

NMHS-Himalayan Institutional Project Grant

NMHS-FINAL TECHNICAL REPORT (FTR)

Demand-Driven Action Research and Demonstrations

NMHS Reference No.:	NMHS-2017/Him- NLC-Assam-01/484 dated 22/12/2017	Date of Submission:	1	7	1	1	2	0	2	1
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PROJECT TITLE

NMHS HIM-NATURE LEARNING CENTRE (NLC) - ASSAM

Project Duration: From 22/12/2017 to 30/09/2021

Submitted to:

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Submitted by:

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NMHS-Final Technical Report (FTR)

Demand-Driven Action Research Project

DSL: Date of Sanction Letter

2	2	1	2	2	0	1	7
d	d	m	m	y	y	y	y

DPC: Date of Project Completion

3	0	0	9	2	0	2	1
d	d	m	m	y	y	y	y

PART A: PROJECT SUMMARY REPORT

1. PROJECT DESCRIPTION

i.	Project Reference No.	NMHS-2017/Him-NLC-Assam-01/484 dated 22/12/2017					
ii.	Type of Project	Small Grant		Medium Grant	√	Large Grant	
iii.	Project Title	NMHS HIM-NATURE LEARNING CENTRE (NLC) – ASSAM					
iv.	State under which Project is Sanctioned	Assam					
v.	Project Sites (IHR States covered) (Maps to be attached)	Assam (map attached in Appendix 8)					
vi.	Scale of Project Operation	Local	√	Regional		Pan-Himalayan	
vii.	Total Budget/ Outlay of the Project	Rs. 3,76,34,312/- (in Cr) Rupees Three Crore Seventy Six Lakhs Thirty Four Thousand Three Hundred Twelve only					
viii.	Lead Agency	Assam State Biodiversity Board (ASBB)					
	Principal Investigator (PI)	Shri K.S.P.V Pavan Kumar, IFS Addl. PCCF (Biodiversity & Climate Change), Assam, PI-NMHS Him-Nature Learning Centre (NLC), Assam, Member Secretary-ASBB, Assam, CEO, ACCMS, Govt. of Assam					
	Co-Principal Investigator (Co-PI)	DFO, Assam State Zoo, Guwahati.					
ix.	Project Implementing Partners	<ol style="list-style-type: none"> 1. Environment & Forest Department, Govt. of Assam 2. Assam State Biodiversity Board 3. Biodiversity Management Committees of Assam 					

	Key Persons / Point of Contacts with Contact Details, Ph. No, E-mail	Shri K.S.P.V Pavan Kumar, IFS Addl. PCCF (Biodiversity & Climate Change), Assam, PI-NMHS Him-Nature Learning Centre (NLC), Assam, Member Secretary-ASBB, Assam, CEO, ACCMS, Govt. of Assam Address of the Organization: 2nd Floor, Aranya Bhawan, Panjabari, Guwahati-781037, Assam Contact No. : +91-7099010729 E-mail: assambioboard@gmail.com / kspv.pavankumar@gmail.com
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2. PROJECT OUTCOMES

2.1. Abstract

Background: The project NMHS Him-Nature Learning Centre (NLC)-Assam is funded and supported by Ministry of Environment, Forest and Climate Change (MoEF&CC) and is implemented by Assam State Biodiversity Board (ASBB) and Environment & Forest Department, Govt. of Assam. The NLC-Assam was established with a vision to educate, engage and empower community to understand our environment and to conserve and manage our biodiversity and natural resources in a sustainable manner.

➤ **Objectives/ Aim:**

1. To develop and promote conservation awareness and sensitization on biodiversity and natural resources.
2. To create a cadre of trainers among the various stakeholders, who can lead the conservation actions and capacity building at various levels.
3. To promote participatory conservation action and management of wetland resources for livelihood generation.
4. To promote conservation of endemic, rare, threatened and endangered species.
5. To facilitate alternative livelihood generation capacities in order to reduce pressure on forest resources and promote efficient utilization of natural resources base.

➤ **Methodology:** The methodology of NLC-Assam is both qualitative and quantitative. It is based on information collected during PRAs and focus group discussions as well as on the secondary data available with the implementing agency (ASBB) and Environment and Forest Dept, Govt. of Assam. The deliverables were quantifiable with certain monitoring indicators and targets to be achieved.

➤ **Approach:** The NLC, Assam objectives were accomplished by raising awareness through interactive learning programmes, practical activity based learning, green technologies demonstrations / exposure visit, audio-visual training material, reading materials, promoting sustainable livelihood training programmes and development of interpretation centres, nature trails and amphitheatre at ex-situ site.

➤ **Results:**

1. 103 Nature Conservation Clubs (N'CCs) were formed for awareness and sensitization on biodiversity conservation and generate young cadres for conservation of biodiversity.
2. 57 Training and Capacity Building programmes on alternative livelihood were given to community members.

3. Conservation of select rare endemic plant species and medicinal plants at Assam Sate Zoo and Nellie Sub centre.
 4. Upgradation of an amphitheatre-alike open space and identification of three trails- A, B, and C (based on age groups) for exposure visits at Assam Sate Zoo.
 5. Upgradation of Ecological Museum at Assam Sate Zoo.
 6. Development of NLC Sub-centre at Nellie and vermicompost unit along with a nature trail at Kakoijana.
 7. Publication of 11 knowledge products and production of 4 documentary films.
 8. Capacity Building and N'CC awareness and exposure visit program conducted after executing PRA exercise with the communities residing near the wetland Urpabeel.
- **Conclusion:** The NLC-Assam is able to achieve the target objectives besides identifying the various underlying issues of biodiversity conservation. The awareness and sensitization programme for N'CCs organized in remote schools of Assam has created large numbers of students, govt. officials and community as cadres for biodiversity conservation. The capacity buildings on various alternative livelihood sources like mushroom cultivation, beekeeping, nursery development, vermicompost have created a sustainable source of income source that will not only reduce dependency on natural forest resources but also provide economic empowerment and gender equality. The facilitation of NLC Ex-situ site and sub centre would promote conservation of rare endemic and endangered species along with an outdoor learning system to students and other conservation stakeholders.
- **Recommendations:**
1. N'CCs formed may continue following the mandates provided by NLC-Assam and ASBB may be entrusted with forming more clubs at school.
 2. More interpretation centres and botanical museums may be established for sensitisation of community.
 3. Key persons involved in similar projects implemented in different states may be provided a knowledge-platform to interact and share ideas.

2.2. Objective-wise Major Achievements

S. No.	Objectives	Major achievements (in bullet points)
1	To develop and promote conservation awareness and sensitization on biodiversity and natural resources.	<ol style="list-style-type: none"> 1. One documentary on Nature Learning Centre, Assam and three documentary films of 15-mins and 2-mins abridged version of each on Nellie Sub Centre, Kakoijana R.F. and Urpabeel. 2. Vermicompost Training Manual titled “Kesuxaar-matiporipusthirkjoibikutso” (Vermicompost, an organic source of soil fertility). 3. Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual). 4. Children story book entitled “Sticker logagosgojathai”. 5. Nellie Brochure on Nature Interpretation

		<p>Centre and Kholahat R.F.</p> <ol style="list-style-type: none"> 6. Himalayan Biodiversity Exhibits 7. Activity booklet for School students (Assamese and English) 8. A pictorial booklet titled “Jolaxoy” (Wetland) has been developed for the school students. 9. A pictorial document titled “GosBonorObodan” (Contribution of Forests) has been developed for the school students. 10. 13 PowerPoint Presentation topics on Environment, Biodiversity Conservation, Himalayan range biodiversity and its importance for school students. 11. A “Flyer on Household Wastes” has been developed.
2	To create a cadre of trainers among the various stakeholders, which can lead the conservation actions and capacity building at various levels	<ol style="list-style-type: none"> 1. 103 Nature Conservation Clubs were formed in Govt. School across the Assam State. 2. 55 Awareness Programme on Environment in forest fringe Govt. Schools. 3. 23 Students exposure visits to National Parks and Wildlife Sanctuaries.
3	To promote participatory conservation action and management of wetland resources for livelihood generation	<ol style="list-style-type: none"> 1. PRA Exercise done in UrapadBeel, a wetland in Goalpara District of Assam. 2. Focus Group Discussion at UrapadBeel. 3. Discussion with ASBB for promoting NLC, Assam activities with JFMC’s / EDC’s / BMC’s.
4	To promote conservation of endemic, rare, threatened and endangered species	<ol style="list-style-type: none"> 1. A “brochure on the ex-situ conservation site at Assam State Zoo-cum Botanical Garden” has been developed. 2. Conservation of rare endemic plant species and medicinal plants at Assam Sate Zoo, Nellie Sub-centre and various nurseries of social forestry divisions. 3. Developed Nature Interpretation Centre at Nellie and Ecological Museum at Assam State Zoo.
5	To facilitate alternate livelihood generation capacities in order to reduce pressure on forest resources and promote efficient utilization of natural resource base.	<ol style="list-style-type: none"> 1. 54 Capacity Building Programmes on Integrated Farming, Piggery development, Paddy cultivation, Nursery Development, Vermicomposting Technology and Mushroom Cultivation and Mushroom for distressing reserve forests and other protected areas as well as to reduce man and animal conflict in rural as well as in urban fringe areas. 2. Three 5-day’s hands-on training on Honey Bee Keeping.

2.3. Outputs in terms of Quantifiable Deliverables*

S. No.	Quantifiable Deliverables*	Monitoring Indicators*	Quantified Output/ Outcome achieved	Deviations made, if any, & Reason thereof:
1.	<ul style="list-style-type: none"> • Easy learning module and knowledge products, in English and Local Language for school teacher, conservation workers, SHGs, JFMC, BMC, students etc. 	<p>Monitoring in comparison to the baseline information to be provided by the proponent:</p> <ul style="list-style-type: none"> • No. of Nature Learning and Awareness Curricula Developed; • No. of Crucial Nature Learning and Awareness Topics covered; • No. of Trainings organized with no. of stakeholders benefited in each segment; • No. of Dissemination and Awareness Publications (short/detailed) circulated; • No. of Field/ Green Technologies Demonstrations/ Exposure Visits organized; • No. of Publication of Assessment and Findings Reports; • No. of Beneficiaries; • No. of 	<ul style="list-style-type: none"> • More than 300 copies Vermicompost Training Manual titled “Kesuxaar-matiporipusthirekjoibikuts o” (Vermicompost, an organic source of soil fertility) and Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual) were distributed various stakeholders. • Over 2500 copies of Activity Booklet (Assamese and English), and 300 copies of two pictorial booklet titled “Jolaxoy” (Wetland), and “GosBonorObodan” (Contribution of Forests) were distributed to students. • One children story book “Sticker logaGosgojathai” was reprinted along with 4 brochure on NLC-Assam, Zoo ex-situ site, Nellie sub-centre and Biodiversity of Assam were published. A flyer on solid waste management was also printed and disseminated. 	

	<ul style="list-style-type: none"> • Capacity building trainings (Community member-5000 No.; BMC officials-1500 No.; Government officials-200 No.; Women SHG-300 No.) • Awareness programme and dissemination of knowledge on nature and biodiversity conservation • Sensitization programmes and conservation clubs for school and college students on regional and local biodiversity (Student-3000 No.) • Participatory conservation and management of one wetland resources for livelihood generation. 	<p>Collaborations/ Connect with the Protected Areas/ Sanctuaries/ Conservation Areas established;</p> <ul style="list-style-type: none"> • No. of Policy Guidelines and Legislative Mechanisms: Prepared and/ or Communicated. 	<ul style="list-style-type: none"> • Capacity Building Trainings (Community members-3922 No; BMC officials-125 No; Government officials-475 No; Women SHG- 562 No.) • 103 Nature Conservation Clubs were formed in forest fringe area Govt. schools of Assam. (Students-3765 No.)/ 23 Students exposure visits to National Parks and Wildlife Sanctuaries. • No. of Beneficiaries 4915 <p>Urapad Beel, Goalpara, Assam</p>	
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(*) As stated in the Sanction Letter issued by the NMHS-PMU.

