World Bank Funded

Uttarakhand Decentralized Watershed Development Project -II

UPDATED STATUS








DECEMBER 2020

Watershed Management Directorate, Uttarakand
Dehradun

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CONTENTS

EXECUTIVE SUMMARY

THE PROJECT

With an objective to increase the efficiency of natural resource use and productivity of rainfed agriculture by participating communities in selected micro watersheds of the State, the Uttarakhand Decentralized Watershed Development Project is implementing in 526 Gram Panchayats in 18 Developmental Blocks, of 8 hilly Districts in Uttarakhand. The Project components are: (1) Social Mobilization and Participatory Watershed Planning; (2) Watershed Treatment and Rainfed Area Development; (3) Enhanced Livelihood Opportunities; and (4) Knowledge Management and Project Coordination.

PROJECT AREA	:	82 MWS (263837 ha.)
GRAM PANCHAYATS	:	527 (153318.77 ha)
ARABLE AREA (Baseline)	:	39522 ha (Irrigated- 5246.386 ha, Un-irrigated - 34275.917 ha)
DEVELOPMENT BLOCKS	:	18
DISTRICTS	:	Uttarkashi, Dehradun, Tehri, Pauri, Rudraprayag, Almora, Pithoragarh, Bageshwar
PROJECT PERIOD	:	2014 to 2021 (Effective since 15th July 2014)

HIGHLIGHTS OF THE PROJECT

- Implementing through community driven decentralized development approach and designed through inclusion of learning from UDWDP Phase-I.
- In compliance with the 73rd constitutional amendment adequate financial and administrative autonomy is provided to GPs.
- Participatory Monitoring and Evaluation (PME) at GP level as a tool for social audit and transparency.
- Sustainable institutional arrangement and assets maintenance plans.

INSTITUTIONAL ARRANGEMENTS

FIELD OFFICES UNDER WATERSHED MANAGEMENT DIRECTORATE

Six Divisional offices and one PMU unit headed by Deputy Project Directors under two regional Project Director's offices i.e. Garhwal and Kumaun are functional since July 2014.

STATUS OF PROCUREMENT OF MAJOR CONSULTANCIES

Hiring of all major consultancies i.e. PNGO Rudraprayag, FNGO Kumaon and Garhwal, M&E and Hydrology Consultancies, Internal Auditor and Six Agri Business Support Organizations are being finalized and all are in place.

ACHIEVEMENTS

- 527 GPWDPs have been prepared and are being implemented.
- 527 WWMCs have been formed
- 527 Account Assistant and 1057 Village Motivators are in place in Gram Panchayats and Revenue Villages.
- 79 Micro Watershed Plans have been prepared.
- 1,454 Farmer Interest Groups (FIGs) of 16,557 farmers have been constituted. These FIGs have been done a business of Rs.4090.25 Lakhs till now and the savings of FIGs is Rs 298 Lakhs.
- 21 Farmers' Federations (FFs) have been formed through 10,697 farmer HHs belonging to 977 FIGs in all project divisions. The total turnover of FFs till now is Rs.266.38 Lakhs with a profit of 35.93 Lakhs.
- 10 Agribusiness Growth Centres have been approved by State Govt. and construction is under progress.
- 5,877 individuals and 717 group IGAs benefited a total of 9,863 vulnerable households.
- 1,484 water sources have been treated.7,690 existing Tal/ Khal and 229 Naulas renovated.
- 22 Solar Water Lifting Pumps contributing to increase approx. 385,000 lt net water storage capacity and providing irrigation facilities in 232.71 ha gross rainfed area.
- Water storage capacity increased;
    - through different storage structures –62,397 cum for irrigation.
    - through dugout ponds and other percolation structures -6,53,705 cum, impacting soil moisture regime in rainfed areas.
- Gross increase in the irrigated area – 8,034.44 ha
- A total of 48,66,308 man days have been generated through labor component under project activities.

PHYSICAL PROGRESS UNDER MAJOR ACTIVITIES DURING FY TILL NOVEMBER 2020

Demonstrations

▪ Demonstration of water conservation through Village Pond	97	No.
▪ Demonstration of high yielding Agriculture crop (0.2 ha.)	24845	No.
▪ Demonstration of high yielding Vegetable crop (0.08 ha.)	29957	No.
▪ Seeds and Seedlings /High value crop demonstration	1062	Ha.

Plantations

▪ Orchard Development (250 plant/ha.)	5027	Ha.
▪ Forage row Plantation (Ha.)	171	Ha.
▪ Forestry Plantation (Ha.)	4432	Ha.
▪ Napier crop border plantation (Ha.)	899	Ha.

Protected agricultural activities

▪ Poly tunnel and Poly house (No.)	9261	No.

Livestock activities

▪ NBC (No.)	230	No.
▪ NBC Goat (No.)	217	No.
▪ Paravet (AI Service)	44	No.
▪ Animal Shelter (No.)	9294	No.
▪ Mass A.I.	1800	No.

Income Generation Activities for Vulnerable Group members

▪ IGA activities (no. of individual beneficiaries)	5877	No.
▪ IGA activities (no. of Groups)	717	No.

Capacity Development activities

▪ Training and Exposure Visits (Groups)	6711	No.
▪ Staff Training (No.)	2164	No.
▪ Workshops (No.)	14035	No.

Water Harvesting, conservation and use

▪ Irrigation Channel	206	Km.
▪ HDPE Irrigation Pipeline	285	Km.
▪ Irrigation Tank	1214	No.
▪ LDPE Tank	512	No.
▪ Pre Fabricated Geo Membrane Water Harvesting Tank	91	No.
▪ Solar Irrigation Systems	22	No.
▪ Roof Water Harvesting Tank	9636	No.
▪ Village Pond	719	No.
▪ Recharge pit	67085	Cum
▪ Digging of trenches	577641	No
▪ Renovation of existing Tal/Khal and Naulas	7919	No.

Soil Conservation activities

▪ Drainage Line Treatment	679856	Cum
▪ Soil Conservation Structure	130326	Cum

Energy Conservation activities

▪ Bio Gas Plant	52	No.
▪ Solar lantern	7546	No.
▪ Community Solar street panel	6145	No.

Rural Road connectivity program

▪ Rural road improvement	433	Km
▪ Construction of small Bridges	579	No.

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FINANCIAL STATUS - FY 2020-21 (November 2020)

Annual Work Plan for 2020-21 is of Rs. 23239.46 Lakh including beneficiary contribution Rs. 851.74 Lakh.

Budget Provision during FY 2020-21 is Rs. 18464.59 Lakh.

Expenditure during FY 2020-21 is Rs 8581.93 Lakh, while Cumulative expenditure since the inception of the Project is Rs. 75505.21 Lakh.

In addition to the above expenditure beneficiary contribution During the FY 2020-21 *is Rs. 378.39 Lakh, while cumulative beneficiary contribution is Rs. 3792.36 Lakh.*

STATUS OF REIMBURSEMENT

Reimbursement received to the State Government till November 2020 is Rs.508.64 Crore (74.15 MUS$).

KEY PERFORMANCE INDICATORS (KPIs)

PDO level result Indicator	Cumulative progress since July 2015
Indicator 1 : Increase in water discharge – 25%	• 1,484 treated traditional water sources showed increase in water discharge, 7,690 existing Tal/ Khal and 229 Naulas renovated.
Indicator 2 : Increase in biomass. – 20%	• 10,026 ha. Vegetative cover increased (about 46 % of targeted).
Indicator 3: Increase in rain-fed area under irrigation – irrigated 5262 ha. To 7800 ha	• Increase in gross irrigated area – 8,034.44 ha • Water storage capacity increased; ○ through different storage structures – 62,397 cum for irrigation. ○ through dugout ponds and other percolation structures – 6,53,705 cum to increase soil moisture regime, in rainfed areas.
Indicator 4: Increase in productivity in irrigated – 50% and rainfed crops– 20%	**Irrigated area** • 47% farmers have adopted efficient irrigated crop production technologies. • 29,957 demonstrations in irrigated area. • 9,261 Poly house and Poly tunnels. • Input support for off-season high value crops in 3,750 ha. benefitting 16,557 farmers.
	Rainfed area • 62% farmers have adopted in-situ soil and moisture practices along with efficient crop production technologies • 24845 no. of demonstrations done. • Adoption of high value crops in 4,495 ha. • Agriculture terraces repaired in 22,221 cum. • 2,530 ha fallow land shifted to horticulture and agriculture cultivation.
Indicator 5: Direct project beneficiaries, - 80% of which % of female – 50%	• Approx. 77% farmers adopted efficient farming practices through demonstration and adoption practices • 16,557 farmers benefited through agribusiness initiative. 1,454 FIGs formed. • About 35,260 HHs benefited through animal husbandry improvement • 5,877 individual and 717 group total 9,863 vulnerable household benefited through IGA of which 40% are women beneficiaries.

CHAPTER -1

ABOUT THE PROJECT

1.1. BACKGROUND

Watershed is a hydrological unit of an area draining to a common outlet point. It is recognized as an ideal unit for planning and development of land, water and vegetation resource. Watershed concept has been used extensively because of importance of water balance in the study of ecosystems. Integrated watershed management covering an area from the highest point (ridge line) to the outlet is, therefore, the process of formulating, implementing and managing a course of actions involving natural and human resources in a watershed. It takes into account all the factors operating within the watershed. With time the watershed management concept has evolved into a decentralized and participatory approach with financial autonomy to the Panchayati Raj Institution (PRIs), (legal institution under 73rd amendment) thereby improving and ensuring efficient process delivery system. In watershed management the decision making regarding uses and modification of all categories of lands and water within the watershed are made in an iterative process with participation of all stakeholders in the Gram Panchayats (GPs). The repeated coming together and discussion provides opportunity to all stakeholders to balance diverse objectives for enhancement of productivity not only of individually owned resources but also of common property resources, and to consider how their cumulative actions may ensure long term sustainable use of all the natural resources. Since the last decade, it has been realized that ensuring livelihood opportunities and food security of the rural inhabitants is must for a sustainable watershed management approach, thus, focus on increasing the productivity of rainfed areas and ensuring livelihood opportunity for poorest of the poor is the mandate of the project.

1.2. PROJECT OBJECTIVE

The objective of the Project is to increase the efficiency of natural resource use and productivity of rainfed agriculture by participating communities in selected micro watersheds of the State of Uttarakhand.

1.3. PROJECT BENEFICIARIES

The project is expected to benefit about 66,352 households. By enhancing the natural resource base and improving sustainability, the project targeted 527 GPs, which are selected in accordance with the GoI's Common Guidelines for Watershed Development Projects. The project has supported Farmer Federations (FFs) formed under the Gramya- I to ensure their sustainability, scale up their agribusiness development and support the following beneficiary groups:-

Medium, small and marginal farmers: would benefit from: (a) watershed treatment, in particular, rainwater conservation and water harvesting structures that would increase water availability and efficiency; (b) improved support services in agriculture, horticulture, and livestock, including rainfed agriculture development; and (c) agribusiness development and market linkages. Vulnerable groups (e.g., marginal landholders, landless, women, and transhumance): would benefit from: (a) improved livelihoods, mainly in the livestock and services sectors; and (b) support of transhumance through a dedicated Transhumant Action Plan.

PRI institutions, such as GPs: would gain capacity in project management and social accountability, in particular, in preparing and implementing Gram Panchayat Watershed Development Plans (GPWDPs). Gramya II would also engage Van Panchayats (VPs) in managing interventions for inter-GP areas and reserve forests. The project would also promote the formation of community-based organizations, such as water user groups, farmer interest groups (FIGs), and FFs.

Key institutional stakeholders in watershed development: would benefit under Gramya-II through expanded knowledge outreach to Partner NGOs, Field NGOs, agribusiness support agencies, six district headquarters, regional headquarters in each of the two regions of the State of Uttarakhand and the Watershed Management Directorate (WMD).

1.4. PROJECT AREA

Middle Himalayas adjoining the Gramya-I area in about 82 MWS covering an area of about 2.638 lakh ha. Project would re-visit the UDWDP Phase-I areas to consolidate its achievements especially with focus on agribusiness. The Project area falls in 18 development blocks of 8 hill districts of the State. Project proposes to benefit 2.92 lakh populations of about 527 GPs (1057 Revenue Villages, 66,352 Households).

DETAIL OF PROJECT AREA SELECTED FOR UDWDP – II

District	Development Blocks	No. of MWS	Area (Ha.)	Gram Panchayat		Revenue Villages		Arable Land (in Ha)		
				No.	Area (Ha.)	No.	Area (Ha.)	Irrigated	Un-irrigated	Total arable area
Almora	Dhauladevi, Bhasiyanchana	9	28396	87	24421.12	188	24421.12	430.008	7711.89	8141.898
Uttarkashi	Mori, Naugaon, Purola	17	45103	68	9820.12	120	9820.12	1373.265	3326.559	4699.824
Dehradun	Kalsi, Chakrata	9	29242	56	21016.765	76	21016.765	618.846	3237.656	3856.502
Tehri	Jaunpur	13	31730	78	17833.16	143	17833.16	410.469	4524.372	4934.841
Rudraprayag	Ukhimath, Jakholi, Augustmuni	6	19201	61	7885.40	107	7885.40	674.308	3149.434	3823.742
Pithoragarh	Munsiyari, Didihat, Berinag	9	25739	64	21791.12	147	21791.12	747.594	3592.729	4340.323
Bageshwar	Kapkot	11	55296	44	34456	78	34456	750.736	3781.966	4532.702
Pauri	Pokhara, Ekeshwar	7	26713	62	12091.42	175	12091.42	185.151	4529.378	4714.529
Model MWS	Raipur	1	2417	7	4023.41	23	4023.41	56.009	421.933	477.942
TOTAL	**18**	**82**	**263837**	**527**	**153318.77**	**1057**	**153318.77**	**5246.386**	**34275.917**	**39522.3028**

1.5. PROJECT PERIOD

The project period will be for seven years i.e. from July 2014 to September 2021.

1.6. PROJECT COST

The project cost is 156.0 million US$ with IDA Credit as 109.2 million US$ (70%), State contribution as 40.20 million US$ (25.77%) and beneficiary contribution as 6.60 million US$ (4.23%).

Project Components	Project Cost		IDA Financing		GoUK Financing		Beneficiary Contribution	
	Million US$	%	Million US$	%	Million US$	%	Million US$	%
1. Social Mobilization and Participatory Watershed Planning	22.67	15	9.43	42	13.24	58	0.0	0
2. Watershed Treatment and Rainfed Area Development	86.79	56	69.42	80	10.83	12	6.54	8
3. Enhancing Livelihood Opportunities	17.29	11	13.83	80.0	3.4	20	0.06	0
4. Knowledge Management and Project Coordination	29.25	19	16.52	56	12.73	44	0	0
Total Project Cost	**156.0**	**100**	**109.2**	**70**	**45.8**	**27.0**	**6.60**	**4.23**

1.7. PROJECT COMPONENTS

COMPONENT 1: Social Mobilization and Participatory Watershed Planning (US$ 22.67.0 Million, of which IDA US$9.43 million)

(a) Mobilization of GPs in order to prepare integrated and coordinated GPWDPs including, inter alia, the identification of specific interventions to increase effective land use and water resource management and develop agriculture and income generation activities.

