

LIVELIHOOD INTERVENTIONS FOR ENSURING INVOLVEMENT OF COMMUNITIES IN GANGA CONSERVATION

BIODIVERSITY CONSERVATION AND GANGA REJUVENATION

Component -5 Community Based Conservation
Programmes for Species Restoration in Ganga River
2016-2019



Coordinating Lead Authors

Ruchi Badola
Syed Ainul Hussain
Hemlata Khanduri
Sandhya Joshi

Lead Authors

Pariva Dobriyal
Sunita Rawat
Ekta Sharma
Deepika Dogra
Mohammad Rahil

Contributing authors

Vipul Maurya
Aditi Dev
Amanat Kaur Gill

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Shri Rajiv Ranjan Mishra, Director General
Shri S.K. Ratho, Deputy Director General
Shri Ashok Kumar Singh, Executive Director (Projects)
Shri Rozy Agarwal, Executive Director (Finance)
Shri D.P. Mathuria, Executive Director (Technical)
Shri G. Asok Kumar, Mission Director, National Water Mission
Shri Rajiv Kishore, Former Executive Director (Administration)
Dr. Sandeep Behera, Biodiversity Consultant
Shri Sunil Kumar, Assistant Engineer
Shri Mohammad Najeeb Ahsan, Senior Social Management Specialist

Forest Departments

Uttarakhand Forest Department
Uttar Pradesh Forest Department
Bihar Forest Department
Jharkhand Forest Department
West Bengal Forest Department

Wildlife Institute of India

Dr. Dhananjai Mohan, Director
Dr. Y.V. Jhala, Dean
Dr. G.S. Rawat, Former Director
Dr. V.B. Mathur, Former Director

Other Organizations

Nuclear Power Corporation of India Limited (NPCIL)
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Executive Summary

Livelihood and skill development activities for local communities are aligning Ganga conservation through innovative livelihood approaches. Under the WII-NMCG project, livelihood skills of the local people in alternative sustainable livelihoods are developed through effective trainings and market linkages. A total of 21 mobile livelihood centres are established and a total of 35 trainings have been conducted, wherein 713 (M=27, F=686) *Ganga Praharis* are trained in different skills. To link the trained *Ganga Praharis* to existing market and to create market for the products developed at the livelihood centres a floating livelihood centre “Jalaj”, a boat owned by one of the Ganga Prahari at Varanasi, has been developed as an information and marketing centre. The business model of Jalaj is now been recognized and replicated by District Administration Sahibganj, Jharkhand for information dissemination and sensitization. *Ganga Praharis* have also been linked with different Government schemes, programmes and organizations working towards the rural and livelihood development and marketing of services and products. Though, it is not feasible to totally switch from one’s traditional livelihood practice at once, but the alternative livelihood options give them a choice to slowly switch it and increase their resistance towards any economic and ecological shocks. Livelihood trainings also provided a platform to the village women to come out and discuss their issues. Regular education and mobilization activities were conducted with them to bring about a positive change in their behavior. A number of women registered themselves as *Ganga Praharis* after participating in the livelihood and skill development trainings. Number of *Ganga Praharis* increased as the number of livelihood training increased. Women came out and participated in biodiversity and Ganga conservation activities not only in their respective sites but also in programme organized at distant places. Their income has also increased and it brought self confidence in them that they can also contribute positively for their family and society. They took a step towards conservation of Ganga and its biodiversity and we hope it will continue in future.



Livelihood Interventions for ensuring involvement of communities in Ganga Conservation

1 Introduction

Millions of people rely on natural ecosystem to sustain their livelihood (Shanker K et.al, 2005; Wismer, 1996, Margolius and Salafsky, 1998, Pandey et al., 2016). Rivers are source of life and civilization all over the world. They have nurtured various civilizations throughout the world. Today rivers are under threat due to various reasons. The loss of forest in river catchment, dams, barrages and other barriers, urbanization, sewage and other pollutants are factors degrading the river biodiversity (Kausar et al., 2018; Dutta et al., 2018).

Ganga basin is the most fertile and populated area in the world and supports more than 400 million people. A large number of populations have their own beliefs in its sanctity and medicinal powers (Ramesh et al., 2019). Millions of people are dependent on it for their livelihoods. Its soil carries nutrients from the mountains, from where it originates and deposits it on the banks, as it flows down. The Ganga basin has the most irrigated land area in the world. This is about 57% of the total irrigated area of India and has a significant contribution in the agriculture economy of the country. Apart from agriculture, it also supports other livelihood sectors like animal husbandry, fisheries, trade, transport and tourism etc., which are source of livelihood for many (GOI, 2008, Kumar, D. 2017). Therefore, conservation of river Ganga and its biodiversity will have a positive impact on these people.

It is universally accepted that, for sustainable impact it is important to engage the community in conservation efforts. Community participation is vital for the success of any development or conservation activity. The community based conservation approach is now being implemented in many areas (Biggs et al., 2017). The Convention on Biological Diversity has also emphasized on the need to engage individuals and communities in biodiversity conservation by educating and generating awareness among them (Kanaujia et al., 2016).

The Sustainable Development Goal (SDG) 15.5 also calls for taking urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect

and prevent the extinction of threatened species (Leal Filho et al., 2018). Under the NMCG-WII Biodiversity and Ganga Conservation Project, different activities are being organized for engaging communities in biodiversity conservation.

2 Rationale

Livelihood comprises of activities that enables a person to meet the needs of food, water and shelter. It enables people to meet their daily needs and things they choose to buy. (Kumar et. Al, 2015). People opt for different activities to earn their living depending upon their skills, resources and opportunities available to them.

People's livelihood options may be positive or negative on conservation criteria/standards. Some options may affect it positively and some negatively (Brockington, 2003; McLean & Straede, 2003). Livelihood interventions are required for building trust to minimize the actions of the communities that damage the river biodiversity.

Success of field conservation activities depends on the attitude of the local community. Conservation efforts affect the livelihoods of the local people in one or other way making the people vulnerable. Thus, to promote conservation, it is required to keep their livelihood needs in mind.