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

S. No.	Particulars	Number/ Brief Details	Remarks/ Attachment
1.	New Methodology developed	<ul style="list-style-type: none"> Lined up with BMC, JFMC and EDCs for creating awareness on importance on biodiversity 	To develop and promote conservation awareness and sensitization on biodiversity and natural resources.
2.	New Models/ Process/ Strategy developed	<ul style="list-style-type: none"> 103 Nature Conservation Clubs were formed in forest fringe Govt. Schools across the State. 	To create a cadre of trainers among the student, who can lead the conservation actions and capacity building at various level.
3.	New Species identified	-	-
4.	New Database established	-	-
5.	New Patent, if any	-	-
	I. Filed (Indian/ International)	-	-
	II. Granted (Indian/ International)	-	-
	III. Technology Transfer(if any)	-	-
6.	Others (if any)	-	-

3. TECHNOLOGICAL INTERVENTION

S. No.	Type of Intervention	Brief Narration on the interventions	Unit Details (No. of villagers benefited / Area Developed)
1.	Development and deployment of indigenous technology	<ul style="list-style-type: none"> <u>Mushroom cultivation technology:</u> Mushroom is the most common food item in the cuisines of several tribes of Assam. NLC, Assam in collaboration with KVIC, KVK and Civil Society organisations engaged resource persons and experts to conduct training on the more sophisticated version of the indigenous method of mushroom cultivation. 	<ul style="list-style-type: none"> Over 100 community members were given training mushroom cultivation to promote sustainable livelihood generation
2.	Diffusion of High-end Technology in the region	<ul style="list-style-type: none"> <u>Vermicomposting unit at Thakuranipara, Kakoijana, Bongaigaon, Assam:</u> In consideration of the negative impacts of using chemical fertiliser NLC-Assam established a vermicompost unit at Thakuranipara, Kakoijana in Bongaigaon district after a focus group discussion session with the community. 	Over 100 community members were given hands on training on Vermicomposting Technology aided as a means of income generation. The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.
3.	Induction of New Technology in the region	-	-
4.	Publication of Technological / Process Manuals	2 Training manuals were developed. Vermicompost Training Manual titled “Kesuxaar-matiporipusthirekjoibikutso” (Vermicompost, an organic source of soil fertility) and Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual)	<ul style="list-style-type: none"> 13 training and capacity building programmes on Vermicomposting were conducted and more than 300 copies Vermicompost Training Manual titled “Kesuxaar-matiporipusthirekjoibikut so” (Vermicompost, an organic source of soil fertility) were distributed various stakeholders. 16 training and capacity building programme on Nursery development were conducted. Over 300 copies of Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual)
	Others (if any)	-	-

4. NEW DATA GENERATED OVER THE BASELINE DATA

S. No.	New Data Details	Status of Existing Baseline	Additionally and Utilisation New data
1.	Formation of Nature Conservation Clubs	The concept of imparting nature knowledge and awareness by forming Nature Conservation Club (NCC) is a novel and unique attempt in Assam. No such school clubs or activity groups were formed in the region earlier.	To create a cadre of trainers among the students, which can lead the conservation actions and capacity building at various levels.
2.	Sensitisation and capacity building of 3922 community members residing in fringe area out of which 981 belonged to ST, 2235 are women and 668 were SC.		Capacity Building on Honey Bee Keeping, Vermicomposting, Mushroom Development and Nursery Development were given to the forest fringe area community to reduce pressure on forests which shall aid in economic empowerment and gender disparity.

5. DEMONSTRATIVE SKILL DEVELOPMENT AND CAPACITY BUILDING/ MANPOWER TRAINED

S. No.	Type of Activities	Details with number	Activity Intended for	Participants/Trained			
				SC	ST	Woman	Total
1.	Workshops	• 53 Capacity Building Programmes on Integrated Farming, Piggery development, Paddy cultivation, Nursery Development, Vermicomposting Technology and Mushroom Cultivation.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.	611	834	1747	3072
2.	On Field Trainings	• Three 5-day's hands-on training on Honey Bee Keeping.	Alternative livelihood	53	147	466	825

3.	Skill Development	<ul style="list-style-type: none"> One 2-day Mushroom Cultivation Training program cum an experimental approach to mitigate Human Wildlife Conflict. 	To generate an alternative livelihood option apart from farming and animal husbandry and thus mitigate Human Wildlife Conflict. As a follow-up to this capacity building has generated market linkages and selling points for the community.	4	Nil	22	22
4.	Academic Supports	<ul style="list-style-type: none"> 103 Nature Conservation Clubs (N'CC) in schools in the forest fringe areas. 55 Awareness Programme on Environment in forest fringe Govt. Schools. 23 Students exposure visits to National Parks and Wildlife Sanctuaries 	The dissemination of the knowledge products has a positive impact on the students and these initiatives have successfully inculcated a nature friendly temperament among the students of remote areas.	1034 937 233	1766 1396 751	1692 1421 548	3765 3726 1150
	Others (if any)						

6. LINKAGES WITH REGIONAL & NATIONAL PRIORITIES (SDGS, INDC, ETC.)/ COLLABORATIONS

S. No.	Linkages /collaborations	Details	No. of Publications/ Events Held	Beneficiaries
1.	Sustainable Development Goal (SDG)	<p>NLC-Assam covers 7 SDGs viz.</p> <ul style="list-style-type: none"> <u>Goal 1 : No Poverty</u> – Under NLC-Assam sustainable livelihood training programmes, the community were sensitised to live more sustainably to reduce their forest dependency and avoid exhaustion of natural resources and climate-related extreme conditions. <u>Goal 2 : Zero Hunger</u> – NLC-Assam activities were implemented to ensure awareness for sustainable 	<ul style="list-style-type: none"> Eight (8) Publications 5 day-long webinars Radio campaign 	<ul style="list-style-type: none"> Students Women SHGs STs OtherCommunity members Govt. Officials

		<p>food production systems and resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p> <ul style="list-style-type: none"> • <u>Goal 5 : Gender Equality</u> – NLC-Assam ensure women’s full and effective participation in its sensitisation and capacity building activities. • <u>Goal 8 : Decent Work and Economic Growth</u> – NLC, Assam encourages the unemployed youths to actively participate in its workshops and other programmes. NLC, Assam had also engaged resource persons who could guide them through formalization of micro-, small- and medium enterprises. • <u>Goal 10 : Reduced Inequality</u> – NLC-Assam intends to reduce inequality through its livelihood capacity building program and promote economic empowerment. • <u>Goal 13 : Climate action</u>–Raising awareness on environment literacy, climate change mitigation and adaptation. • <u>Goal 15 : Life on earth</u> – NLC-Assam promotes sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation. 		
2.	Climate Change/INDC targets	NLC-Assam in collaboration with Assam Climate Change Management Society (ACCMS) enhancing various stakeholders through Education & Awareness on Climate Change to tackle climate change issues. This will	<ul style="list-style-type: none"> • Webinars • Radio Campaigns 	<ul style="list-style-type: none"> • Govt. officials • Community based organisation • Researchers Scholars

		allow climate proofing of vulnerable natural resources and help sustain the livelihoods of those dependent on climate sensitive sectors/natural resources.		<ul style="list-style-type: none"> Students
3.	International Commitments	-	-	-
4.	Bilateral engagements	-	-	-
5.	National Policies	-	-	-
6.	Others collaborations	ACCMS, Department of Environment and Forest (Govt. of Assam), JFMC and EDCs	-	Forest fringe Communities.

7. PROJECT STAKEHOLDERS/ BENEFICIARIES AND IMPACTS

S. No.	Stakeholders	Support Activities	Impacts
1.	Gram Panchayats	Training and Capacity Building on alternative livelihoods.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.
2.	Govt. Departments (Agriculture/ Forest)	Training and Capacity Building on alternative livelihoods and Awareness programme on Environment and Conservation of Biodiversity.	Training programmes and workshops on sustainable livelihood assisted in bridging the gap between the governing authorities and community that in turn led to joining hands in conserving biodiversity and combating climate change impact.
3.	Villagers	Training and Capacity Building on alternative livelihoods.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.
4.	SC Community	Training and Capacity Building on alternative livelihoods.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.
5.	ST Community	Training and Capacity Building on alternative livelihoods.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.

			resources.
6.	Women Group	Training and Capacity Building on alternative livelihoods.	Alternative livelihood training program on Mushroom cultivation was conducted as a compensatory tool to curb Human-Wildlife conflict in Guwahati metro. As a follow-up to this capacity building program it has generated market linkages and selling points for the community.
	Others (if any)	-	-

8. FINANCIAL SUMMARY (CUMULATIVE)

S. No.	Financial Position/Budget Head	Funds Received	Expenditure/ Utilized	% of Total cost
I.	Salaries/Manpower cost	76,66,481.00	80,14,331.00	-
II.	Travel	20,00,000.00	9,02,875.00	45.14
III.	Expendables & Consumables	9,60,000.00	2,74,250.00	28.56
IV.	Contingencies	2,00,000.00	1,98,973.00	99.48
V.	Activities & Other Project cost	1,60,00,000.00	1,32,34,910.93	82.71
VI.	Institutional Charges	-	-	-
VII.	Equipment	10,20,000.00	8,50,797.00	83.41
	Total	2,78,46,481.00	2,34,76,136.93	84.30
	Interest earned	7,77,062.00	6,82,222.00	
	Grand Total	2,86,23,543.00	2,41,58,358.93	

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

9. MAJOR EQUIPMENT/ PERIPHERALS PROCURED UNDER THE PROJECT** (IF ANY):

Please refer Schedule- II; Details of Fixed Assets as on 30-09-2021 of the Audit Report.

As per the sanction order, the assets purchased out of the grant have been taken over by the Assam State Biodiversity Board.

10. Quantification of Overall Project Progress

S. No.	Parameters	Total (Numeric)	Remarks/ Attachments/ Soft copies of documents
1.	IHR States Covered	1	Assam

2.	Project Site/ Field Stations Developed	3	Nellie, Assam State Zoo and Kakoijana
3.	New Methods/ Modeling Developed	2	1. Interpretation Centre 2. Ecological Museums
4.	No. of Trainings arranged	57	-
5.	No of beneficiaries attended trainings	4522	-
6.	Scientific Manpower Developed (Phd/M.Sc./JRF/SRF/ RA):		1. Dr. QueenSarma 2. Dr. BanashreeSarma 3. Mr. Pankaj Kr. Mili 4. Ms. DebolinaDey 5. Ms.HijamMalemNganbaSingha 6. Ms.DwimuNarzary 7. Ms.NijiraBasumatary
7.	SC stakeholders benefited	668	-
8.	ST stakeholders benefited	981	-
9.	Women Empowered	2797	Members of women SHGs
10.	No. of Workshops Arranged along with level of participation	5	<ul style="list-style-type: none"> Several outreach programmes such as Plantation drive, online competitions, cleanliness drives, webinars etc were organised. Beneficiaries : Students, Researchers, Teachers, BMCs, EDCs, Women SHGs, GaonBura (Village Head), Forest fringe Communities etc.
11.	On field Demonstration Models initiated	(attach maps about location & photos)	<ul style="list-style-type: none"> Nature Interpretation Centre, Nellie. Kakoijana R.F. Ecological Museum ex-situ site
12.	Livelihood Options promoted	6	Mushroom Cultivation, Vermicomposting Unit, Nursery Development, Honeybee Keeping, Paddy Cultivation, Piggery.
13.	Technical/ Training Manuals prepared	2	<ul style="list-style-type: none"> Kesuxaar-matiporipusthirekjoibikutso” (Vermicompost, an organic source of soil fertility). Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual)
14.	Processing Units established (attach photos)	Vermicompost Unit at Kakoijana R.F.