(b) Development of watershed treatment plans to guide the preparation and implementation of GPWDPs.

COMPONENT 2: Watershed Treatment and Rainfed Area Development (US$86.79 Million, of which IDA US$69.42 million)

Sub Component 2 a. Watershed Treatment and Water Source Sustainability

Construction and rehabilitation of recharge pits, ponds, vegetative structures and other soil conservation structures

(a) Perimeter rehabilitation with Napier and other grasses
(b) Forestry activities (e.g., plantations and nursery development) and

(c) Promotion of alternate energy sources (e.g., biogas plants, solar cookers, water mills, and pine briquette production).

Sub Component 2 b. Rainfed Area Development

In the rainfed areas, the improved seeds would promote rainwater conservation, climate-smart agricultural practices, and on-farm integrated crop management. In the irrigated areas, the project would promote diversification to high-value off-season vegetable crops, adoption of innovative agronomic practices, establishment of greenhouses and tunnels, productivity enhancement of irrigated maize, wheat and other crops, and production of bio-fertilizers and vermi-compost. The Project would also provide support in the horticulture and livestock sectors, including new orchard development, orchard rehabilitation, fodder production, and livestock genetic upgrading.

COMPONENT 3: Enhancing Livelihood Opportunities (US$17.29 million, of which IDA US$13.83 million)

Sub Component 3 a. Agribusiness Support

The support would include:

(a) Formation of FIGs and their FFs, building on project supported water user groups and others;

(b) Building capacity of FIGs and FFs in business planning and supply chain development, including input supply and value addition and

(c) Providing market oriented extension services and marketing support, including market intelligence and brand creation.

Sub Component 3 b. Support for Vulnerable Groups

To finance entrepreneurial activities for Vulnerable Groups in the targeted GPs, including landless, vulnerable women, and transhumance, who will not directly benefit from the major project investments under Component

(a) The Project has a dedicated transhumant action plan, which will have an emphasis on livestock support.

Sub-Component 3c - Consolidation of Gramya-I activities

It would repair the damaged assets created in Gramya-I and strengthen the business planning and management capacity of 27 FFs formed under Gramya-I to develop them as sustainable producer businesses. The support for agribusiness development will be provided by local NGOs.

COMPONENT 4: Knowledge Management and Project Coordination (US$29.25 million, of which IDA US$16.52 million)

Sub-component 4a: Knowledge Management

(a) Training and dissemination activities for targeted local institutions and the GoI-supported programs
(b) Establishment of a Center of Excellence in Watershed Development.
(c) Information and educational exchanges among and between the various Gramya II stakeholders
(d) Project supervision through an ICT-based management information system (MIS)
(e) Hydrology monitoring stations to build a comprehensive dataset at the micro watershed level and
(f) Social accountability though participatory monitoring exercises (PMEs), social audits and grievance redress mechanisms.

Sub-component 4b: Project Coordination

Incremental expenditures incurred by the Project Implementing Entity for Project implementation, management and supervision

(a) Financial management and annual internal and external audits

(b) Incremental contractual staff salaries (other than consultants), excluding salaries of civil servants deputed to the Project and

(c) Dissemination of Project-related information.

1.8. PROJECT HIGHLIGHTS

- Community driven decentralized development approach
- Learning from UDWDP Phase-I are incorporated to design the second phase of the project.
- Formulation of Gram Panchayat Watershed Development Plans (GPWDP) by the community.
- Budget envelop for GPWDP is calculated on the basis of 35% of population and 65% of GP area, with a minimum cap of Rs. 40 lakhs and a maximum cap of Rs. 1.60 Crore.
- Provision of dedicated account at GP level for the Project funds.
- The Project fund is being operated by the joint signature of Gram Pradhan and Woman Ward Member.
- In compliance with the 73rd constitutional amendment adequate financial and administrative autonomy is provided to GPs.
- Involvement of NGOs for mobilization, implementation and monitoring level.
- Appointment of dedicated Account Assistant by Gram Panchayat.

- ❖ Appointment of village level woman motivator.
- ❖ Provision of Procurement and financial system manuals for GPs.
- ❖ Provision of Women Aam Sabha for consent to GPWDP and 50% women representation in village level committees.
- ❖ Focus on Water User Groups, Vulnerable Groups & Transhumant Population.
- ❖ Formation of Farmer Interest Groups (FIGs), Farmer Federation (FF) for market linkages and Agribusiness initiative.
- ❖ Participatory Monitoring and Evaluation (PME) at GP level as a tool for social audit and transparency.
- ❖ Market linkages through Agribusiness Support Agencies.
- ❖ Convergence at GP level with other development programmes/schemes.
- ❖ Sustainable institutional arrangement and assets maintenance plans.

1.9. EXPECTED OUTCOME INDICATORS

1. Increase in water discharge – 25% at the end of the Project (7th year)
2. Increase in biomass – 20% at the end of the Project (7th year)
3. Increase in rainfed area under irrigation- 5262 ha. to 7800 ha. at the end of the Project (7th year)
4. Increase in productivity in irrigated and rainfed crops –50% of irrigated and 20% of rainfed at the end of the Project (7th year)
5. 80% HHs should be direct project beneficiaries from the Project interventions.

1.10. ENVIRONMENTAL AND SOCIAL SAFEGUARDS THE PROJECT

The application and mitigation of all environment and social safeguards policies of World Bank are being addressed through the Environmental and Social Management Framework (ESMF) in planning and implementation of Project activities. The ESMF is applied as a tool for decision-making to promote environmental sustainability and equity. The ESMF includes criteria for screening and exclusion of subprojects that may have irreversible impacts and includes formats to carry out the Environmental and Social Assessment during GPWDP preparation. Wherever required, mitigation measures are also being proposed. The implementation status of mitigation measures is proposed to be monitored and evaluate from second round of PME; as the first round of PME is already in progress in different GPs.

THE STRATEGIES/ ACTIVITIES APPLICABLE TO WORLD BANK'S SAFEGUARD POLICIES ARE AS FOLLOWS:

S. no.	Name and code of World Bank's safeguard policy	Strategies/ Activities under UDWDP-II
1	**Environmental Assessment (OP 4.01)**	Participatory planning through traditional local knowledge along with technical inputs of MTD members and side specific designs are being used for the implementation of watershed-related interventions to reduce any adverse impact on the hydraulic and geological regime in the area. Mitigation measures are also being taken up to prevent long-term slope instability, changes in surface water flow, improper disposal of debris or changes in water availability.
2	**Natural Habitats (OP 4.04)**	The soil and moisture conservation activities, maintenance and rejuvenation of water sources, protection activities like Oak ANR and rehabilitation of slopes through vegetative treatment along with forage row plantation will have positive impact on natural habitats and their functions.
3	**Pest Management (OP 4.09)**	Integrate Pest & Disease Management **(**IPDM) is a integral part of Project's Integrated Crop management (ICM) approach. IDPM is a tool for pests and disease management, where in mechanical, cultural, biological, chemical, use of resistant varieties, and quarantine methods are carefully combined to keep pest & diseases at below economic injure levels to obtain optimum crop yields.
4	**Physical Cultural Resources (OP/BP 4.11)**	In accordance to the criteria for exclusion of sub-projects/activities under Project, such activities are being excluded, which may cause damage to cultural property, places of religious importance and restricted historical monuments viz. resources of archeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic, or other cultural significance.
5	**Indigenous Peoples (OD 4.20)**	Project fosters full respect for indigenous peoples' dignity, human rights, and cultural uniqueness and so that they; (i) receive culturally compatible social and economic benefits, and (ii) do not suffer adverse effects during the implementation of project activities. Under the Project a strategy has been formulated for traversing and semi-sedentary transhumant population to assist them in an attempt to improve their quality of life through project interventions.
6	**Forest OP 4.36)**	All the NRM related activities in reserved and protected forests under project area are in process of planning in accordance to the Forest Working Plan with the approval of Divisional Forest Officer. The activities will be implemented through Van Panchayats along with technical inputs of MDT to enhance the health and quality of forests.

1.11. MONITORING IN THE PROJECT

- **State and District level monitoring :** State Steering Committee and District level Watershed Committees have been constituted and regular meetings are being organized
- **Internal Monitoring :**
  - WMD staff does regular field visits ,
  - Through MIS/GIS: Financial progress reports are generated regularly using FMIS.
  - HHs wise data base for beneficiaries for each activity is being generated.

- **Evidence based monitoring:** 'Pratyaksh app' is used regularly to obtain the information and photographs of field level created assets on GIS platform.
- **External Monitoring:** Baseline Survey, concurrent monitoring, mid-term review and final impact evaluation.
  - Inception report submitted and working draft of baseline survey also submitted.
- **Hydrological monitoring:** Continuous monitoring on surface runoff, reduction in silt load and increase in water availability in selected 8 MWS.
  - Inception report submitted and baseline survey to commence soon.

1.12. AUDIT ARRANGEMENTS IN THE PROJECT

1. **External Audit:** Annual Certification AG audit of the Project.
2. **Internal Audit:** Quarterly and Annual Audit of all the Project offices and 20% sample GPs by an independent firm of Chartered Accountant empanelled in the CAG roll.
3. **Post Procurement Audit:** by World Bank on annual basis.
4. **GP Audit:** All the Gram Panchayats in the Project are subjected to the annual mandatory audit by an independent audit firm.

1.13. STATUTORY COMMITTEES IN THE PROJECT

1. **At Gram Panchayat level –** Water and Watershed Management Committee under the Chairmanship of Gram Pradhan
2. **At District level –** District watershed Committee under the Chairmanship of Zila Panchayat Adhayaksh
3. **At State level –** Project State Steering Committee under the Chairmanship of Additional Chief Secretary and APC, Govt. of Uttarakhand

1.14. LEGAL COVENANTS APPLICABLE TO THE PROJECT

1. **Project Steering Committee -** Establish and thereafter maintain throughout the period of implementation of the Project, a state-level steering committee.
2. **WMD Multi-disciplinary teams at district level-** For each district involved in the Project, designate and thereafter maintain throughout the period of implementation of the Project, a multi-disciplinary team.
3. **Project internal Auditor -** Hire by no later than six (6) months after the Effective Date, an internal auditor, under terms of reference acceptable to the Association.
4. **Project computerized accounting system-** Establish by no later than three (3) month after the Effective Date, and thereafter maintain throughout the period of implementation of the Project, a computerized accounting system.

5. **Interim Financial Report-** Furnish to the Recipient and the Association, not later than forty-five (45) days after the end of each calendar quarter, an interim financial report.
6. **Operational manual and safeguards instruments -** The Project Implementing Entity shall implement the Project in accordance with the Operations Manual, ESMF and each environmental management plan and/or social management plan prepared there under, and TAP.

1.15. PROJECT PREPARATION - KEY DATES

1. Project Preparation Mission - April 15-23, 2013
2. Project Appraisal Mission - November 11-16, 2013
3. Project Negotiation - January 8, 2014
4. World Bank Board Approval - March 31st 2014
5. Project Agreement Signing- 30th May, 2014
6. Project effectiveness date – 15th July, 2014
7. Project Closing date – 30th September, 2021

1.16. PROJECT MANUALS

The Project Manuals are prepared in-house to adopt uniform planning and implementation approach, technical guidance and smooth financial and procurement procedures for all the Project stakeholder. The main Project Manuals are:-

Operational Manual, Environmental & Social Management Framework (ESMF), Project Procurement Manual, Community Procurement Manual, Financial Management System, Financial System Manual for GP, Forestry, Soil & Water Conservation, Agriculture & Horticulture Component, Animal Husbandry Component, Capacity building strategy, Communication strategy, Agribusiness strategy, Participatory Monitoring & Evaluation and Transhumant Action Plan (TAP) have been prepared and hosted in the website http://wmduk.gov.in/UDWDP.html.

CHAPTER -2

FINANCIAL PROFILE OF THE PROJECT (NOVEMBER 2020)

2.1. BUDGET PROVISION AND STATUS OF EXPENDITURE FY 2020-21

Cumulative expenditure till March, 2019	Progress during the Financial Year 2020-21 (Rs. in Lakh)						Cumulative expenditure since the inception of the Project
	Outlay	Budget Provision	Released Budget	Expenditure up to October,, 2020	Expenditure during November, 2020	Cumulative Expenditure during FY 20120-21	
66923.28	22386.30	18464.59	18452.59	6832.73	1749.20	8581.93	75505.21

- **In addition to the above beneficiary contribution During the FY 2020-21 is 378.39 Lakh.**
- **Cumulative beneficiary contribution is Rs 3792.36 Lakh.**

2.2. FINANCIAL PROGRESS (Rs. in Cr.)

	Total	IDA	Beneficiary contribution	State contribution
Project cost:	1070	754	44	272
Expenditure up to March 2020:	703.37	483.63	34.14	185.60
AWP 2020-21:	23,2.39	16,6.65	8.53	5,7.21
Expenditure During FY 2020-21 up to November 2020:	89.60	63.22	3.78	22.60
Cumulative expenditure up to November 20	792.97	546.85	37.92	208.20
Reimbursement up to November, 2020	**508.64 (74.15 MUS$)**			

2.3. COMPONENT WISE FINANCIAL PROGRESS (Rs. in Cr,)

Sl. No.	Component / Sub-Component	Project Target (for project period)	Financial Progress Till FY 2019-20	Financial Progress FY 2020-21	Cumulative progress since inception of the project
1	2	3	4	4	5
1	Social Mobilization and Participatory Watershed Planning	156.70	112.98	13.35	126.33
2	Watershed Treatment & Rain-fed Area Development	597.31	393.24	55.33	448.57
3	Enhancing Livelihood Opportunities	119.44	69.35	8.33	77.68

Sl. No.	Component / Sub-Component	Project Target (for project period)	Financial Progress Till FY 2019-20	Financial Progress FY 2020-21	Cumulative progress since inception of the project
1	**2**	**3**	**4**	**4**	**5**
4	Knowledge Management and Project Coordination	197.13	127.80	12.60	140.40
	GRAND TOTAL (1-4)	**1070.58**	**703.37**	**89.60**	**792.97**

2.4 PROJECTED EXPENDITURE FOR THE FINANCIAL YEAR 2020-21

IN MUS$

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Total Expenditure	**1.12**	**4.48**	**10.66**	**14.73**	**30.99**
Reimbursable Amount	**0.47**	**3.00**	**7.65**	**11.10**	**22.22**

2.5. ANNUAL WORK PLAN FOR 2020-21

Subject / component	Rs. in Lakh
Annual Work Plan 2020-21	**23239.46**
Budgeted Amount	**22386.29**
❖ **Salaries**	**2408.32**
❖ **Operating Cost**	**485.30**
❖ **Work Component**	**19492.67**
Proposed Beneficiary Contribution	**853.17**
Budget Provision	**18464.59**
Released Budget	**18452.59**

2.6. PROJECT DISBURSEMENT PROFILE

As per the Project Appraisal Document (PAD) following disbursement profile is envisaged for the Project during its operational period.