Over last 30 years, livelihood-based conservation strategy is being used to engage the community in conservation activities, which has helped in enhancing the people's participation in biodiversity conservation (Roe et al., 2015).

Ganga River is a source of livelihood, spiritualism and salvation for a large population. Agriculture is the main occupation of communities residing along the Ganga River and they also practice riverbed agriculture along the river banks. Water for domestic and other uses, fish, power, sand and other minerals, shipping, performing religious rituals, boating, rafting etc. are the other benefits associated with the river. Though these activities are benefitting people but are also leading to deterioration of the water resources and ecology of the river. To orient the

communities towards the conservation of river resources and to change their environmental damaging behavior, it is important to engage them in the conservation activities.

As livelihoods of communities residing along the Ganga River is heavily dependent on river, its pollution and water diversion will affect half of the population residing on its banks. Thus, alternative livelihood and skill development trainings for communities (especially for women) are organized as a strategy to engage them in conservation activities. Rural women and men do not have many choices available to them for their livelihood. At the same time, they have limited capacity to adjust the change; therefore, they are skeptical of changes in their livelihood activities. In order to encourage community participation, we need to give them economic and social incentives. It is envisaged that, alternative livelihood activities will support improving relationships with local communities, and also improve collaboration of local people for conservation measures. Along with this, their social structure will also improve, which may increase their direct involvement in conservation actions. Keeping in mind that livelihood and skill development interventions are a constructive way to engage with local communities, following objectives were formulated:

3 Objective

- To create a platform to motivate and engage the community, especially women, in the conservation activities.
- To provide local people with an alternative means of livelihood that reduces pressure on the biodiversity of Ganga River.

In rural areas of northern India, it is challenging to engage the community in conservation for various reasons, especially communities residing along the Ganga River, who are dependent on it for their day to day survival. Livelihood training centers are visualized as a platform to engage the communities in conservation efforts. By engaging women and men in different livelihood and skill development trainings, a platform has been created to sensitize them about the conservation of Ganga River and its Biodiversity, along with increasing their income thus reducing dependence on the river resources.

4 Approach

To engage people in biodiversity conservation and to reduce their dependence on Ganga River, livelihood trainings were conducted in selected sites along the river (figure 2). The process followed is depicted in the following diagram (Figure 1):

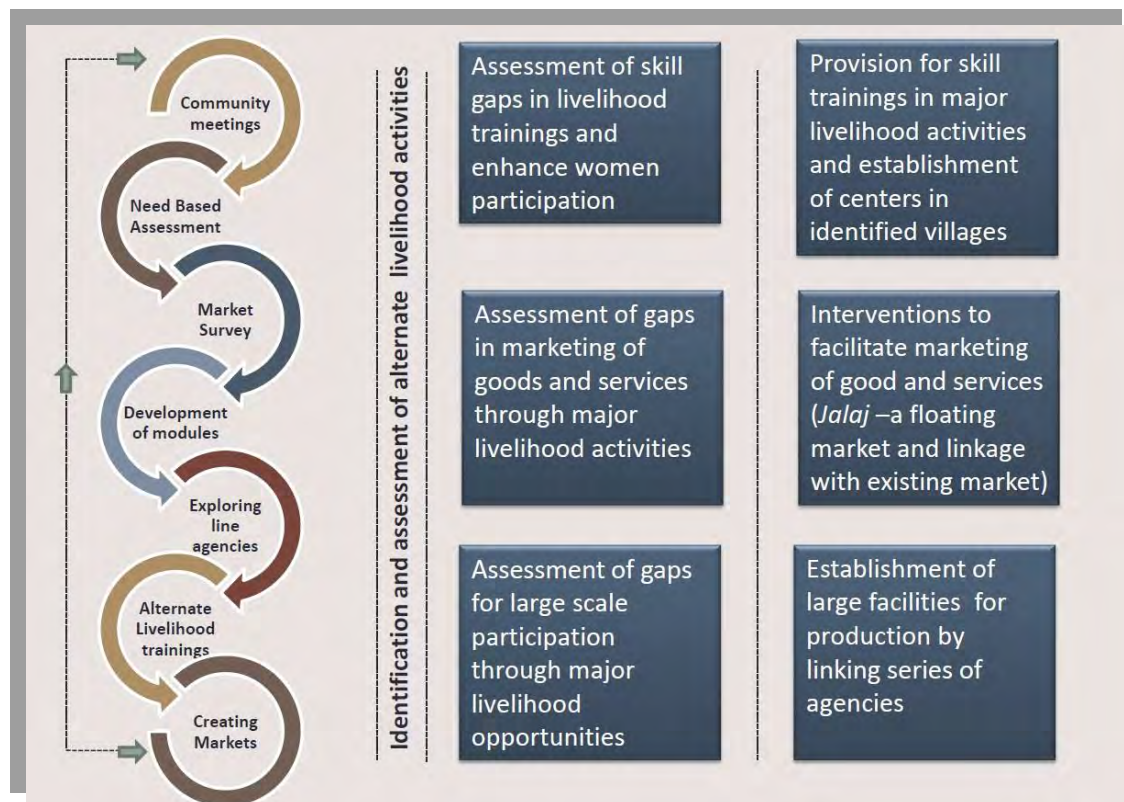


Figure 1: Process and components of alternate livelihood centers

4.1 Regular meetings/ Interaction with the community

Regular community meetings, focus group discussions and consultation with members of Gram Panchayat and Community were organized, to orient them about the project. The community was sensitized about the importance of Ganga River Biodiversity and their role in maintaining the same. Communities' dependence on Ganga for subsistence was discussed and it was felt that there is a need to orient the community for adopting alternate livelihood to reduce their dependence on the Ganga River. After discussions, it was observed that there is a huge skill development gap. Discussions were conducted to

understand the set of skills for which the people were interested and which were feasible according to the resources available in the area.