15.	No of Species Collected	28 endemic citrus spp.	These 28 species were planted at Nellie, Morigaon.
16.	New Species identified	N.A	N.A
17.	New Database generated (Types):	N.A	N.A
	Others (if any)		

11. KNOWLEDGE PRODUCTS AND PUBLICATIONS:

S. No.	Publication/ Knowledge Products	Number		Total Impact Factor	Remarks/ Enclosures
		National	International		
1.	Journal Research Articles/ Special Issue:	-	-	-	-
2.	Book Chapter(s)/ Books:	-	-	-	-
3.	Technical Reports	-	-	-	-
4.	Training Manual (Skill Development/ Capacity Building)	-	-	-	2 Training manual “Kesuxaar-matiporipusthirekjoibikutso” (Vermicompost, an organic source of soil fertility) and Nursery Development Training Manual titled “KirixokorHathputi” (A farmer’s hand manual) were published. Copies attached in Appendix 2.
5.	Papers presented in Conferences/Seminars	-	-	-	-
6.	Policy Drafts/Papers	-	-	-	-
7.	Others:	-	-	-	-

12. RECOMMENDATION ON UTILITY OF PROJECT FINDINGS, REPLICABILITY AND EXIT-STRATEGY

Particulars	Recommendations
Utility of the Project Findings	<ul style="list-style-type: none"> Nature Conservation Clubs which were formed to create a cadre of trainers among the students, which can lead the conservation actions and capacity building at various levels. The learning methodologies and tools / techniques used garnered more attention and enthusiasm of the students. Students exposure visits to National Parks and Wildlife Sanctuaries which will have a positive impact on the students and these initiatives have successfully inculcated a nature friendly

	<p>temperament among the students.</p> <ul style="list-style-type: none"> • Outreach programmes were able to engage more community members in nature learning and nature conservation. • Training and Capacity Building on alternative livelihoods which will made familiar with the options on alternative livelihoods and reduce the dependence on forest resources and issues such as man-animal conflict threatening our biodiversity. • Training and capacity building programmes are also conducted with a vision to empower community economically and reduce gender gap and inequality. • The state of the art interpretation centre and vermicompost unit established under the project shall be beneficial for the community.
Replicability of Project	<p>Due to a structured implementing framework the project is easily replicable since awareness and sensitization is a necessary tool in conservation. Additionally, building capacity to for sustainable livelihood generation will aid in reducing pressure on forest resources. This way students as well as communities will be engaged and volunteer for conservation of biodiversity. It has also resulted in adapting sustainable economic activities which aided the community in generating income, in reducing gender disparity, economic empowerment of the tribal communities and youth empowerment. Collaborating with different stakeholders such as ACCMS was also a crucial part of the project. This helped in sharing ideas and resources and also creating a better impact on the community.</p>
Exit Strategy	<ul style="list-style-type: none"> • NLC, Assam has partnered with ASBB and Forest Department Assam which has similar mandate given by the state government and biodiversity authority. • Over the tenure of the project, NLC, Assam has been collaborated with numbers of Government organizations and agencies for implementing its various activities such as outreach programs, capacity building programs, N'CC awareness programs. • The N'CCs formed under NLC, Assam are self-sustainable provided they continue to follow the mandates provided by NLC, Assam. To ensure this, collaborative partners- ACCMS and ASBB may continue to replicate the activities of NLC, Assam. Both the agencies may also continue to provide alternative training livelihood program which is in line with their own mandates. • The interpretation centres, nature trails and vermicompost unit are handed over to the respective Divisional offices of Assam Forest Department. • The BMCs, JFMCs, EDCs and SHGs will also continue sensitization of the community.

Place:

Date:...../...../.....

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(Project-in-Charge / Project Investigator)

PART B: PROJECT DETAILED REPORT

1 EXECUTIVE SUMMARY

The project NMHS Him-NLC, Assam was implemented with a vision to – ‘*Build capacities of various stakeholders on nature conservation through a holistic and coordinated effort to create an enabled environment for nature based learning and sustainable developmental action.*’ Assam State Biodiversity Board (ASBB) is the implementing agency and Environment and Forest Department, Govt. of Assam and BMCs are the implementing partners of NLC-Assam. During the term of the project NLC, Assam also collaborated with several government and non-government organization such as Assam Climate Cell Management Society (ACCMS), Khadi and Village Industries Commission(KVIC) and KrishiVigyan Kendra (KVK), PARIVARTAN, PHANTOM, SuroviKrishakUnnayanSamiti (SKUS), Assam Agriculture University (AAU) and World Wide Fund for Nature (WWF) – Assam & Arunachal Pradesh State Office. Promoting networking with these organizations especially with ACCMS promoted sharing ideas and manpower, makes a stronger impact in sensitization and mobilization of the beneficiaries and aided in accelerating in implementation of several activities of NLC-Assam.

The activities implemented under NLC, Assam:

- a. Awareness and sensitization Programmes : NLC, Assam conducted awareness programmes and outreach programmes for both students as well as community members. Nature Conservation Clubs (N'CC) are formed in forest fringe areas' schools and mobilized to promote awareness for biodiversity conservation. Several outreach events are conducted to involve community and spread mass awareness.
- b. Knowledge product development : NLC, Assam published 11 knowledge products for raising awareness and dissemination during workshops and orientation
- c. Creating a cadre of trainers and conservation workers : Awareness programmes, outreach events and capacity building programmes are aimed at creating a cadre of conservation workers who shall work as stewards of natural world.
- d. Alternative Livelihood Generation Programme : NLC, Assam conducted Capacity Building programmes to generate sustainable livelihood in order to reduce dependency on forest resources and promote sustainable management of natural resources.
- e. Ex-situ conservation of Sensitive species: Assam State Zoo cum Botanical Garden is chosen as the ex-situ conservation site where select rare and endemic species are conserved. NLC, Assam also conducted exposure visits and established an Ecological museum at Assam State Zoo.
- f. Interpretation centre and development of nature trails : NLC, Assam established interpretation sites at Nellie, Morigaon with Diorama's and information Kiosk and developed nature trails at Nellie and Kakoijana. A vermicompost unit is also set up at Kakoijana, Bongaigaon.

Beneficiaries and targets to be achieved:

Sl. No.	Beneficiary	Approx. Number of Direct Beneficiary
1	Students	3000

2	Community Members	5000
3	BMC Officials	1500
4	Government Officials	200
5	Women SHG	300

Quantifiable outputs and number of beneficiaries benefitted from the programs under NLC-Assam are as follows :

Sl. No	Objectives	Quantifiable Outputs	Target beneficiaries
1	To develop and promote conservation awareness and sensitization on biodiversity and natural resources.	<ul style="list-style-type: none"> Awareness program in collaboration with ACCMS, SuroviKrishakUnnayanSamity (SKUS), PHANTOM, KVIC, KVK, AAU, Parivartan Celebration of important Day-Environment Day, International Biological Diversity Day, Teachers day, World Water Day. Mass communication mode for public awareness- social media, NLC facebook page, FM Radio, Newspaper. Events-Webinar, series workshops, rally, meeting etc. on Biodiversity conservation and environmental issues. Knowledge materials- PowerPoint presentations, standees, charts,Activity booklet, Himalayan Biodiversity Exhibit, Documentary Film- NLC- Assam, Nellie Sub-centre, Kakoijana R.F. and UrpadaBeel (a wetland), Nellie Brochure “Jolaxoy” (Wetland) “GosBonorObodan” (Contribution of Forests), Flyer on Household Wastes” has been developed as awareness materials Vermicompost Training Manual titled “Kesuxaar-matiporipusthirekjoibikutso” (Vermicompost, an organic source of soil fertility). Nursery Development Training Manual titled “KrixokorHathputi” (A farmer’s hand manual). 	<ul style="list-style-type: none"> More than 3000 copies of activity booklets and other publications were distributed 10 events and meetings organized in collaboration with NGOs, ACCMS, Mass communication mode
2	To create a cadre of trainers among the various stakeholders,	<ul style="list-style-type: none"> 103 Nature Conservation Clubs were formed in forest fringe area of Assam 55 Awareness Programme on 	<ul style="list-style-type: none"> Students-3765 nos.benefitted

	which can lead the conservation actions and capacity building at various levels	<p>Environment/Biodiversity Conservation were organised</p> <ul style="list-style-type: none"> • 23 Students exposure visits to National Parks and Wildlife Sanctuaries were organized. 	
3	To promote participatory conservation action and management of wetland resources for livelihood generation	<ul style="list-style-type: none"> • PRA Exercise and focus group discussion were done in Urapad Beel, a wetland in Goalpara District of Assam. • Six villages were covered – Gendera Village, Chamaguri Village, Jungle Block, Kalapani Chandamari, Agia part-2, Garokuta, Kuruwabhasha • Awareness programmes in the N'CCs of Goalpara were conducted • Capacity building on alternative livelihood were conducted • Documentary film named 'Scripting the future' on Urapad Beel and the community were produced. 	<ul style="list-style-type: none"> • 200 nos. community members benefitted
4	To promote conservation of endemic, rare, threatened and endangered species	<ul style="list-style-type: none"> • A "brochure on the ex-situ conservation site at Assam State Zoo-cum Botanical Garden" has been developed. • Conservation of rare endemic plant species and medicinal plants at Assam State Zoo and Nellie Sub-centre. • Developed sub centre- Nature Interpretation Centre & Nature trails at Nellie, Kakoijana and Assam State Zoo 	<ul style="list-style-type: none"> • 67 (medicinal, fruit bearing plant species) planted • 28 citrus germplasm planted at Nellie sub centre • 2000s plant saplings in Assam state Zoo.
5.	To facilitate alternate livelihood generation capacities in order to reduce pressure on forest resources and promote efficient utilization of natural resource base.	<ul style="list-style-type: none"> • 53 Capacity Building Programmes on Integrated Farming, Piggery development, Paddy cultivation, Nursery Development, Vermicomposting Technology and Mushroom Cultivation. • Three 5-day's hands-on training on Honey Bee Keeping. • One 2-day Mushroom Cultivation Training program cum an experimental approach to mitigate Human Wildlife Conflict. 	<ul style="list-style-type: none"> • (Community members-3922 No; BMC officials-125 Non Government officials-475 No; Women SHG- 562 No.) benefitted

2 INTRODUCTION

2.1 Background of the Project:

The project NMHS Him-Nature Learning Centre, Assam was implemented with a vision to educate, engage and empower community to understand our environment and to conserve and manage our biodiversity and natural resources in a sustainable manner. The project was implemented by Assam State Biodiversity Board (ASBB). The Assam Forest Department's existing infrastructure at its divisional offices as well as the protected areas were used as the field sites and the manpower were used for facilitating on-site trainings and exposure visits as per requirement. The Biodiversity Management Committee (BMCs) at different districts acted as field units for NLC, Assam. The BMCs are constituted at all local bodies i.e. Zilla Parisad, Gaon Panchayat, Anchalik Panchayat, Urban Bodies and at Forest Range Jurisdiction at 3 Autonomous Councils with a purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity. The existing Assam state Zoo cum Botanical Garden is the ex-situ conservation site for NLC, Assam. The managerial and administrative centre of NLC-Assam was set up at Aranya Bhawan, Panjabari, Guwahati along with an ex-situ site at the Assam State Zoo cum Botanical Garden.

Its thrust as per the identified objectives is *“Building capacities of various stakeholders on nature conservation through a holistic and coordinated effort to create an enabled environment for nature based learning and sustainable developmental action.* With a motto to explore, experience and understand nature, NLC, Assam devised certain activities in line with its objectives:

- a. Awareness and Sensitisation Programme
- b. Knowledge product development
- c. Create a cadre of trainers and conservation workers
- d. Alternative Livelihood Generation Programme
- e. Capacity Building of Government Officials
- f. Ex-situ conservation of Sensitive Species

2.2 Overview of the Major Issues to be Addressed:

Though a range of different efforts have been taken by the state and central government, the government is not able to address all the stakeholders and build capacities for sustainably using the natural resources in general and bio-resources in particular. The initiatives taken so far have not reached every stakeholder and thus need a concentrated and focussed effort through a dedicated entity like NLC, Assam which primarily worked towards increased understanding of the nature, natural ecosystems, biological resources, their importance and conservation and so on.

Another important aspect is that, though various interventions have been taken by various department and council towards creating and sensitizing people on these aspects, these are often isolated efforts and thus requires to be brought under a single umbrella. Efforts are made to mitigate the lack of coordination between different departmental interventions towards nature and biodiversity conservation. NLC, Assam worked as vehicle to promote nature learning and biodiversity conservation within the state.

The major issues addressed under NLC-Assam are as follows:-

- Intensification of conservation of biodiversity of state's bio-resources with focus on threatened and endangered species.
- To ensure biodiversity is duly represented by the endemic and rare floral and faunal species through adequate interventions

- Building stakes in people's organisation for nature conservation and sustainable use of the local bio-resources.
- Identifying species specific concerns and undertaking appropriate interventions against the same.
- Reduce dependency on forest resources promote efficient utilization of natural resource base.