EXPECTED DISBURSEMENTS (IN USD MILLION)

Fiscal Year (1st April to 31st March)	2014	2015	2016	2017	2018	2019	2020	2021
Annual	2.80	5.20	14.50	18.50	20.00	20.00	18.20	10.00
Cumulative	2.80	8.00	22.50	41.00	61.00	81.00	99.20	109.20

The Annual Work Plan of UDWDP-II is prepared as per the targeted disbursement profile. The same figure translates in to the budgetary provision for the Project.

2.7. CUMULATIVE DISBURSEMENT STATUS

Project Size - 156 Million US$
Assistance size - 109.20 Million US$
Disbursement Graph as of September 30th, 2020

Disbursement Profile as per PAD (in US$ Million)

Fiscal Year	2014	2015	2016	2017	2018	2019	2020	2021
Projected Cumulative disbursement	2.8	8.0	22.5	41.0	61.0	81.0	99.2	109.20
Actual Disbursement Status	1.18	4.155	21.92	41.60	59.67	70.67	74.15	

Note : i) Till date 74.15 MUS$ has been disbursed;
ii) Projected disbursement for FY 2020-21 is 22.22 MUS$,

2.8. UPDATED STATUS OF REIMBURSEMENT

Reimbursement received to the State Government is given below:-

Sl. No.	Claim Application No.	Submission date	Amount in INR lakh	Remarks
1	1	26-06-2014	270.24	Retroactive financing
2	2	07-08-2014	46.42	1. Salary component is non reimbursable 2. All other Budgeted expenditures are reimbursed by World Bank @ 80% of the expenditure.
3	3	18-10-2014	122.89	
4	4	16-01-2015	285.38	
5	5	12-05-2015	1057.63	
6	6	27-07-2015	127.83	
7	8	09-11-2015	483.24	
8	9	08-02-2016	261.33	
9	10	19-05-2016	2742.10	
10	11	08-08-2016	655.53	
11	12	18-11-2016	1998.31	
12	13	06-02-2017	1497.88	
13	14	17.05.2017	4908.71	
14	15	29.07.2017	526.40	
15	16	23.11.2017	2303.58	
16	17	07.02.2018	3287.50	
17	18	17.05.2018	6845.66	

Sl. No.	Claim Application No.	Submission date	Amount in INR lakh	Remarks
18	19	01.08.2018	296.912	
19	20	14.11.2018	2813.48	
20	21	16.02.2019	2965.17	
21	22	15.05.2019	6593.01	
22	23	07.08.2019	240.64	
23	24	05.12.2019	1130.37	
24	25	15.02.2020	1060.64	
25	26	28.04.2020	2328.94	
26	27	23.05.2020	3430.77	
27	28	04.08.2020	354.74	
27	28	04 -11-2020	2228.69	
	Total		50863.99	
			74.15 MUS$	

2.9. PROJECT DISBURSEMENT TRACKING

UTTARAKHAND DECENTRALIZED WATERSHED DEVELOPMENT –II PROJECT (GRAMYA-II) (IDA CR.NO- 5369-IN)		
	SITUATION AS OF:30-11-2020	**US$**
	BANK ACTUALS AT BEGINNING OF FY 2020-21	
1	**Total Loan/Credit Amount**	**109200000**
2	**Undisbursed Balance at Beginning of FY 2020-21**	**38532500**
3	**Total Commitments at Beginning of FY 2020-21**	**23357780**
	PLANNED LOAN/CREDIT DISBURSEMENTS, CURRENT BANK FY	
4	**Projected Loan/Credit Disbursements for FY 2020-21**	**222,19,883**
5	**Projected Additional Commitments for FY 2020-21**	**-**
	BANK ACTUALS UNTIL TO DATE	
6	**Cumulative Actual Disbursements in FY 2020-21**	**3476138**
7	**Cumulative Actual New Commitments in FY 2020-21**	**-**
	PLANNING FOR REMAINDER OF FY 2020-21	
8	**Projected Disbursements for Remainder of FY 2020-21**	**18743745**
9	**Projected New Commitments for Remainder of FY 2020-21**	**-**

Note:- Bank FY means 1st July to 30th June.

CHAPTER - 3

INNOVATIVE ACTIVITIES AND THRUST AREAS UNDER PROJECT

3.1. INNOVATIVE INTERVENTIONS:

3.1.1. Solar Irrigation System

With more than 90% of the agriculture in the hill districts being rainfed, marginal and small farmers are under continuous pressure to sustain their agriculture productivity. One of the main factors which affect agricultural productivity in the hills is availability of water. In the villages with agricultural fields at up-stream and water source at the down-stream, solar energy pumps are being promoted by the project to ensure availability of water for irrigation and other chores.

In order to ensure optimum utilization of the collected water and increase the efficiency of water usage, technologies like sprinkler and drip irrigation systems are also being promoted. So far, 22 solar irrigation systems are being installed, through which about 385,000 liters of additional storage capacity have been developed and are providing irrigation facilities in 232.71 ha gross rainfed area.

3.1.2. Mass Artificial Insemination in clusters with Female Sorted Sexed Semen Technology

Under Gramya-2 project area of Pauri division specially, it has been observed that the continuous movement and permanent resettlement of the people out of their native mountain villages has been a topic of intense social and political debate in Uttarakhand, with a very high degree of Agro-climatic diversity, fragmented land holdings, enormous pressure of wild animals on the existing rainfed areas. Due to all these constraints, the people of the area are forced to look for alternative

avenues to augment their better incomes. Switching on to the livestock livelihoods, with strategic group discussions and meetings with project staff , communities and animal husbandry deptt., it was decided to bring forth the idea of creating surplus produce of milk by employing the Mass Artificial Insemination in the breedable animals of the two blocks, which is technically synchronising their oestrus cycle through hormonal therapy and medicines so that most of the breedable cattle are undergoing Artificial Insemination which actually is Mass Artificial Insemination. In the initial stage only 200 animals were taken as case study, which went off with very good results, thus inviting a bigger goal of Mass A.I. in 1800 animals and with adds-on comprising new technology of Female Sorted Sexed Semen.

Impact of the intervention- After a period of one year, this has proved timely service availability of the skilled paravet with the least number of visits, saving the expected losses occurring due to errors in heat detection, anoestrus & repeat breeding, removing the feeding expenses of male calves and ultimately decreasing dry period and reducing the feeding expenses and finally creating opportunity to sell surplus heifers to other farmers.

3.1.3. Certified Seed Production in rainfed areas

In Uttarakhand, impacts of climate change are leading to decrease in productivity which is adversely affecting the livelihoods of the 70% of population engaged in agriculture. Thus, project is focusing to increase the productivity with the viewpoint of increase in household income of mountain farmers. Of all the inputs used in agriculture, use of quality seed plays an important role in deciding the productivity of crops. The seed replacement rate for the plains stands at 15 -20 percent, while for the hills it is a mere 3 – 4 per cent. Mountain farmers are in practice of saving produce of their previous season's crop and using the same as seed for the next sowing season. Certified seeds of agriculture crops are available only with seed corporations. Although the state agriculture department promotes seed replacement by popularizing high yielding varieties through demonstrations and through subsidies on new varieties, yet the production of certified seeds needs special attention and care.

Over the years, raising cereal crops was increasingly viewed as non-profitable by the farming community. If the same could be done with an aim of producing certified seed, it would attract farmers towards cultivation of crops like barnyard and finger millets as a means of combating climate change. Though research institutes produce small amounts of breeder seed they need organized farmers collectives and institutes for its multiplication to foundation or certified seeds.

With this in mind, Gramya motivated, guided and organized the farmers of Dhaula Devi Block into FIG's and subsequently the 18 FIGs were registered as a federation called "*Jagnath Krishi Beej Utpadak Sangh, Artola*". The inception of the "Certified Seed Production Programme" took place in the year 2015. This federation was the first to receive the license to sell certified and foundation seeds from Tarai Seeds and Development Corporation (TDC).

An increase in awareness regarding scientific cultivation methods and registration procedures for seed production among farmers on their own lands, leads to greater economic returns. Unlike other agricultural produce seeds can be multiplied and produced in the fields itself. Certified seeds cost two to four times more than the value of grain therefore their production is profitable and at the same time its contributes towards seed sufficiency of the state.

Till now the federation has been marketed 720 qt certified rainfed seeds of Mandua, Madira, Ramdana, Gahat, Lantil, Mustard etc. with sale price of Rs 38,94,270.00. Total savings of the federation till date, are Rs. 4,10,860.00.

3.1.4. Conversion of Fallow lands into cultivable lands

Migration is not a new phenomenon in the villages of Uttarakhand. In fact all the impacts of climate change in hill agriculture lead to migration from hill villages, which simultaneously lead to the conversion of cultivable lands into fallow lands. The capacity development and created irrigation facilities through project are motivating communities to expend their area under cultivation through cluster approach in fallows and generate marketable surplus of agri-horti produces. The comeback of migrated families and individuals, inspired through project's climate resilience practices is also impacting the land use change i.e., from fallow lands to cultivable land. In the project area a total of 2,530.88 ha fallow land have been shifted under cultivation till now through horticulture crop (1669.33 ha), fodder crop (423.95 ha) and agriculture crop cultivation (437.71 ha).

3.2. THRUST AREAS UNDER THE PROJECT:

3.2.1. Water Source Sustainability

The environmental conditions of the Himalayan region have been degrading and most of the forest stands have disappeared gradually. Simultaneously, Himalayan springs on which people depend, have dried up due to interference in their natural recharge caused mainly by deforestation, mining, construction of roads and other previous unplanned developmental activities. Thus, keeping the view point of rejuvenation of depleting traditional water sources through springshed management approach, the Project is focusing on; 1)- Controlling runoff to minimize intensity of soil erosion, 2)- Rain water conservation and reducing siltation through conservation structures, and 3)- Increase the ground water recharge through in-situ conservation practices and water harvesting structure to maintain the moisture regime and availability of irrigation.

To rejuvenate and increase water discharge in natural springs, dharas and naulas, treatment of the identified 1500 depleting traditional water sources has been targeted. The treatment of traditional water sources is being carried out by harvesting of rain water for ground water recharge through different vegetative and engineering measures. Till now construction of trenches 5,77,641 nos., village percolation ponds/ dugout ponds 732 nos. and 67,085 cum recharge pits is being done. These activities along with forestry and horticulture plantations are not only enhancing the moisture regime in the rainfed area but also would be helpful for rejuvenation of traditional water sources.

3.2.1. Agribusiness Growth Centres

In the hill districts of Uttarakhand due to the geographical remoteness of villages, agriculture is not regarded as a viable business option as the landholdings are small, fragmented and productivity is very low. The hill farmers lack technical knowhow regarding diversification, modern agronomical practices, market access, scopes for credit linkages and options to do value addition of their farm produce. In this context, it is envisaged to establish agribusiness growth centres in remote areas of the state.

These Agribusiness Growth Centres will support the farmers in exploring, developing, processing, marketing, knowledge sharing, information dissemination and financing of the niche farm produce in the village clusters. The Growth centres will provide all possible inputs and output support facilities to the farmers in the nearby village clusters. Till date, all 10 Agribusiness Growth Centres approved by State Govt are functional. The Growth centres will provide all possible inputs and output support facilities to the farmers in the nearby village cluster such as; i) Input, advisory and extension support, ii) Value addition, Marketing and Logistic Support.

CHAPTER -4

OUTCOME AND IMPACTS

4.1. Project's Achievements; as per Mid Term Review Report of External Monitoring Agency.

Project has hired Ms SUTRA Ltd. as an external monitoring agency which is responsible for Baseline, Mid Term and Final Impact assessment of Project activities. The Mid-Term review focuses not only on results measurement but also impacts achieved till MTR i.e. July 2019, which maybe intended or unintended. The aim of the review is to assess the progress against its targets and assess the process involved in achieving the results as measured by the relevant indicators stated in PAD. A comparative analysis of performance in the project areas as compared to the control areas under both “With Project” and “Without Project” scenarios has been undertaken in the Mid-Term review.

4.1.1. PDO level Achievements

PDO 1: Increase in water discharge – Increase in water discharge by 12.3% to 22.2% in Pre-Monsoon and 13.8% to 27.0% in post monsoon has been achieved against a target of 10% by MTR.

PDO 2: Increase in Biomass - The increase in biomass has been reported to increase by 10.58% from 27.69 Tonnes /Ha to 30.62 Tonnes /Ha.

PDO 3: Increase in rainfed area under irrigation- 3252.8. Ha of additional rainfed area has been brought under irrigation making land reclaimed as 8514.8 Ha (baseline 5262 Ha) against target of 6050 Ha till mid-term, 40.7 percent more than the targeted area till MTR.

PDO 4: Increase in productivity- The data collected for the Midterm shows that there is a net increase of 23.7 Qtls/Ha in the average productivity of Irrigated crops corresponding to 37.2 per cent increase in productivity against the year 4 (MTR) targets of 30 per cent.

With respect to rainfed agriculture too, there is significant achievement in the productivity has been documented corresponding to 27.3 per cent and 27.9 per cent increase in productivity for Kharif and Rabi respectively over baseline data. The target for increase in productivity of rainfed crops was 5 present for Year 4 i.e. Midterm.

4.1.1. Other Achievements

Fallow land under cultivation 1854.4 Ha of previously fallow land has been brought under cultivation through improved irrigation facilities.

Impact on Land Use Land Cover (LULC) shows 3.6% percent increase in area under agriculture throughout the 8 micro sheds along with a 0.9% increase in the forest cover. There LULC also shows a good 2.5% reduction in the area with or without scrubs.

Land Conversion Reduction of 4.7 percent barren land in the project area attributable to forestry intervention.

Crop Demonstrations; 16,367 demonstrations for high yielding Agriculture crops have been conducted covering 2123.28 Ha till March, 2019. Similarly, 25,817 demonstrations for high yielding vegetable crops were conducted covering in area about 2056.4 Ha in the similar period.

Adoption of improved practices: The MTR assessment shows that soil moisture conservation practices are now widely followed and 65.1 percent of the farmers in the treatment area are using at least five of the soil moisture conservation practices and crop production technologies. 99.9% farmers follow at least 1 of the 13 practices in project area of the sample.

Increase in cropping intensity: Cropping intensity for land under irrigation has increased to 225 from 171 per cent in baseline. The cropping intensity for rainfed crops too has increased to 160 in midterm from 152 per cent in baseline.

Productivity Enhancement 37.2 percentage increase in productivity of irrigated crops and a 27.2 percentage point increase in case of rainfed crops. The percentage increase in productivity of vegetable crops is between 13 and 50% and that for spice crops is between 16 and 51 %.

The key factors contributing to an increase in productivity in irrigated crops are extensive field demonstrations of high yielding crops, proper crop husbandry practices especially nutrient management with integrated use of FYM, vermi-compost and green manure and adoption of improved techniques.

Agribusiness activities: A total of 12 federations have been established as part of the project and of these 6 have achieved self-sustainability. The 6 federations comprising of 452 FIGs and 4581 farmers have increased their profit margins through backward and forward market linkage provided by ABSOs.

