Final Technical Report

Promotion of Sustainable Community based tourism in the Khangchendzonga Landscape: Linking Livelihoods with Nature Conservation





Submitted by:

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Submitted to:

National Mission on Himalayan Studies, GBP-NIHE HQs Ministry of Environment, Forest & Climate Change (MoEF&CC), New Delhi

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Template/Pro forma for Submission

NMHS-Himalayan Institutional Project Grant

NMHS-FINAL TECHNICAL REPORT (FTR)

Demand-Driven Action Research and Demonstrations

NMHS Grant Ref. No.:

GBPI/NMHS-2017-18/MG-14/553

Date of Submission:	2	4	1	2	2	0	2	2
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PROMOTION OF SUSTAINABLE COMMUNITY BASED TOURISM IN THE KHANGCHENDZONGA LANDSCAPE: LINKING LIVELIHOODS WITH NATURE CONSERVATION

Project Duration: from (26.02.2018) to (28.02.2021).

Submitted to:

Er. Kireet Kumar Scientist 'G' and Nodal Officer, NMHS-PMU National Mission on Himalayan Studies, GBP NIHE HQs Ministry of Environment, Forest & Climate Change (MoEF&CC), New Delhi E-mail: nmhspmu2016@gmail.com; kireet@gbpihed.nic.in; kodali.rk@gov.in

Submitted by:

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GENERAL INSTRUCTIONS:

- 1. The Final Technical Report (FTR) has to commence from the start date of the Project (as mentioned in the Sanction Order issued by NMHS-PMU) till completion of the project duration. Each detail has to comply with the NMHS Sanction Order.
- 2. The FTR should be neatly typed (in Arial with font size 11 with 1.5 spacing between the lines) with all details as per the enclosed format for direct reproduction by photo-offset printing. Colored Photographs (high resolution photographs), tables and graphs should be accommodated within the report or annexed with captions. Sketches and diagrammatic illustrations may also be given detailing about the step-by-step methodology adopted for technology development/ transfer and/ or dissemination. Any correction or rewriting should be avoided. Please provide all information under each head in serial order.
- 3. Any supporting materials like Training/ Capacity Building Manuals (with detailed contents about training programme, technical details and techniques involved) or any such display material related to project activities along with slides, charts, photographs should be brought at the venue of the Annual Monitoring & Evaluation (M&E) Workshop and submitted to the NMHS-PMU, GBP NIHE HQs, Kosi-Katarmal, Almora 263643, Uttarakhand. In all Knowledge Products, the Grant/ Fund support of the NMHS should be duly acknowledged.
- 4. The FTR Format is in sync with many other essential requirements and norms desired by the Govt. of India time-to-time, so each section of the NMHS-FTR needs to be duly filled by the proponent and verified by the Head of the Lead Implementing Organization/ Institution/ University.
- 5. Five (5) hard-bound copies of the Project Final Technical Report (FTR) and a soft copy of the same should be submitted to the **Nodal Officer**, **NMHS-PMU**, **GBP NIHE HQs**, **Kosi-Katarmal**, **Almora**, **Uttarakhand**.

The FTR is to be submitted into following two (02) parts:

Part A – Project Summary Report
Part B – Detailed Project Report

In addition, the Financial and other necessary documents/certificates need to be submitted along with the Final Technical Report (FTR) as follows:

Annexure I	Consolidated and Audited Utilization Certificate (UC) & Statement of
	Expenditure (SE) , including the interest earned for the last Fiscal year and
	the duly filled GFR-19A (with year-wise break-up).
Annexure II	Consolidated Interest Earned Certificate
Annexure III	Consolidated Assets Certificate showing the cost of the equipment in
	Foreign/ Indian currency, Date of Purchase, etc. (with break-up as per the
	NMHS Sanction Order and year wise).
Annexure IV	List of all the equipment, assets and peripherals purchased through the
	NMHS grant with current status of use, including location of deployment.
Annexure V	Transfer of Equipment through Letter of Head of Institution/Department
	confirming the final status of equipment purchased under the Project.
Annexure VI	Details, Declaration and Refund of any Unspent Balance transferred
	through Real-Time Gross System (RTGS)/ PFMS in favor of NMHS GIA
	General

NMHS-Final Technical Report (FTR) template

Demand-Driven Action Research Project

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Part A: Project Summary Report

1. Project Description

i.	Project Grant Ref. No.:	GBPI/NMF	GBPI/NMHS-2017-18/MG-14/553; dated 26.02.2018						
ii.	Project Category:	Small Grar	Small Grant Medium Grant Large Grant						
iii.	Project Title:	Khangchei	Promotion of Sustainable Community Based Tourism in the Khangchendzonga Landscape: Linking Livelihoods with Nature Conservation						
iv.	Project Sites (IHR States/ UTs covered)	Sikkim and	l West B	engal Hills					
	(Location Maps attached):		Dzongu (Sikkim), Barsey-Singalila (West Bengal and Sikkim) and Bandapani (West Bengal)						
V.	Scale of Project Operation:	Local		Regional		Pan-Himalayan			
Vi.	Total Budget:	1.76 (in Cr) Received: Rs. 99,40,340.00/- Expenditure: Rs. 82,72,560.00/-							
vii.	Lead Agency:			Institute of Hima angthang, Gang	•	Environment, Sik 7 101, Sikkim	kim		
	Lead PI/ Proponent:	Dr. Deven	dra Kuma	ar					
	Co-PI/ Proponent:	Dr. K.S. Ga	aira						
viii.	Implementing Partners:	GB Pant Na	tional Ins	stitute of Himala	yan En	vironment, Sikkir	n		
		Regional Ce	ntre, Ga	ngtok; The Mou	ıntain In	stitute of India (ГМΙ),		
		Gangtok; Mı	utanchi L	om Aal Shezun	n (MLAS	S), Sikkim, Dzon	gu,		
		North Sikkin	n; Himala	ayan Nature and	d Adven	ture Foundation			
		(HNAF), Sili	guri, and	Ecotourism and	d Conse	ervation Society	of		
		Sikkim (ECC	OSS), Ga	ingtok					

Key Persons (Contact Details, Ph. No., E-mail):

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Gangtok, Sikkim

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2. Project Outcomes

2.1. Abstract/ Summary (not more than 250-300 words)

Community Based Tourism (CBT) is popular as a means of supporting biodiversity conservation, particularly in developing countries and it focuses on the involvement of the host community in planning and maintaining tourism development in order to create a more sustainable tourism industry. The Khangchendzonga Landscape (KL) has a potential to promote community based tourism with the adjoining countries like Bhutan and Nepal. In addition, diversifying tourism to transboundary areas through developing ecotourism corridors can mitigate the various negative impacts and provide livelihood options to the people living in the corridors across the landscape. Realizing the above and dealing with the major issues, the project proposal sent to the MoEF&CC under NMHS programme focusing in the three pilot sites of KL (covering two states i.e., entire Sikkim and Northern part of West Bengal), through involving the multi-stakeholders and multidisciplinary mechanism. The SWOT analysis (strengths, weaknesses, opportunities and threats) of each pilot site was performed. Based on the SWOT analysis site specific activities such as; data collection on floral and faunal diversity, entry level consultations, awareness campaign, promotion of models (Home stay, Nature trail, solid-waste management, and low cost water conservation model) and handicrafts based products, capacity building programme, participation in local level fairs and festivals, public-private partnership (PPP) and celebration of important days viz., World Tourism Day, World Environment Day etc. were organized with the help of state level organization and local stakeholders. For the data collection in different aspects of project; methods and approaches such as; focus group discussion (FGD), personal interviews and secondary data were taken into consideration. A total 2,345 plant species inventorized using field work and secondary resources and developed ecotourism based resource maps (3 nos.) for the KL India. For the development and strengthening CBT promotion models, inventorized the status of homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (36 Nos.) pilot sites of KL India, this include training provided by region specific best practices homestay models (3 Nos.), strengthening the existing nature trail (1 no.), organized certificate course/green skill programme (3 Nos.) and Eco-tourism based festival (3 Nos.) etc. A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). The project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources. CBT was seen to be the most viable sustainable livelihood option by the local community groups for themselves in Himalayan region. The action-oriented path coupled sustainable use of bio-resources, for promotion of sustainable tourism in the Himalaya, can enhance economic and livelihood opportunities while maintaining the ecology and cultural values of the region.

2.2. Objective-wise Major Achievements

S#	Objectives	Major achievements (<i>in bullets points</i>)
1.	Assessment and promotion of community-based ecotourism and equitable benefit sharing	 Generated baseline data and completed the SWOT analysis for all three pilot sites.
	- -	 Resource maps for Barsey-Singhalila, Dzongu and Bandapani pilot site has been completed in consultation with project partners and local stakeholders.
		 Developed database of plant diversity in Khangchendzonga Landscape.
		 A total 2,345 plant species were recorded for three pilot sites of Khangchendzonga Landscape (attached Apendix-1). They belonged to 166 families where Orchidaceae, Compositae, Cyperaceae, Poaceae and Rosaceae was most dominant and represented by 389, 202, 157, 107 and 100 numbers of species.
		 Along with, a total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled in different forest types of Khangchendzonga Landscape. They belonged to 54 families, 68 genera and 117 species. In herbaceous layer, a total of 45,935 individuals of 134 species belonging to 95 genera and 50 families were recorded.
		 Prepared Herbarium of 2,140 plant specimens and 678 lichen specimens.
		 For linking the biodiversity with livelihood component, a training manual entitled "Key Species of Biodiversity Monitoring for Promoting Ecotourism in Sikkim Himalaya" has been prepared. Wherein 14 species (3 angiosperms, 2 lichens, 3 mammals, 2 birds, 2 butterfly and 2 herpeto-fauna) selected for promoting community based ecotourism linking with livelihood, including the conservation status, distribution map, description and monitoring protocol of selected species.
		 Strengthen nature-trail (1 No.) at Dzongu, North Sikkim; tagging of tree species and knowledge dissemination boards
		Training on eco-guide (1 No.)