2.3 **Baseline Data and Project Scope:**

S. No.	New Data Details	Status of Existing Baseline	Additionally and Utilisation New data
1.	Formation of 103 Nature Conservation Clubs with each club comprising of 40-50 school student members	The concept of imparting nature knowledge and awareness by forming Nature Conservation Club (NCC) is a novel and unique attempt in Assam. No such school clubs or activity groups were formed in the region earlier.	To create a cadre of trainers among the students, which can lead the conservation actions and capacity building at various levels.
2.	Sensitisation and capacity building of 3922 community members residing in fringe area out of which 981 belonged to ST, 2235 are women and 668 were SC.		Capacity Building on Honey Bee Keeping, Vermicomposting, Mushroom Development and Nursery Development were given to the forest fringe area community to reduce pressure on forests which shall aid in economic empowerment and gender disparity.

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

Him-NLC Objectives	Target Deliverables
<ul style="list-style-type: none"> • To develop and promote conservation awareness and sensitization on biodiversity and natural resources • To create a cadre of trainers among the various stakeholders, which can lead the conservation actions and capacity building at various levels • To promote participatory conservation action and management of wetland resources for livelihood generation • To promote conservation of endemic, rare, threatened and endangered species • To facilitate alternate livelihood generation capacities in order to reduce pressure on forest resources and promote efficient utilization of natural resource base. 	<ul style="list-style-type: none"> • Easy learning module and knowledge products, in English and Vernacular Language for school teacher, conservation workers, SHGs, JFMC, BMC, students etc. • Capacity building trainings (Community member-5000 No.; BMC officials-1500 No.; Government officials-200 No.; Women SHG-300 No.) • Awareness programme and dissemination of knowledge on nature and biodiversity conservation • Sensitization programmes and conservation clubs for school and college students on regional and local biodiversity (Student-3000 No.) • Participatory conservation and management of one wetland resources for livelihood generation.

METHODOLOGIES, STRATEGY AND APPROACH

2.5 Methodologies used for the study:

The methodology of NLC-Assam is based on the secondary data available with the implementing agency (ASBB). Data related to divisional forest offices and BMCs, JFMCs and EDCs were acquired from the agency. NLC, Assam also collaborated with the Assam Climate Change Management Society (ACCMS), Govt. of Assam to implement its activities. This was done to promote networking, share ideas and resources since one of the mandates of the society is conducting outreach and awareness programmes. It was also initiated to ensure sustainability and further replication of the activities of the centre.

For fulfilling the objectives NLC, Assam in coordination with its field partners adopted various approaches such as:

- interactive learning programmes
- practical activity based learning
- green technologies demonstrations / exposure visit
- audio – visual training material
- reading materials / Knowledge products
- sustainable livelihood training programmes
- development of interpretation centres, nature trails and amphitheatre at ex-situ site.

Objectives and the methodology adopted:

1. The awareness programs, alternative livelihood generation programmes, publication of knowledge products and conducting outreach events contributed in **developing and promoting conservation awareness and sensitization on biodiversity and natural resources** fulfilling the first objectives of NLC-Assam. 103 schools in and around protected areas registered as Nature Conservation Clubs (N'CCs) through Divisional Forest Officers. Each N'CCs comprises of 40-50 students in each clubs. A team of NLC, Assam then conducts awareness programmes and exposure visits to protected areas and ecologically significant places. Furthermore, the alternative livelihood generation programmes conducted under NLC, Assam conducts orientation programmes for community residing in forest fringe areas also involves inculcating knowledge of biodiversity and sustainable management of natural resources and reduce dependency on forests.
2. The various activities training manuals, flyers and booklets published and documentaries produced under NLC, Assam supported in mobilization of different stakeholders to volunteer for conservation and biodiversity protection. These approaches were adopted to initiate a fast paced conservation step across the state, reduce exploitation of bio-resources and for sustainability of NLC interventions and in turn fulfilling the second objective i.e. **to create a cadre of trainers for nature conservation**.
3. NLC, Assam conducted focus group discussion and PRA exercises with the community of UrapadBeel (Lake), Goalpara and later on conducted awareness programs, outreach programs in schools and capacity building program. A documentary capturing the importance of Urapadbeel for the people of Agia, Goalpara was also produced under NLC, Assam. This activity was carried out to fulfil the third objective of NLC-Assam i.e. **to promote participatory conservation action and management of wetland resources**.
4. To fulfil the fourth objective, Assam State Zoo cum Botanical Garden was chosen as the ex-situ site of NLC, Assam where select **rare and endangered species** are conserved. An amphitheatre alike open space was created and three nature trails were identified where

N'CCs members were taken for exposure visits where they get a hands-on experience in understanding nature.

5. Capacity building alternative and sustainable livelihood training programmes were organised to generate livelihood for community of forest fringe areas **to reduce pressure on forest resources and promote efficient utilization of natural resource base** fulfilling the fifth objective of the project.

2.6 **Preparatory Actions and Agencies Involved:**

Prior to the project, Assam State Biodiversity Board (ASBB) and Forest Department has done secondary research and literature review of Assam State Action Plan on Climate Change (ASAPCC) and Assam Biodiversity Strategy and Action Plan (ABSAP). Accordingly, the Assam State Biodiversity Board has conducted focus group discussion (FGD) and PRA with various Divisional Forest Officers (DFOs), Rangers and fringe communities.

2.7 **Details of Scientific data collected and Equipments Used-** NA

2.8 **Primary Data Collected** - NA

2.9 **Details of Field Survey arranged** - NA

2.10 **Strategic Planning for each Activities :**

- **Awareness and Sensitization Program:** The NLC, Assam has conducted various awareness and sensitization programmes for both students and community members. For students around 55 numbers of programmes were organised at the registered NCCs (Nature Conservation Clubs) formed by the NLC, Assam at various government schools situated at forest fringe areas. The programmes were conducted mainly to increase awareness of the community members and students on various issues of biodiversity conservation including field exposure based learning. Various media campaign, street plays and mass communication modes were included under this activity. Details of all the programmes conducted and total number of beneficiaries are enlisted in Appendix 1.1.
- **Knowledge products development:** The NLC, Assam has created easy learning materials like leaflets, pamphlets, posters, standees, documentaries etc. to facilitate understanding of the nature and ecosystem as well as creation of awareness on conservation. The details of all the knowledge products and publications are given in Appendix 2
- **Creating a cadre of trainers and conservation workers:** The NLC, Assam created a cadre of nature enthusiasts, conservation workers and trainers within the state so that the concepts of conservation and nature learning reach out to each and every stakeholder. A series of training modules, short term learning courses, workshops etc. were prepared for students and researchers studying conservation, environment and other biological sciences. An estimate of 103 numbers of Nature Conservation Clubs (N'CCs) have been developed by the NLC, Assam at various fringe area schools and colleges which will work for nature learning and conservation independently after NLC, Assam. Details of all the programmes conducted at the N'CCs are enlisted in Appendix 1.2.
- **Alternative Livelihood Programme:** The NLC, Assam has provided training programmes to the community members and women members of SHGs on alternative livelihood like nursery development, mushroom cultivation, bee keeping etc. to reduce pressure on the forest resources near the protected areas. NLC, Assam has also taken up pilot work on wetland (Urpada Beel) restoration and community partnership based management conservation of the wetland, its

biodiversity by generating alternative livelihood and thus narrowing the dependency of local people on the same. The details of all the alternative livelihood and capacity building programmes are given in Appendix 1.3.

- Ex-situ conservation of sensitive species: An ex-situ conservation site has been developed at the Assam State Zoo cum Botanical Garden where nature trails, orchid house, creeper house have been developed for restoring RET Plant species of Assam. A Biodiversity Museum has also been developed exhibiting the taxidermic models of some rare, endangered and threatened mammal and avifaunal species of the N.E. India. A sub centre has also been developed at Nellie, Morigaon, Assam where 3-D models and computerised dioramas have been installed imparting knowledge on the RET animal and plant species of Assam. A good number of rare *Citrus* spp. of Assam has also been restored and conserved at the same location. Details of the ex-situ conservation centre and sub centre has been enumerated in Appendix 1.4.

Activity wise Time frame followed [using Gantt/ PERT Chart (max. 1000 words)]

Main Activity	Sub-Activity	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.Awareness and Sensitization	Dissemination of knowledge products on biodiversity conservation including curriculum development for schools												
	Seminars and workshops, audio-visual demonstration, field level activities for students.												
	Involvement of media in campaign.												
2. Promote ex-situ conservation and develop a cadre for conservation.	Creation of a Nature Learning Sub centre at the Assam State Zoo with a series of field activities.												
	Development of an ex-situ conservation site for sensitive species.												
	Mobilizing different nature enthusiasts and stakeholders.												
3.To create a network for extensive outreach	Internship program for students and formation of Nature Conservation Clubs (NCCs).												
	Identification of NLC sub centre across Assam.												
4.Alternative Livelihood Generation Programme	Capacity Building of women SHGs on alternative livelihood.												
	Conservation of select wetlands and community based resource management.												
	Ecotourism.												

3 KEY FINDINGS AND RESULTS

3.1 Major Research Findings - NIL

3.2 Key Results:

- NLC, Assam has created 103 Nature Conservation Clubs (N'CC) in schools situated in the forest fringe areas of Assam. 55 awareness programs were conducted across the State of Assam covering over 3500 students.
- 23 Exposure visits for about 1150 students to National Parks and Wildlife Sanctuaries have been conducted during the first year.
- Celebration of World Earth Day by organising various online competitions on the theme "Restore our Earth" for school, college and university students.
- Media campaign in the form of jingles, interactive talks etc. were conducted on the eve of World Environment Day, 2021 and International Biodiversity Day, 2021.
- Development of three 15 minutes each short documentary films by NMHS Him-NLC, Assam on correlation between the wetland and the local communities of UrapadBeel, Golden Langurs of the Kakoijana RF and the role of community in conserving it and Nellie sub centre of NMHS Him-NLC, Assam at Morigaon. A 2 minutes abridged version of each is also produced.
- Activity booklets, power point presentations covering topics related to nature and its conservation, standees displaying ecosystem services, wall posters, NLC t-shirts, caps, etc. were disseminated during the programs.
- The ex-situ conservation site at Assam State Zoo-cum-Botanical Garden has been upgraded with new features like reviving the nature trails, implanting new signage for plants and animals etc.
- Also, development of the Ecological/Biodiversity Museum at the Assam State Zoo has been completed.
- NLC sub-centre at Nellie, 28 sp. of rare and endemic Citrus sp. of Assam has been planted and maintained. Tendering and selection of bidders for developing the interpretation centre has been completed.
- NLC sub-center at Nellie has been completed and inaugurated for awareness generation on RET species of Assam.
- A plantation of around 500 rare and indigenous fruit bearing trees of Assam were planted at the Assam State Zoo on World Planting Day.
- The development of the NMHS Him-NLC, Assam sub center at Kakoijana (Bongaigaon) has been completed and inaugurated for the benefit of the community members of the fringe forest areas.
- 57 capacity building programs addressing Women Self-help Groups (approx. 562members) and community members (about 3922 members) were conducted.
- 4 capacity building programmes on Integrated Farming, Piggery development and Paddy cultivation was conducted in Barpeta district of Assam, covering 287 members.
- 8 capacity building programmes on vermicompost and on nursery development have been conducted in Nagaon and Hojai districts of Assam.
- Collaboration with organizations such as KVIC, Parivartan, AAU, SKUS and PHANTOM, have been done for conducting various capacity building workshops, 11 Mushroom Cultivation, 8 Nursery Development and 5 Vermicomposting Technology. 2 programmes on nursery development, 2 programmes on vermicompost, 3 programmes on honey bee keeping and 2 programmes on bee distribution were also conducted.
- Celebration of World Water Day at DeeporBeel, the only Ramsar site of Assam by generating awareness on wetland restoration amongst the locals.

3.3 Conclusion of the study :

The NMHS Him Nature Learning Centre, Assam project has been concluded with all the sub centres, museum, vermicompost units being inaugurated and handed over to the concerned DFOs for its maintenance and sustainability. The Nellie Sub centre being inaugurated by the Hon'ble Minister of Forest & Environment, Assam and later handed over to the Divisional Forest Officer, Nagaon District. The Nature Learning Centre built at the Assam State Zoo cum Botanical Garden along with the Biodiversity Museum has been inaugurated and handed over to the Divisional forest Officer, Assam State Zoo. The vermicompost unit and forest trail developed at the Kakoijana Reserve Forest has been inaugurated and handed over to the Divisional Forest Officer, Aie Valley (Bongaigaon).

