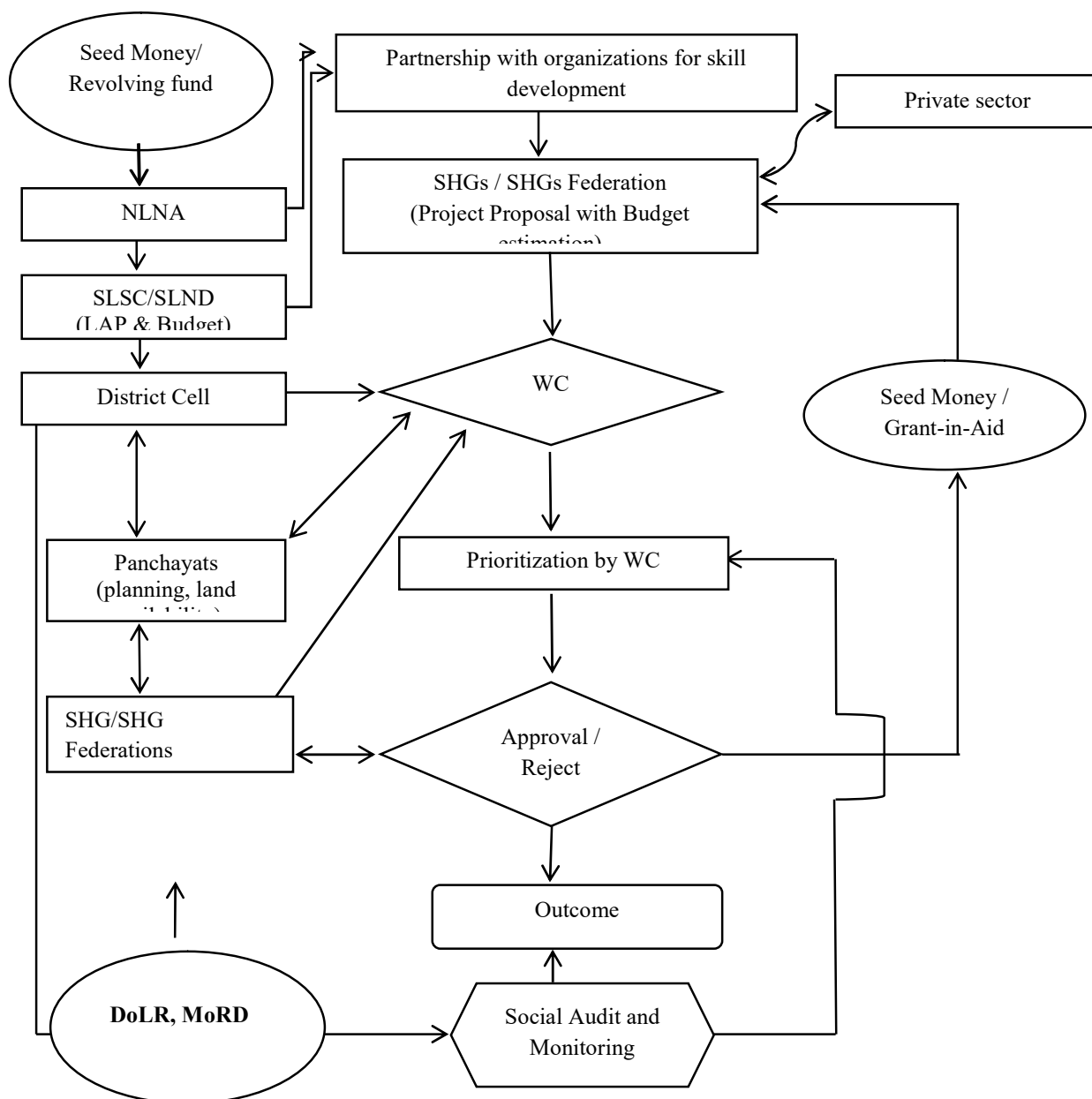
The DoLR / National Level Nodal Agencies (NLNA) may use the services of National Rainfed Area Authority (NRAA) as Knowledge Partner for capacity building activities. National Institute of Rural Development & Panchayati Raj (NIRD&PR) could help developing training schedules, operational strategies and cost norms for capacity building for States/UTs in consultation with State Level Nodal Agencies (SLNA) and other relevant organizations.

NIRD&PR will act as nodal training institution for developing various training modules and Audio-Video training programmes.

A separate segment for livelihood development programmes can be created for better monitoring of the livelihood programmes.

### **8. Livelihood Development Process**

The livelihood development process takes care of the institutional framework and the interactions among the various organizations and agencies for approving the project and fund flow for overall monitoring for the development of sustainable livelihood while ensuring nutritional security, income security and ecological security. While ensuring the guiding principles of livelihood development, it follows the livelihood activities as brought out in **Annexure 1**. While the National Nodal Agency overall directs the watershed development in the country, the district, panchayats and watershed committee plays the crucial role in ensuring the sustainable livelihood development in the country. The entire livelihood development flow process is given in the Figure 2.0 below.