A total of 1358 FIGs have been formed thus far with a membership of 15006 farmers. Good proportion of saving of Rs 149.53 lakhs has been done by 1358 FIGs. The FIG's are involved in sale of **102523.1 quintal** of agricultural produce (out of **123758.9 quintal produced)** to the tune of 2056.6 lakhs.

Demonstration of improved agricultural practices including organic techniques, marigold cultivation, farm mechanization, protected cultivation, Medicinal and aromatic plants (MAP's) and kiwi fruit cultivation are the highlights of the project.

Animal Husbandry: The progress of AI in 34 Para Vet centres established till MTR, shows that out of 1366 coverings in Buffaloes, 801 progenies were born and out of 2784 coverings in cows, 1260 progenies were born showing a success rate of 45% - 58%. Once improved, female claves are recruited in production groups, the animal owner would have an additional income of about Rs. 1200 to Rs. 1500 per month per cow in terms of 6-8 times more milk, reduced age at first calving from 10-15 months, 4-6 months reduction in dry period etc.

The mass AI of the cattle in heat with ordinary as well as female sorted sexed semen. Mass AI has been done for 1000 cows across the project area. Of these, 7 progenies have been born until May.

Reducing Drudgery Decrease of Fodder load on forest by stalling open grazing, time spent on collection of fodder reduced from 2.5 hours to 2 hours per family per day.

Increased Women participation in project planning: Adult female participation in GPWDP preparation: 0 to 39.4 %. Female participation in project meetings: 41 to 47 %.

4.2. Mid Term Review Report of Hydrological Monitoring Agency.

Uttarakhand Decentralized Watershed Development Project, GRAMYA-2, has hired 'Ms. WAPCOS Ltd' as hydrological assessment agency, to assess the effects of water treatment, enrichment and water source treatment activities carried out by the project in selected micro-watersheds. 8 representative micro watersheds were identified by WAPCOS for detailed study of the hydrology of micro-watersheds. To obtain data on hydrological and social impacts of the project in these sample micro-watersheds, villages located in different elevation areas such as ridge, mid-range and valleys were selected. The results of the mid-term hydrological assessment are as follows.

- Impacts and benefit of recharge through hydrological structures
  - Increased soil moisture
  - Root zone water availability for forestation, fodder crops, cash crop and other horticultural activities
  - Replenish water sources downstream.
  - Arresting the sheet flows there by reducing soil erosion
  - Act as a nutrient trap.
  - Water made available for irrigation near to the community so that woman folk can work in the field easily.
  - More water means more agriculture and more income to the community and thereby livelihood improvement.
  - Pattern of agriculture changes from self-sustaining to commercial with the availability of more water.
  - Roof top rainwater has reduced efforts of the women to fetch water for domestic purpose.
  - Some of the barren land converted to crop land.

- Some major springs available in micro catchment areas were augmented with the help of water conservation activities. The water discharge of about 1530 identified water sources was assessed for pre-monsoon and post-monsoon years. Out of the identified water sources, pre-monsoon discharge has increased from 13.8% to 22.2% among 1485 water sources. In the post-monsoon period, the percentage increase in water discharge has increased from 13.7% to 26.6%.

- The impact of the project activities has been clearly reflected in the land use and cover area of micro-watersheds. A total of 246 hectare growth has been observed in the cultivated area, 215 hectare increase in forest area and reduction of 495 hectares land with or without scrub is noticed in 8 representative micro-watersheds. The average growth of 8 representative micro-watersheds in agriculture and forest is 3.57% and 0.75% respectively. The average decrease in wastelands in 8 representative micro-watersheds is 2.6%.
- The results of the water budgeting study indicated that the average water availability of the 8-micro watershed during the baseline period was 42.4 million cubic meters, while it increased to 44.18 during the mid-term. This increase of about 1.78 cubic meters in water availability is contributing towards soil moisture retention in micro-catchment areas.
- Almost all watersheds shows reduction in surface runoff. More than 60% of the watersheds shows increase in lateral flows. Wherever reduction in lateral flows notices, it is marginal only to a range of 0.3 to 0.4 %.
- 75% of the watersheds are showing increase in aquifer recharge which directly contribute to water sources as well as soil moisture.
- Average sediment yield of the representative micro watersheds was 71.6 tons per ha per year and this has reduced to 69.3 tons per ha per year. Holistically 17% reduction in sediment load is happening in the watersheds.

CHAPTER -5

PROJECT COMPONENT WISE PHYSICAL ACHIEVEMENTS

5.1. Social Mobilization and Participatory Watershed Planning

This component is focused on mobilization of GPs in order to prepare integrated and coordinated GPWDPs including, inter alia, the identification of specific interventions to increase effective land use and water resource management and develop agriculture and income generation activities. Keeping in view the holistic resource management, the development of micro watershed treatment plans including both, the GP area and the Inter GP area are also of prime focus under this component. The progress till month is as follows;

5.1.1. Preparation of GPWDPs

Since the inception of Project activities at village level, Project has been implementing various capacity development exercises to mobilize the community to priorities their problems and prepare their GPWDP in accordance to the Environmental and Social Management Framework (ESMF) of the Project. A total of 527 GPWDPs have been prepared.

Status of GPWDP preparation

Sl. No.	Name of Division	No. of GPs	No. of GPWDP prepared
1	Almora	87	87
2	Bageshwar	44	44
3	Pithoragarh	64	64
4	Dehradun	56	56
5	Tehri	78	78
6	Pauri	62	62
7	Rudraprayag	61	61
8	Uttarkashi	68	68
9	PMU (Model MWS)	7	7
Total		**527**	**527**

5.1.2. Preparation of MWS Plans

The degraded micro watersheds in Uttarakhand are very prone to erosion and massive loss of top soil due to insufficient vegetative cover. To make efforts to reverse the situation, Project is implementing in a watershed approach i.e. the holistic treatment of micro watershed through top to down approach. Keeping this point in prime focus, MWS plans are being prepared by the community level primary stakeholders under the project with an objective of comprehensive NRM

activities for the management of local springsheds. The status of MWS plan preparation is given below;

Status of MWS Plan preparation

Sl. No.	Name of Division	No. of MWSs	No. of MWS prepared
1	Almora	9	9
2	Bageshwar	10	10
3	Pithoragarh	9	9
4	Dehradun	8	8
5	Tehri	13	13
6	Pauri	6	6
7	Rudraprayag	6	6
8	Uttarkashi	17	17
9	PMU (Model MWS)	1	1
Total		**79**	**79**

5.1.3. Status of procurement of major consultancies

Hiring of all major consultancies i.e. PNGO Rudraprayag, FNGO Kumaon and Garhwal, M&E and Hydrology Consultancies, Internal Auditor and Six Agri Business Support Organizations is being finalized and all are in place. The details are given below:

Consultancy	Status	Name of Firm / Remarks
PNGO Rudraprayag	Finalized and Placed	Asian Society for Entrepreneurship Education and Development, New Delhi
FNGO Kumaon	Finalized and Placed	Himalayan Study Circle for Environment , Child education health and research
FNGO Garhwal	Finalized and Placed	Society of People for Development (SPD) Dehradun
M&E Consultancy	Finalized and Placed, Inception report approved	Sutra Consulting Pvt. Ltd, B 117, Sarvodaya Enclave, New Delhi.
Hydrology Consultancy	Finalized and Placed	M/s WAPCOS Ltd., 76-C Institutional Area, Sector 18, Gurgaon, Haryana
Internal Auditor	Finalized and Placed	M/s Goyal Parul& Co., Chartered Accountants, 54, Meedo Complex, Near Saharanpur Chowk, Dehradun
Six Agri Business Supp Organisation:	Finalized and Placed	Six ABSOs are in place (3 in Kumaon and 3 in Garhwal).

5.1.4. Status of Labour Man days generated

Migration in the Himalayas, as in other mountain areas of the world, is not a new phenomenon. Absence of livelihood opportunities in Uttarakhand hills is among the main causes of migration. To address the issue of local employment for rural folks, the 'enhancing livelihood activities' is a major component under the project. Besides this, as all the project interventions including construction activities are being implemented by villagers it selves, thus these activities creates job opportunities for them within their GPs. The status of labor Man days generated through different project components is given below;

Status of Component wise Labour Man-days generated

S. No	Component activity Up To Month (In Lakh)	Expenditure on Labour (In Lakh)	Skill wise Labour Man-Days Generated(No. of Days)			Total Labour Man-Days Generated(No. of Days)		
			Skilled (Male)	Unskilled		Male	Female	Total
				Male	Female			
1	2	3	4	5	6	7	8	9
1	Agriculture	69.2979	0	12600	18899	12600	18899	31499
2	Horticulture	708.90765	1125	137526	164666	24204	164666	188870
3	Livestock	2587.086	148443	601208	313081	727498	313081	1040580
4	Forestry	1373.1648	0	174766	262149	174766	262149	436916
5	Drainage Line Treatment & soil Conversation	3578.6808	223669	854004	366001	1077671	366001	1443672
6	Water Harvesting & Source Sustainability	3359.5052	209969	801701	343587	1011668	343587	1355256
7	Road Programme	915.9796	57248	218586	93680	275835	93680	369515
Total		**12592.622**	**640454**	**2800391**	**1562063**	**3304242**	**1562063**	**4866308**

1- In engineering works the expenditure on labour component = 40% of total expenditure, in which skilled = 25% and unskilled = 75% of total labour.

2- To calculate gender wise labour, all skilled are considered as male, while under unskilled category, male = 70% & female = 30%

3- In Forestry works, the expenditure on labour component = 70% of total expenditure, in which male =40% & female = 60% of total labour.

4- In Horticulture works, the expenditure on labour component = 65% of total expenditure, in which male = 40% & female = 60% of total labour.

5- Rates of wages are Rs 400/day for skilled labour, while it is Rs220/ day for unskilled labour.

5.2. Watershed Treatment and Rainfed Area Development

5.2.a Sub Component - Watershed Treatment and Water Source Sustainability

This sub component is focused on construction and rehabilitation of recharge pits, ponds, vegetative structures and other soil conservation structures. The activities like perimeter rehabilitation with Napier and other grasses and Forestry activities (e.g., plantations and nursery

development) are aimed to increase vegetative biomass. Promotion of alternate energy sources (e.g., biogas plants, solar cookers, water mills, and pine briquette production) the activities to reduce biotic pressure on the existing forest.

All the watershed treatment and source sustainability related activities under this sub component are being implemented through GPWDPs. The progress till month under GPWDPs is given below;

PHYSICAL & FINANCIAL PROGRESS UNDER GRAM PANCHAYAT WATERSHED DEVELOPMENT PLAN (GPWDP) - TILL NOVEMBER 2020

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2	**Watershed Treatment and Rainfed Area Development**						
2.1	**Watershed Treatment & Source Sustainability**						
2.1.1	**Watershed Treatment (sub projects)**						
2.1.1.01	**Agriculture**						
2.1.1.01.01	Agriculture minikit (0.04 Ha.)	No.	1482	0	0	0	1482
2.1.1.01.02	Agri/Horti. tools	No.	1455	4	0	4	1459
2.1.1.01.03	Terrace repair/Vegetative field boundary	Cum	20760	1225	235	1460	22221
	Financial Sub Total -2.1.1.01(Rs. In Lakh.)		**187.10**	**31.16**	**1.23**	**32.39**	**219.49**
2.1.1.02	**Horticulture**						
2.1.1.02.01	Bio Compost	No.	464	8	5	13	477
2.1.1.02.02	Vermi Compost	No.	74	3	0	3	77
2.1.1.02.03	High value crops minikit (0.04Ha.)	Ha.	21.15	0	0	0	21.15
2.1.1.02.04	Homestead plantation (250 Plant)	Ha.	1387.37	144.80	0.00	144.80	1532.17
2.1.1.02.05	Orchard Development (250 Plant/ha.)	Ha.	352	3	0	3	355
2.1.1.02.06	Orchard Development (250 Plant/ha.) Cluster	Ha.	12	0	11	11	23
2.1.1.02.07	Poly House	No.	81	0	0	0	81
2.1.1.02.08	Poly Tunnel	No.	21	0	0	0	21
	Financial -2.1.1.02 (Rs. In Lakh.)		**603.92**	**42.49**	**6.55**	**49.05**	**652.96**
2.1.1.03	**Livestock**						

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2.1.1.03.01	Animal Shelter/ Sheds	No.	5949	834	116	950	6899
2.1.1.03.02	Mangers	No.	2360	109	21	130	2490
2.1.1.03.03	Animal chari	No.	869	66	33	99	968
2.1.1.03.04	Napier Crop Border Plantation	Ha.	545	0	15	15	560
2.1.1.03.05	Forage row plantation	Ha.	154	17	0	17	171
2.1.1.03.06	Chaff Cutter	No	239	1	0	1	240
	Financial Sub Total -2.1.1.3 (Rs. In Lakh.)		**4119.04**	**453.98**	**165.63**	**619.61**	**4738.65**
2.1.1.04	**Forestry**						
2.1.1.04.01	**Afforestation (1000 plants/ ha.)**						
2.1.1.04.01.01	Advance soil work	Ha.	3751	20	5	25	3776
2.1.1.04.01.02	Plantation	Ha.	3622	15	5	20.0	3642
2.1.1.04.01.03	Maintenance - Ist Year	Ha.	2146	0	0	0	2146
2.1.1.04.01.04	Maintenance - 2nd Year	Ha.	1374	307	10	317	1691
2.1.1.04.02	**Nursery establishment (Farmer nursery(10,000 plants)**	**No.**	0	0	0	0	0
2.1.1.04.03	**Assisted Natural Regeneration of Oak Areas**						
2.1.1.04.03.01	Advance soil work	Ha.	113	0	0	0	113
2.1.1.04.03.02	Plantation	Ha.	95	0	0	0	95
2.1.1.04.03.03	Maintenance - Ist Year	Ha.	85	0	0	0	85
2.1.1.04.03.04	Maintenance - 2nd Year	Ha.	38	0	0	0	38
	Financial Sub Total 2.1.1.4(Rs. In Lakh.)		**2011.21**	**37.64**	**1.74**	**39.38**	**2050.59**
2.1.1.05	**Energy conservation**						
2.1.1.1.05.01	Bio Gas Plant	No.	46	0	6	6	52
2.1.1.1.05.02	Solar lantern	No.	7196	350	0	350	7546