The maintenance and sustainability of the 103 Nature Conservation Clubs (NCCs) and its associated activities has been handed over to the Assam Climate Change Management Society, Govt. of Assam (ACCMS).

4 OVERALL ACHIEVEMENTS

NLC-Assam has followed an interactive learning programme, practical activity based learning, exposure visits, audio visual training material, reading materials training facilities etc. to achieve its objectives.

NLC has formed 103 Nature Conservation Clubs(N'CC) in remote forest fringe govt. schools in the entire districts of Assam. About 55 awareness and sensitization programme on biodiversity conservation, environmental issues were organized for the school students, govt. officials, and community members. The NLC has developed knowledge products like leaflet, standees, and activity booklets to facilitate understanding of the nature as well as a part of awareness on biodiversity conservation. The workshops, exhibition, competitions were organized for different stake holders on nationally observed days. The NLC has also organized various effective modes of mass communication like radio talk and jingles to disseminate knowledge on relevant topics among general public. The 23 exposure visits to protected areas and reserve forest has provided a nature based learning to young enthusiast students. Such program and exposure has provided a great experience for remote school students who usually remain unexposed to such programme due to the remoteness and backwardness. The NLC has worked in collaboration with different organization such as Parivartan, PHANTOM, Khadi Village Industries Commission (KVIC), KrishiVigyanKendra (KVK), SuroviKrishakUnnayanSamiti (SKUS), Assam Agriculture University (AAU) as a part of collaborative conservation efforts. The NLC has organized capacity building programme for community members and woman SHGs. Around 57 training programs on vermicomposting, beekeeping, nursery development, mushroom cultivations were provided as a means of alternative livelihood options for forest fringe communities to reduce dependency on forest resources. The NLC has able to reach its target beneficiaries through such programme. (Students-3765nos; community members-3922 nos, BMC- 125 nos; govt. officials-475 nos Woman SHGs- 562 nos.) The NLC- Ex situ conservation site is developed in Assam State Zoo cum Botanical Garden. Around 67 saplings (medicinal, fruit bearing plants were planted with taxonomical sinages. A nature trail and ecological museum was also set up. The two NLC sub centers-Nellie sub center at Nellie and at Kakoijana RF were established facilitating interpretation center, trails and vermicompost unit.

NLC-Assam besides field based awareness programme has also made the use of modern technological intervention to create sophisticated advance for nature based learning exposure.

- Development of Biodiversity museum at Assam, state Zoo cum Botanical garden: As a part of technical intervention, NLC has developed an ecological museum. The museum consists of taxidermy models, dry skeletal samples and wet bottled specimens of faunal species. The specimen has been placed on constructed models and dioramas with lightning and covered glass facilities. The models of big mammals have been set up in a way which gives 3D appearance. The museum may provide a technologically updated experience for the visitors.
- VermicompostUnit: A concrete vermicompost unit was constructed in Thakuraniparavillage, Kakoijana R.F. under Aie valley division. The unit was constructed following the scientific techniques for generation of vermicompost. This unit will help in generation of organic manure from dry and wet wastes. This unit may be beneficial for forestry plantations and nursery development.
- Nellie Sub Centre: As a part of technical intervention 5 dioramas, 3D models have been developed. The diorama represents rare and endangered species of Assam, Himalayan avian diversity. Himalayan animal diversity, Himalayan terrain, and depiction of sustainable living and unsustainable human practices. The dioramas were installed with light work and installed in an

artistic backdrop of oil and acrylic paintings. A touch screen interactive kiosk was installed. The contents of NLC-Assam, Floral and faunal diversity of the Himalayas, about Himalayan ranges were installed in the system. These user friendly kiosk can provide details and interesting learning experience to the visitors. A tabletop terrain map of Assam representing the forest types of Assam with two information display stand has also been setup.

As a part of field based demonstration and value addition of products, the capacity building on vermicomposting, beekeeping, nursery development trainings were held with a proper field based demonstration by experts and resource persons.

- The 5-day **beekeeping program** included 15 hours of theory and 10 hours practical. The beekeeping capturing techniques, process of collecting hygienic bees, wax collection from wild bees were demonstrated practically.
- The two-day **vermicompost** techniques focus on production technique of low cost vermicompost unit. The maintaining of the unit by using organic waste bio residual dungs were practically demonstrated on field. Preparation of vermi wash, selection of earth worms species and quantities of bio residuals were also demonstrated. As a value addition, packaging of enriched compost prepared from vermicompost and market linkage were provided.
- In **nursery development** programme there was a practical demonstration of nursery raising for flowers, ornamental plants and fruit bearing plants. The site selection priorities, water availability and selecting mother block plants species were made familiar. The grafting process and seed propagation techniques and proportion of male female ratio of citrus, papaya, species were also demonstrated. As a value addition nursery development can provide a scope of kitchen garden and saplings production.
- **Mushroom training:** In two-day mushroom cultivation training the handling of spawn, organic distillation of paddy straw (both boil and cold technique) mushroom cylinder preparation, installation techniques, pest and disease management, harvesting, marketing of mushroom in local market, retailer and experts were demonstrated in detailed steps. As a follow up and monitoring the value added products were sold under regional brand Northeast Taste.

The identified important cross cutting issues that has been integrated and mainstreamed throughout the project-

- Climate Change

Biodiversity conservation must go together with strategies that improve the livelihoods and wellbeing of local communities and foster overall economic growth – all while managing/mitigating climate change. In this context, the participatory planning process will evaluate threats and propose solutions in the overall context of climate change. Through biodiversity conservation efforts, afforestation, nursery development can support climate change mitigation. This also help in the conservation of soil and improve ecosystem resilience in the face of extreme weather events such as heavy rainfall and floods.

- Awareness, sensitization and traditional knowledge management

Awareness and sensitization is crucial for gaining support towards implementing activities for the sustainable use and conservation of forest and biodiversity for future generations. NLC targets to bring all stakeholders together to collaborate towards common biodiversity goals. It recognizes that solid support for and alliances with traditional custodians of nature i.e. Vital for beneficial outcomes. As a part of knowledge management the harvesting of **Traditional Ecological Knowledge (TEK)** from

those indigenous local populations can provide a back bone to biodiversity conservation. The **Traditional Value and Ethics (TEV)** practices by different tribes and community in their culture and religion can play a significant role in identifying the importance of biodiversity species and uses. e.g. Northeast India is enriched both with biodiversity and cultural richness. All their knowledge somewhere is linked to biodiversity conservation, water bodies conservation, mangroves, sacred forest and so on. A proper harvesting of such knowledge system would facilitate replication of best practices by documenting best practices through scientific approach and sharing whether and how they are replicable in conservation projects in the state. This will help policy and institutional environment, which would, in turn, facilitate the scaling up of the best practices/innovations across wider landscapes and in policies towards biodiversity conservation.

- Training and Capacity buildings on alternative livelihoods

Community engagement through livelihood enhancement tries to bring tangible benefits to people and communities. It focuses on generating income opportunities through sustainable use of natural resources, building capacities of the communities in livelihood-oriented skills, and diversifying livelihood assets with an overall aim to increase the financial capital and well-being of the communities. Diversification of livelihoods and introducing sustainability principles in traditional agriculture and alternative options like bee keeping, nursery development, mushroom cultivation etc. would further reduce the dependency of the community on the forest resources and reduces their vulnerability in the face of climate change. Activities such as nursery raising and cultivation of RET species would have the dual benefits of safeguarding against the loss of important floral species exacerbated by climate change while contributing to local livelihoods. Training and capacity building of the local community and governmental and institutional stakeholders will enable the integration of biodiversity conservation plans and management strategies and ensure the long-term sustainability of project interventions.

- Ex-Situ Conservation

The conservation of rare endemic species under NLC-Assam at Assam State zoo cum Botanical Garden can preserve the gene pool of various medicinal, fruit bearing plants, ornamental, rare endemic plants. It can also provide a foraging site for zoo faunal species. Around 67 saplings (medicinal, fruit bearing, ornamental) have been planted with taxonomical identification. Around 50 citrus germplasm has been planted and preserved at Nellie sub centres. A gene pool site of wood stock in Nellie may also serve as site for researcher in near future. Nature trails have also been identified in the zoo where student and nature enthusiast youths can experience and explore biodiversity more closely. An Ecological Museum has also been upgraded to give a better understanding of the biodiversity of the northeast.

5 PROJECT'S IMPACTS IN IHR

5.1 Socio-Economic Development

1. Rapid growth of population, largely associated with poverty, has adversely affected natural resources, particularly those that are renewable, such as forests, rivers and soils. Along with ecological and biospheric damage it also causes economic and social breakdown. Livelihood and socio-economic development are said to be the most important indices of development of a community.
2. In line with this, NLC, Assam aims to achieve this objective through training of community member / SHGs in and around protected areas on alternate livelihood options to reduce pressure on forest resources and promote efficient utilization of natural resources.
3. NLC, Assam has provided trainings and workshops to the community members on the following alternate and sustainable organic livelihood sources throughout the state:
 - a. Honey Beekeeping
 - b. Nursery Development
 - c. Vermicomposting
 - d. Mushroom cultivation
4. NLC, Assam also promotes active participation of youth to prevent youth-migration, tribal communities and women to reduce gender gap.
5. NLC, Assam intends on providing social equity and provide support and training to improve technical and management skill to its beneficiaries, especially to women and tribal community.
6. NLC, Assam, has so far organised 56 Capacity Building Orientation or workshops and training programs all over Assam in collaboration with Government regulated bodies such as Khadi Village Industries Commission (KVIC), Krishi Vigyan Kendra (KVK) and non-profit organisations such as Surovi Krishak Unnayan Samiti (SKUS) and PHANTOM.
7. The Nature Conservation Clubs (N'CC) formed under the aegis of NLC, Assam were also encouraged to organise training programs for socio-economic development of the community members.
8. Over 3000 numbers of community members were trained through capacity building programs organised by NLC, Assam out of which around 2500 numbers were women and nearly 1000 numbers were scheduled tribes.
9. NLC, Assam in collaboration with its partner training partners and civil society were also able to provide mushroom cultivation training as well as market linkages to the community of a human-wildlife conflict prone community. It was taken as an experimental step towards mitigating human-wildlife conflict. The training was provided to reduce dependence on forest resources as well as on their age-old livestock rearing practices.
10. NLC, Assam aimed to provide diverse opportunities for economic development based on the place and community living in the area. To aid in its capacity building activities manuals on vermicomposting and nursery development were also developed and distributed.

5.2 Scientific Management of Natural Resources In IHR

1. NLC, Assam promotes management of natural resources through community participation based conservation practices.
2. The stakeholders or participants involved were students, community members, BMC Officials, Government Officials and women SHGs.
3. Various awareness programmes, exposure visits and sensitization programmes such as radio campaign and webinars were organised by NLC, Assam.

4. The awareness programmes of NLC, Assam is primarily focussed on awareness of the biogeography and biodiversity of Indian Himalayan region (IHR) and on how management or mismanagement of those natural resources directly and indirectly affects each and every being living on this planet.
5. Nature Conservation Clubs (N'CCs) are formed in the schools residing in and around protected areas. Each club comprises of 40-50 students.
6. NLC, Assam aimed at creating a cadre of trainers and conservation workers by instilling the value of conservation among students at a young age.
7. Around 103 schools are registered as N'CC under NLC, Assam through Divisional Forest Offices.
8. NLC, Assam organised awareness programs, exposure visits and different competitions for these N'CC members.
9. In the awareness programs, various topics related to nature conservation were discussed. N'CC members were also informed about the project NLC, Assam, its goals and objectives and various other initiatives taken up by NMHS and how it is aiding in generating awareness for conservation.
10. The club members were briefed about the NLC, Assam mandates and their role as N'CC members. N'CC members were also taken for exposure visits in national parks and Assam State Zoo or to a local ecologically significant ecosystem to give a more up close and personal experience to the students.
11. In the awareness programmes, audio-visual tools such as MS PowerPoint presentation, videos, activity booklets (in both Assamese and English) etc were used.
12. N'CCs are given financial assistance amounting to Rs.10,000/- to carry out different conservational activities such as:
 - a. Preparation of Wall magazine
 - b. Gardening (flower/fruits/medicinal plants/vegetable)
 - c. Collection of Nature related books/documents/journals etc. for school library.
 - d. Preparation of School Biodiversity register.
 - e. Conducting awareness drives (rallies/meetings/campaigns etc. on local environmental issues).
13. On receiving the financial aid with the help of their teachers N'CC members were able to fulfil all the NLC, Assam prescribed activities and organised large scale mass awareness campaigns regarding conservation of natural resources in their own locality.
14. Knowledge products and documentaries produced under NLC, Assam were also disseminated.