Picture - 1 Community level meeting at village Rampur, Varanasi, Uttar Pradesh



Picture - 2 Community level meeting at village Kahalgaon, Bhagalpur, Bihar

4.2 Need Assessment

Meetings and discussions with community members highlighted the need for livelihood and skill development trainings in villages located along the Ganga River. A training need assessment was also conducted through focus group discussions and consultation with different sections of the community e.g. Panchayat members, Women, Men, Youth group, Farmers, Fishermen community to assess the potential trainings to be given. Information was collected about different livelihood schemes and already implemented

projects in the villages. The type of skill trainings were discussed with participants (Need based skill development training), where they revealed their choices of trainings. It was observed that the young men were inclined towards receiving training in computers, tourist guide, nursery, plumbing and electrician, which could get them employment. Women were interested in trainings, which can fetch them work at the home itself, such as: sewing and tailoring, value addition of local produces, incense stick making, fruit and food preservation and beautician etc. Young girls were especially interested in beautician training. Socio-economic assessment for identifying the potential trainees was also conducted. Additionally, consultation meetings were conducted with Gram Pradhan, Training agencies, Block and District administration to understand the need and facilities available for skill development trainings. Information on availability of market, livelihood schemes implemented in the area and people's response about the same was also gathered. On the basis of above process, identification and prioritization of the viable trainings was done.



Picture – 3 Need Assessment in Village Domari, Varanasi, Uttar Pradesh

4.3 Resource/Market Survey

After the need assessment, a survey was conducted regarding the local resources available with the community. Identification of local skill resource base was done through discussions. Potential livelihood schemes, projects and resource persons were explored. Information on existing natural resources in the area was collected, in order to insure that raw material for the trainings could be easily available and in economical rates. Availability of Infrastructure for conducting the livelihood training was also considered as a resource. After considering technical, natural and infrastructure resources, estimation of financial requirement was done. Market Survey was also conducted to collect information about the producers, traders and NGO's working in and around the villages.

4.4 Development of livelihood Manuals

A training manual is used for teaching a subject step by step. It is also helpful in organizing and disseminating the information in a better manner. Before conducting the training, livelihood manuals for different skill development courses were developed keeping in view the requirement and duration of the training. After discussions with the resource persons, 21 days manual for Health and wellness, 10 days manual for Prasad (Laddoo), and incense stick making, 10 days manual for Nursery development, 21 days manual for Biodiversity based tourist guide, 2 months training manual for electrician training and 3 months training manual for stitching and sewing trainings are developed (Annexure 1-6). These manuals give description of the day to day teaching learning topic. It also helps the trainer to carry out the training in a structured way.



Picture - 4 Livelihood training manuals

4.5 Exploring line agencies

To establish the linkages to conduct skill development trainings at sites, line agencies working for skill and livelihood development were explored. For this consultation meeting with agencies i.e. Forest department, District and Block administration, officials of National/State Rural Livelihood Mission (N/SRLM), Nehru Yuva Kendra Sangathan (NYKS), Pradhan Mantri Kausal Vikas Yojna (PMKVY), Rural Self-employment Training Institute (RSETI) of district lead banks, NGO's and other institutes were conducted. Information was also collected about the livelihood related schemes being implemented at the village level. Links with RSETI, Institutions involved with PMKVY, District administration and N/SRLM were developed. In Uttar Pradesh: i. trainings and workshops were organized in collaboration with RSETI and USHA International limited in the villages of Dibai block, Bulandshahr district, and ii. in Varanasi district, linkages were established with NRLM and Prime Minister Kaushal Vikas Yojna centers. WISE (Women Initiative for Self Employment): the women empowerment unit of a renowned NGO - HESCO (Himalayan Environment Studies and Conservation Organization) in the state of Uttarakhand was identified as lead training agency for imparting alternate skill and livelihood trainings to the rural communities. Other agencies working for rural

development were also explored. After discussions with different agencies, MOU was signed with USHA International limited, which conducts sewing and tailoring training under its CSR initiative, and RSETI, Bulandshahr to conduct trainings in the villages of Dibai block, district Bulandshahr in Uttar Pradesh. At institute level linkages with different projects and centers were also explored and certificate course in Green skill development training for *Ganga Praharis* was conducted in Varanasi in association with ENVIS centre of the institute under Ministry of Environment, Forest and Climate change (MoEFCC).



Picture - 5 Meeting by RSETI officials at village Udaigarhi, Bulandshahr, Uttar Pradesh

4.6 Conduct of livelihood trainings

After the need assessment, resource survey was conducted and keeping in mind the demand from the community and availability of resources 35 trainings in different skills were conducted in selected sites (Table 1, Figure 2).

1. **Sewing and Stitching Training** – Conduct of skill and livelihood trainings for the community is used as a strategy to connect with the community especially women, as in areas of Uttar Pradesh, Jharkhand and Bihar, women are hesitant to come out from their houses and interact with unfamiliar persons. To engage them with the project activities, sewing and stitching centers were established in the selected villages, where the village pradhans were supportive, and helped in allotting community space for training center.

The first training center was established in village Rampur (Block Cholaapur in district Varanasi) in the month of February 2018, where 25 women participated in this training. Following this, trainings were conducted in village Dhaka, Tatepur, and Molnapur in district Varanasi, village Rajghat, Udaigarhi, Badarpur, Niwari khadar, Nayabas and Ramghat in district Bulandshahr, Uttar Pradesh and village Kalyani, Maskalayian and Ghat Jamni in district Sahibganj, Jharkhand. During these trainings total 343 women were trained.



Picture - 6 Sewing and stitching training at village Niwari Khadar, Bulandshahr, Uttar Pradesh

Livelihood Interventions for ensuring involvement of communities in Ganga Conservation



Picture - 7 Sewing and stitching training at village Rampur, Varanasi, Uttar Pradesh

2. **Prasad (Laddoo) and Incense stick making** – To add value to the resources available in the area, trainings in Prasad (Laddoo) and Incense stick making were conducted. Local produce such as wheat flour, gram flour, bajra flour, maize flour, rice etc. were used to make high nutrition laddoos. These trainings were conducted in four villages in Uttar Pradesh (Dhaka and Domari villages of Varanasi district and Rajghat and Gopalpuri Khadar villages of Bulandshahr district) and in village Maskalaiya and Sankarigali in Sahibganj district of Jharkhand. Women of village Kunao in Uttarakhand were also trained in making laddoos. A total of 92 women participated in these trainings.