2. Strengthening community based A complete inventorization of Homesaty at tourism by integrating traditional Dzongu (21 Nos.) and Barsey-Singhalila (36 knowledge nos.) pilot sites. Organized training on best practices for Homestay model at Dzongu, Equitable benefit sharing model at Barsey-Singalila and Water conservation model at Bandapani pilot sites of Khangchendzonga Landscape. For strengthening the community based ecotourism, region-specific best practices and developing the Homestay model, 6 training programme was organized at Dzongu and Barsey-Singhalila pilot sites of KL. For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsev-Singhalila Pilot Site a Ribdi Bharang Ecotourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders. Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e., Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET. 3. Promotion of sustainable tourism Organized training programme for promotion of through integration of (i) Livestock livestock (1 No.) and handicrafts based products and horticulture, (ii) handicraft (2 Nos.) products and iii) knowledge Details of programme provided in Table 1 management of water resources Knowledge dissemination materials (Flyers 2) Nos. and Boards 3 Nos.)

- 4. Build critical mass of informed and skilled youth for harnessing tourism potential and working for conservation of nature though sensitization and capacity building
- Organized 16 training cum capacity building including two Green Skill Programme/certificate course on different aspects for strengthening community based eco-tourism in three pilot sites. (Table 1)
- A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December).
- Overall the project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources

Note: Further details may be summarized in DPR Part-B, Section-5. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

2.3. Outputs in terms of Quantifiable Deliverables*

S#	Quantifiable Deliverables*	Monitoring Indicators*	Quantified Output/ Outcome achieved	Deviations, if any, & Remarks thereof:
	 Ecotourism resource maps for 3 pilot sites Development of webenabled community tourism promotion models (3 sites) Reports/Dissemination materials on strengthening ecosystem services; prioritization of ecotourism opportunities; capacity building of different Stakeholders Database highlighting Flora and Fauna Resources Success Stories Documentary 	 No. of New Database/ Datasets generated on the identified dynamics, i.e. Flora and Fauna linking with Livelihood Options (No.) Region-specific best practices/ models developed (No.) No. of Stakeholders benefitted (No. of Rural Youth, No. of Women, and Total No. of Beneficiaries) with update on Income generation (Rs./ person) 	 Generated baseline data and completed the SWOT analysis for all three pilot sites. Resource maps (3 Nos.) for Barsey-Singhalila, Dzongu and Bandapani pilot site has been completed in consultation with project partners and local stakeholders Documented floral resources for three pilot sites of Khangchendzonga Landscape by field work and secondary literatures. A total 2,345 plant species were recorded for three pilot sites (List Provided Appendix-1) 	Web-enabling was performed only on social media. Due to Complete Lockdown and movement restriction from March 2020 to October 2020 in Sikkim, the proposed activities of project were not conducted. Therefore few activities was not conducted/performed.

- Policy drafts

 (No.) for
 assisting the
 regional
 decision making in the
 identified area
 and dynamics
- Other
 Publications
 and knowledge
 products
 (Nos.).
- Identified 584 woody species and prepared Herbarium of 2,140 plant specimens.
- For linking the biodiversity with livelihood component, a training manual entitled "Key Species of Biodiversity Monitoring for **Promoting** Ecotourism in Sikkim Himalaya" has been prepared. Wherein 14 species (3 angiosperms, 2 lichens, 3 mammals, 2 birds, 2 butterfly and 2 herpeto-fauna) selected for promoting community based ecotourism linking with livelihood, including the conservation status, distribution map, description and monitoring protocol of selected species.

(Annexure-1)

- Inventorized and documented the Homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (36 Nos.) pilot sites and linked this information on social media pages for promotion of community based ecotourism.
- For strengthening the community based ecotourism, regionspecific best practices and developing the Homestay model, 6 training programme was organized at

- Dzongu and Barsey-Singhalila pilot sites of Khangchendzonga Landscape.
- For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsey-Singhalila Pilot Site a Ribdi Bharang Eco-tourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders.
- Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e., Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET.
- Organized 16 training cum capacity building including two Green Skill
 Programme/certificat e course on different aspects for strengthening community based eco-tourism in three pilot sites.
- A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training

programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep- December). Flyers (2 Nos.) Research Papers (1
No.) Book Chapters (1 No.)
Document on Home Stay (1 No.)
Manual (1 No.)Abstracts (5 Nos.)

^{*}As stated in the Sanction Letter issued by the NMHS-PMU.

2.4. Strategic Steps with respect to Outcomes (in bullets)

S#	Particulars	Number/ Brief Details	Remarks/ Attachment
1.	New Methodology/ Technology developed,	NA	
l .	if any:		
2.	New Ground Models/ Process/ Strategy		
۷.	developed, if any:		
3.	New Species identified, if any:	NA	
4.	New Database established, if any:	Plant Species List	Attached
4.		of KL India	Annexure 1
5.	New Patent, if any:		
	Filed (Indian/ International)	NA	
	2. Technology Transfer, if any:	NA	
6.	Others, if any		

Note: Further details may be summarized in DPR Part-B, Section-5. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

3. New Data Generated over the Baseline Data

S#	New Data Details	Status of Existing Baseline	Addition and Utilisation New
			data
	NA		

NA	
NA	

Note: Further details may be summarized in DPR Part-B. Database files in the requisite formats (Excel) may be enclosed as annexure/ appendix separately to the soft copy of FTR.

4. Demonstrative Skill Development and Capacity Building/ Manpower Trained

S#	Type of	Details with number	Activity Intended for	Part	icipa	nts/Train	ed
	Activities			SC	ST	Women	Total
1.	Workshops	3 Nos. 1. Solid Waste Management and Best Practices (18 th September, 2018)	Sensitized and build capacity of local youths towards solid waste management and best practices at Bandapani, West Bengal	-	-	28	60
		2. Workshop on Ecotourism in Khangchendzonga Landscape-India (Consultation Workshop) 27 September, 2018	Brainstorming consultation meeting was conducted for identifying knowledge gap and study design. Stakeholders from three pilot sites were participated.	_		11	45
		3. Celebration of International Mountain Day-2022	Local stakeholders	-	-	28	48
2.	On-Field Trainings	10 Nos. (Details Provides in Table 1)	To Sensitize local stakeholder and build capacity of local youths in different aspects of promotion of community based tourism			281	515

3.	Skill Development	 Nos. Training and exposure visit on Eco-Guide in the Khangchendzonga Landscape-India Exposure and Exchange Learning on Nature, Culture and Tourism Certificate Course on "Ecotourism & Livelihood Enhancement" 	Build capacity of local youths for eco-guide and handicrafts Build capacity of local youths for eco-guide and handicrafts and local cushions Build capacity of local youths on ecotourism and Livelihood enhancement through 3 week certificate	-	24	58
4.	Academic Supports	- -	course -		 	-
	Others (if any)	Awareness Campaign on Ecotourism in Khangchendzonga Landscape-India (Showcasing Knowledge Product)	Showcasing of local crafts/bamboo crafts, knowledge products, medicinal plant based local medicines and other local product by involving local stakeholders of each pilot sites		7	19

Note: Further details may be summarized in DPR Part-B. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

5. Linkages with Regional & National Priorities (SDGs, INDC, etc.)/ Collaborations

S#	Linkages /collaborations	Detail of activities (No. of Events Held)*	No. of Beneficiaries
1.	Sustainable Development Goals (SDGs)/ Climate Change/INDC targets addressed	-	
2.	Any other:	-	

Note: Further details may be summarized in DPR Part-B, Section-6. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

6. Project Stakeholders/ Beneficiaries and Impacts

S#	Stakeholders	Support Activities	Impacts in terms of income	
			generated/green skills built	

2.	Line Agencies/ Gram Panchayats: Govt Departments (Agriculture/ Forest/ Water):		
3.	Villagers/ Farmers:	Build capacity of local youths for eco-guide and handicrafts and local cushions Strengthened eco-trail, homestay model, and low cost Water conservation model	A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December).
4.	SC Community:	-	
5.	ST Community:	-	
6.	Women Group:	379 Women's directly benefited	
	Others, if any:		

Note: Further details may be summarized in DPR Part-B, Section-6. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

7. Financial Summary (Cumulative)

Please attach the consolidated and audited Utilization Certificate (UC) and Year-wise Statement of Expenditure (SE) separately, *ref.* **Annexure I.**

8. Major Equipment/ Peripherals Procured under the Project** (if any)

S#	Name of Equipment	Quantity	Cost (INR)	Utilisation of the Equipment after project
1.	HP Laser Printer (1No.)	1	10,400.00	
2.	UPS (Workstation Unit) [1 No.]	1	70,210.00	
3.	Binocular (2 Nos.)	2	25,960.00	
4.	GPS (2 Nos.)	2	68,440.00	
5.	Projector (1 No.)	1	40,000.00	
6.	Photocopy Machine (1 No.)	1	1,48,090.00	
7.	Workstation with Monitor (1 No.)	1	1,30,800.00	
8.	CPU with Monitor (1 No.)	1	87,510.00	
9.	Camera (1)	1	76,000.00	

10.	Laptop (1 No.)	1	78,590.00	

^{**}Details should be provided in details (ref. Annexure III &IV).