**Fig. 2.0 Livelihood Development Process**

### 9. Project Monitoring

It is essential to monitor the livelihood development in the watershed areas to bring qualitative improvements in effective execution of targeted activities at field level. The Project Monitoring Cell will be set up at State/District/Block level involving the representatives of respective organizations.

The PIA shall submit quarterly progress reports (countersigned by the Watershed Committee (WC) President/competent authority) to SLNA. The designated Nodal Officer may be nominated for this purpose.

The district level officials have to ensure that the monthly progress report is uploaded by all blocks. The consolidated information at the district level may be perused for monitoring the scheme progress.

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### Indicative list of livelihood options under PMKSY-WDC 2.0

In a scenario wherein the per-capita income of a rural household is far less than that of urban household, especially in the age of booming e-commerce, the increasing flow of money from rural to urban areas is a cause of concern. The need is to transform the situation from 'rural people as consumers of industrial goods' to 'rural people as producers of industrial grade output, especially the population related to farming. Secondary Agriculture in such a case is expected to bring about a shift in the direction of flow of money from urban to rural areas, especially through meeting the demand for value addition or pre-conditioning services from the food processing industries in urban areas. The various avenues for earning a sustainable livelihood are listed below.

Broadly, the avenues of Secondary Agriculture can be categorised into three types:

1. **Type I:** Value addition to Primary Agriculture Production Systems
2. **Type II:** Alternative Enterprises
3. **Type III:** Enterprises that use crop residues and wastes of Primary Agriculture

#### 1. Type I: Value addition to Primary Agriculture Production Systems

This category broadly contains activities with respect to (a) inputs; (b) production systems; and (c) harvest / post-harvest segments of the agriculture value chains.

This category summarizes crafts that add value to the primary agriculture activity. Alternatively stated, the activities of secondary agriculture in this sphere principally hinge on the agricultural activities. In the process of augmenting the productivity improvement in crop cultivation or other production systems of primary agriculture, these options also produce supplementary income for the rural youth.

#### A. On-farm input production

1. Nursery for field crops, horticulture crops, forest species including medicinal, aromatic and dye plants;
2. Certified organic seeds;
3. Vermicompost, vermi-wash;
4. Components of Natural Farming/Organic Farming: *Beejamrit, Jeevamrit, Agniastra, Ghanajeevamrit*;
5. Anaerobic digested compost - FYM, compost;
6. Bio-fertilizer production *e.g.*, Azolla, Blue Green Algae;
7. Green manure and its seed production *e.g.*, Dhaincha (*Sesbania*), Sunnhemp *etc.*;
8. Animal feed/fodder including urea enriched straw blocks;
9. Bio-pesticides: ITK based-concoctions, bio/plant extracts, *etc.*;

## **B. On-farm production**

B.1. Organic / natural products - high value flowers, fruits, vegetables, spices, condiments, tea, coffee, medicinal, aromatic and dye plants *etc.*

## **B.2. Organic/natural or conventional production including milk and meat processing**

2.1. Dairy;

2.2. Poultry, ducks, goats, turkey, sheep, rabbit farming, piggery, Emu farming;

2.3. Composite pisciculture; and prawns, shrimp, lobster farming;

2.4. Canine/pet breeding; and

2.5. Equine breeding.

## **C. Harvest / Post harvest processing and value addition of farm produce**

- i. Primary and secondary value addition: pre-conditioning produce for markets of fruits, vegetables, flowers, spices, *etc.*;
- ii. Assaying, packaging, pre-cooling and dispatch hubs/units;
- iii. Micro and Small Enterprises for garlic extracts / paste, ginger processing (flakes, powder), turmeric powder, products, pickles, jams, canning, solar drying, *etc.*;
- iv. Makhana (Prickly water lily, *Euryale ferox*) products;
- v. Edible oil expellers;
- vi. Mills for pulses (*Dāl* mills);
- vii. Ornamental breeding;
- viii. Flavouring agents;
- ix. Natural dyeing agents;
- x. Ayush medicine units;
- xi. Aromatic/essential oil production - lemon grass, patchouli, eucalyptus, *etc.*;
- xii. High value oil production - lavender, periwinkle, drumstick, thyme, primrose, clove *etc.*; and
- xiii. Confectionery - indigenous specialty products;

## **2. Type II: Alternative enterprises**

Different professions that can create income without competing for the resources (land and manpower) engaged in primary agriculture comprise the Category 'B' of Secondary Agriculture avenues. While these vocations have been adopted in different parts of the country, mainstreaming them through specific promotional activities and incorporating into various department schemes and funding support opportunities are equally important. Since, these vocations need specific skill sets and equipment, special provisions that support the vocations are to be put in place. For the fact that several of these vocations do not have mature markets, efforts to establish their supply chains and integrating them into the markets need to be addressed/ensured.