Picture – 8 Prasad and Incense stick making training at Village Maskalaiya, Sahibganj, Jharkhand

3. **Health and Wellness Training** –Young girls demanded for training in Health and Wellness (Beautician). Therefore, 15 and 21 days training in Health and Wellness was conducted in Sarnath, Varanasi (GSDP), Narora, Bulandshahr and Shahibganj Districts. In Varanasi, the training programme was conducted under Green Skill

Development Programme of Ministry of Environment, Forest and Climate Change (MoEFCC). In Narora, young girls from Udaygarhi, Rajghat, Niwari Khadar and Gopalpuri Khadar villages participated in the training. While in Sahibganj, 37 participants from village Rampur Sankarigali, Maharajpur, Kalyani, Maskalaiya, Balapokhar, Fatehpur, Karampura attended the training. Under these trainings, participants were trained to use locally available biodegradable and chemical free products such as milk, oils, curd, turmeric, lentils, fuller's earth, rice flour, herbal leaves and flowers etc. for improving the health and beauty. A total of 80 participants were trained in three locations.



Picture - 9 Health and wellness training at Sarnath, Varanasi, Uttar Pradesh

4. **Fruit Preservation Training** – Fruit preservation training was conducted to add value to locally available fruits and vegetables, and to preserve the fruits from rotting away. These trainings were conducted in Jharkhand and Uttarakhand. In Jharkhand, two training centers were established, at Maskalaiyan and Sankarigali villages of Sahibganj district. While in Uttarakhand, fruit preservation training was organized for 6 participants from Uttarkashi district at HESCO headquarter in Dehradun, as Uttarakashi district is known as one of the fruit growing belt of the country. Apart from this, in Sahibganj the trainees were also trained to make incense sticks from the waste flowers and leaves collected from the Ghats. Total 36 women participants were trained in these centers.



Picture - 10 Fruit preservation training at Sankarigali, Sahibganj, Jharkhand

5. **Handicraft Training** – Handicraft training was conducted for 52 participants with the articles available at household and plastic waste such as rope, cloth, thread etc., in two batches, at Matli village in Uttarkashi district of Uttarakhand.
6. **Bakery Training** – 15 women from Kunao and Ganga Bhogpur villages of Yamkeshwar block, Uttarakhand and 15 women from Domari village, Kashi Vidyapeeth, Varanasi have been trained in making bakery items (biscuits, cup cakes, nankatai and muffins) from local products.



Picture- 11 Bakery training at village Kunao, Yamkeshwar, Uttarakhand

7. **Jute Bag Training** – To make participant aware about the harmful effects of single use polythene bag and to encourage use of cloth/jute bags, Jute Bag training was conducted in livelihood centre of village Rampur, Varanasi. A total of 20 women Ganga Praharis from village Chandrawati, Rampur, Dhaka, and Molnapur participated in the training.



Picture -12 Jute bag training at village Rampur, Varanasi, Uttar Pradesh

8. **Sewing and tailoring training by USHA International Limited** – USHA International Limited conducted basic and advance sewing and tailoring trainings in village Rajghat (block Dibai, district Bulandshahr). Participants were from village Rajghat, Udaygarhi, Badarpur, Niwadi khadar and Gopalpuri Khadar in Dibai block of district Bulandshahr, Uttar Pradesh. 20 and 14 women from these villages participated in basic and advance trainings respectively.



Picture – 13 Sewing and stitching training by USHA International limited at Rajghat, Bulandshahr, Uttar Pradesh

8. Green Skill Development Training Programme - A certificate course for Ganga Prahari livelihood enhancement under Green Skill Development Programme was conducted from 23rd July to 12th August, 2018 at Sarnath, Uttar Pradesh. It witnessed the participation of seventy seven *Ganga Praharis* from thirteen villages located near the banks of Ganga River. The programme comprised of four courses on Health and Wellness, Nursery Development, Prasad and Incense stick making and Biodiversity based tourist guide.

- (i) The Health and wellness programme encouraged the growth and use of organic herbs for everyday health and grooming. Basics of personal hygiene, use of herbal home-made products, importance of client-customer relationship, dealing with clients at wellness centre, and providing quality service to customers were discussed in detail with the participants.
- (ii) Farming is the most widely practiced occupation in the Gangetic plains. Nursery training programme was imparted to the farmers to employ ecologically and economically advanced farming techniques, preparation of low-cost poly houses, nutrient rich bio-compost and bio-pesticides for sustainable farming and reduce the current threats of the conventional farming methods in practice.
- (iii) Prasad making imparted skills of making nutritious Prasad (Laddoo) or bhog using commonly available local food grains with green packaging to target the huge number of pilgrims and tourist footfalls in Varanasi and other places. The incense sticks making course was designed to use the disposed flowers at religious places like temples and ghats and impart skills to recycle it into fragrant incense sticks.

(iv) The biodiversity based tourist guide programme was designed keeping in view the huge tourist footfall in Varanasi and the deteriorating status of the Ganges. It trained the youth to become well-informed tourist guides capable of engaging tourists with nature walks, heritage walks and exploring Ganga River. Apart from knowledge about the history and culture of Varanasi, the participants were introduced to the biodiversity of Ganga River with special focus on priority species and indicator species of Ganga River and their habitats. Species sighting, breeding programmes, status of species in different bio-geographic zones of India were also explained. The participants were trained to sensitize the tourists on the biodiversity of Ganga River.