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2.1.1.1.05.03	Community Solar street panel	No.	5800	306	39	345	6145
2.1.1.1.05.04	Pine Briquett machine	No.	20	0	0	0	20
2.1.1.1.05.05	Pine briquett stove	No.	0	0	0	0	0
2.1.1.1.05.06	Solar Cooker	No.	1634	0	0	0	1634
2.1.1.1.05.07	Gharat renovation for power generation	No.	12	3	2	5	17
2.1.1.1.05.08	Energy efficient Chulhas	No.	0	0	0	0	0
	Financial Sub Total 2.1.1.5(Rs. In Lakh.)		**1547.63**	**73.31**	**12.76**	**86.07**	**1633.70**
2.1.1.06	**Drainage Line Treatment& Soil Conservation**						
2.1.1.1.06.1	**Drainage Line Treatment**						
2.1.1.06.1.01	Construction of dry stone check dam	Cum	123822	7379	824	8203	132025
2.1.1.1.06.1.2	Construction of crate wire check dam	Cum	268920	8549	2032	10581	279501
2.1.1.1.06.1.3	River / Nala training work						
2.1.1.1.06.1.3.1	Construction of spur	Cum	990	0	0	0	990
2.1.1.1.06.1.3.2	Retaining Wall	Cum	151003	12779.2	5363.61	18143	169146
2.1.1.1.06.1.4	Construction of Cross Barrier	Cum	423	0	0	0	423
2.1.1.1.06.2	**Soil Conservation**						
2.1.1.1.06.2.1	Construction of vegetative check dam	No.	3618	850	886	1736	5354
2.1.1.1.06.2.2	Vegetative treatment	Sqm	15942	3000	1152	4152	20094
2.1.1.1.06.2.3	Road Side erosion control	Cum	67457.77	1820.13	0	2724	70181
2.1.1.1.06.2.4	Land Slide Treatment	Cum	26117.38	4582.28	1989.72	7017	33134
2.1.1.1.06.2.5	Diversion drain	Km	11.83	2.2	0.0	2	14
	Financial Sub Total 2.1.1.6(Rs. In Lakh.)		**8700.62**	**591.27**	**250.96**	**842.22**	**9542.84**

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2.1.1.07	**Water Harvesting & Source Sustainability**						
2.1.1.07.1	**Water Harvesting**						
2.1.1.1.07.1.01	Irrigation Channel	Km	186.80	15.843	3.488	19.33	206.13
2.1.1.1.07.1.02	HDPE Irrigation Pipeline	Km	243.69	26.22	14.895	41.115	284.80
2.1.1.1.07.1.03	Irrigation Tank	No.	1088	102	24	126	1214
2.1.1.1.07.1.04	Roof Water Harvesting Tank	No.	8724	736	176	912	9636
2.1.1.1.07.1.05	LDP Tank	No.	419	65	28	93	512
2.1.1.1.07.1.06	Solar water lifting Pump with solar panels	No.	9	1	1	2	11
2.1.1.1.07.1.07	Pre Fabricated Geo Membrane Water Harvesting Tank	No.	81	7	3.0	10	91
2.1.1.1.07.1.08	Village Irrigation Pond	No.	30	10	2	12	42
2.1.1.1.07.2	**Source Sustainability**						
2.1.1.1.07.2.01	Dugout Ponds (Village Pond)	No.	321	17	5	22	343
2.1.1.1.07.2.02	Recharge pit	Cum	28475	9152	2181	11600	40075
2.1.1.1.07.2.03	Digging of trenches	No.	326166	37144	4778	41922	368088
2.1.1.1.07.2.04	Renovation of existing Tal/Khal	No.	4389	473	40	513	4902
2.1.1.1.07.2.05	Renovation of existing Naula	No.	177	43	9	52	229
	Financial Sub Total 2.1.1.7 (Rs. In Lakh.)		**8377.71**	**920.41**	**313.96**	**1234.37**	**9612.08**
2.1.1.08	**Road Programme**						
2.1.1.08.01	Rural road improvement	Km	367.17	47.083	18.592	65.68	432.85
2.1.1.08.02	Construction of small Bridges	No.	509	47	23	70	579
	Financial Sub Total 2.1.1.8 (Rs. In Lakh.)		**2233.68**	**263.83**	**83.21**	**347.04**	**2580.72**
	Financial Total 2.1.1(Rs. In Lakh.)		**27780.90**	**2414.09**	**836.04**	**3250.13**	**31031.03**

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2.1.1.2	**MWS Plan**						
2.1.1.2.1	**Inter GP Fund Activities as per MWS Plans-In RF Areas**						
2.1.1.2.1.01	**Afforestation**						
2.1.1.2.1.01.01	Advance soil work	Ha.	179	0	0	0	179
2.1.1.2.1.01.02	Plantation	Ha.	164	15	0	15	179
	Digging of trenches	No.	0	0	0	0	0
2.1.1.2.1.01.03	Maintenance - Ist Year	Ha.	27	0	0	0	27
2.1.1.2.1.01.04	Maintenance - 2nd Year	Ha.	15	0	0	0	15
	Sub Total		**92.52**	**4.09**	**0.74**	**4.83**	**97.35**
2.1.1.2.1.02	**Assisted Natural Regeneration of Oak Areas**						
2.1.1.2.1.02.01	Advance soil work-ANR	Ha.	372	0	0	0	372
2.1.1.2.1.02.02	Plantation-ANR	Ha.	332	40	0	40	372
	Digging of trenches	No.	0	0	0	0	0
2.1.1.2.1.02.03	Maintenance ANR - Ist Year	Ha.	30	0	60	60	90
2.1.1.2.1.02.04	Maintenance ANR - 2nd Year	Ha.	0	0	0	0	0
	Sub Total		**108.42**	**2.48**	**3.68**	**6.17**	**114.59**
2.1.1.2.1.03	**Forest Fire Management**						
2.1.1.2.1.03.01	Village level training on Fire Mgmt.	No.	0	0	0	0	0
	Sub Total		**0.00**				
2.1.1.2.1.04	**Soil and Water conservation**						
2.1.1.2.1.04.01	Construction of dugout Pond	No.	38	79	6	85	123
2.1.1.2.1.04.02	Recharge pits	cum	5738	3224	755	3979	9717
2.1.1.2.1.04.03	Digging of trenches	No.	29966	2896.75	3022.37	5919	35885
2.1.1.2.1.04.04	Renovation of existing Tal/Khaula	No.	147	10	87	97	244

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
	Sub Total		**201.37**	**86.09**	**17.21**	**103.30**	**304.67**
2.1.1.2.1.05	**Drainage Line Treatment**						
2.1.1.2.1.05.01	Construction of vegetative check dam	No.	310	0	0	0	310
2.1.1.2.1.05.02	Construction of dry stone check dam	Cum	8626	1260.42	201.2	1462	10087
2.1.1.2.1.05.03	Construction of crate wire check dam	Cum	3990	350	0	350	4340
2.1.1.2.1.05.04	Protection wall	Cum	610	0	0	0	610
2.1.1.2.1.05.05	Diversion drain	Km.	0	0	0	0	0
	Sub Total		**146.37**	**28.74**	**12.38**	**41.12**	**187.49**
	Total 2.1.1.2.1		**548.69**	**121.40**	**34.02**	**155.42**	**704.11**
2.1.1.2.2	**Inter GP Fund Activities as per MWS Plans-Within GP area (Additional activities for water source sustainability)**						
2.1.1.2.2.01	**Afforestation**						
2.1.1.2.2.01.01	Advance soil work	Ha.	59	0	0	0	59
2.1.1.2.2.01.02	Plantation	Ha.	59	0	0	0	59
	Digging of trenches	No.	0	0	0	0	0
2.1.1.2.2.01.03	Maintenance - Ist Year	Ha.	0	0	0	0	0
2.1.1.2.2.01.04	Maintenance - 2nd Year	Ha.	0	0	0	0	0
	Sub Total		**20.82**	**1.37**	**0.64**	2.01	**22.84**
2.1.1.2.2.02	**Assisted Natural Regeneration of Oak Areas**						
2.1.1.2.2.02.01	Advance soil work-ANR	Ha.	75	0	0	0	75
2.1.1.2.2.02.02	Plantation-ANR	Ha.	65	20	0	20	85
	Digging of trenches	No.	0	1000	0	1000	1000
2.1.1.2.2.02.03	Maintenance ANR - Ist Year	Ha.	0	0	0	0	0

Sl. No.	Component Activity	Unit	Progress till previous year	2020-21			Cumulative progress since inception of the project
				Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8
2.1.1.2.2.02.04	Maintenance ANR - 2nd Year	Ha.	0	0	0	0	0
	Sub Total		**13.89**	**3.56**	**0.00**	3.56	**17.44**
2.1.1.2.2.03	**Soil and Water conservation**						
2.1.1.2.2.03.01	Construction of dugout Pond	No.	168	38	5	43	211
2.1.1.2.2.03.02	Recharge pit	Cum	13164	2786	1343	4129	17293
2.1.1.2.2.03.03	Digging of trenches	No.	154193	13844	5631	19475	173668
2.1.1.2.2.03.04	Renovation of existing Tal/Khaula	No.	2333	176	35	211	2544
	Sub Total		716.84	115.94	37.49	153.42	870.27
2.1.1.2.2.04	**Drainage Line Treatment& Soil Conservation**						
2.1.1.2.2.04.01	Construction of vegetative check dam	No.	680	545.73	20	566	1246
2.1.1.2.2.04.02	Construction of dry stone check dam	Cum	27942	4625.65	3036.8	7662	35604
2.1.1.2.2.04.03	Construction of crate wire check dam	Cum	35677	4008.51	4062.1	8071	43748
2.1.1.2.2.04.04	Protection wall	Cum	3122	260	0	260	3382
2.1.1.2.2.04.05	Diversion drain	Km.	0	0	0	0	0
	Sub Total		**778.06**	**125.07**	**69.05**	**194.11**	**972.17**
	Total 2.1.1.2.2		**1529.61**	**245.93**	**107.18**	**353.11**	**1882.72**
	Total 2.1.1.2		**2078.30**	**367.33**	**141.20**	**508.53**	**2586.83**
	Grand Total- 2.1.1Watershed Treatment (Sub-Project)		**29859.2**	**2781.42**	**977.23**	**3758.66**	**33617.86**

5.2.b. Sub Component -Rainfed Area Development

This sub component is mainly focused on promotion of rainwater conservation, climate-smart agricultural practices, and on-farm integrated crop management. In the irrigated areas, the project is promoting diversification to high-value off-season vegetable crops, adoption of innovative agronomic practices, establishment of greenhouses and tunnels, productivity enhancement of irrigated maize, wheat and other crops, and production of bio-fertilizers and vermi-compost. The Project is also providing support in the horticulture and livestock sectors, including new orchard development, orchard rehabilitation, fodder production, and livestock genetic upgrading. These all

project interventions under this sub component are being carried out through demonstration activities.

Progress under demonstrations is given below;

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8	9
	Agriculture & Horticulture demonstrations							
1	Demo. of High Yielding agric. crops (0.2 ha. For rainfed area)	No.	21100	4030	2333	1412	3745	24845
2	Adoption support for High yielding agric. crops (0.06 ha for rainfed area)	farmer	59222	19800	12135	2892	15027	74249
3	Demonstration for high yielding vegetable crops (0.08 ha. for irrigated area)	No.	28906	1300	1051	0	1051	29957
4	Orchard Development (250 plant/ha.)	Ha.	2706	695	411	0	411	3117
5	Seeds and Seedlings (High value crop demonstration)	Ha.	1062	0	0	0	0	1062
6	Polyhouses	No.	2179	326	113	34	147	2326
7	Poly tunnels	No.	6183	980	255	395	650	6833
8	Vermi compost Demonstration	No.	5140	821	241	22	263	5403
9	Improved agriculture/horticulture implements	LS	LS	LS	LS	LS	LS	LS
	Animal Husbandry Programme							
	Livestock Improvement							
10	Natural Breeding Centres	No.	230	33	0	0	0	230
11	Natural Breeding Centres-Goat	No.	175	119	25	17	42	217
12	Paravet (AI services)	No.	44	12	0	0	0	44
13	Mass A.I.	No.	1800	LS	0	0	0	1800
14	Veterinary camps	No.	751	143	21	14	35	786
	Stall feeding Program							
14	Animal shelter /sheds	No.	2260	331	93	42	135	2395
15	Manger	No.	2741	365	85	62	147	2888
16	Animal Chari	No.	1766	290	46	26	72	1838

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8	9
	Fodder Production Programme							
17	Fodder Minikit	N0.	20558	4400	1094	375	1469	22027
18	Napier crop border plantation	"000" mtrs	2973	575	420	0	420	3393

5.3. Enhancing Livelihood Opportunities

5.3.aSub Component - Agribusiness Support

To make hill agriculture a profitable venture, through marketing of surplus agriculture and horticulture produces, this sub component is focused on formation of Farmers' Interest Groups (FIGs) and their Farmers' Federations (FFs), water user groups and building capacity of FIGs and FFs in business planning and supply chain development, including input supply and value addition. The project is supporting farmers through hiring of Agribusiness Support Organizations (ABSOs) for providing market oriented extension services and marketing support, including market intelligence and brand promotion. The progress under this sub component is given below;

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8	9
	Agri-business Support							
1	ABSO Support (6 nos.)	No.	6	8	7	7	7	7
2	Training at Unit level & division level	Trgs. No.	309	82	17	7	24	333
3	Exposure visit - within state	Visits.No.	84	24	3	3	6	90
4	Exposure visit - outside state	Visits.No.	45	23	0	2	2	47
5	High Yielding Agric/Horti. Crops	Ha.	3227.79	753	287.1	235	522.2	3750.0

Till the month 1,454 FIGs have been formed by constituting 16,557 farmer Households of the project area. To establish viable agribusiness model, 977 FIGs from all project divisions have been constituted in 21 Farmer Federations (FFs). Detail of FFs is given below;

Division	No of Federation	No of FIGs grouped	No of Farmers/HHs grouped
Almora	2	121	1840
Bageshwar	2	106	1340
Pauri	3	195	1709
Pithoragarh	2	125	1195
PMU	1	28	319
Rudraprayag	3	276	2425
Tehri	1	17	257
Uttarkashi	4	62	1170
Vikash Nagar	3	47	442
Total	**21**	**977**	**10697**

5.3.bSub Component - Support for Vulnerable Groups

To finance entrepreneurial activities for Vulnerable Groups in the targeted GPs, including landless, vulnerable women, and transhumance, the project is focusing on promoting different livelihood options especially their left out traditional occupations. The Project also has a dedicated transhumant action plan, which will have an emphasis on livestock support. The progress under this sub component is as under;

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
	Income Generation Activities							
1	Funds for Vulnerable Groups: Individuals	No.	5197	1490	559	121	680	5877
2	Funds for Vulnerable Groups : Groups	No.	678	305	23	16	39	717

5.3.cSub-Component - Consolidation of Gramya-I activities

It would repair the damaged assets created in Gramya-I and strengthen the business planning and management capacity of 27 FFs formed under Gramya I to develop them as sustainable producer businesses. The support for agribusiness development will be provided by local NGOs.

5.4 Knowledge Management and Project Coordination

5.4.aSub-component -Knowledge Management

Under this sub component, the focus is given on;

- Training and dissemination activities for targeted local institutions and the GoI-supported programs
- Establishment of a Center of Excellence in Watershed Development.
- Information and educational exchanges among and between the various Gramya II stakeholders
- Project supervision through an ICT-based management information system (MIS)
- Hydrology monitoring stations to build a comprehensive dataset at the micro watershed level and
- Social accountability though participatory monitoring exercises (PMEs), social audits and grievance redress mechanisms.