9. Quantification of Overall Project Progress

S. No.	Parameters	Total (Numeric)	Remarks/ Attachments/ Soft copies of documents
1.	IHR States/ UTs covered:	Sikkim and West Bengal Hills	Company arrives arrive
2.	Project Sites/ Field Stations Developed:	3 Nos. Dzongu (Sikkim), Barsey-Singalila (West Bengal and Sikkim) and Bandapani (West Bengal)	Details Provided in Fig 1-3
3.	Scientific Manpower Developed (PhD/M.Sc./JRF/SRF/ RA):	RA: 1 No. JPF: 7 Nos. Field Assistant: 3 Nos.	
4.	Livelihood Options promoted	16 Training and Green Skill programme conducted	Details provided in Table 1
5.	Technical/ Training Manuals prepared	1 No.	
6.	Processing Units established, if any	-	
7.	No. of Species Collected, if any		
8.	No. of New Species identified, if any		
9.	New Database generated (Types):	Database of plant species: 2,345 plant species	Attached: Appendix-1
	Others (if any)		

Note: Further details may be summarized in DPR Part-B. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

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11. Knowledge Products and Publications:

S#	Publication/ Knowledge Products		Number		Remarks/
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1.	Journal – Research Articles/ Special Issue:	1 (Under review)	1	3.945	Appendix - 2
2.	Book – Chapter(s)/ Monograph/ Contributed:	1		-	Appendix - 3
3.	Technical Reports:				
4.	Training Manual (Skill Development/Capacity Building):	1			Appendix - 4
5.	Papers presented in Conferences/Seminars:	5			
6.	Policy Drafts/Papers:				
7.	Others, if any: (Flyers/Homestay infomation	2			Appendix -5 and 6

<u>Note</u>: Please append the list of KPs/ publications (with impact factor, DOI, and further details) with due Acknowledgement to NMHS. Supporting materials may be enclosed as annexure/ appendix separately to the FTR.

12. Recommendation on Utility of Project Findings, Replicability and Exit Strategy

Particulars	Recommendations
Utility of the Project Findings:	The key findings that would emanate from the project will be
	shared with all the stakeholders in easy to understand
	language as and when desired by the competent authority
	(PMU/Project Coordinator/Partner Institution). Besides, the
	results will be shared at various forums ranging from class
	room lectures in Universities to seminar/workshops at
	regional and national levels. Also, project findings will be
	shared with the relevant user departments/institutions/
	agencies of the State Govt. for necessary follow-up action.
	Dissemination of the findings accomplished through
	publication of, local state level meetings / workshops,
	pamphlets and flyers etc. Further, projects outcome can be
	used to prepare a monogram of the bio-resources of that
	area. Moreover, outcome of the project can be used to
	prepare a tourism related management plan of target area
	which will be very much useful for the researchers and
	managers.

Replicability of Project/ Way Forward:	 Regular capacity building packages and follow-up systems for promoting sustainable tourism and its packages (homestays, rural tourism, etc.) is needed. Market linkages should be developed on Ecotourism hot spot areas. Need to replicate and upscale the successful sustainable tourism models in different parts. Updated capacity building packages and follow-up systems for promoting sustainable tourism and its packages (e.g. homestay) need to be provided. Regular skill building of youths/community on various 		
Exit Strategy:	aspects of ecotourism models. The project implementation was performed in a participatory manner following a long-term activity plan, so the implementation of the project activities will be continued even after the project exits from the sites. The local NGOs are working in the respective sites will support the community-based activities in sustainable ways at the landscape. In addition, the KLCDI-India programme has to be implemented with 20 years vision in the particular landscape, which may be an alternative source for supplementing the project activities in the target sites.		

(PROJECT PROPONENT/ COORDINATOR)

(Signed and Stamped)

(HEAD OF THE INSTITUTION)
(Signed and Stamped)

Place: Gangtok

Date: 24/12/2022

PART B: DETAILED PROJECT REPORT

1 **EXECUTIVE SUMMARY** (not more than 2–3 pages)

Community Based Tourism (CBT) is popular as a means of supporting biodiversity conservation, particularly in developing countries and it focuses on the involvement of the host community in planning and maintaining tourism development in order to create a more sustainable tourism industry. The Khangchendzonga Landscape (KL) has a potential to promote community based tourism with the adjoining countries like Bhutan and Nepal. In addition, diversifying tourism to transboundary areas through developing ecotourism corridors can mitigate the various negative impacts and provide livelihood options to the people living in the corridors across the landscape. Realizing the above and dealing with the major issues, the project proposal entitled "Promotion of Sustainable Community based tourism in the Khangchendzonga Landscape: Linking Livelihoods with Nature Conservation" sent to the MoEF&CC under NMHS programme focusing in the three pilot sites of Khangchendzonga Landscape (covering two states i.e., entire Sikkim and Northern part of West Bengal), through involving the multi-stakeholders and multidisciplinary mechanism.

The goal of the project is promotion of sustainable community based ecotourism in the pilot sites of the Khangchendzonga Landscape for improved and equitable livelihoods that also ensures the conservation and enhancement of the local bio-resources and culture and provides unique learning experiences and products to tourist visitors. The approved objectives of this project are i) Assessment and promotion of community-based ecotourism and equitable benefit sharing, ii) Strengthening community based tourism by integrating traditional knowledge, iii) Promotion of sustainable tourism through integration of (i) Livestock and horticulture, (ii) handicraft products and iii) knowledge management of water resources and iv) Build critical mass of informed and skilled youth for harnessing tourism potential and working for conservation of nature though sensitization and capacity building. The project was focused on the three Pilot Sites of KL-India viz., i)Dzongu; ii) Barsey-Singalila and iii) Bandapani, which are already identified under KLCDI-India programme. Dzongu is located in north district of Sikkim state, a "Lepcha community reserve" falls within the transition zone of Khangchendzonga Biosphere Reserve, has been considered as one of the potential pilot sites for promoting tourism and livelihood activities with its unique bio-cultural practices.

Dzongu pilot site covers 149 km² area across 800 m to 4595 m asl, encompassing 03 Gram Panchayat Units (GPUs) namely, Lingthem-Lingdem, Tingbung and Sakyoung Pentong. Barsey-Singalila: Pilot site shares a part of Darjeeling district (West Bengal) and West district of Sikkim having significant attributes as: i) Transboundary nature: as an International transboundary location, the site is connected with Nepal and falls in Sikkim and West Bengal states of India, ii) Socio-economic

pliability: Community of the pilot site is highly depended on the agricultural practices and tourism in identified part of West

Bengal (Gorkhey and Samanden Villages); while in Ribdi-Bhareng village (Sikkim), farming is the major occupation. Whereas Bandapani site, situated in the foothills of Khangchendzonga Landscape-India, is recognized as one of the transboundary pilot sites located along Bhutan border. The site covers 16 Km² spatial areas, passing through important elephant corridor in Dooars, and closely associated with tea gardens.#The significance of the site are as: i) Transboundary Nature: as an international transboundary region connected with Bhutan, ii) Socio-economic Flexibility: Complex cultural and social assemblage is largely dependent on the agriculture, tea gardens, off-farm labour works and natural forest resources for their livelihood, iii) Eco-climatic Similarity: tropical and subtropical forests and grass lands, manipulated with bio-geographical range of Bhutan hills, iv) Corridor Connectivity among Protected Areas: partially connected with Jaldapara National Park (West Bengal) and recognized as an elephant corridor across the dooars foothills, v) Biodiversity uniqueness: floral and faunal including agrobiodiversity and livestock, and vi) Offering trans-boundary tourism.

The SWOT analysis (strengths, weaknesses, opportunities and threats) of each pilot site was performed. Based on the SWOT analysis site specific activities such as; data collection on floral and faunal diversity, entry level consultations, PRA, awareness campaign, promotion of models (Home stay, Nature trail, solid-waste management, and low cost water conservation model) and handicrafts based products, capacity building programme, participation in local level fairs and festivals, public-private partnership (PPP) and celebration of important days viz., World Tourism Day, World Environment Day etc. were organized with the help of state level organization and local stakeholders. For the data collection in different aspects of project; methods and approaches such as; focus group discussion (FGD), personal interviews and secondary data were taken into consideration.

A total 2,345 plant species were recorded for three pilot sites of Khangchendzonga Landscape (attached Apendix-1). They belonged to 166 families where Orchidaceae, Compositae, Cyperaceae, Poaceae and Rosaceae was most dominant and represented by 389, 202, 157, 107 and 100 numbers of species. Along with, a total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled in different forest types of Khangchendzonga Landscape. They belonged to 54 families, 68 genera and 117 species. In herbaceous layer, a total of 45,935 individuals of 134 species belonging to 95 genera and 50 families were recorded.

Developed ecotourism based resource maps (3 nos.) for the KL India. For the development and strengthening CBT promotion models, inventorized the status of homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (27 Nos.) pilot sites of KL India, this include training provided by region specific best

practices homestay models (3 Nos.), strengthening the existing nature trail (1 no.), organized certificate course/green skill programme (3 Nos.) and Eco-tourism based festival (3 Nos.) etc.

A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). The project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources. CBT was seen to be the most viable sustainable livelihood option by the local community groups for themselves in Himalayan region. The action-oriented path coupled sustainable use of bio-resources, for promotion of sustainable tourism in the Himalaya, can enhance economic and livelihood opportunities while maintaining the ecology and cultural values of the region.