5.3 Conservation of Biodiversity in IHR

1. NLC, Assam took various steps for conservation of Biodiversity in Assam:
 - a. Forming Nature Conservation clubs among school students in and around protected areas.
 - b. Conducting awareness programmes among N'CC members and community members.
 - c. Organising alternative livelihood capacity building and training programs.
 - d. Conducting various outreach programs and events such as various competitions for school and college students, radio ad campaigns, plantation drives, cleanliness drive, webinars etc.
 - e. N'CC members were also taken for excursion to national parks and Assam State Zoo cum Botanical Garden.

- f. NLC, Assam developed nature trails at Kakoijana, Bongaigaon and Nellie, Morigaon for nature enthusiasts.
 - g. NLC, Assam also established interpretation sites at Nellie, Morigaon.
 - h. NLC, Assam also developed an ex-situ conservation site at Assam State Zoo for some of the selected species with higher degree of vulnerability towards extinction.
 - i. Knowledge products such as training manuals, handbooks, activity booklets, nature related booklets, flyers were published under NLC, Assam for both community and school students.
 - j. Four Documentaries films documenting NLC, Assam activities, NLC interpretation centre and nature trail at KholahatRF, Kakoijana RF and the endemic Golden Langur and UradBeel, Goalpara were also produced for mass awareness and sensitization.
2. NLC, Assam through its N'CC members and capacity building programmes generated a cadre of students and community members for nature conservation.
 3. N'CC members organised activities such as procession to spread awareness to conserve our biodiversity, plantation drive, make nature related wall magazine etc.
 4. Apart from generating awareness towards various facets of conservation NLC, Assam also took a step towards mitigation of human-wildlife conflict through mushroom cultivation program funded by NLC, Assam in collaboration with the organising partner PHANTOM. In Assam, cases of human-leopard conflict, human-elephant conflict, human-monkey conflict is quite frequent. Government, non-government organisations and environmental activists are constantly working with community for mitigation and prevention of such incidences. The NLC, Assam funded mushroom cultivation program was implemented in Sankardev Nagar of Goshala in the city Guwahati where several cases of human-leopard conflict and human-monkey conflict were recorded. Most of the community members of this area rear livestock that attract leopards and eventually leading to conflict. Mushroom cultivation capacity building program conducted under NLC, Assam was an experimental approach towards mitigation of human-wildlife conflict. The beneficiaries of Mushroom cultivation capacity building program were 22 members of women SHG group.
 5. As a result, the 22 beneficiaries of mushroom training program were able to use the skills learned and were able to generate a moderate amount of income. These 22 women were motivated and volunteered to mobilize other members of the community to adopt mushroom cultivation as an alternate source of income and also aid in mitigating conflict with scheduled species.

5.4 Protection of Environment

1. Assam is endowed with beautiful and ecologically significant places in every nook and corner of the districts. With a motto to promote local conservation practices and protection of environment the Nature Conservation Clubs (N'CC) are formed in the entire districts of Assam. The N'CC students carried out campaign and rally on protection of ecologically significant places e.g. Conservation rally at HajongTortoiseLake, MahurDimaHasao, 200 year old banyan tree said to be Asia's second largest at Jalikata, Patshala, Solid waste pollution rally at Panimur and so on.
2. The adoption of 3Rs (Reduce, Reuse, Recycle) principle were made mandatory in school clubs. The N'CC members were instructed to make garbage dumping site and re use of plastics in gardening purpose and other crafts materials.

3. Carbon foot prints reducing practices-Efficient use of natural resources is practised by NCC students. Creation of plastic free zone in school premises, medicinal garden, tree plantation etc is practiced.
4. An activity booklet related to conservation and environment, Flyers on solid waste management were distributed among students and community members.
5. The community members were trained in eco-friendly Livelihood options -Nursery Development, vermicomposting etc., beekeeping.
6. To create mass environment awareness –Environment Day, International Biological Diversity Day, World Water Day, Wildlife Day were celebrated by organising competitions, webinars for various stakeholders.
7. In world planting day about 2000 saplings were targeted to plant in zoo premises. Initially 500 sapling have been planted.(the plants mostly constitute fruit bearing plants where zoo animal can forage, and also can create a lively environment for avian and primate species.
8. The social medias, FM radios station, facebook pages were also used as a mode to create public awareness on environment protection.
9. The NLC sub centres, Nellie has been developed to create awareness on biodiversity of IHR. A nature trail has also been developed with various learning points that can enhance visitors about the necessity of biodiversity and protection of environment.
10. The development of Ex-situ conservation site at Assam State Zoo cum Botanical Garden has conserved 67 varieties of (medicinal, fruit bearing rareendemic species) as a part of environment protection. The 50 citrus germplasm has also been planted in Nellie sub centre.

5.5 Developing Mountain Infrastructures

1. The communities residing in the mountain infrastructure of Assam are most vulnerable to a changing climate, as high population density puts pressure on already-fragile ecosystems.
2. NLC-Assam conducted orientation and workshop in Halflong with the community members.
3. NLC, Assam also conducted awareness programs and exposure visits for school students for students of Haflong Girls' Government Higher Secondary School, Nature Conservation Club as a stepping stone towards understanding their ecosystem, natural resources and its conservation.
4. Around 50 students registered as nature conservation club members.
5. NLC, Assam aimed at mobilizing these young cadres of school students towards biodiversity conservation and mass awareness.

5.6 Strengthening Networking in IHR

1. The Indian Himalayan Region (IHR) is the most fragile and complex ecosystem in the world. Assam along with other north eastern states is also facing the threats of Climate change.
2. As a mandate of NMHS - Him NLC-Assam to mitigate climate change in the region, the NLC-Assam has mainly focused on its objective- (i) Options for education, awareness and outreach program and (ii) Human capacity building including promotion of microenterprises and green technologies through alternative livelihood options.
3. NLC-Assam has formed 103 Nature Conservation Club(NCC) in the entire districts of Assam.
4. NCC along with the local forest officials and community member is playing as a coordinating team to disseminate awareness on conservation and environment.
5. The NLC-Assam has organised near about 55 awareness program in remote areas like Hailakandi districts, Dima Hasao, Baksa etc. This has strengthened the network of conservation efforts among target beneficiaries.
6. Around 4915 students were benefited by NLC-Assam outreach program.

7. Most of the communities living in forest fringe areas belongs to economically weaker section depending on natural resources for their livelihood. NLC-Assam as a part of providing livelihood security and sustainable food production through efficient management of locally available natural resources provided capacity building trainings on nursery development, vermicomposting and beekeeping. Diversifying livelihood generating alternative source income through application of various technology interventions.
8. NLC-Assam has organises 57 such programs in remote forest fringe areas. About 3922 beneficiaries (Woman SHGs, community members availed the benefits of such program.
9. To involve local youths in conservation efforts, NLC-Assam Nature Interpretation Centre and Nature trails can provide a greater scope and also state art facilities at district levels.

6 EXIT STRATEGY AND SUSTAINABILITY

6.1 How effectively the project findings could be utilized for the sustainable development of IHR

The project NMHS Him- Nature Learning Centre, Assam aimed at generating awareness and sensitize community living in and around protected areas regarding conservation of biodiversity through its several awareness and capacity building programmes. Under the project, nature trails and interpretation centre / museums are also established to draw nature enthusiast, especially school children and raise their interest towards conservation of unique biodiversity of IHR. The following are the findings of the project:

Finding 1: A non-formal or unconventional learning methodology was adopted by NLC, Assam for conducting awareness program for Nature Conservation Clubs (N'CC). The learning methodologies and tools / techniques used garnered more attention and enthusiasm of the students. The methodologies comprised of -

- Lecture/presentation
- Discussions
- Groupwork
- Questions and answers
- Demonstrations
- Examples of good practice
- Case studies
- Practical sessions (hands-on practice).
- Outdoor activities or field trip to nearby wetland, reserve forest or to National Parks.

This overall approach of raising awareness and sensitization among students turned out to be effective. It was apparent from the activities and conservation drives conducted by beneficiaries (N'CC members). The students were more driven and found to be more connected with nature and the concept of conservation. It inculcated a nature friendly temperament among students especially during outdoor activities such as exposure visits.

Finding 2: The objectives of raising awareness and sensitization of community for biodiversity conservation among youths and community members were attained through several outreach products (knowledge products) and events organised in collaboration with Assam Climate Change Management Society, WWF-India and local radio FM stations. These events covered several conservation and nature related topics such as Climate Change and its mitigation and prevention, rare and endemic biodiversity of Assam, threats faced by the biodiversity of the region etc. It is found that outreach programs conducted helped influencing the opinions, attitudes and behaviours of the community towards conservation, nature and avoiding conflict between wildlife especially the scheduled species. Outreach programs had the potential to mobilize the community mindset and thereby influence the other members of the community.

Finding 3: Capacity Building training programmes were conducted to understand the existing livelihood pattern of the community in order to achieve the sustainable livelihood generation objective of NLC, Assam. The beneficiaries of training programs included community members living in and around protected areas, women SHG members, tribal communities etc. It is found that community residing in these areas are generally economically weak and depends on forest resources for sustenance. This causes threat to natural resources and in some cases arises conflict with wildlife.

Hence sustainable alternative livelihood trainings are provided to reduce the pressure on forest resources as well as provide a source of generating income to the community. It is found that providing livelihood sources also provided additional or alternate source of income to the weaker section of the society, reduced gender gap and provided a source to the women members of the society to become independent.

Finding 4: The Ecological Museum established at Assam state Zoo cum Botanical garden and the state of the art interpretation centre at Nellie, Morigaon with dioramas and information kiosk will provide a better understanding and learning opportunities to the community members belonging to all age groups. The vermicompost unit developed in Kakoijana will bring awareness among local communities and promote a more sustainable and environment friendly of growing crops. The nature trail identified at Assam State Zoo, Nellie, Morigaon and Kakoijana Reserve Forest will continue to attract nature enthusiasts to explore and understand nature.

6.2 Efficient ways to replicate the outcomes of the project in other parts of IHR

Biodiversity all around the world have been facing threats due to environmental degradation. Issues such as climate change, deforestation, urbanisation, loss of habitat etc. has led to dwindling population status and extinction of several species. If the initiatives and activities undertaken under the project NMHS Him-Nature Learning Centre, Assam is replicated, it can help to mobilize the community to protect the environment and most importantly it can reduce human dependency on the natural resources. It will also be able to generate considerable income and able to enhance livelihood options, which needs little investment cost and start-up capital, little production area and inputs.

The methodology used for conducting awareness program in schools is quite structured. Since the project is implemented by Assam Forest Department (AFD) and Assam State Biodiversity Board (ASBB) the Divisional Forest Officers were given the charge of registering schools as Nature Conservation Clubs (N'CC) under Nature Learning Centre (NLC), Assam. 103 schools were registered as N'CC under NLC, Assam. In each clubs around 40-50 students took membership. The criteria for selection of N'CC were:

- i. Ecological significance in and around the identified locations
- ii. Remoteness of the school
- iii. Willingness of the school for active participation in conservation works.