Picture - 14 Health and Wellness training under GSDP programme at Sarnath, Varanasi, Uttar Pradesh



Picture - 15 Nursery and Biodiversity based tourist guide training under GSDP programme at Sarnath, Varanasi, Uttar Pradesh



Table 1: Livelihood trainings Conducted

State	District	Block	Village	Type of Training	Female	Male	GP trained
Uttar Pradesh	Varanasi Sewing and Stitching – 6 Prasad and Incense Stick making - 3 Jute bag making -1 Bakery training -1 Health and Wellness -1 Nursery training -1 Tourist Guide Training -1	Cholapur	Dhaka	Sewing and Stitching	25	0	25
			Rampur		25	0	25
			Rampur		16	0	16
			Molnapur		16	0	16
			Molnapur		25	0	25
			Dhaka	Incense Stick Making	20	0	20
			Rampur (Chandrawati, Rampur, Dhaka, Molnapur)	Jute bag making	20	0	20
		Chiraigaon	Tatepur	Sewing and Stitching	24	0	24
		Kashi Vidyapeeth	Domari	Prasad and Incense Stick Making	24	0	24
			Domari	Bakery Training	15	0	15
		Sarnath (GSDP Training)		Health and Wellness	22	0	22
				Tourist Guide	4	16	20
				Prasad and Incense Stick Making	20	0	20
				Nursery Training	4	11	15
	Bulandshahr Sewing and Stitching – 8 Prasad and Incense Stick making – 2 Health and wellness - 1	Dibai	Rajghat	Sewing and Stitching	20	0	20
			Udaigarhi		14	0	14
			Badarpur		22	0	22
			Niwadi Khadar		25	0	25
			Nayabas		21	0	21
			Ramghat		25	0	25

			Narora	Health and Wellness	21	0	21
			Gopalpuri Khadar	Prasad and Incense Stick Making	16	0	16
			Rajghat	Prasad and Incense Stick Making	12	0	12
			Rajghat	Sewing and tailoring (Basic training by USHA)	20	0	20
				Sewing and tailoring (Advance training by USHA)	14	0	14
Uttarakhand	Uttarkashi Handicraft -1 Fruit preservation -1	Dunda	Matli	Handicraft	52	0	52
		Dunda and Bhatwari	Matli, Harsil, Nirakot, Maneri, Mando	Fruit Preservation	6	0	6
	Pauri Garhwal Bakery - 2	Yamkeshwar	Ganga Bhogpur	Bakery	6	0	6
			Kunao	Bakery	9	0	9
	Jharkhand	Sahibganj Sewing and Stitching – 3 Fruit preservation, Incense stick making – 2 Health and Wellness - 1	Taljhari	Maskaliyan	Sewing and Stitching	25	0
Kalyani				Sewing and Stitching	26	0	26
Maskaliyan				Fruit preservation , Incense stick making	15	0	15
Sankarigali				Fruit preservation , Incense stick making	15	0	15
Sahibganj			Sahibganj	Health and Wellness (Beautician)	37	0	37
Rajmahal			Ghat Jamni	Sewing and stitching	25	0	25
Total Trainings Conducted = 35; Total GP Trained = 713; Female = 686; Male= 27							

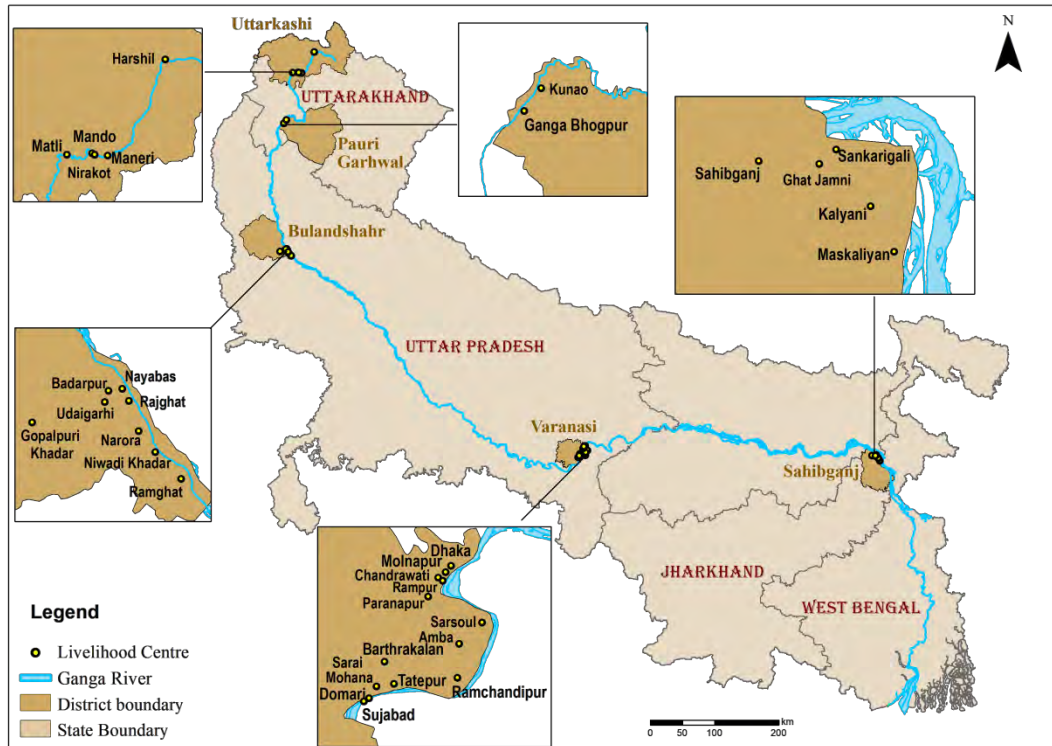


Figure 2: Location of livelihood centers

4.7 Creating Market - The JALAJ model

To carry forward the livelihood activities and to create market for products developed and produced by *Ganga Praharis*, a floating livelihood centre “Jalaj” is established at Varanasi. This boat “Jalaj” comprises of a small shopping complex and sells the products and services of trained *Ganga Praharis* (Annexure-7). A business model in collaboration with IBM USA was developed for the Jalaj (Figure -3). The boat takes the tourists along the Ganga, and apart from the popular tourist spots also shows them the rich biodiversity at Varanasi and the glimpses of village life. It not only creates livelihood opportunities for the *Ganga Praharis*, but also creates awareness among the tourists and local people on Ganga Biodiversity conservation and cleanliness.