### **Indicative list of alternative enterprises for sustainable livelihood**

1. Apiary incl. beeswax, royal jelly *etc.*;
2. Mushroom production;
3. Coir/fibre-based products - banana, sunnhemp, coconut *etc.*;
4. Snake venom farming;
5. Hydroponics;
6. Agro-processing (corn powder production, pulses, turmeric, ginger, lac, forest produce);
7. Fruit and vegetable processing;
8. Custom Hiring Centres;
9. Rural tourism/organic agri eco-tourism/ homestays;
10. Palmyra palm products;
11. Broomstick production;
12. Kitchen gardening / Terrace farming;
13. *Aloe vera* farming;
14. Ram servicing;
15. Bull servicing;
16. Eucalyptus / mint farming;
17. Bamboo products;
18. Mahua products - wine, plates *etc.*;
19. Integrated farming (bee-keeping, piggery, goat rearing, duck rearing, back-yard poultry);
20. Babui grass products;
21. Cosmetics/toiletries production (MSME based);
22. Incense stick production;
23. Lac cultivation - gums and resins products;
24. Sericulture and silk products;
25. Weaving - fibre crops (cotton, rabbit, sheep and yak wool *etc.*);
26. Black smithy;
27. Handicrafts/carpentry/sculpting – wood craft (MSME based);
28. Handloom/tailoring/knitting/candle making *etc.* (MSME based);
29. Beverage units;
30. Winery/breweries based on location-specific grains/fruits/flowers;
31. Skin and hides products (MSME based).
32. Local petty shop.
33. Repairing shop.
34. Tent house business
35. Brick kiln

### **3. Type III Enterprises that rely on residues and wastes of primary agriculture**

These enterprises of secondary agriculture establish several income generation activities that utilize residues and wastes of different field crops, horticulture crops, products of animal origin and forest produce on the concept of “waste to wealth” completing the circular economy emanating from agriculture. The economic products of primary agriculture activities directly

contribute to the economy and to the income of rural households; while periodically the residues and wastes of crops and animals also offer prospects of income generation.

Several crop residues such as corn cobs, cashew apples, groundnut shells, are employed for the production of industrial chemicals. The production of chemicals from such agricultural waste invites huge investments and infrastructure; whereas, the activity of the waste aggregation, pre-conditioning and supply (supply chain management) to the industries can be a prospective opportunity to create employment and income generation in the rural areas that can supplement the existing income levels of rural households. These possibilities of rural-urban industrialisation appear practicable; however, their techno-commercial feasibility requires evaluation and piloted before such avenues are explored for rural households.

1. Cotton stalk products;
2. Dung logs, bio-gas, leather extracts, *etc.*;
3. Fibre boards *etc.*, from rice straw, corn stover *etc.*;
4. Urea enriched fodder block from rice straws;
5. Agave/banana fibre extraction and products; and
6. Cutlery from wheat husk, arecanut leaves, *etc.*

**Note:** *This list is an indicative but not exhaustive. The District Watershed Cell, GP & local WCs may promote other relevant livelihood activities based on geographical, agro-climatic and economic conditions prevalent in the area.*

**List of Institutes**

1. Krishi Vigyan Kendras (KVKs)
2. State Agricultural Universities (SAUs)
3. National Institute of Rural Development & Panchayati Raj (NIRD&PR), Hyderabad.
4. National Institute of Agriculture Marketing (NIAM), Jaipur
5. National Remote Sensing Centre (NRSC)
6. Central Institute of Post-Harvest Engineering and Technology (CIPHET), Ludhiana
7. National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Sonapat
8. Agricultural and Processed Food Products Export Development Authority (APEDA)
9. Central Food Technological Research Institute (CFTRI)
10. Indian Institute of Technologies (IITs)
11. Indian Institute of Management (IIM)
12. Sill Development Universities in the States
13. Agriculture Skill Council of India, Gurugram
14. National Institute of Technology (NIT),
15. National Institute of Agricultural Extension Management (MANAGE), Hyderabad.
16. Central Arid Zone Research Institute (CAZRI), Jodhpur.
17. Indian Institute of Soil and Water Conservation (IISWC), Dehradun.
18. Central Research Institute for Dry land Agriculture (CRIDA), Hyderabad.
19. Water Technology Centres (WTCs)
20. Institute of Rural Management(IRMA), Anand
21. Indian Institute of Forest Management (IIFM), Dehradun
22. Soil and Land Use Survey of India (SLUSI), Delhi.
23. Central Agro-forestry Research Institute (CAFRI), Jhansi.
24. Indian Council of Forestry Research and Education (ICFRE)
25. National Bureau of Soil Survey & Land use Planning (NBSS&LUP), Nagpur.
26. Bankers Institute of Rural Development (BIRD)
27. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad
28. Indian Grassland & Fodder Research Institutes (IGFRI), Jhansi