Awareness programs were conducted in the schools by NLC, Assam and a grant of Rs.10,000/- (Rupees Ten Thousand only) were given to each N'CC. Following are the objectives to fulfil the club mandates:

- i. Reduce plastic use (less use, proper disposal and sustainable use and reuse)
- ii. 3 Rs (Reduce, Reuse and Recycle)
- iii. Adoption of a symbol/flagship species by every school
- iv. Preparation of School Biodiversity Register
- v. Preparation of Children Climate Action plan
 - a. Observation on the seasonality of the birds & insect call, flower blooms, rainfall etc.
 - b. Identification of the wild fruit trees
 - c. Study of the common pests
- vi. Opening of bank accounts for each schools
- vii. Excursion to nearby place of ecological significance

Mass awareness and sensitization programs were also carried out through outreach programs such as plantation drive, cleanliness drive, on-spot and online competitions and webinars. These events were organized in collaboration with implementing partners (Forest Department and ASBB) and collaborating organization such as Assam Climate Change Management Society (ACCMS), NGOs, communication medium such as radio FM stations etc. Ideas, information and expertise were exchanged with these collaborative partners for engagement of community in a larger scale. Knowledge products published under NLC, Assam were also aided in mass awareness and sensitisation.

The capacity building program for livelihood generation under NLC, Assam aimed at reducing dependency on forests resources. Forest reserves still continues being a very integral part of rural community living near protected areas. Local communities are dependent on traditional farming and natural resources. This is because of productivity loss resulted from forest and land degradation and others. Hence after an orientation session or workshop with the community sustainable livelihood sources such as Honey Bee keeping, Mushroom Cultivation, Vermicomposting and Nursery Development were introduced in that area. And by adapting these alternate income sources due attention will be given to biodiversity protection, rehabilitation and restoration in one hand and household income will be enhanced on the other. Therefore, this solution is best fit to the purpose both in generating income, diversifying income sources and conserving biodiversity.

6.3 Identify other important areas not covered under this study needs further attention

Conservation and protection of environment is a very broad subject and it is not possible to cover its every aspect in a three-year long project. Under the project NMHS Him-NLC, Assam, following approaches for conservation of biodiversity were adopted:

- Raising awareness and sensitisation of community through awareness drives, outreach programs and developing knowledge products.
- Conducting capacity building sustainable livelihood programs for community living in and around protected areas
- Ex-situ conservation of rare and endemic variety of flora at Assam State zoo cum Botanical garden.
- Establishment of nature trail and interpretation sites

There are other study areas of conservation management which could not be incorporated in under this project such as Ecosystem protection and recreation, habitat restoration or management, sustainable use of natural resources, climate change management etc. A significant part of the project NLC, Assam focused on disseminating environmental literacy among communities and building a cadre of environment enthusiasts. A vast majority of the project is based on the ability of an individual to understand environmental systems and the subtle action of conservation, amendment, and improving the health of these systems. In order to inculcate environmental literacy NLC, Assam instilled ecological knowledge, knowledge of Environmental Issues, Cognitive Skills and Environmentally Responsible Behaviors among different stakeholders.

6.4 Major recommendations for sustaining the outcome of the projects in future

To sustain the outcomes of the project in future following recommendations can be taken into account:

1. The Nature Conservation clubs (N'CC) formed should continue to handhold and subsequently Assam Climate Change Management Society (ACCMS) and Assam State Biodiversity Board

(ASBB) should form many more N'CCs. This is a unique model and can be replicated in other states.

2. Implementation of similar activities such as training programmes on NTFP, eco-tourism, training of indigenous fruits and medicinal plantation which will help the local communities for income generation and at the same time it will help to distress the reserve forest, protected areas and national parks.
3. There should be more interpretation centres as well as botanical museums on the same line as developed through Him-NLC, Assam. It not only creates awareness on conservation of biodiversity and wildlife but also helps to educate communities and specially youth on the richness of Indo Himalayan region.
4. It is highly recommended to Assam Climate Change Management Society (ACCMS), Assam State Biodiversity Board (ASBB) and others to use the knowledge products developed in their training, meeting, community development program etc.
5. Similar projects implemented in different states should have an interactive platform to share ideas and information.
6. With the outcomes of audio-visual interactive museum and interpretation centres it has been found that it catches quick attention of the communities as well as youth.
7. One of the key output of Him-NLC, Assam is the syllabus developed for high school level students which need to be inducted into the course curriculum. ACCMS is coordinating with the education department of Government of Assam and Assam Higher Secondary Education Education Council (AHSEC).
8. Project should have a scope of having buffer time or cushion to complete delayed activities in event of unforeseen events such as pandemic, flood etc.

7 REFERENCES/BIBLIOGRAPHY: NIL

- 8 ACKNOWLEDGEMENT: The NMHS Him-NLC, Assam would like to acknowledge the National Mission on Himalayan Studies, Ministry of Environment, Forest & Climate Change (MoEF&CC) and G.B. Pant "National Institute of Himalayan Environment"(NIHE) for financial and technical assistance in successfully accomplishing the project. We also extend our sincere thanks to the Assam State Biodiversity Board (ASBB), Department of Forest & Environment, Govt. of Assam, Assam Climate Change Management Society (ACCMS) and the Assam Project on Forest and Biodiversity Conservation (APFBC) Society Phase-II. NMHS Him-NLC, Assam would also like to acknowledge the Divisional Forest Offices of the Assam State Zoo cum Botanical Garden, and all other Divisional Forest offices of Assam for their assistance and encouragement in the completion of all activities. The organisation acknowledges all the Nature Conservation Clubs (NCCs) and the Principals of all the schools who had facilitated in our activities. It also acknowledges WWF India-AAPSO; KNC Media & Entertainments; KVIC, Assam; KVK, Assam; PHANTOM; Surovi KrishakUnnayanSamity (SKUS), Assam; Parivartan, Turtle Survival Alliance, India and Help Earth and all other organisations who had helped in accomplishing the activities of NMHS Him-NLC, Assam.

APPENDICES

Appendix 1 – Details of Technical Activities

Appendix 1.1: Awareness and Sensitization Program



Few glimpses of the Awareness Programmes conducted across various NCCs of Assam.



Few glimpses of the various Awareness Generating Programmes conducted on various occasions and events.

Appendix 1.2: Few glimpses of cadre of trainers and conservation workers



Few glimpses of the field activities, exposure visits etc. undertaken for students, nature enthusiasts and other stakeholders

Appendix 1.3: Alternative Livelihood Programme



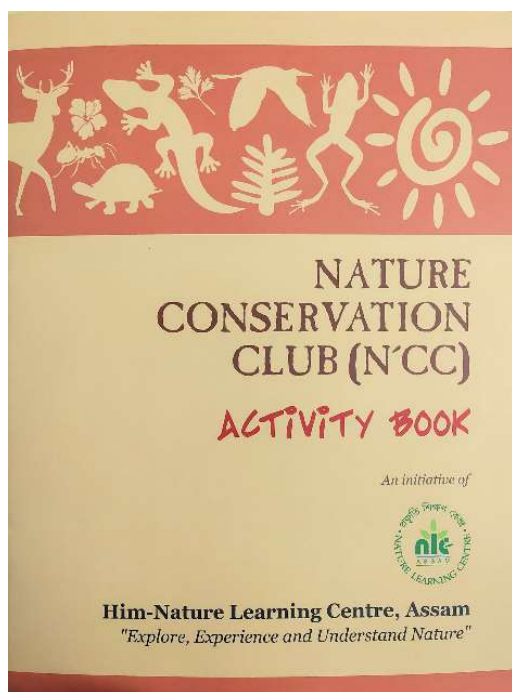
Few glimpses of the capacity building and alternate livelihood programmes conducted for Women, SHGs, community members etc.

Appendix 1.4: Ex-situ conservation of sensitive species

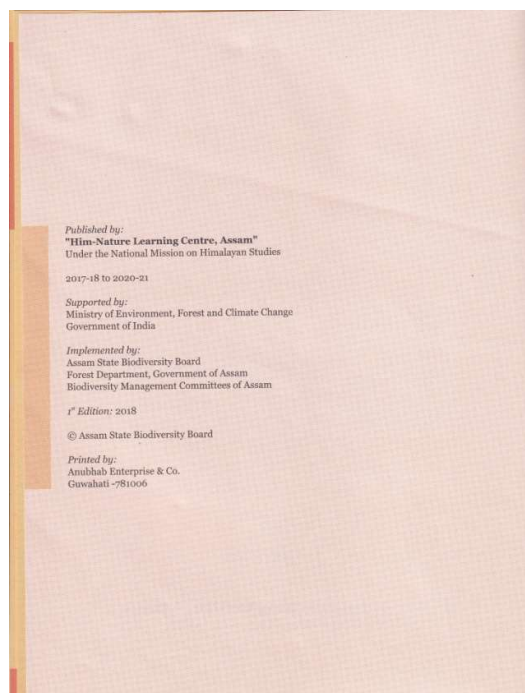


Few glimpses of the activities done in relation to the promotion of ex-situ conservation of sensitive species

Appendix 2 – Copies of Publications duly Acknowledging the Grant/ Fund Support of NMHS



The front cover of the Activity Book developed for the students of the NMHS Him- NLC. Assam Nature Conservation Clubs (NCCs)



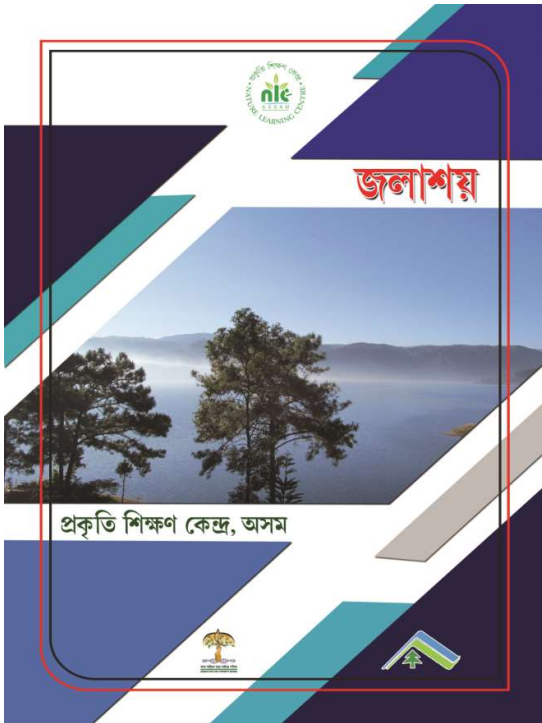
The publishing details of the NMHS Him-NLC, Assam Activity Book developed for the students of the NMHS Him- NLC. Assam Nature Conservation Clubs (NCCs)



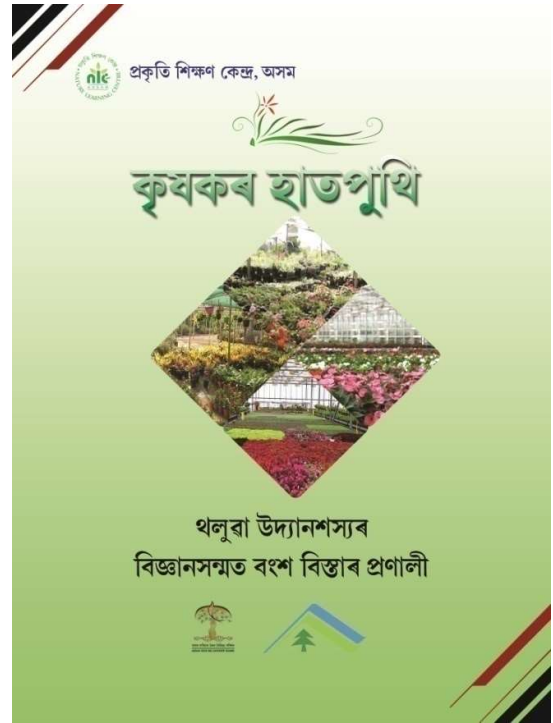
Front cover of the brochure developed on the Ex-situ Conservation site of NMHS Him-NLC, Assam.