2 INTRODUCTION

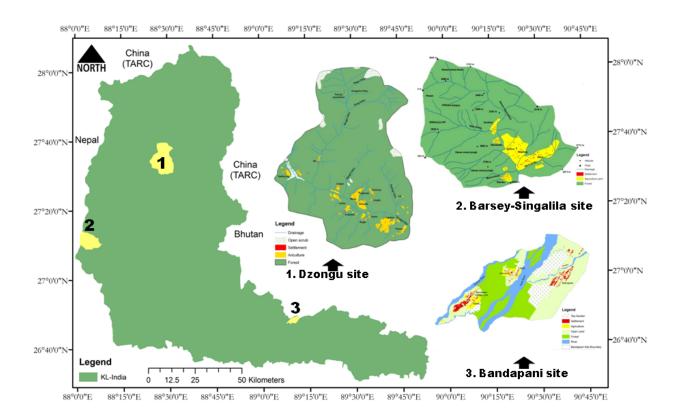
2.1 Background

Khangchendzonga Landscape (KL) has been delineated under the Khangchendzonga Landscape Conservation and Development Initiative (KLCDI)-India programme, covering a total area of 25,085.8 Km² (26°21'40.49" and 28°7'51.25" N latitudes and 87°30'30.67" to 90°24'31.18" E longitudes), which is shared by India (56%), Bhutan (23%), and Nepal (21%). The KL offers life support systems to over 7.25 million peoples (87% in India, 11% in Nepal and 2% in Bhutan). Whereas, Indian part of KL covers 14,061.7 Km² area stretching along the elevation gradients from 40 m representing foot hills (Alipurduar and Jalpaiguri districts of West Bengal) to 8586 m asl of Mt Khangchendzonga, the third highest peak of the world, in Sikkim. The entire state of Sikkim and the West Bengal (four districts, viz. Alipurduar, Darjeeling, Jalpaiguri and Kalimpong (notified as new district) are included in delineating the KL- India (26°29'13.56" to 28°7'51.6" N latitudes and 87°59'1.32" to 89°53'42.96" E longitudes). The indian part of KL harbours 17 protected areas, including UNESCO World Heritage Site, the Khangchendzonga National Park in Sikkim.

The Khangchendzonga Landscape is broadly categorized into different eco-elevational zones i.e. a) tropical <1000m asl, b) sub-tropical 1000-2000m asl, c) temperate 2000-3000m asl, e) sub-alpine 3000-4000m asl and f) alpine > 4000m asl. The entire eco-region falls in three distinct eco-regions, viz. i) broad-leaved and conifer forests, ii) the Himalayan Alpine meadows and iii) Terai-Dooars' savannas and grasslands. Within the landscape, the Himalayan broad-leaved and conifer forests vary, supporting both their rich species diversity and endemism. The ecology of the landscape is further represented by several characteristics like wetland, broad leaved, coniferous dominated forests, alpine and subalpine regions. Khangchendzonga Landscape, encompassing 6,325,457 populations with 3,243,393 male and 3,086,853 female, has a very low human density of 1,294 persons per Km². Within demographic features, target landscape exhibits a gamut of ethnicity

and clans and subclan orders within groups with its individual language/dialects, culture, social make-up and religious beliefs. The upper part of the landscape has Lepchas, Bhutias, Nepali, Limboo as the major caste/ethnic groups. The Lepchas are officially notified as the ancient tribe of Sikkim by the state government (Pradhan and Badola, 2008) and other old tribe is Limboo (Badola and Pradhan 2013).

Realizing the importance of the landscape, in mid November 2013 a letter of agreement (LoA) was signed between the GBPNIHE, India and ICIMOD, Nepal for initiating a preparatory phase by prepare documents like Feasibility Assessment Report (FAR), Conservation and Development Strategy (CDS), and Implementation Plan (IP) of the KL-India. In continuation, an addendum to LoA phase was started focussing to generate the baseline information on ecosystem and socioeconomic and develop bioresource based management plans for three identified pilot sites i.e. Dzongu (North Sikkim), Barsey-Singalila (sharing part of West Sikkim and Darjeeling district of West Bengal), and Bandapani (foothill range under Alipurduar district, West Bengal).



Based on the above, four major issues emerged in the KL-India, i.e. i) limited livelihood opportunity, ii) declining cultural entity, iii) unregulated tourists influx and iv) over dependence on natural resources. However, KL, art an element of the Sikkim and Darjeeling Himalaya together by all of the warm neighboring areas of eastern Nepal and western Bhutan, has been an impressive

destination for adventure tourists (trekkers, mountaineers, white water rafters, and bikers), naturalists, and academicians as well as for health conscious people over the last century (Dozey, 1989). The landscape offers a great potential for tourism through community-based approaches, such as integrating livelihoods with biodiversity conservation (Sharma, 2008). Realizing the opportunities in KL for the conservation of biodiversity and for the promotion of sustainable livelihoods, community based approaches may play an important role. To maintain this, appropriate area-specific strategies and plans are prerequisite.

Community based tourism (CBT) is popular as a means of supporting biodiversity conservation, particularly in developing countries (Kiss, 2004) and it focuses on the involvement of the host community in planning and maintaining tourism development in order to create a more sustainable tourism industry (Hall, 1996; Goodwin, 2009). The Khangchendzonga Landscape has a potential to promote community based transboundary tourism with the adjoining countries like Bhutan and Nepal. In addition, diversifying tourism to transboundary areas through developing ecotourism corridors, can mitigate the various negative impacts and provide livelihood options to the people living in the corridors across the landscape. However, a cooperative understanding, infrastructure, and policy amongst implementing member countries will be required to concrete this strategy (Sharma, 2008; Badola et al. 2016). Realizing the above and dealing with the major issues, the project proposal entitled "Promotion of Sustainable Community based tourism in the Khangchendzonga Landscape: Linking Livelihoods with Nature Conservation" sent to the MoEF&CC under NMHS programme focusing in the three pilot sites of Khangchendzonga Landscape (covering two states i.e., entire Sikkim and Northern part of West Bengal), through involving the multi-stakeholders and multidisciplinary mechanism.

2.2 Overview of the major issues addressed

The large biodiversity complex in the Khangchendzonga landscape easily invites several conservation conflicts adding a serious concern in the landscape and need to be managed to minimize negative impacts on biodiversity, human livelihoods and human well-being (Redpath et al., 2013). The majority of marginal people in KL suffer from livelihoods insecurity, which is in need of provisioning alternative options of sustainable livelihoods. The present study on promotion of community based tourism in KL is based on a team based approach involving the multi-stakeholders and multidisciplinary mechanism. As per approved objectives, context of project and SWOT analysis following major issues was addressed for KL-India;

(i) Limited livelihood opportunity:

 Various training programme organized for promotion community based ecotourism to enhance livelihood of local peoples involving multistakeholdes viz., Green Skill Programme (21 days Certificate Course), Homestay management (Best Practices), Training on Bamboo based Products, Eco-Guide

Developed network of ecotourism service providers (e.g. Home stay owners, Eco-guide, etc.)

(ii) Declining cultural entity:

Diverse training/workshop programme on showcasing of local crafts and culture, and nature cum cultural tourism festival (Songbing Nature and Culture Tourism Fest 2019 and 2020) was organized for promoting the cultural entity of KL-India involving local stakeholders.



















(iii) Unregulated tourist's influx:

- Developed synergy between local stakeholders, and governmental & non- governmental organizations
- For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsey-Singhalila Pilot Site a Ribdi Bharang Eco-tourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders.
- Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e., Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET.
- Dissemination of knowledge for effective promotion and management of ecotourism.
- Integration of diverse approach for promotion of ecotourism.

(iv) Over dependence on natural resources:

- Linking Eco-trail with community based ecotourism in fringes villages of Khangchendzonga National Park and strengthen the existing eco-trail at Dzongu pilot sites
- Skill building of unprivileged youths towards ecotourism (e.g. Eco-guide)

2.3 Baseline Data and Project Scope (max. 500 words)

NA#

2.4 Project Objectives and Target Deliverables (as per the NMHS-Sanction Order)

Objectives	Quantifiable Deliverables	Monitoring Indicators
(1) Assessment and	Ecotourism resource maps for	Monitoring in comparison to
promotion of community-	3 pilot sites;	the baseline information to be
based ecotourism and	Development of web-enabled	provided by the proponent in
equitable benefit sharing	community tourism promotion	the 1st Quarter:
	models (3 sites);	No. of pilot sites (3 Nos.)
	Database highlighting Flora	covering two states i.e.
	and Fauna Resources;	Sikkim and West Bengal
		Hills
		Datasets on plant species
		(1 No.)
		Herbarium datasets (Nos.)
		Resource maps (3 Nos.)
		Knowledge Products
		Training Manual
		Publications
(2) Strengthening community	Development of web enable	Inventorized Homstay at
based tourism by integrating	community tourism promotion	Dzongu (21 Nos.) and
traditional knowledge	models (3 sites)	Barsey-Singhalila (36
	Reports/Dissemination	Nos.) pilot sites and liked
	materials on strengthening	with social media
	ecosystem services;	Training Programme: For
	prioritization of ecotourism	strengthening the
	opportunities; capacity	community based
	building of different	ecotourism, region-
	Stakeholders	specific best practices
		and developing the

		Homestay model, training
		programme was
		organized at Dzongu and
		Barsey-Singhalila pilot
		sites of
		Khangchendzonga
		Landscape (6 Nos.)
		Flyers (Nos)
		Posters (Nos.)
		Reports (Nos.)
(3) Promotion of sustainable	Reports/Dissemination	Provided training and
tourism through integration of	materials on strengthening	build capacity of local
(i) Livestock and horticulture,	ecosystem services;	youths
(ii) handicraft products and iii)	prioritization of ecotourism	Eco-tourism Committee
knowledge management of	opportunities; capacity	Formed (2Nos.)
water resources	building of different	Knowledge Products
	Stakeholders;	Flyers (Nos)
		Posters (Nos.)
		Reports (Nos.)
(4) Build critical mass of	Training Programme/Green	Organized 16 training
informed and skilled youth for	Skill Programme	cum capacity building
harnessing tourism potential	Success Stories	including two Green Skill
and working for conservation	Documentary;	Programme/ certificate
of nature though sensitization		course on different
and capacity building.		aspects for strengthening
		community based eco-
		tourism in three pilot sites
		A total 745 (379 F & 366)
		M) stakeholders
		benefited through various
		benefited through various
		aspect of capacity
		aspect of capacity building/training
		aspect of capacity building/training programme and out of
		aspect of capacity building/training programme and out of this 31 beneficiaries were
		aspect of capacity building/training programme and out of

		month during the peak
		tourist period (April-June
		& Sep-December).
	•	Documentary on
		Bamboo-crafts/hand-
		crafts (Nos.)
	•	Reports (Nos.)