The progress under this sub component is given below;

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8	9
4. Knowledge Management and Project Coordination								
1	Training at Village Level (one day 35 participants)	No.	5216	1109	152	166	318	5534
2	Training at Division level (3-day trg 100 Participants)	No.	599	77	22	8	30	629
3	Within state training	LS	64	LS	10	0	10	74
	Exposure visits							
4	Within State 3 days (25 Participants per visit)	No.	369	LS	4	3	7	376
5	Outside State 5 days (25 Partici. per visit)	No.	98	LS	0	0	0	98
	Capacity Building of Staff							
6	Training of staff (Participants)	No.	2159	LS	4	1	5	2164

Sl. No.	Component/ Sub-Component	Unit	PHYSICAL					
			Progress till previous year	Financial Year 2020-21				Cumulative progress since inception of the Project
				Annual Target	Progress till last month	Progress during the month	Progress up to the month	
1	2	3	4	5	6	7	8	9
7	Exposure visit of staff - outside state (visits)	No.	53	LS	1	0	1	54
8	Exposure visit of staff - within state (visits)	No.	87	LS	2	2	4	91
	Workshops							
9	National /State Level workshops	No.	12	4	0	0	0	12
10	WMD/PD level workshop/Project Staff (events)	No.	183	48	10	2	12	195
11	Division level workshops	No.	493	102	38	5	43	536
12	Unit level workshops	No.	2013	312	149	30	179	2192
13	Village level workshops	No.	10262	1214	582	87	669	10931
14	Special workshops at WMD/PD/DPD level	No.	161	LS	7	1	8	169

5.4.b Sub component - Project Coordination

This sub component is focused on;

- Incremental expenditures incurred by the Project Implementing Entity for Project implementation, management and supervision
- Financial management and annual internal and external audits
- Incremental contractual staff salaries (other than consultants), excluding salaries of civil servants deputed to the Project and
- Dissemination of Project-related information.

The Project received a sanction of retroactive expenditure since 1st June, 2013 to 31st May, 2014 for formulation and preparatory works. The Project became effective since 15th of July, 2014.

ANNEXURE -1

UPDATED PROJECT PROGRESS V/S TIMELINE

- The Project was formulated in FY 2013-14
- The Project became effective since 15th July, 2014
- Software for Financial Management Information System (FMIS) was developed in-house. The Financial progress reports are generated regularly using FMIS.
- The Project web site http://wmduk.gov.in/UDWDP.html is operational. All Project related documents, reports, government order, important circulars, AWPs, MPRs and Procurement details are uploaded/ updated and available in public domain.
- To overcome the field level staffing outsourcing of MDT, Junior Engineers and support staff have been done in FY 2015 with the approval of World Bank and Govt. of Uttarakhand.
- Project Operational Manual with all the technical and financial information/ processes/ procedures is in place and being followed.
- Transhumant Plan for the Project is approved and is in place.
- Social, Knowledge Management, Environment, Watershed, GIS, MIS, Agribusiness, Agronomy Consultants/ Experts are in place.
- Project Internal Auditor are in place.
- The Field NGO-Garhwal has been contracted on 2nd March, 2015.
- The Field NGO-Kumaon has been contracted on 2nd March, 2015
- The Partner NGO- Rudraprayag has been contracted on 2nd March, 2015
- External M&E Consultants has been contracted on 25th June, 2016
- External Hydrological Consultant has been contracted on September, 2016.
- Six ABSOs are in place (3 in Kumaon and 3 in Garhwal).
- In house 'Pratyaksh app' has been developed and being used regularly to obtain the field level created assets on GIS platform as a tool of evidence based monitoring.
- Certification Audit (AG Audit) of FY 2014-15, 2015-16, 2015-16, 2016-17, 2017-18, 2018-19 & 2019-20 has been completed and the reports have been submitted to the Bank.
- Quarterly Internal Audit of FY 2014-15, 2015-16,2016-17, 2017-18, 2018-19 and 2019-20 has been completed and the Annual Financial Statements, Management Letter have been submitted to the Bank
- The Post Procurement Review Audit FY 2016-17, 2017-18 and 2018-19 (Bank Financial Year) has been conducted.

ANNEXURE -2

KEY PERFORMANCE INDICATORS (KPIS) AS PER PROJECT OUTCOME INDICATORS

Sl. No.	PDO level result Indicator	Cumulative Target Values /Description	Progress during the FY (November, 2020)	Cumulative progress since July 2015
1	2	3	4	5
1	**Indicator 1 : Increase in water discharge – 25%**	Rejuvenate 1530 sides of traditional natural water sources **Note:** Various soil and moisture conservation interventions – Recharge pits, contour trenches, drainage line treatments and dugout ponds are carried out in the spring shed areas of the various water sources occurring in the selected micro watersheds of the project. *External Hydrological Monitoring agency will be concurrently monitoring the various project interventions and its impact on the water discharge of the sample micro watersheds.*	• 1,210 existing Tal/ Khal renovated.	• 1,484 treated traditional water sources showed increase in water discharge, • 7,690 existing Tal/ Khal and 229 Naulas renovated.
2	**Indicator 2 : Increase in biomass. – 20%**	21,734 ha. Plantations- Forestry, Fodder, Horticulture orchards etc. **Note:** The community/ Gram Panchayats are motivated to sustainably the natural resources in the selected micro watersheds of the project. They are motivated to increase the green cover in the Gram Panchyats and the forests nearby through various plantations. External M&E Consulting Agency will measure the baseline, mid-term and at the final stages of the project the increase in bio-mass.	• 726 ha. Vegetative cover increased.	• 10,026 ha. Vegetative cover increased (about 46 % of targeted).
3	**Indicator 3: Increase in rain-fed area under irrigation – irrigated 5262 ha. To 7800 ha**	Increase Irrigated agriculture area 5,262 ha. to 7,800 ha (Cropping intensity 170 % to 250 %) **Note:** The primary focus of the Project is to increase the productivity of the rain-fed agriculture. With this objective efforts are made in the project to cover as much rain-fed area as possible to irrigated. The various interventions carried out by the community through sensitization are irrigation tanks, roof water harvesting tanks, LDPE tanks, irrigation pipe lines, irrigation channels, solar pumps for lifting of water from lower elevation to agriculture lands on higher elevation and village pond construction.	• Increase in gross irrigated area – 1,636.44 ha • Water holding capacity increased; ○ through different storage structures – 12,929 cum for irrigation. ○ through dugout ponds and other percolation structures - 1,13,136 cum.	• Increase in gross irrigated area – 8,034.44 ha • Water holding capacity increased; ○ through different storage structures – 62,397 cum for irrigation. ○ through dugout ponds and other percolation structures - 6,53,705 cum to increase soil moisture regime, in rainfed areas.

Sl. No.	PDO level result Indicator	Cumulative Target Values /Description	Progress during the FY (November, 2020)	Cumulative progress since July 2015
1	2	3	4	5
4	**Indicator 4: Increase in productivity in irrigated – 50% and rainfed crops– 20%**	**Irrigated area** • 90% farmers are projected to adopt and sustained the efficient irrigated crop production technologies • 18950 demonstration in Irrigated area • 15,500 poly house and poly tunnel, off-season high value crops and major vegetables in 1066 villages. Note: Demonstrations on various integrated crop management practices are carried out to educate the farmers. Farmers are also provided seeds of high yielding varieties, technical inputs – poly house and poly tunnels, mulching, pre and post cultivation practices. And also motivated to take up cultivation of off-season high value vegetable/ cash crops, which can yield higher returns to the farmers.	**Irrigated area** • 851 nos. demonstration in irrigated area. • Input support for high value crops in 523 ha.	**Irrigated area** • 47% farmers have adopted efficient irrigated crop production technologies. • 29,757 demonstrations in irrigated area • 9,261 Poly house and Poly tunnels • Input support for off-season high value crops in 3,750 ha. benefitting16,557 farmers.
	Indicator 4: Increase in productivity in irrigated – 50% and rainfed crops– 20%	**Rainfed area** • 70% farmers are projected to adopt and sustain in situ soil and moisture practices along with efficient crop production technologies • Rainfed area 34695 ha. to 37157 ha. (7% increased due to shift fallow lands into cropping) promoting improved resource conservation cum production technology-14300 demonstrations • Terrace repair 901,000 no. Note: Demonstrations on various rain-fed agriculture crop management practices are carried out to educate the farmers. Farmers are also provided seeds of high yielding varieties, technical inputs – line showing, mulching, pre and post cultivation practices.	**Rainfed area** • 3,745 no. of demonstrations done. • Adoption of high value crops in 942 ha.	**Rainfed area** • 62% farmers have adopted in-situ soil and moisture practices along with efficient crop production technologies • 24,845 no. of demonstrations done. • Adoption of high value crops in 4,495 ha • Agriculture terraces repaired in 22,221 cum. • 2,530 ha fallow land shifted to horticulture and agriculture cultivation.

Sl. No.	PDO level result Indicator	Cumulative Target Values /Description	Progress during the FY (November, 2020)	Cumulative progress since July 2015
1	2	3	4	5
5	**Indicator 5: Direct project beneficiaries, - 80% of which % of female – 50%**	• 100% farmers adopt efficient farming practices in irrigated and rainfed area • 14,571 farmers benefited through agribusiness • 33,208 household benefited through animal husbandry improvement • 20,333 vulnerable household would be benefited through IGA of which 50% women beneficiaries. Note: The objective of the Project is to provide benefits to all the community members/ primary stakeholders in the project. Through the project interventions, efforts are made to increase the agriculture productivity, so that the agriculture can become a remunerative option. The poor/ landless households in the project are provided training and supports for various income generating activities.		• Approx 77% farmers adopted efficient farming practices through demonstration and adoption practices • 16,521 farmers benefited through agribusiness initiative. 1,454 FIGs formed. • About 34,486 HHs benefited through animal husbandry improvement • 5,877 individual and 717 group total 9,863 vulnerable household benefited through IGA of which 40% are women beneficiaries.

ANNEXURE -3

STATUS OF COMPLIANCE OF AIDE-MEMOIRE IMPLEMENTATION REVIEW AND SUPPORT MISSION (SEPTEMBER 2019)

SN.	Key Action	Date	Responsibility	Action Taken
1.	Disaggregate crop data under varying cultivation systems (protected and open) to assess the economics of cultivation for computing production surplus and profit margins	Rolling	PMU	The template for the collection of the data to do the analysis has been forwarded to the Divisions. As part of the value chain analysis, Capsicums' protected and open calculations have been done. [annex-3 (a)]
2.	Hydrological monitoring set-up	As agreed with PMU	WAPCOS	Out of 8 representative micro watersheds weir construction has been completed for two pilot sites (Tehri and Almora) and stage discharge monitoring is in progress for these sites since February, 2020 6 other sites were delayed due to Covid 19 situation, and associated interstate travel restrictions and restriction on logistics. Once it was eased, it was monsoon during which constructions are not possible in the watersheds. Presently, out of the remaining 6 MWS, site selection has been completed for 4 sites. Now in improved situation, construction has started at Uttarkashi. During this month 4 weirs (Uttarkashi, Bageshwar, Dehradun, and Pithoragarh) will be completed and work will start for other two sites (Rudraprayag and Pauri)
3.	Strengthen monthly reporting format to incorporate aspects of beneficiary contribution, months of business operation etc.	Sept 30, 2019	Social Development Specialist, PMU	Formats have been finalised and data being calculated. [annex-3 (b)]

SN.	Key Action	Date	Responsibility	Action Taken
4.	Develop a common template for reporting the data for the activities done by the ABSOs in different divisions	Immediate	SUTRA	The common templates for reporting the data has been finalised [annex-3 (c)]
5.	Hire a consultant at PMU level for overall consolidation of activities performed by the ABSOs at project level;	Immediate	PMU	Done, the Lead Agribusiness Advisor has been contracted in August 2020.
6.	Formulate business plans / roadmap with proposed financial support and viability analysis for each ABGC, thus also incorporating the exit strategy.	Rolling	Lead Agribusiness Specialist, ABSOs	The work has started with the Cost Benefit Analysis being done for the ABGCs.
7.	Conduct value-chain study for the key commodities which have been demonstrated under the project with highest returns, and market scoping study for the potential commodities	Rolling	Lead Agribusiness Specialist	8 Value Chains have been selected for the analysis. The primary research has been done for all eight of these. The report for the Kiwi Value Chain analysis has been finalised and findings are being implemented through a consultant recently hired in the project.
8.	Conduct trainings for the project staff, ABSOs, and FNGOs on basic business planning and basic market scoping	Rolling	Lead Agribusiness Specialist/SUTRA	The trainings on Business Planning by IRMA and Value Chain analysis by Lead Agribusiness Advisor have been planned and will be carried out from November onwards.
9.	Enlist knowledge products, develop TOR, hire consultant	Rolling	PMU	As the project is in final year, various knowledge products are being developed.

ANNEXURE -3 (a)

Capsicum		
	Cost Borne using- Open Cultivation (Rs. Per Nali)	Cost Borne using- Protected Cultivation (Rs. Per Nali)
Seeds	700	700
Insecticides	200	100
Fertilizer	250	250
Labor (Imputed Cost*)	2000	1400
Packaging	300	300
Transportation	1000	1000
Wastage	1500	1500
Total cost	5950	5250
Margin (Revenue - Total Cost)	1550	6750
Revenue (Annual productivity per Nali * Approximate Market Price (Rs. 30 per kg))	7500 (Annual productivity (250 kg) * Market Price (Rs 30 per kg))	12000 (Annual productivity (400 kg) * Market Price (Rs 30 per kg))

*** Imputed Cost of Labor = Number of Days Worked * Rs. 200**

ANNEXURE -3 (b)

Format for Vulnerable Group

S. No.	Division	Name of the GP	Name of the RV	Name of the Group	Divorcee	widow	Physically Challanged	No. of Members								Total Members	Name of the Activity	Date of Funding	Date of Start of Activity	Grant Allotted (in Rs.)
								Male				Female								
								SC	ST	OBC	Gen	SC	ST	OBC	Gen					
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*

Format … contd……

Beneficiary Contribution	Number of months of Operation in a year		No. of workers employed during the year		Income earned per year by the Activity (In Rs.)		Raw Material cost per year (In Rs.)		Cash Withdrawn by Enterpreneur for household/ personal purposes(In Rs.)		Wages paid to the workers employed(in Rs.)		Other Costs(Rent, Electricity, Repair, Maintaince and Transportation)		Average net profit earned (in Rs.)		Average net income earned per year (In Rs.)
	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	Year wise (Yr-1, Yr-2…Yr-N)	Total	
22	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*	*33*	*34*	*35*	*36*	*37*	*38*	*39*

ANNEXURE -3 (c)

SUSTAINABILITY – ROLL OUT OF FORMATS FOR ANALYSIS OF SELECTED INTERVETIONS

Assessing the Farmers' Federation (FF) Sustainability

FIGs (on sampled basis) formed for specific targeted produce would be closely assessed to see their profitability measure. The overall performance of the FIG will be analyzed using variables viz., Maintaining documentation/record, Regular Meetings (FF) with Minimum of 2 Meetings per year, Regular business operations, and overall profitability/loss. Federations will be assessed for their financial sustainability and assess their financial performance. In case of farmer federations, the following would be done to understand sustainability outcomes

1) Financial Ratio Analysis (FRA) will be done for assessing the financial performance of select FF. FRA is an appropriate tool providing concrete summary of the performance of a business organization.
2) Audited Annual Financial Statements of FF's for last two years will be taken into consideration

The following scoring matrix and format will be used to capture the requisite information.