Picture – 16 JALAJ at Rajghat, Varanasi, Uttar Pradesh

The objectives of developing the Jalaj are -

- To carry forward the livelihood activities.
- To create market for products, developed and produced by *Ganga Praharis* .
- To develop alternative livelihood opportunities for the community and to reduce dependence on Ganga river.
- To create a replicable model for livelihood initiatives of *Ganga Praharis* and create awareness among the tourists and local people towards biodiversity conservation and Ganga cleanliness.

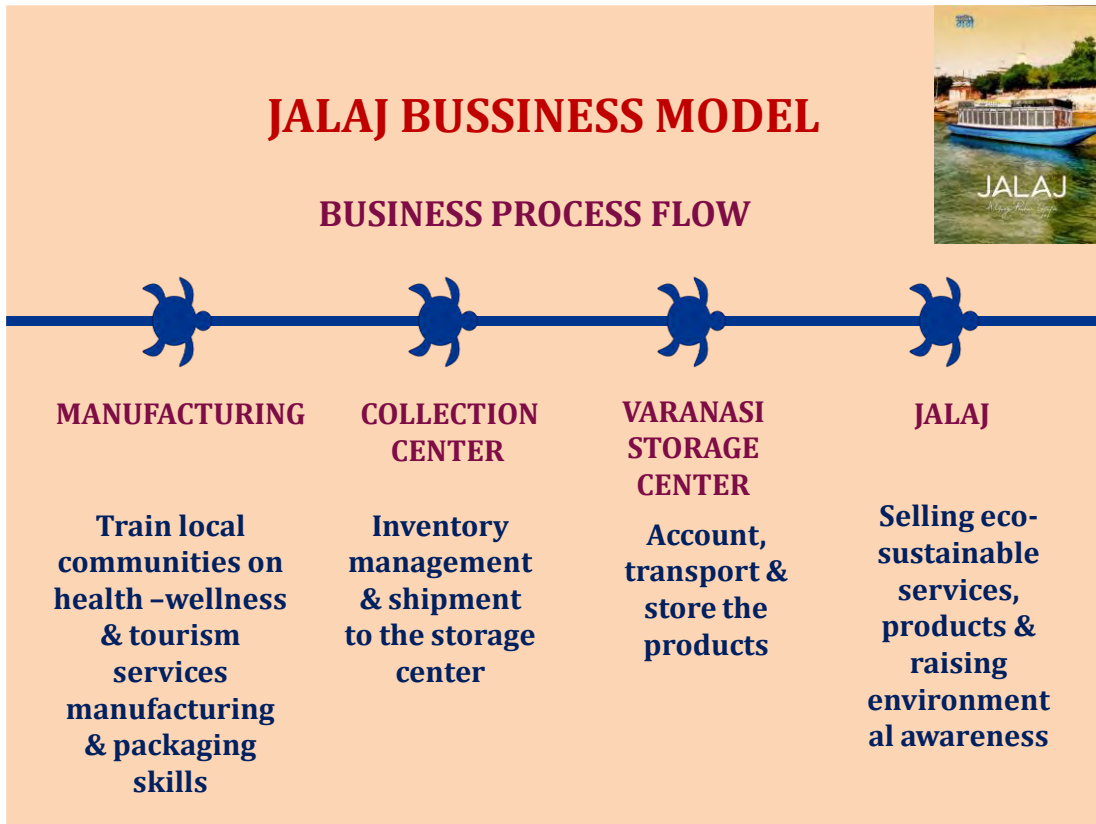


Figure 3: Business model developed for “Jalaj” in collaboration with IBM USA

The “Jalaj” has been created to provide a platform to the *Ganga Praharis*, who have been trained to produce local products. The trained *Ganga Praharis* under the guidance of WII, are selling the products made by *Ganga Praharis* at different sites including Jalaj. Some of the *Ganga Praharis* trained in Health and Wellness are also providing their services at “Jalaj”. Apart from sale of products and providing services, the “jalaj” is vital in creating awareness among the tourists and local peoples. For this a trained tourist guide, information brochures, publications and other reading material on biodiversity of Ganga River and its conservation, is exhibited on “Jalaj”.



Picture -17 Honorable Minister Jal Shakti on JALAJ



Picture-18 Director General and other NMCG officials on JALAJ



Picture -19 National Geographic team and local people enjoying the services of trained *Ganga Praharis* at JALAJ



5. Discussion

Most of the people living along the Ganga River agree to the fact that they are getting benefits from the river in one or other way. They also accept that the river is losing it's true form and there is a need to protect and conserve it. Although they know that the environmental damaging behavior of people visiting the river, is one of the reasons behind it, but they are not keen to change their behaviour. Wildlife Institute of India under NMCG-WII project adopted livelihood interventions as a tool to achieve positive outcomes for biodiversity and for people.

Under the NMCG-WII Biodiversity and Ganga Conservation Project, livelihood trainings are conducted at Varanasi and Bulandshahr districts of Uttar Pradesh, Sahibganj district of

Jharkhand and Uttarkashi & Pauri districts of Uttarakhand. Several meetings and interactions were conducted with the communities, district administration and organizations working in the area. After interaction, it was felt that there is a need to conduct livelihood trainings to develop connects with the communities. Different livelihood trainings were conducted according to the needs and availability of raw material and resources in the area. Community members especially women participated in large numbers in these trainings. Co-ordination and linkages were developed with different departments and organizations working for skill development i.e N/SRLM (National/State Rural Livelihood Mission), Rural self employment and training institutes of lead banks (RSETI) which are present in every districts, Integrated Livelihood Support Project (ILSP), Skill development programmes, DST, NGO's, USHA International Limited and Green skill development programme of ENVIS centre under Ministry of Environment, Forest and Climate change (MoEFCC).

Workshops and trainings were organized with the support of different organizations at different sites. 4 trainings under GSDP programme of ENVIS center were conducted in Sarnath, Varanasi, in which 77 participants including 27 men and 50 women participated. Apart from this, Ganga Prahari **Vikram Ram** is trained under Deen Dayal Upadhyay Gramin Kaushal Vikas Yojna, Varanasi. Presently he is working in Chennai. Four female *Ganga Praharis* are under training in Hand embroidery and Computer skills at Varanasi. 2 *Ganga Praharis* at Allahabad are trained by RSETI in computers. 1 Ganga Prahari from village Mukhba, Uttarkashi, Uttarakhand is trained in Solar panel repair under DST-SEED programme. Collaboration with USHA International Limited was established to conduct sewing and tailoring training in Narora area of Bulandshahr district. USHA International Limited conducted basic and advance training at Rajghat, Narora, 20 and 14 women from different villages participated in basic and advance training respectively.