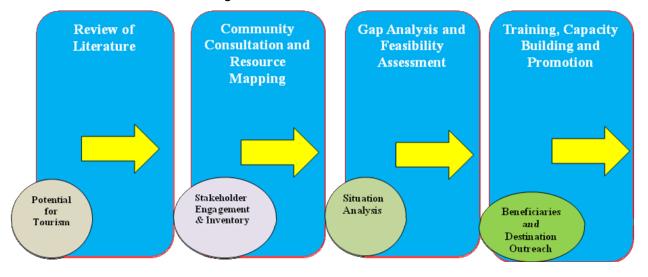
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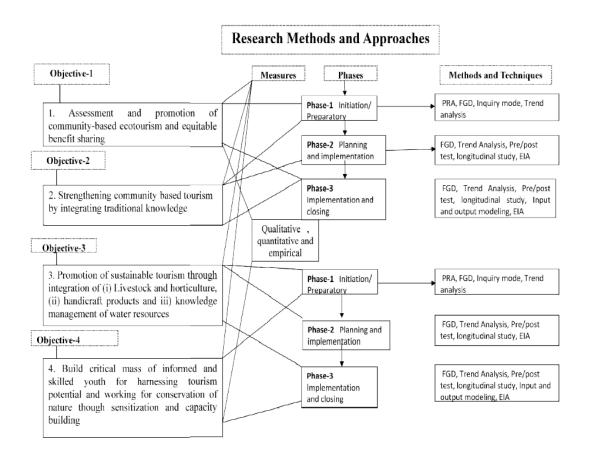
3 METHODOLOGIES/STARTEGY/ APPROACH – supporting documents to be attached.

3.1 Methodologies used

In the preliminary phase of the project it was to develop community interest and to mobilize the local community and resources-Focus Group Discussions (FGD) were adopted. Participatory Rural Appraisal (PRA) technique was applied to assess and map the existing and potential resources, skill gaps and knowledge. A matrix was developed to rate the existing tourism support infrastructure. In many a cases personal interviews were taken into account. In the entire three pilot sites a total of 390 respondents were participate in FGD, personal interview and PRA.. Further, a detailed SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was done in all the pilot sites by taking socioeconomic, cultural and environmental asp sites a total of 150 respondents were participated in FGD, personal aspects into consideration. The project work focuses on the following areas of interventions to address the delineated project objectives:

- Awareness creation, sensitization and capacity building of local community
- Conservation and management of indigenous knowledge and products
- Value addition and product development
- Destination promotion and outreach
- Documentation and knowledge dissemination





The secondary data and primary data were deployed to get the information regarding the traditional knowledge, culture and tradition and uses of different bamboo species and conservative lifestyle of the Lepcha community in Dzongu (Lingdem) like government reports, newspaper article, article, Journal and books. Focused Group Discussion, Rapid Rural Appraisal, Participatory Rural Appraisal, Household Survey, Community Consultation and Meeting were conducted in the Lingdem to get the information regarding the existing traditional knowledge and documentation and knowledge dissemination. For enumerating the plant diversify and population structure, we laid transect of 500m ×10m in different forest types of KL-India. All individuals of species present within transects were enumerated. Woody stems of size ≥ 10 cm girth at breast height (1.37 m from the ground) were measured and the height of each stem was recorded. The voucher specimens of sampled species were put up on herbarium sheet and identified by consulting herbaria and regional flora (Hooker 1872-1897; Maity et al. 2018; Gosh and Mallick 2014). The accepted plant species names and families were adapted from The Plant List (2013).

3.2 Data collected and Equipments utilized

Resource map:

Field based survey was conducted for mapping the resources of each pilot site. Inventorized Homstay at Dzongu (21 Nos.) and Barsey-Singhalila (36 Nos.) pilot sites and liked with social media. For the same GPS, Digital Camera along with Computer/workstation was used.

Plant Diversity:

Documented floral resources for three pilot sites of Khangchendzonga Landscape by field work and secondary literatures. A total 2,345 plant species were recorded for three pilot sites. Along with total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled in different forest types of Khangchendzonga Landscape. For the same GPS, Camera, Computer/Workstation and Printer was used.

Organizing Training and Green Skill Programme:

Organized 16 training cum capacity building including two Green Skill Programme/ certificate course on different aspects for strengthening community based eco-tourism in three pilot sites. For the same Projector, bionoculor, GPS, Camera, Laptop and Computer/Workstation was used.

3.3 Details of Field Survey conducted, if any

Provided as above

3.4 Strategic Planning for each activity with time frame (max. 200 words)

We conduct this project by involving the multi-stakeholders and multidisciplinary mechanism with local NGO's and state level departments. The team represents following NGO's; The Mountain Institute of India (TMI), Gangtok; Mutanchi Lom Aal Shezum (MLAS), Sikkim, Dzongu, North Sikkim; Himalayan Nature and Adventure Foundation (HNAF), Siliguri, and Ecotourism and conservation society of India (ECOSS), Gangtok. Several brain storming workshops along with field visits were conducted to workout methods, time schedule, study sites for detailed investigation. Field visits in groups helped finalizing sampling design, number of replicates.

Activities wise Time fame:

Objectives/ Activities		Years/Quarters											
		Year-2				Year-3							
	I	I	II I	IV	I	I	II I	V	ı		_ =	IV	
Recruitment of project staff													
Procurement of field / lab. Items													
Preliminary survey in pilot sites for mapping resources													
Community consultation Workshop													

Organized Training Programme and Celebration of important days/ exposure visits/showcasing of knowledge products						
Field Work: SWOT Analysis, PRA, Vegetation Assessment						
Resource mapping in different pilot sites						
Buid Critical mass of informed Skill (organized 16 training including 3 Green Skill programme/certificate						
Report Writing (Annual/FTR)						

#

4 KEY FINDINGS AND RESULTS – <u>supporting documents to be attached.</u>

4.1 Major Activities/ Findings (max. 500 words)

- The SWOT analysis (strengths, weaknesses, opportunities and threats) of each pilot site was performed. Based on the SWOT analysis site specific activities such as; data collection on floral and faunal diversity, entry level consultations, PRA, awareness campaign, promotion of models (Home stay, Nature trail, solid-waste management, and low cost water conservation model) and handicrafts based products, capacity building programme, participation in local level fairs and festivals, public-private partnership (PPP) and celebration of important days viz., World Tourism Day, World Environment Day etc. were organized with the help of state level organization and local stakeholders. For the data collection in different aspects of project; methods and approaches such as; focus group discussion (FGD), personal interviews and secondary data were taken into consideration.
- Inventorization and document of floral resources was performed by field work and compilation of secondary information. Apart from this the plant diversity and population structure in different forest types of Khangchendzonga Landscape was performed by laying a transect of 500m length and 10m width. A total 30 transects (500m ×10 m) was laid in different forest types across the elevation gradient (400 to 3000m) viz., tropical moist-deciduous, tropical-semi-evergreen, tropical evergreen, subtropical broad-leaved, oak dominated, temperate mixed and oak mixed forests.
- Developed database of plant diversity in Khangchendzonga Landscape.
- A resource map was developed by integration of field work, PRA, and several consultations at community level involving multi stakeholders.
- For linking the biodiversity with livelihood component, a training manual entitled "Key Species of Biodiversity Monitoring for Promoting Ecotourism in Sikkim Himalaya" has been prepared. Wherein 14 species (3 angiosperms, 2 lichens, 3 mammals, 2 birds, 2 butterfly and 2 herpeto-

- fauna) selected for promoting community based ecotourism linking with livelihood, including the conservation status, distribution map, description and monitoring protocol of selected species.
- A complete Inventorization and document of Homestay at Barsey-Singhalila and Dzongu pilot sites.
- Training provided by region specific best practices homestay models, solid waste management, low cost water conservation, strengthening the existing nature trail, organized certificate course/green skill programme, and Eco-tourism based festival etc.
- Organized several awareness programme and celebration important days viz., World Tourism Days, World Environment Day, International Biodiversity Day, Swachhata Campaigns etc. for sensitization and promotion of community based tourism involving local stakeholders, students, and youths.
- Developed synergy between local stakeholders, and governmental & non- governmental organizations
- Integration of diverse approach for promotion of ecotourism.
- Developed network of ecotourism service providers (e.g. Home stay owners, Eco-guide, etc.)
- Organized cultural festival and showcasing of crafts/ethenic items for promotion of ecotourism.
- Dissemination of knowledge for effective promotion and management of ecotourism.
- Linking Eco-trail with community based ecotourism in fringes villages of Khangchendzonga
 National Park.
- Skill building of unprivileged youths towards ecotourism (e.g. Eco-guide)

4.2 Key Results

- Generated baseline data and completed the SWOT analysis for all three pilot sites.
- A total 2,345 plant species were recorded for three pilot sites of Khangchendzonga Landscape (attached Apendix-1). They belonged to 166 families where Orchidaceae, Compositae, Cyperaceae, Poaceae and Rosaceae was most dominant and represented by 389, 202, 157, 107 and 100 numbers of species.
- Along with, a total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled
 in different forest types of Khangchendzonga Landscape. They belonged to 54 families, 68 genera
 and 117 species. In herbaceous layer, a total of 45,935 individuals of 134 species belonging to 95
 genera and 50 families were recorded.
- Prepared Herbarium of 2,140 plant specimens and 678 lichen specimens.
- Strengthen nature-trail (1 No.) at Dzongu, North Sikkim, wherein tagging of tree species and knowledge dissemination boards installed and repairing of exiting trail was performed.
- A complete inventorization of Homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (36 nos.) pilot sites.