FARMERS FEDERATION SCORING MATRIX							
Sl.No.	**Name of Division**	**Name of FF**	**Maintaining documentation/records (Yes=1/No=0)**	**Regular Meetings (FF) with Minimum 2 Meetings per year, Yes=1, No=0)**	**Business Operations are ongoing (yes, Operational=1, No, not operational=0)**	**Profits (Saving) made from operations Yes=1, No=0)**	**Score on self-sustenance (Out of Total Score 4)**

ASSESSMENT DETAILS OF SUSTAINABLE FARMERS FEDERATION

Name of Division	Name of FFs constituted	No. of associated FIGs	No. of associated Farmers	Commodity wise Production of the Associated Farmers	Name of commodities being marketed	Produce marketed in (Qtls)			Value of marketed produce in (Rs)			Year wise total running and operating expenses of FFs, including the interest incurred on the loan (in any) (Rs)					Benefit shared to member FIGs (Rs)					Total savings of FFs (Rs)					Status of Annual audit					No. Of meetings of FF members held till date
						Fresh Produce	Graded	Processed	Fresh Produce	Graded	Processed	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

FARMER INCOME GROUP DATABASE

Sl No.	Division	Block	Name of ABSO	Name of FIG	Year of Formation (DD/MM/YY)	Name of Federation Associated	No. of total Farmers	No. of Male Farmers	No. of Female Farmers	Year of Cultivation	Crop cultivated (Name of Crop)	Season	Total Cultivated Area (Ha)	Total Produced (Quintals)	Area for which input was provided (Ha)	Seed and input cost (Rs)	Labour Cost (Hired labour only) (Rs)	Transport and other post harvest cost (Rs)	Total cycles of Sale (in 2018-19)	Month in which sold- Sale Cycle 1 (FOR EACH YEAR SUBSEQUENTY CYCLES ARE TO BE ADDED)						
																				Month	Quantity sold	Place of Sale (Local Trader, Mandi, Any other)	Sale Value (Rs)- Total	Price received by FIG per Quintal (on sale)	Total Savings with FIG by first cycle of Sale	Expenditure Incurred on labour (externally hired)+ Transportation)
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Analyzing the Improvement in milk production through improved breeds & progenies

Milk production is largely affected by a combination of factors namely; genetic make-up in terms of the use of improved breeds selected for milk production, a favorable nutritional environment and improved managerial practices. Consequently, genetic make-up of dairy animals plays a great role in the variation of milk yield and composition. Milk production is, therefore, a factor of genotype-environment interactions. It is important to balance selection for both production (e.g., milk yield and composition) and functional (e.g., fertility, disease resistance, feed intake and body weight) traits.

A part of the assessment will look into activities under animal husbandry. The assessment will ascertain if there has been increase in milk production through improved breeds introduced through the Project. The study will outline what is the increase or decrease in milk production though factorizing various aspects of Project Interventions under the Animal husbandry Program such as Improved Breeds, Animal health camp, Napier grass production, Fodder mini Kit distribution, Cattle Shed construction, Animal Chari Construction and Manger Construction. The format to capture the information for further analysis is as follows;

IMPROVED MILK PRODUCTION																			
Sl.No	Name of Beneficiary	Name of Division	Name of Block	Name of village	Contact Details	Various Programs on Livestock Development							Class of animals (cattle, buffalo, Goat, Sheep etc.) owned	Average milk production all cows& Buffalo, Indigenous (in liters) **	Average milk production all cows& Buffalo, high yielding variety (in liters) after the project intervention	Percent increase in production	Average milk production goats Indigenous (in litres)	Average milk production all goats high yielding variety (in litres) after the project intervention	Percent increase in production
						Improved Breed	Animal health camp	Napier grass production	Fodder mini Kit	Cattle Shed construction	Animal Chari	Manger Construction							

**Calculation of the average yield of milk will be computed through the following table below

Sl.No	Name of Beneficiary	Type of Animal	Type of Breed (Indigenous/Improved)	Total Yield Month wise during lactation period											Total Yield in litres during the lactation period	Averagel Yield in litres during the lactation period	No of days in lactation	No of days of dry off
				Jan	Feb	March	April	May	June	July	Aug	Sept.	Oct.	Nov.					

ANNEXURE -4

SUCCESS STORIES

Enhancing Biomass through Participatory Approach

Model MWS-Bidhalna, Raipur

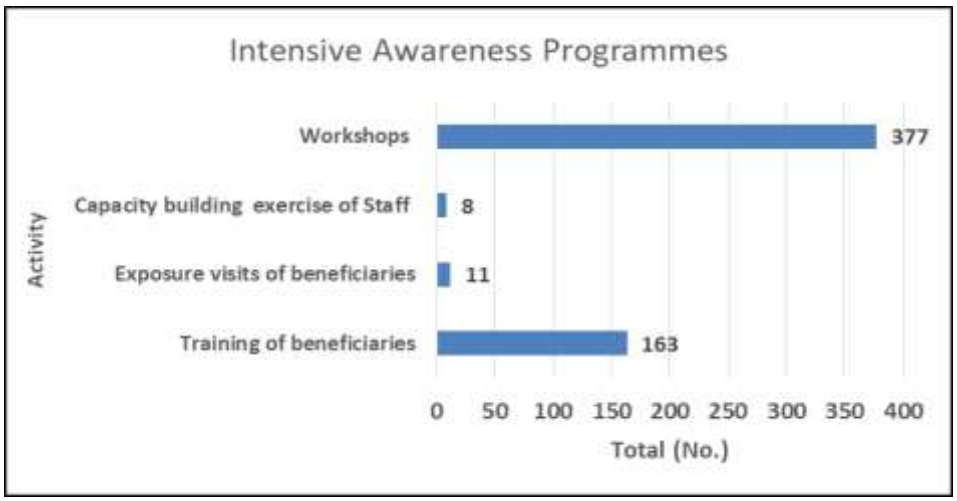
Bidhalna micro watershed of Uttarakhand is one of the most fragile area of Himalayas. Entire land is hilly with fragile soils and steep slopes that are highly prone to soil erosion during the monsoon season. The micro watershed is losing soil fertility due to high erosion. UDWDP II's objective is to improve the situation of Bidhalna micro water shed region and increase its efficiency of natural resource use and productivity of rainfed agriculture by participating communities in the micro watershed.

Interventions

The developmental interventions are listed below:

Mobilization

- The UDWDP II supported the Gram Panchayats to get organized as a Water Management Committee (Jal Avam Jalagam Prabandh Samiti) and empowered them to take up developmental interventions
- A 3-year perspective plan was developed (Gram Panchayat Watershed Development Project) in the first year itself with the identification of critical pain points and approach for development planning with the participation of local communities
- Intensive awareness programmes like different level trainings and workshops, exposure visits to reputed institutions motivated farmers to adopt new and improved agriculture practices and made them aware towards soil and water conservation



Watershed planning and treatment activities

- A comprehensive micro watershed plan was prepared which outlined the need to implement different interventions in village panchayat, inter gram panchayat and other areas
- Construction of water conservation structures like Contour Trenches, Village ponds etc were implemented
- Drainage line treatment works like Gully plugging, Check dams etc. were also implemented

Activity	Achievement
Contour Trenches	1865 No.
Village ponds	5
Vegetative slip control	5000 Sqm
Gabion Check Dam, Gabion Spur	4969 Cum
Cross Barriers	636.47 Cum
LDPE Embedded Check Dam	50.15 Cum

Achievement of water conservation structures and Drainage line treatment works

Impact of Watershed planning and Treatment: Increase in water storage capacity (9.30 Lakh Litre)

Village Pond

"Three years back the Bidhalna micro watershed was just drying not noticed by anyone. But now it is a being noticed by villagers whose voice has an echo in the region. Now many other villages and farmer visits us to learn the secret behind success. Thanks to the support extended by the project, we are now united forever to keep our micro watershed recharge well."- Villagers of Bidhalna

Biomass Enhancing Activities

The main interventions provided in the MWS (Micro Watershed) plan for enhancing of biomass are:

- Afforestation - 50 Ha
- Napier Grass plantation along farm boarder: 105.33 Km
- Plantation of trees, orchard development, vegetative treatment in 122 hectares of land across 7 GPs

Impact of Enhancing Biomass: The area under green cover increased significantly and protection mechanism developed by community itself lead to further safeguard of the green cover.

Napier Grass plantation

Other Impacts

- **Increase in water conservation & availability**
  - A total of 28.50 hectare of rainfed area was brought under irrigation with the help of the conserved water.
  - 22 water source treatment, 47.50 hectare of plantation, 1865 trenches, 3 Naula-Khala, 1598 cum dry stone, 4969 cum crate wire check dam and 5000 square meter of vegetative treatment helped farmers to bring rainfed agriculture land under irrigation.
  - The project caused 30% increase in agriculture production in the 7 GPs.

- **Gender:** The project empowered women by involving them in the project activities.
    - A comprehensive micro watershed plan was prepared with the participation of local communities especially with Women Aam Sabha (WAS).
    - The Gram Sabha which so far had difficulty in having quorum suddenly started having full house. 90% of the women are now attending the gram Sabha.

- **Community ownership and Participation is key to Sustainability**
    - On its part, the monthly Water Management Committee meeting made all efforts to make its functioning fair and transparent. The vision & activity document was displayed in the public which detailed various schemes, work undertaken, expenditure and beneficiary list.
    - Six monthly Participatory Monitoring Exercise (PME) was the mandatory concurrent monitoring tool.

The activities of sub committees like Revenue Village Committee (RVC), User Group, Farmers Interest Group was reviewed and a mechanism to continuously engage the local communities in implementation and accounting was set.

Certified Seed Production

Village: Aartola Gram Panchayat: Panuwanaula, Division -Almora

Self- sufficiency in quality seed production of high yielding varieties has been achieved through Certified Seed Production

Farming in Uttarakhand is mostly dependent on monsoons. Farmers normally sowed in two seasons in a year namely Kharif and Rabi. The crops were mainly grown for self-consumption and a very low volume of Maduwa and Ramdana was sold. The farmers were forced to do labour work to meet the needs of their families. Farmers with access to irrigation facilities were more inclined to grow vegetables as they fetched good prices.

The Uttarakhand Decentralized Watershed Development Project (UDWDP II) started two years ago in this area and it covered more than 80 villages. The project staff visited the village regularly and conducted meeting to create awareness regarding the activities to be performed under UDWDP II. The project staff advised the farmers that the inputs will be given only when they form a Farmer Interest Group (FIG) in the village. The project officers called the farmers in their office and advised them to make their own seeds and get them certified. The farmers were provided with the breeder seeds and the foundation seeds. A meeting was held on 28th Aug 2015 and Jagnnath Krishi Beej Utpadak Sangh was formed.

Storage area for seeds produced by Jagnnath Krishi Beej Utpadak Sangh

The UDWDP-II played an instrumental role in facilitating the paperwork for certification of seeds.

The project liaised with different organizations in the process and kept the member farmers updated with the various stages of the process. The project even bought the certified seeds produced and paid Jagnnath Krishi Beej Utpadak Sangh Rs 1,48,970 after the first produce. In the second year, the project paid Rs 2,96,960 to the society. By 2018, the project staff and Agribusiness Support Organization (ABSO) procured about 112 quintals of certified seeds from the federation.

Vermicompost leads to employment generation

Village: Kaknava Gram Panchayat: Thano, PMU Division Dehradun

This is a story which highlights how vermicompost became a source of employment in Kaknava, Thano, Dehradun. Generally, the youth of the village completed their education and migrated to metro cities in search of employment. This caused discomfort in their lives and the villages were getting deserted. UDWDP-II helped the youth in getting a source of employment within their village which lead to reverse migration in the villages. Amongst these youth was Mukesh, who completed his graduation and pursued a course in Hotel Management. He worked in the hotel Industry in Mumbai for about 10 years and worked for another two years in Dehradun. He said, the meagre wages in private sector were not sufficient to support his family of nine members. Thereafter, he decided to take up farming as his occupation.

Mukesh came to know about the Uttarakhand Decentralized Watershed Development Project (UDWDP II) which was ongoing in his village. He started attending the project meetings which helped him to gain a better understanding of the activities conducted by the project. As an educated person, he was given the opportunity to become the accountant for the project in his village. He was given Rs 4000 per month for performing his accounting responsibilities. This was just a start for Mukesh.

"The project has given my life a new direction. After facing difficulties while working in other cities, coming back to my own village and earning money with respect was a dream come true for me. UDWDP - II Project has made it possible to realize my dream"

- Mukesh Tiwari

The UDWDP-II staff advised the villagers about the harmful effects of regular use of chemical fertilizers and pesticides on soil health. The project staff also informed about the benefits of using Vermicompost. As a part of capacity building programmes, the villagers received training on farming, agronomic practices, animal husbandry etc. To encourage the villagers to adopt vermicompost, vermicompost pits were constructed in the village area.

The villagers started using vermicompost to grow organic cash crops which fetched a better price in the market. The village farmers also encouraged farmers in nearby villages to use vermicompost as a fertilizer in their field. The farmers started selling vermicompost in packets ranging from 1Kg to 10 Kgs.

Mukesh used about 5 quintals of vermicompost to grow beans, tomatoes, Chilli, Ginger, Turmeric, etc. and earned Rs 40,000 by selling the organic produce. He also started growing chrysanthemum and used the vermicompost as the fertilizer. His received good yield and price for the chrysanthemum flowers. In December 2017, Mukesh started selling the vermicompost to other farmers in the village at the rate of Rs 10 per kg. He sold around 7 quintals of vermicompost till now and generated an income of Rs 7000. As people become aware of the benefits of using vermicompost, they have started placing advance orders to Mukesh. Looking at the income generated by selling vermicompost, Mukesh plans to scale up the production of vermicompost. A

number of farmers are taking his example and taking production of vermicompost as a source of employment.

Post-harvest (Logistics) support to Farmers group

Village: Devan and Ghansi , Tehri Division, Thatyur

Devan and Ghansi villages are pioneer in commercial tomato farming since last 10 years. Approximately 10000-12000 crates (2000-2400 Qtl) of tomato crop is harvested and marketed by the farmers each year. But these villages faced constraints because of the hilly terrain of the area which is a major hurdle in the logistics of the produce as the near by road side is situated above 2.7-3.0 km (i.e. Mason Band connected to Nainbag-Vikasnager/ Mussorrie / Dehradun road) and the slope of the valley area is too steep. Because of this, almost each family had to rear mule/horse for transportation purposes. In the harvesting season, each farmer had to travel around 22-24 km per day with his mule/horse to transport the harvest in an average of four rounds and in each round, a of load 4 crates (80-90 kg.) were transported by a mule/horse and it costed around 150 Rs. (i.e Rs.37.5/crate or Rs. 1.60 - 1.85/Kg.)