In Village Matli of Uttarkashi district, a group of women, "*Ganga Prahari Swayam Sahayata Samooh*" was formed and linked with the Integrated Livelihood Support Project of Govt. of Uttarakhand (Figure 4).

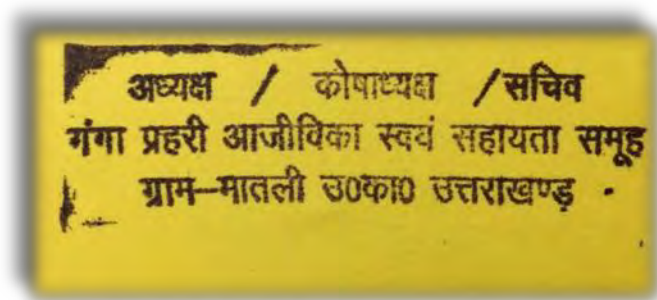


Figure 4: Official stamp of the Self help group Matli

In other villages, trainings in Sewing and stitching, Health and wellness, Prasad and Incense stick making, Handicrafts, Fruit preservation and Bakery were organized under the NMCG-WII initiative. A total of 713 *Ganga Praharis* were trained in 35 skill development trainings (Table 1).

The training centers not only provided skill enhancement training but are also the focal point to discuss on biodiversity of Ganga River, its threats, conservation and importance of a clean Ganga ecosystem. These centers became a platform to create awareness about the importance of Ganga Biodiversity and its conservation. The trainees were mobilized and motivated to regularly conduct cleanliness drives, do plantation activities and make people around them aware of the importance of biodiversity and cleanliness of the river.

The community members trained and sensitized in these centers are also reporting of distressed animals found in their vicinity and motivating other people visiting the banks not to pollute the river. They conduct awareness meetings, cleanliness drives, plantation drives, awareness drives in schools to sensitize the community. These trainings worked as a trust building activity to establish bond with the community. It increased collaboration and support of the local people in sustaining biodiversity conservation efforts while improving their livelihood prospects.

Most of the *Ganga Praharis* trained in the centers are earning money, ranging from Rs. 200 - 4500 per month. Others, who are not having monetary benefits, they are using their skills for their families and neighborhoods. Efforts are being made to link the trained *Ganga Praharis* to the various schemes and programme to market their skills, services and

products. Apart from this, their ownership to the programme has also increased as their earning increased.

6. Impact of the programme

Under the project livelihood interventions are used as a strategy to engage the communities in Ganga and Biodiversity conservation. Through these interventions, the institute was able to connect with the communities, especially women of that particular area. Women and young girls, who were not coming out from their homes, turn out in a large number in these livelihood centres. More and more women registered themselves as *Ganga Praharis* after attending the livelihood trainings and participated in activities conducted by the institute or Ganga Prahari leaders. Number of Ganga Prahari increased as the no. of livelihood trainings increased (Figure-5).

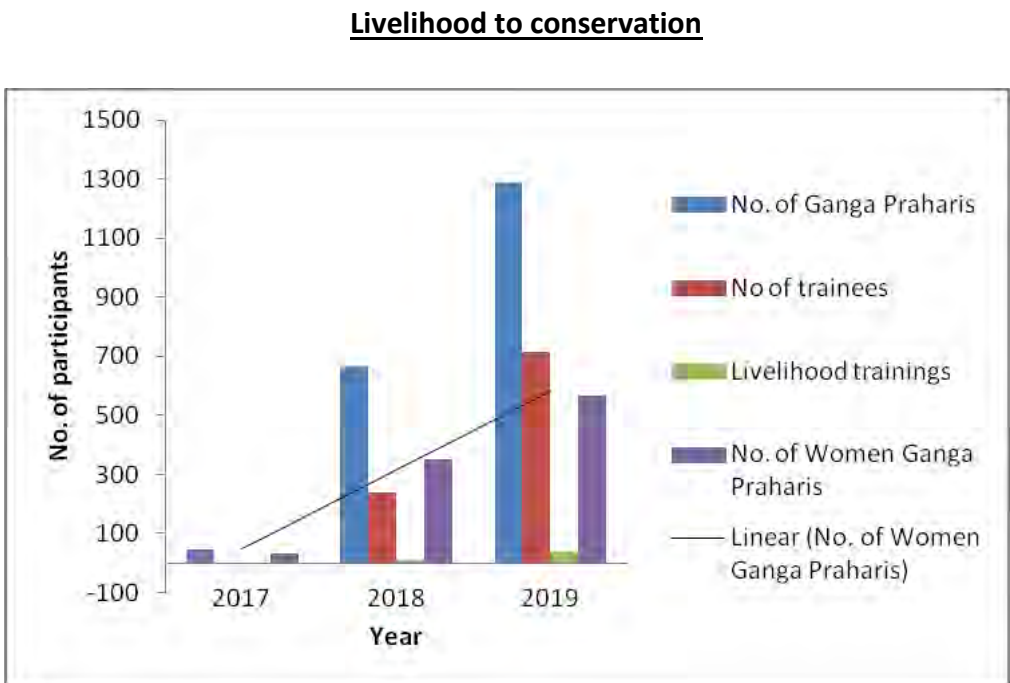


Figure 5: Increase in number of total Ganga Praharis and women Ganga Praharis with livelihood trainings

After participating in the trainings, most of the trainees are using their skills to increase their income. The impact assessment survey conducted with 213 *Ganga Praharis*,

trained during livelihood trainings in Narora and Varanasi, Uttar Pradesh and Shahibganj, Jharkhand revealed that the average income of *Ganga Praharis* trained at livelihood centres has increased by 200-4500 per month.(Table-2)

Contribution to livelihood security

Table 2: Increase in monthly income of trained Ganga Praharis

Sl. No.	Training	No. of trainings	No. of GP's	Increase in income (INR/month)
1	Sewing and Stitching	17	368	200-4500
2	Prasad and incense stick making	5	92	500-2500
3	Jute bag making	1	20	100-500
4	Bakery	3	30	500-1500
5	Health and Wellness	3	80	2000-4500
6	Tourist guide	1	20	1000-3500
7	Nursery development	1	15	1000-3000
8	Handicraft	1	52	500-2500
9	Fruit processing and value addition	3	36	200-1500
	Total	35	713	-

Apart from the above, interaction with already formed Self Help Groups were established to orient them on Ganga Conservation. Members of 18 SHG's along with youths from 16 groups of Nehru Yuva Kendra Sangathan (NYKS) and youth clubs also participated in livelihood trainings conducted under the project. These livelihood trainings worked as catalyst in strengthening these groups.