- Developed Resource maps (3 Nos.) for Barsey-Singhalila, Dzongu and Bandapani pilot site in consultation with project partners and local stakeholders and linked these information's on social media (Fig. 1-3)
- Organized training on best practices for Homestay model at Dzongu (2 No.), Equitable benefit sharing model at Barsey-Singalila (2 No.) and Water conservation model (1 No.) at Bandapani pilot sites of Khangchendzonga Landscape.
- Organized training programme for promotion of livestock (1 No.) and handicrafts based products (2 Nos.)
- For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsey-Singhalila Pilot Site a Ribdi Bharang Eco-tourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders.
- Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e.,
 Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET.
- For Promoting livestock, horticulture and handicrafts based products at Dzongu, North Sikkim a
 "Songbing Nature and Cultural Tourism Festival" was formed with collaboration from local NGOs
 and government. Now days the festival organizing every year at the last week of January month.
- Organized 16 training cum capacity building including two Green Skill Programme/ certificate course on different aspects for strengthening community based eco-tourism in three pilot sites. (Table 1)
- A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December).
- A detail of Programme was provided in **Table 1**.
- The project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources. CBT was seen to be the most viable sustainable livelihood option by the local community groups for themselves in Himalayan region. The action-oriented path coupled sustainable use of bio-resources, for promotion of sustainable tourism in the Himalaya, can enhance economic and livelihood opportunities while maintaining the ecology and cultural values of the region.

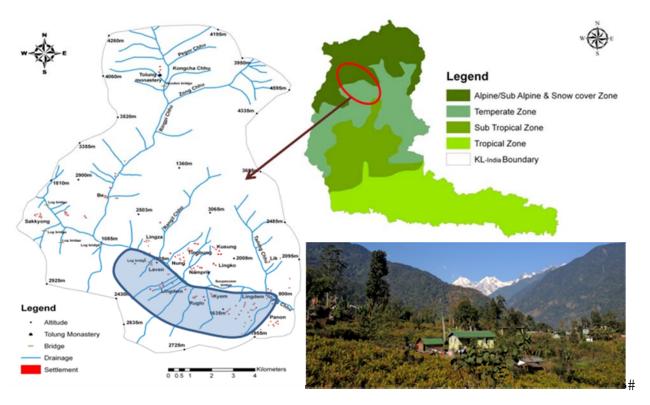


Fig. 1. Map of Dzongu pilot site,, North Sikkim



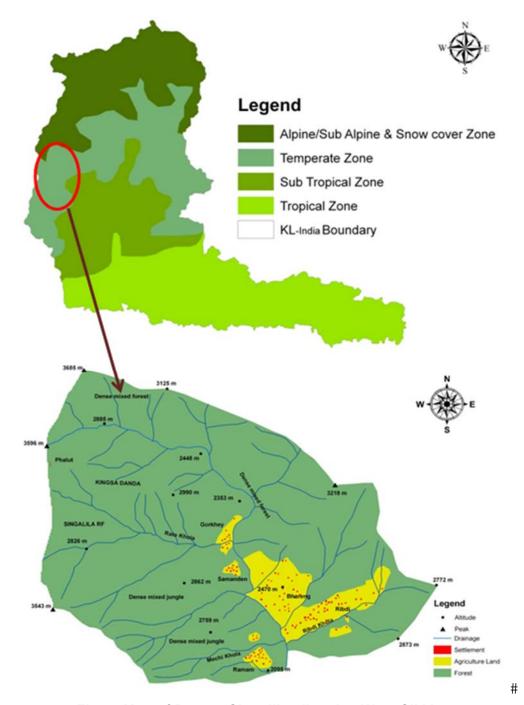


Fig. 2. Map of Barsey-Singalila pilot site, West Sikkim



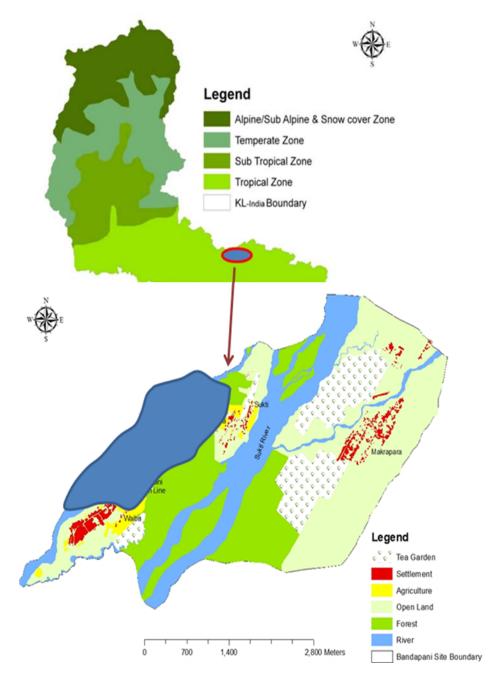


Fig. 3. Map of Bandapani pilot site, West Bengal



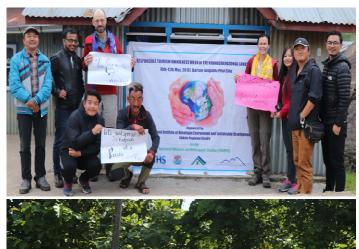
Promotion and Outreach



Promotional Measures-FACEBOOK PAGE



Environmental Awareness











Showcasing and Promotion of hand-crafts



Fig 9: Momo Box

Fig 10: Hair Clip

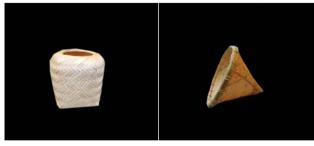


Fig 11: Pen Stand

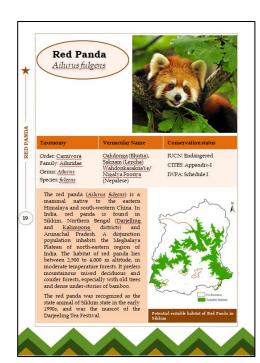
Fig 12: Rice Beer strainer

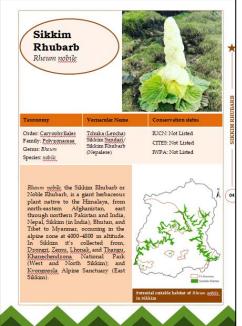


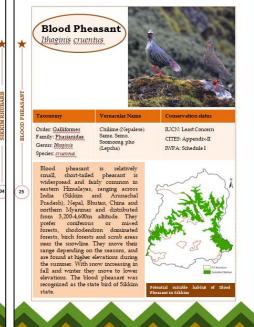


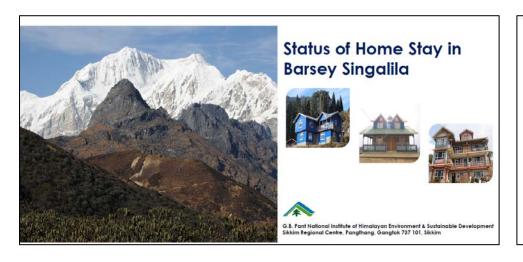


Knowledge dissemination











Certificate Course/ Training on Ecotourism & Livelihood Enhancement/ Capacity Building



Celebration of Tourism Day (2018 & 2020)









Home Stay Management



Paradise Homestay



Denver's Gallery Homestay





Rate: @Rs.1000/person (including breakfast dinner)
Address: Gorkhey Forest Village, Darjeeling, PO: Rammam,

West Bengal, India Contact no: 9593036651

Email: mamtalama06@gmail.com

Site specification: Forest hamlet, National Park nearby, Close

to Falut-Sandalkphu Trekking





Rate: @Rs.1000/person (including breakfast dinner)
Address: Gorkhey Forest Village, Darjeeling, PO: Rammam,

West Bengal, India Contact no: 7063359479

Site specification: Forest hamlet, National Park nearby, Close

to Falut-Sandalkphu Trekking

Table 1. List of Training and Capacity Building Programme organized during project tenure.