Transportation of Crates By mule/ horse

To solve the issues, the project undertook the intervention of developing a 300-meter-long community rope way system for goods transportation. The intervention was designed with an objective to achieve community participation and community ownership. To accomplish this, the idea of community-based goods transport ropeway was disseminated to local farmers and village leaders by Project MDT. After finalizing the possible potential villages, the project team interacted with the community/stakeholders about the possible interventions. After three rounds of community meeting at different villages, a total 61 farmers of different villages were identified for formation of

User groups; and matters such as cash contribution, construction, operation and maintenance issues were discussed.

The project intervention had a positive impact on the livelihoods of the villagers. Devan, Ghansi and five other villages are now able to transport their high valued crops (primarily tomatoes & mangoes) to the market at Nainbagh using the ropeway built under the project.

The risk of damage to the produce caused due to slow transportation as reduced because of faster transportation by the ropeway. The efforts and cost beared by the farmers in rearing mule/horse is also now saved as ropeway is now the major means of transportation for the seven villages. The ropeway has also enabled the farmers in getting better prices for their produce.

Farmers use ropeway instead of mules to transport their produce

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ANNEXURE -5

DETAILS OF UDWDP PHASE- II PROJECT AREA (LIST OF GRAM PANCHAYATS)

DEVELOPMENT BLOCK- DHAULADEVI

	GP Name		GP Name		GP Name		GP Name		GP Name
1	Dhar	19	MantolaGun	37	Bhagartola	55	Walikhet	73	Arasalpad
2	Dhaspar[1]	20	Madam[1]	38	Papoli	56	Velak[1]	74	Aati[1]
3	Dhura[1]	21	Manu	39	Papgad	57	ChamuvaKhal	75	Anoli
4	Khaudi[1]	22	MeltaJol	40	Pokhari[1]	58	Chamtola[1]	76	Gauli
5	Kheti[1]	23	Melgaon	41	Pali[1]	59	Chauda	77	Gunaditya
6	Basan[1]	24	Matkanya[1]	42	Paldi Gunth[1]	60	Chaundungari[1]	78	Garar Malla[1]
7	Basoli[1]	25	Malan	43	Padai	61	Chagethi	79	Garartalla
8	Bajela	26	Thali[1]	44	Raul	62	Chalthi	80	Galli
9	Kachiyola	27	Sindhiya	45	Sukana	63	Faltiya[1]	81	LwetaLadfoda
10	Kabhari[1]	28	Sirola	46	Seli	64	Farakholi	82	Tank
11	Kaphali[1]	29	Diyar Kholi[1]	47	Daseeli[1]	65	Fulai	83	Khatiyola
12	Kola	30	Virkola	48	Dungra	66	Falyant[1]	84	Chausala
13	Kana	31	Chitola	49	Dashaula	67	Tarkot	85	Ladholi[1]
14	Kasermanya	32	Chill	50	DodamPaloli	68	Jajar	86	ChaunaBhanar
15	KunjaGunth	33	Jigolitoli	51	Dauligad[1]	69	NayalDhura	87	KotuliGonth
16	Kumar[1]	34	Bhaisadi	52	Dunar	70	Nainoli		
17	Kalauta	35	Bhaita	53	Dyotoli	71	Nailpad		
18	Mayoli	36	Bhanoli[1]	54	Danya[1]	72	Andoli		

ASSEMBLY CONSTITUENCY- KAPKOT

DEVELOPMENT BLOCK- KAPKOT

	GP Name		GP Name		GP Name		GP Name
1	Pothing	**12**	Sama	23	Khaljhuni[1]	34	Kismila[1]
2	ChiraBagar	13	Saling	24	Harkot[1]	35	KalapairKapdi [1]
3	Toli	14	Sumgarh	25	Chaura[1]	36	Leeti
4	Dobad	15	**Sooding**	26	Pethi	37	BadiPanyali
5	Dhovati	16	Rikhari[1]	27	KafaliKamera	38	Ramadi
6	Baghar	17	Gasi[1]	28	Bhanar	39	Keemu
7	Karmi	18	Lahoor	29	Lathi	40	Gogina
8	Dulam	19	Soopi	30	Majhkhet[1]	41	Malkh Dugarcha[1]
9	Barait	20	Tarsal Patiyasar	31	Chucher	42	Rateerkethi
10	Naukudi	21	Mikila Khalpatta[1]	32	NanchiChetaBagar	43	HamtiKapadi
11	Seeri	22	Jhuni	33	Sukhchauna		

DISTRICT : PITHORAGARH

ASSEMBLY CONSTITUENCY- DHARCHULA

DEVELOPMENT BLOCK- MUNSHYARI

	GP Name		GP Name		GP Name		GP Name
1	Bansbagar[1]	**16**	Khatera	28	Chama	44	Marh[1]
2	KhetBharad	17	Sini	29	BhainsudiTalli	45	Barambachkyudi[1]
3	Kotuda	18	Rimuniya	30	Khiri	46	Kholimali[1]
4	Hupli	19	Napad[1]	31	Masmoli	47	Baltir[1]
5	Dhamigaon	20	Hokara	32	Ghingtadr	48	Bhadgaon
6	Gunthi	21	Gaula	33	Digauti	49	Atalgaon[1]
7	TallaBhainskot	22	Khoyam	34	Kumalgaon	50	Ranikhet

ASSEMBLY CONSTITUENCY- DIDIHAT

DEVELOPMENT BLOCK- DIDHAAT

8	Nachini	23	Dekuna	35	Kukrauli	51	Chupdakhet
9	DhamiPhalyati	24	Tejam	36	Turgoli[1]	52	Varshayat[1]
1	Ghatghorgadi	25	Boragaon[2]	37	Dyokali[1]	53	Bagjiwala
1	Malla Bhainskot[1]	26	Bhanskhal[1]	38	Daulikauli	54	Ghimali
1	Chami Bhainskot[1]	27	Kwitee	39	Leparti[1]	55	Malajhula
1	Bansani[1]			40	SatyalGaon	56	Lejam[1]
1	BathiGunth			41	Sata	57	Almiyagaon[1]
1	Bara			42	Athkhet[1]	58	Goal
				43	Batyuli	59	Dhungeti

ASSEMBLY CONSTITUENCY- GANGOLIHAT

DEVELOPMENT BLOCK- BERINAG

60	Sunethi[2]	61	Balyaun	62	Lachhima	63	Udisirtoli

DISTRICT : PAURI

ASSEMBLY CONSTITUENCY- CHAUBATTAKHAL

DEVELOPMENT BLOCKS- EKESHWAR & POKHDA

	GP Name		**GP Name**		**GP Name**		**GP Name**
1	Bharpur[1]	17	MolthiTalli	33	Syoli	49	Sangalakothe
2	Tachhwar	18	Kaghthun	34	Badoli[1]	50	Pand
3	GwarMalla	19	Malai[1]	35	Odgaon[1]	51	Melgaon
4	GwarTalla	20	Chaumasudhar	36	Naie	52	Masmole
5	Katholi	21	Gorli	37	Malkot	53	DivrareMalli
6	Kulasu	22	ChaidharMalla	38	Mald Bara	54	Bhaduli
7	PatalGonth	23	Binjoli[1]	39	Dalmarha	55	Bagdegad[1]
8	Nav	24	Kurkhyal	40	Benti	56	Ghadiyal[1]
9	Raidu[1]	25	Bhadmoli[1]	41	Bondhar	57	Saknaule
10	Simar	26	GuradMalla	42	Chopra	58	Pokhra[1]
11	Uchakot	27	Gurad Talla[1]	43	Salan	59	BeenaMalli
12	Cham Bada	28	Halai	44	Jhalpade	60	Beena Gad
13	Jantoli Talli[1]	29	Kandai[1]	45	Gadri	61	BeenaDhar
14	JantoliMalli	30	Latibuo	46	DuilaTalla	62	Aslot
15	Bamoli	31	Maletha	47	Bhairgaon		
16	Era Malla[1]	32	Raisoli Talli[1]	48	Borgaon		

DISTRICT : RUDRAPRAYAG

ASSEMBLY CONSTITUENCY- KEDARNATH AND AGASTYAMUNI

DEVELOPMENT BLOCK- JAKHOLI				**DEV.B. - UKHIMATH**		**DEV.B. - AGASTYAMUNI**	
	GP Name		**GP Name**		**GP Name**		**GP Name**
1	BashtaBamara	21	Bajwar	41	Andrawani	53	Barmwadi
2	ThatiBamara	22	Panjana	42	Guptkashi	54	Chandrapuri[1]
3	DobhaBamara	23	Bhatwari	43	Bhaisari	55	Dalsingi
4	Dobliya	24	Chopra	44	Sankari	56	Pali
5	Kirora[1]	25	Pauthi	45	Lwani[1]	57	Falai[1]
6	Sem[1]	26	NanadwanGaon	46	Devlimanigram[1]	58	Dadoli
7	Jakholi	27	Chaura[1]	47	Lwara[1]	59	SillaBamangaon
8	Dangwalgaon	28	Khaliyan	48	Tulanga	60	Hat
9	Utarsu	29	Muniyagar	49	Lambgaudi	61	Singhata
10	Munnadevel	30	Pulan	50	PhaliPasalat		
11	Chaka	31	Sirwadi	51	Devar		
12	Dangi	32	Kothiyara	52	Salya		
13	Arkhud	33	Bharanga				
14	Dhankot	34	Mawangaon				
15	Kudiadoli	35	Shishanu				

16	Rayadi	36	Dharkot[1]				
17	Syur	37	Kurchhola				
18	Nag	38	Kapriya				
19	Pujargaon	39	Jakhani				
20	Barsir[1]	40	Taila				

DISTRICT : UTTARKASHI

ASSEMBLY CONSTITUENCY- PURAULA

DEVELOPMENT BLOCK- PURAULA				**DEV.B. - MORI**		**DEV.B. - NAUGAON**	
	GP Name		**GP Name**		**GP Name**		**GP Name**
1	Chandeli	20	Khdkasem	36	Devra[1]	50	Bigradi
2	Panigaon[1]	21	Kandyalgaon	37	GaitwanGaon	51	Gauna[1]
3	Hodeli	22	Naagjhala[1]	38	Haltadi	52	Eedak
4	Binai[1]	23	Mahargaon	39	Pensar[1]	53	Gadoli[1]
5	Kantari	24	Pora	40	Guradi	54	Kanda[1]
6	Sweel[1]	25	Kumola[1]	41	Pokhri	55	Kud
7	Thadung	26	Pujeli[1]	42	Kunara[1]	56	Kotla
8	Chaptadi[1]	27	Korna	43	Dobhalgaon	57	Khansi
9	Netri	28	Nauri	44	Devjani	58	Manjiyali
10	Karda	29	Raun	45	Kharsadi	59	Kuni
11	Dhakada	30	Westpalli	46	Khedmi	**ASSEMBLY CONSTITUENCY- YAMUNOTRI DEV.B. - NAUGAON**	
12	Mairana	31	Syalunka	47	Nanai		
13	Thakda	32	BingadheraMalla	48	Bhigsari[1]	60	Guladi
14	Kureda[1]	33	Saundhari	49	RamalGaon	61	Thanki
15	Dhyura	34	Ghudanda			62	Dharali
16	Shrikot[1]	35	Suranuseri			63	Seedak
17	Koti					64	Biyali
18	Devdhunga[1]					65	Bakhrati
19	Madh					66	Koti Banal
						67	Bhani
						68	KwalGaon

DISTRICT : DEHRADUN

ASSEMBLY CONSTITUENCY- CHAKARATA

DEVELOPMENT BLOCK- CHAKARATA				**DEVELOPMENT BLOCK- KALSI**			
	GP Name		**GP Name**		**GP Name**		**GP Name**
1	Kandar	17	KandiChamagatha	31	Dilau	46	Panjiya
2	Sawara	18	Kandoi Bandar	32	Timara	47	Sakni
3	Baniyana	19	Chhultad	33	Ara	48	Tilwadi
4	Ravna	20	DhauraPudiya	34	Tipau	49	Kalsi
5	Mehrawana	21	Guthad	35	Chandeu	50	Thana
6	Sujau	22	Lakhamandal	36	Supau	51	Thungara
7	Mohana	23	Myuda	37	JismauGharana	52	Nithala
8	Khatuwa	24	Kunna	38	Ubhreu	53	Rikhad
9	Kharsi	25	Maletha	39	Suryou	54	Birmoi
10	Manuwa	26	Manjgaon	40	Kharaya		
11	PunhPokhri	27	Samong	41	Haripur		
12	Bijnu[1]	28	Jogiyo	42	ByasNahri		
13	SidiBarkoti	29	Thanta	43	ByasBhund		
14	Rangau	30	Mendal[1]	44	Bansar		
15	Birpa			45	Chutaya		
16	KuradKhanadSichad						

DISTRICT : TEHRI

ASSEMBLY CONSTITUENCY- DHANAULTI

DEVELOPMENT BLOCK- JAUNPUR

	GP Name		GP Name		GP Name		GP Name
1	Muglodi	21	Khyarsi	41	Pali[1]	61	Bandasari
2	Digaun	22	Bichhu	42	Timyal Gaon[1]	62	Mair[1]
3	Tewa	23	Takarna	43	Sartali	63	Pantwari
4	Bangsil[1]	24	Chamasari	44	Ghaniyala	64	Ghora Khuri[1]
5	Budkot	25	Gaid	45	Bel[1]	65	Masras
6	Moldhar	26	Agariyana	46	Bodari	66	Mogi
7	Auntar	27	Lagrasu	47	Khaskudau	67	Masaun[1]
8	Tik[1]	28	Mawana	48	Dwargarh	68	Khairad+[1]
9	Khera[1]	29	Kanda Jakh	49	Sadav	69	Tator
10	Bhunyasari[1]	30	Kimoi	50	Rampur Nigyana	70	Thakraul
11	Shirsh	31	Jinsi[1]	51	Binau	71	Tikri[1]
12	Mundani[1]	32	Tunetha	52	Gharad[1]	72	Birod
13	Thatyud	33	SiyaKempti	53	Srikot	73	Nakot
14	Papra[1]	34	Nawadidhar[1]	54	Bhatwari	74	Matli
15	Aglad Sera	35	LagwalGaon	55	Basangaon	75	Devban
16	Parori	36	Rayatgaon	56	Bistonsi	76	Ghansi
17	Kyari	37	Bhediyana	57	Khasonsi	77	Kadaksari[1]
18	Lalotna	38	Bhatoli[1]	58	Bamangaon	78	Myani
19	Bangar	39	BanglowkiKandi	59	Khaskoti		
20	ChhananGaon	40	Sainji	60	Sendul		

DISTRICT : DEHRADUN, MODEL MICRO WATERSHED - BIDHALNA

ASSEMBLY CONSTITUENCY- DOIWALA M DEVELOPMENT BLOCK- RAIPUR

	GP Name		GP Name
1	**Thano**	**5**	**Sangoan**
2	Dharkot	6	Sindwalgaon
3	**Talai**	**7**	**Haldwadi**
4	Nahikhurd		

[1]-Gram Panchayats selected under SCSP program, which includes such revenue villages.

[2]- Gram Panchayats selected under TSP program, which includes such revenue villages.