7. Outcome

- **Change in Attitude:** Livelihood trainings were also helpful in improvement of people's attitude towards conservation and improvement in their environmentally damaging

behavior. The training centers emerged as a platform to create awareness about Ganga and biodiversity conservation, where the project personnel could interact with the participant. Sessions on status of Ganga, species in Ganga, their importance and role of community in biodiversity conservation were conducted during the trainings. Activities like Cleanliness drives, plantation drives rallies, celebration of important days etc. were conducted with the participants. This helped to orient them towards the objective of Biodiversity conservation. Now they are actively participating in Ganga conservation activities.

- **Increased mobility:** Participation in livelihood training and different project activities has increased the mobility and confidence of the women. Young girls, who were earlier hesitant to come out of their houses now actively participating in exchange programmes and trainings workshops, seminars organized in and outside their villages and communities.
- **Sustainable use of river resources:** The participants were oriented towards biodiversity conservation during the training period. After attending the alternate livelihood trainings large numbers of women came out to participate in activities pertaining to cleanliness of Ganga River and conservation of its biodiversity in their respective villages and towns. Training and orientation in these centers have evoked a sense of ownership in them and they are more sensitive towards the sustainable use of the natural resources extracted from the river and are mobilizing other members of the community for the same.
- **Social Inclusion:** People from all caste and sections attended the training programme. This developed a connection among them and gave them a platform to share their experiences and activities.



A step towards self reliance – Kunao, a success story

As part of the NMCG-WII initiative on alternative sustainable livelihood, a training programme was conducted for the women of Kunao village in Rishikesh. Women in this beautiful village nestled at the himalayan foot hills of Pauri Garhwal are engaged in agriculture work and dependent on money sent by their husbands working in big cities. To make them economically independent and ensure their participation in Ganga conservation their skills are developed through a 5 days training programme.

A total of ten (10) women were trained during the five days training programme. Hands-on-skill training sessions in bakery and nutritious laddoos making from the local produce i.e., Gram flour (Besan), Maduwa (Ragi) and Amaranthus (Chaulai or Ramdaana) were imparted during this workshop. After the training, these Green entrepreneurs organised themselves into a group. They raised a fund of INR. 4900/-. These women further invested the collected money for purchasing resource material for sale of their products to the Eco-Development Committee, Kunao and the Wildlife Institute of India, Dehradun, which were consumed during the celebration of the “Biodiversity week” and “Swachhta Hi Sewa” Programme, respectively. They made a total sale of INR. 8000/-, making a profit of INR. 4400/- . Motivated and encouraged with their small success the group –“Ganga Prahari Swayam Sahayata Samooh- Kunao”, opened a bank account with the profits they earned. They also took a pledge to work for the conservation of the holy river and protect its rich biodiversity.



Story of Kamlesh – A role model

My name is Kamlesh devi, a resident of Village Udaigarhi, Block Dibai, District Bulandshahr, Uttar Pradesh. My family belongs to the economically weaker section. In 2018, I participated in a meeting conducted by Wildlife Institute of India (WII) in our village. In this meeting, we were informed about the cleanliness and biodiversity of Ganga, and its conservation, this was entirely new concept for us. After that, I started attending all the meetings conducted by WII. Hearing about the conservation of aquatic life, I always feel that we know about the mythological importance of the aquatic creatures of the Ganga but for the first time we knew about their contribution to our economy and wellbeing. After several meetings project personnel of WII asked about our economic independence and suggested if we want to get trained in any livelihood skills. We decided to get sewing and beautician training. WII in collaboration with USHA International Limited conducted basic and advance training in sewing and tailoring. I participated in these trainings. I learned stitching and also got a certificate. I started stitching clothes in my house. After some time I participated in health and wellness training conducted in Narora. After attending this training, I practiced it on my family members, friends and neighbors. I received a good response and decided to rent a shop in the nearby market. WII helped me with a sign board, which gave me a new identity. In the first month I earned a profit of Rs. 3000/-. If I keep earning good amount, in future I will open my own shop. I want to train more women and help them to become self-reliant. I have also registered myself as Ganga Prahari and am very excited and committed to work for the conservation of biodiversity and cleanliness of the river.

Conclusion

Livelihood interventions play an important role in establishing a link/connect between the programme and the communities. It helped in building trust between the communities and the project implementers. As monetary benefits are linked with the training centers, people were enthusiastic to join and the platform was used to educate them about the biodiversity and its conservation along with teaching a new skill. Regular education and communication activities with the communities were conducted to change people's behavior. It is evident that Livelihood trainings can help communities by providing additional income, while protecting and maintaining resources and the environment. Increased income along with sustainable use of natural resources can help in conservation goals.

SDG's Addressed through livelihood interventions



Annexures

- 1 Training manual for Health and wellness
- 2 Training manual for Prasad (Laddoo) and incense stick making
- 3 Training manual for Nursery training
- 4 Training manual for Biodiversity based tourist guide
- 5 Training manual for stitching and sewing
- 6 Training manual for electrician training

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NMCG

National Mission for Clean Ganga

Ministry of Jal Shakti

GACMC

Ganga Aqualife Conservation

Monitoring Centre

Wildlife Institute of India

Chandrabani Dehradun - 248001

Uttarakhand, India