SI.	Туре	Name of Programme	Date	Venue	Beneficiaries	Number of Beneficiaries		
No.		Name of Programme	Date	venue	Deficitiones	Female	Male	Total
1.	WK	Solid Waste Management and Best Practices	18 th September, 2018	Bandapani, West Bengal	Local youths	28	32	60
2.	WK	Workshop on Ecotourism in Khangchendzonga Landscape-India (Consultation Workshop)	27-28 September, 2018	Gangtok, Sikkim	Stake holder at three pilot sites	11	34	45
3.	ОТ	Awareness Campaign on Ecotourism in Khangchendzonga Landscape-India (Showcasing Knowledge Product)	27-28 September, 2018	MG Marg, Gangtok, Sikkim	Stake holder of three pilot sites	7	12	19
4.	OTF	Awareness campaign on Significance of Community Based and nature tourism	13 th December, 2018	Barsey- Singalila, West Sikkim	Youth and home stay operators	41	33	74
5.	SD	Training and exposure visit on Eco-Guide in the Khangchendzonga Landscape-India	27-31 January,2019	Dzongu, North Sikkim	Local youths of three pilot sites	9	19	28
6.	OTF	Responsible Tourism Awareness Week	4-13 May,2019	Barsey- Singalila, West Sikkim	Unprivileged youths and locals	30	29	59
7.	OTF	Strengthening Dialogues for Equitable Benefit Sharing in Homestay Management	6-12 th May, 2019	Barsey- Singalila, West Sikkim	Homestay owners and other stake holders	26	34	60
8.	OFT	Workshop cum training on 'Nature Conservation, Indigenous Knowledge Management and Revival of Traditional Practices in the Khangchendzonga Landscape-India'	6-8, June, 2019	Barsey- Singalila, West Sikkim	School students, local practitioner, homestay operators and youths	39	37	76

9.	OFT	Gap Analysis survey towards Sustainable Eco-tourism: Participatory Approach in Barsey-Singalila Pilot Site of KL	16-19 July, 2019	Barsey- Singalila, West Sikkim	Youths and homestay Operators	38	29	67
10.	OFT	Workshop on Promotion of Community Based Ecotourism as a Potential Livelihood Option in Khangchendzonga Landscape-India	27-28, September, 2019	Barsey- Singalila, West Sikkim	Youths, Homestay Operators, students and Partners	28	18	46
11.	SD	Exposure and Exchange Learning on Nature, Culture and Tourism	24-27, January, 2019	Dzongu, North Sikkim	Youths from all the pilot site	6	5	11
12.	SD	Certificate Course on "Ecotourism & Livelihood Enhancement"	03-22 February, 2020	Gangtok	Youths from all the pilot site	9	10	19
15.	OTF	A consultation meeting with community representatives and Gorkhey Ecotourism Committee in Barsey-Singalila pilot sites of the project	03 November 2022	Gorkhey	Youths and local stakeholders	4	10	14
17.	OTF	A consultation meeting with community representatives and forest officials of Gaochira Village, Bandapani	6-9 December, 2020	Bandapani, West Bengal	Youths and local stakeholders	17	0	17
13.	WK	International Mountain Day	11 December , 2020	Yuksam	Local stakholders	28	20	48
14.	OTF	Workshop on "Large cardamom product based value chain development linking ecotourism in Khangchendzonga landscape India"	12 December, 2020	Yuksam	Local practitioner and youths	10	12	22
18.	OTF	Training Programme for Homestay Promotion in Barsey- Singalila, West Sikkim	16-23 December, 2020	Barsey- Singalila, West Sikkim	Homestay owners	7	29	36
16.	OTF	A promotional and showcasing event of yak based value chain product from Indian Himalayan Region and neighboring countries of Khangchendzonga landscape-India is proposed to be organized to strengthen and promote yak-based entrepreneurship	25-26 December, 2020	Chungthang, North Sikkim	Local practitioner and youths	41	3	44

17.	OTF	A consultation meeting with community representatives and forest officials of Gaochira Village, Bandapani	6-9 December, 2020	Bandapani, West Bengal	Youths and local stakeholders	17	0	17
13.	WK	International Mountain Day	11 December , 2020	Yuksam	Local stakholders	28	20	48
14.	OTF	Workshop on "Large cardamom product based value chain development linking ecotourism in Khangchendzonga landscape India"	12 December, 2020	Yuksam	Local practitioner and youths	10	12	22
18.	OTF	Traning Programme for Homestay Promotion in Barsey- Singalila, West Sikkim	16-23 December, 2020	Barsey- Singalila, West Sikkim	Homestay owners	7	29	36
16.	OTF	A promotional and showcasing event of yak based value chain product from Indian Himalayan Region and neighboring countries of Khangchendzonga landscape-India is proposed to be organized to strengthen and promote yak-based entrepreneurship	25-26 December, 2020	Chungthang, North Sikkim	Local practitioner and youths	41	3	44

WK: Workshop; OTF: On Field Training and SD: Skill Development

Important events attached (**Appendix – 7-14**)

4.3 Conclusion of the study (max. 500 words in bullets)

Community Based Tourism (CBT) is popular as a means of supporting biodiversity conservation, particularly in developing countries and it focuses on the involvement of the host community in planning and maintaining tourism development in order to create a more sustainable tourism industry. The Khangchendzonga Landscape (KL) has a potential to promote community based tourism with the adjoining countries like Bhutan and Nepal. In addition, diversifying tourism to transboundary areas through developing ecotourism corridors can mitigate the various negative impacts and provide livelihood options to the people living in the corridors across the landscape. Realizing the above and dealing with the major issues, the project proposal sent to the MoEF&CC under NMHS programme focusing in the three pilot sites of KL (covering two states i.e., entire Sikkim and Northern part of West Bengal), through involving the multi-stakeholders and multidisciplinary mechanism.

The SWOT analysis (strengths, weaknesses, opportunities and threats) of each pilot site was performed. Based on the SWOT analysis site specific activities such as; data collection on floral and faunal diversity, entry level consultations, awareness campaign, promotion of models (Home stay, Nature trail, solid-waste management, and low cost water conservation model) and handicrafts based products, capacity building programme, participation in local level fairs and festivals, public-private partnership (PPP) and celebration of important days viz., World Tourism Day, World Environment Day etc. were organized with the help of state level organization and local stakeholders. For the data collection in different aspects of project; methods and approaches such as; focus group discussion (FGD), personal interviews and secondary data were taken into consideration.

A total 2,345 plant species were recorded for three pilot sites of Khangchendzonga Landscape (attached **Apendix-1**). They belonged to 166 families where Orchidaceae, Compositae, Cyperaceae, Poaceae and Rosaceae was most dominant and represented by 389, 202, 157, 107 and 100 numbers of species. Along with, a total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled in different forest types of Khangchendzonga Landscape. They belonged to 54 families, 68 genera and 117 species. In herbaceous layer, a total of 45,935 individuals of 134 species belonging to 95 genera and 50 families were recorded.

Developed ecotourism based resource maps (3 nos.) for the KL India. For the development and strengthening CBT promotion models, inventorized the status of homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (36 Nos.) pilot sites of KL India, this include training provided by region specific best practices homestay models (3 Nos.), strengthening the existing nature trail (1 no.), organized certificate course/green skill programme (3 Nos.) and Eco-tourism based festival (3 Nos.) etc. A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity

building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). The project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources. CBT was seen to be the most viable sustainable livelihood option by the local community groups for themselves in Himalayan region. The action-oriented path coupled sustainable use of bio-resources, for promotion of sustainable tourism in the Himalaya, can enhance economic and livelihood opportunities while maintaining the ecology and cultural values of the region.#

5 OVERALL ACHIEVEMENTS - supporting documents to be attached.

5.1 Achievement on Project Objectives/ Target Deliverables

- Generated baseline data and completed the SWOT analysis for all three pilot sites.
- A total 2,345 plant species were recorded for three pilot sites of Khangchendzonga Landscape (attached Apendix-1). They belonged to 166 families where Orchidaceae, Compositae, Cyperaceae, Poaceae and Rosaceae was most dominant and represented by 389, 202, 157, 107 and 100 numbers of species.
- Along with, a total of 11,523 (≥10cm) tree individuals were recorded in 15 ha area that was sampled in different forest types of Khangchendzonga Landscape. They belonged to 54 families, 68 genera and 117 species. In herbaceous layer, a total of 45,935 individuals of 134 species belonging to 95 genera and 50 families were recorded.
- Prepared Herbarium of 2,140 plant specimens and 678 lichen specimens.
- Strengthen nature-trail (1 No.) at Dzongu, North Sikkim, wherein tagging of tree species and knowledge dissemination boards installed and repairing of exiting trail was performed.
- A complete inventorization of Homesaty at Dzongu (21 Nos.) and Barsey-Singhalila (36 nos.) pilot sites.
- Developed Resource maps (3 Nos.) for Barsey-Singhalila, Dzongu and Bandapani pilot site in consultation with project partners and local stakeholders and linked these information's on social media (Fig. 1-3)
- Organized training on best practices for Homestay model at Dzongu (2 No.), Equitable benefit sharing model at Barsey-Singalila (2 No.) and Water conservation model (1 No.) at Bandapani pilot sites of Khangchendzonga Landscape.
- Organized training programme for promotion of livestock (1 No.) and handicrafts based products (2 Nos.)
- For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsey-Singhalila Pilot Site a Ribdi Bharang Eco-tourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders.

- Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e., Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET.
- For Promoting livestock, horticulture and handicrafts based products at Dzongu, North Sikkim
 a "Songbing Nature and Cultural Tourism Festival" was formed with collaboration from local
 NGOs and government. Now days the festival organizing every year at the last week of
 January month.
- Organized 16 training cum capacity building including two Green Skill Programme/ certificate course on different aspects for strengthening community based eco-tourism in three pilot sites. (Table 1)
- A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). A detail of Programme was provided in Table 1.
- The project provided opportunities to local stakeholders in respect of linking ecotourism with sustainable livelihood and conservation of natural resources. CBT was seen to be the most viable sustainable livelihood option by the local community groups for themselves in Himalayan region. The action-oriented path coupled sustainable use of bio-resources, for promotion of sustainable tourism in the Himalaya, can enhance economic and livelihood opportunities while maintaining the ecology and cultural values of the region.

5.2 Interventions

Described as above

5.3 On-field Demonstration and Value-addition of Products, if any (max. 500 words)

Following training programme was conducted to build capacity of local youths and stakeholders for promotion of community based tourism in the area of Home stay management, Eco-guide, Bamboo based handicrafts, solid waste management etc.#

Name of Duagramma	Date	Venue	Beneficiaries	Number of Beneficiaries		
Name of Programme			beneficiaries	Female	Male	Total
Awareness campaign on Significance of Community Based and nature tourism	13 th December, 2018	Barsey- Singalila, West Sikkim	Youth and home stay operators	41	33	74
Responsible Tourism Awareness Week	4-13 May,2019	Barsey- Singalila, West Sikkim	Unprivileged youths and locals	30	29	59
Strengthening Dialogues for Equitable Benefit Sharing in Homestay Management	6-12 th May, 2019	Barsey- Singalila, West Sikkim	Homestay owners and other stake holders	26	34	60

Workshop cum training on 'Nature Conservation, Indigenous Knowledge Management and Revival of Traditional Practices in the Khangchendzonga Landscape-India'	6-8, June, 2019	Barsey- Singalila, West Sikkim	School students, local practitioner, homestay operators and youths	39	37	76
Gap Analysis survey towards Sustainable Eco-tourism: Participatory Approach in Barsey-Singalila Pilot Site of KL (along with the project partners) from 16 th -19 th July, 2019.	16-19 July, 2019	Barsey- Singalila, West Sikkim	Youths and homestay Operators	38	29	67
Workshop on Promotion of Community Based Ecotourism as a Potential Livelihood Option in Khangchendzonga Landscape-India	27-28, September, 2019	Barsey- Singalila, West Sikkim	Youths, Homestay Operators, students and Partners	28	18	46
A consultation meeting with community representatives and Gorkhey Ecotourism Committee in Barsey-Singalila pilot sites of the project	03 November 2022	Gorkhey	Youths and local stakeholders	4	10	14
A consultation meeting with community representatives and forest officials of Gaochira Village, Bandapani	6-9 December, 2020	Bandapani, West Bengal	Youths and local stakeholders	17	0	17
Workshop on "Large cardamom product based value chain development linking ecotourism in Khangchendzonga landscape India"	12 December 2020	Yuksam	Local practitioner and youths	10	12	22
Traning Programme for Homestay Promotion in Barsey- Singalila, West Sikkim	16-23 December, 2020	Barsey- Singalila, West Sikkim	Homestay owners	7	29	36
Yak-based entrepreneurship	25-26 December, 2020	Chungthang, North Sikkim	Local practitioner and youths	41	3	44

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5.4 Green Skills developed in in State/ UT

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- Organized 16 training cum capacity building including two Green Skill Programme/ certificate course on different aspects for strengthening community based eco-tourism in three pilot sites.
 This includes a 21 days certificate course cum GSDP and two skill development programme,
- A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). A detail of Programme was provided in **Table 1**.

5.5 Addressing Cross-cutting Issues

The project covered promotion of ecotourism for well being of the community and livelihood improvement in three pilot sites (Dzongu, Barsey-Singalila and Bandapani) of KL by developing effective implementation mechanism. The mechanism of project implementation was a participatory approach by following the gender equality and sound communication modules. The project strives to work for the positive alleviation of rural women folk in terms of field, think tank and management regimes. By focusing the large landscape, the cross-cutting themes addressed in this project: bio-resource assessment, sustainable utilization and management; understand the cultural and traditional based practices, and promote and linking with ecotourism for the well being of the community ensured equitable benefit sharing. The project ensured the active participation of weaker section such as women and tribal's, particularly with regard to sustaining livelihoods and knowledge building.

6 PROJECT'S IMPACTS IN IHR – <u>supporting documents to be attached.</u>

6.1 Socio-Economic impact

In this project we organized 16 training cum capacity building including two Green Skill Programme/ certificate course on different aspects for strengthening community based eco-tourism in three pilot sites. This includes a 21 days certificate course cum GSDP and two skill development programme. A total 745 (379 F & 366 M) stakeholders benefited through various aspect of capacity building/training programme and out of this 31 beneficiaries were able to generate income at Rs. 10,000-12,000/ month during the peak tourist period (April-June & Sep-December). A detail of Programme was provided in Table 1.

6.2 Impact on of Natural Resources/ Environment

For reducing the impact of natural resources following activities was performed;

- Linking Eco-trail with community based ecotourism in fringes villages of Khangchendzonga
 National Park and strengthen the existing eco-trail at Dzongu pilot sites
- Skill building of unprivileged youths towards ecotourism (e.g. Eco-guide)

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6.3 Conservation of Biodiversity/ Land Rehabilitation in IHR (max. 500 words)

NA

6.4 Developing Mountain Infrastructures (max. 200 words)

NA

6.5 Strengthening Networking in State/ UT

- Developed synergy between local stakeholders, and governmental & non- governmental organizations
- For proper implementation and monitoring of Community Based Ecotourism (CBET) at Barsey-Singhalila Pilot Site a Ribdi Bharang Eco-tourism Committee (RBETC) was formed in consultation with panchayat president, SHGs, and local community and stakeholders.
- Instead of developing a new committee at Dzongu pilot site, Strengthen the existing committee i.e.,
 Songbing Tourism Development & Management Committee (STDMC), Dzongu for proper implementation and management of CBET.
- Dissemination of knowledge for effective promotion and management of ecotourism.
- Integration of diverse approach for promotion of ecotourism.

7 EXIT STRATEGY AND SUSTAINABILITY – supporting documents to be attached.

7.1 Utility of project findings

The key findings that would emanate from the project will be shared with all the stakeholders in easy to understand language as and when desired by the competent authority (PMU/Project Coordinator/Partner Institution). Besides, the results will be shared at various forums ranging from class room lectures in Universities to seminar/workshops at regional and national levels. Also, project findings will be shared with the relevant user departments/institutions/agencies of the State Govt. for necessary follow-up action. Dissemination of the findings accomplished through publication of, local state level meetings / workshops, pamphlets and flyers etc. Further, projects outcome can be used to prepare a monogram of the bio-resources of that area. Moreover, outcome of the project can be used to prepare a tourism related management plan of target area which will be very much useful for the researchers and managers.

7.2 Other Gap Areas (max. 200 words)

Carrying capacity assessment of tourism potential area need to be defined#

7.3 Major Recommendations/ Way Forward (max. 200 words)

- Regular capacity building packages and follow-up systems for promoting sustainable tourism and its packages (homestays, rural tourism, etc.) is needed.
- Market linkages should be developed on Ecotourism hot spot areas.
- Need to replicate and upscale the successful sustainable tourism models in different parts.
- Updated capacity building packages and follow-up systems for promoting sustainable tourism and its packages (e.g. homestay) need to be provided.
- Regular skill building of youths/community on various aspects of ecotourism models.

7.4 Replication/ Upscaling/ Post-Project Sustainability of Interventions (max. 500 words)

The project implementation was performed in a participatory manner following a long-term activity plan, so the implementation of the project activities will be continued even after the project exits from the sites. The local NGOs are working in the respective sites will support the community-based activities in sustainable ways at the landscape. In addition, the KLCDI-India programme has to be implemented with 20 years vision in the particular landscape, which may be an alternative source for supplementing the project activities in the target sites.

8 REFERENCES/BIBLIOGRAPHY

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9 ACKNOWLEDGEMENTS

We thankfully acknowledge the Ministry of Environment, Forests & Climate Change, New Delhi for providing grants through the National Mission on Himalayan Studies (NMHS) for the Project entitled "Promotion of Sustainable Community based tourism in the Khangchendzonga Landscape: Linking Livelihoods with Nature Conservation". We thank the Department of Forests, Environment and Wildlife Management, Department of Home, and Department of Tourism Government of Sikkim and West Bengal for permission to carry out research work in protected areas. We thank Director G.B. Pant National Institute of Himalayan Environment (GBPNIHE), Almora for providing necessary facilities to carry out the project work. The support and advice from Er. Kireet Kumar (Scientist 'G' and Nodal Officer, NMHS) during entire project tenure is duly acknowledged.

APPENDICES

- Appendix 1 Details of Technical Activities
- Appendix 2 Copies of Publications duly Acknowledging the Grant/ Fund Support of NMHS
- Appendix 3 List of Trainings/ Workshops/ Seminars with details of trained resources and dissemination material and Proceedings
- Appendix 4 List of New Products (utilizing the local resources like NTFPs, wild edibles, bamboo, etc.)
- Appendix 5 Copies of the Supporting Materials like Manual of Standard Operating Procedures (SOPs) developed under the project
- Appendix 6 Details of Technology Developed/ Patents filled, if any
- Appendix 7 Any other

The Detailed report should include an Executive Summary and it should have separate chapters on (i) Introduction, (ii) Methodologies/Strategy/Approach, (iii) Key Findings and Results, (iv) Overall Achievements, (v) Project's Impacts in IHR (vi) Exit Strategy and Sustainability, (vii) References, and (viii) Acknowledgements (acknowledging the financial grant from the NMHS, MoEF&CC, Gol).

Other necessary details/ Supporting Documents/ Dissemination Materials (New Products/ Manuals/ Standard Operating Procedures (SOPs)/ Technology developed/Transferred, etc, if any) may be attached as Appendix(ces).