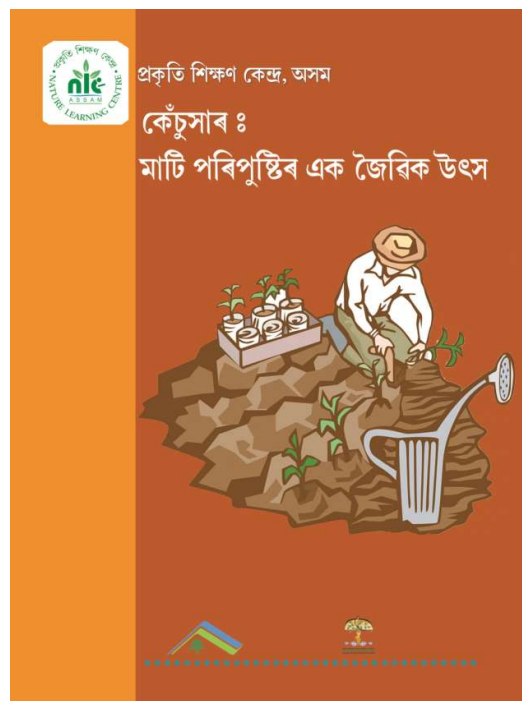
The front cover of the book “Gos Bonor Obodan” developed in local language



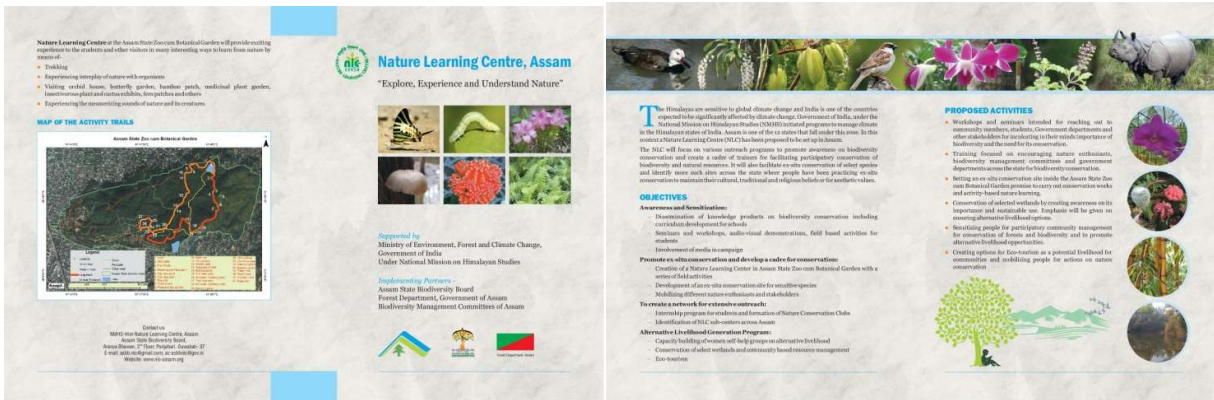
The front cover of the booklet developed in local language on wetland entitled “Jolaxoy”



The front cover of the manual on nursery development developed for farmers in local language.



A manual on Vermicompost developed for farmers, cultivators, horticulturists etc. in local language.



A brochure developed on the details, objectives and activities of the NMHS Him-NLC, Assam.



A Flyer on Household Wastes developed by NMHS Him-NLC, Assam to recycle and reuse the common household wastes



Brochure developed on the NMHS Him-Sub centre at Nellie, Morigaon, Assam

Appendix 3 – List of Trainings/ Workshops/ Seminars with details of trained resources and dissemination material and Proceedings

S. No.	Type of Activities	Details with number	Activity Intended for	Participants/Trained			
				SC	ST	Wom an	Total
1.	Workshops	• 53 Capacity Building Programmes on Integrated Farming, Piggery development, Paddy cultivation, Nursery Development, Vermicomposting Technology and Mushroom Cultivation.	The addressed groups were made familiar with the options on alternative livelihood and reduce the dependence on forest resources.	611	834	1747	3072
2.	On Field Trainings	• Three 5-day's hands-on training on Honey Bee Keeping.	Alternative livelihood	53	147	466	825
3.	Skill Development	• One 2-day Mushroom Cultivation Training program cum an experimental approach to mitigate Human Wildlife Conflict.	To generate an alternative livelihood option apart from farming and animal husbandry and thus mitigate Human Wildlife Conflict. As a follow-up to this capacity building has generated market linkages and selling points for the community.	4	Nil	22	22
4.	Academic Supports	<ul style="list-style-type: none"> • 103 Nature Conservation Clubs (N'CC) in schools in the forest fringe areas. • 55 Awareness Programme on Environment in forest fringe Govt. Schools. • 23 Students exposure visits to National Parks and Wildlife Sanctuaries 	<p>The dissemination of the knowledge products have a positive impact on the students and these initiatives have successfully inculcated a nature friendly temperament among the students of remote areas.</p>	1034	1766	1692	3765
				937	1396	1421	3726
				233	751	548	1150
	Others (if any)						

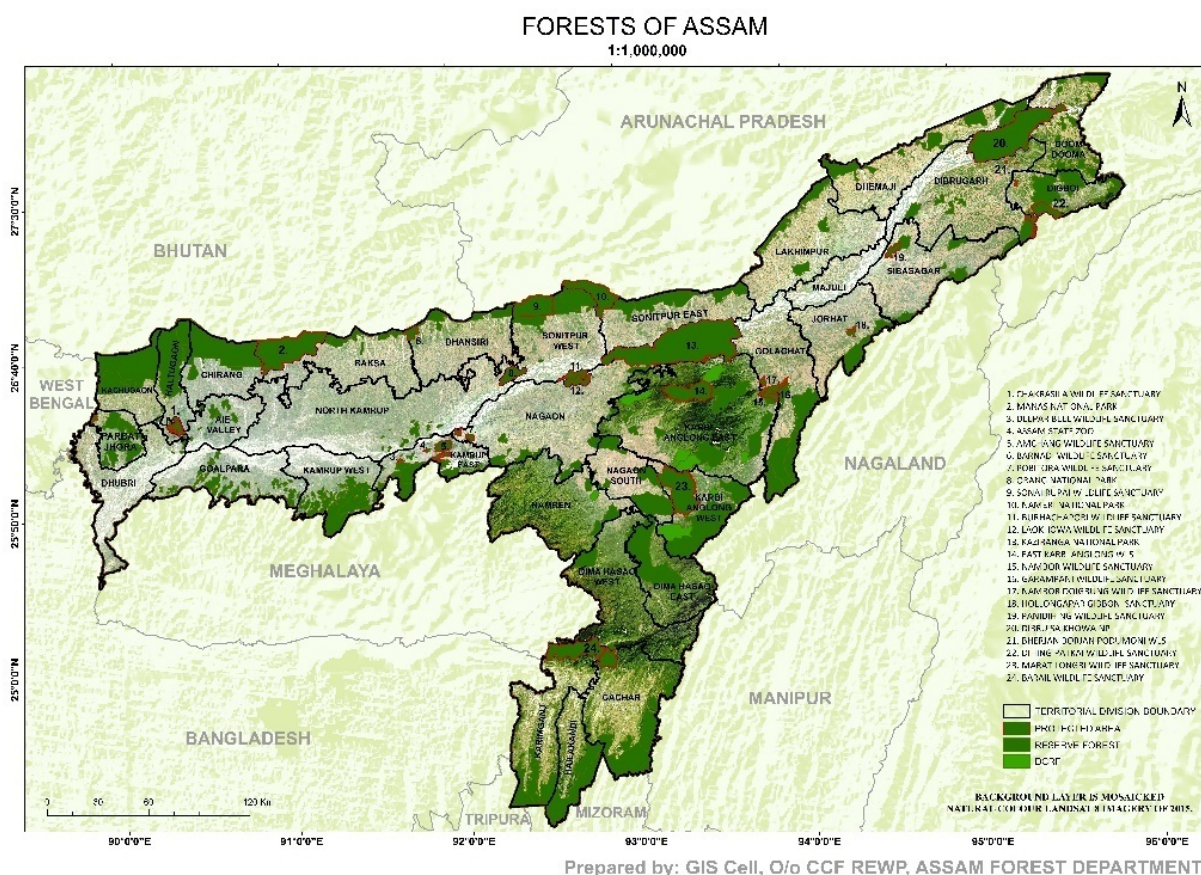
Appendix 4 – List of New Products (utilizing the local produce like NTFPs, wild edibles, bamboo, etc.): NIL

Appendix 5 – Copies of the Manual of Standard Operating Procedures (SOPs) developed: NIL

Appendix 6 – Details of Technology Developed/ Patents filled: NIL

Appendix 7 – Any other (specify): NIL

Appendix 8 – IHR State Covered: Assam (Map Attached)



Consolidated and Audited**Utilization Certificate (UC) and Statement of Expenditure (SE)****For the Period: 22-12-2017 to 30-09-2021**

1.	Title of the Project/Scheme/Programme:	NMHS Him-Nature Learning Centre-Assam
2.	Name of the Principle Investigator & Organization:	<p>i. Shri A. K. Johari, IFS Special PCCF (Biodiversity & Climate Change) & Member Secretary- Assam State Biodiversity Board (w.e.f. 22/12/2017 to 31/01/2020)</p> <p>ii. Shri S. S. Rao, IFS Addl. PCCF (Legal) & i/c Spl. Principal Chief Conservator of Forests (Biodiversity & Climate Change) (w.e.f. 03/02/2020 to 11/03/2020)</p> <p>iii. Shri K.S.P.V. Pavan Kumar, IFS Addl. PCCF (Biodiversity & Climate Change) & Member Secretary, Assam State Biodiversity Board (w.e.f. 11/03/2020 to date of closing)</p>
3.	NMHS-PMU, G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal, Almora, Uttarakhand Letter No. And Sanction Date of the Project:	<p>Letter No: NMHS-2017/Him-NLC-Assam-01/484 Date of Sanctioning of the Project: 22-12-2017</p>
4.	Amount received from NMHS-PMU, G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal, Almora, Uttarakhand during the project period (Please give number and dates of Sanction Letter showing the amount paid):	<p>➤ Letter No: NMHS-2017/Him-NLC-Assam-01/484 dated 22-12-2017 ○ 1st Installment Amount Rs.1,31,20,000/-</p> <p>➤ Letter No- NMHS-2017/Him-NLC-Assam- 01/484 and GBPNI/NMHS-2017-Him-NLC-Assam-01/484/88/219/341/468 dated 04-03-2020 ○ 2nd Installment Amount Rs.1,22,26,000/-</p>

		➤ Letter No- GBPNI/NMHS-2017/Him-NLC-Assam-01/484/88/219//341/468/162/85/30 dated 21-09-2021 ○ 3 rd Installment Amount(Salary Head) Rs.25,00,481/-
5.	Total amount that was available for expenditure (Including commitments) incurred during the project period:	Rs.2,78,46,481.00
6.	Actual expenditure (excluding commitments) incurred during the project period:	Rs.2,34,76,136.93
7.	Unspent Balance amount refunded, if any (Please give details of Cheque no. etc.):	Will be communicate in due course
8.	Balance amount available at the end of the project:	Rs.44,65,184.07
9.	Balance Amount:	Rs.44,65,184.07
10.	Accrued bank Interest:	Rs.94,840.00

Certified that the expenditure of **Rs.2,34,76,136.93 (Rupees Two Crore Thirty-Four Lakhs Seventy-Six Thousand One Hundred Thirty-Six and Ninety-Three Paise Only)** mentioned against Sr. No. 6 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date:

-sd-
(Signature of
Principal Investigator)

Signature of Registrar/
Finance Officer)

(Signature of Head
of the Institution)

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBP NIHE)

Statement of Consolidated Expenditure

Assam State Biodiversity Board

Statement showing the expenditure of the period from 22-12-2017 to 30-09-2021

Sanction No. and Date : **Letter No: NMHS-2017/Him-NLC-Assam-01/484**Dated 22/12/2017

1. Total outlay of the project : Rs. 3,76,34,312/-
2. Date of Start of the Project : 22-12-2017
3. Duration : 3 Years (9 months extended period)
4. Date of Completion : 30-09-2021

a) Amount received during the project period : 2,78,46,481/-

b) Total amount available for Expenditure : 2,78,46,481/-

S. No.	Budget head	Amount received	Expenditure	Amount Balance/ excess expenditure
1	Salaries	76,66,481.00	80,14,331.00	-3,47,850.00
2	Permanent Equipment Purchased (Item-wise)	Please refer Schedule-II of the Audit Report		
3	Travel	20,00,000.00	9,02,875.00	10,97,125.00
4	Consumables	9,60,000.00	2,74,250.00	6,85,750.00
5	Contingencies	2,00,000.00	1,98,973.00	1,027.00
6	Activities And other Project Costs	1,60,00,000.00	1,32,34,910.93	27,65,089.07
7	Equipment	10,20,000.00	8,50,797.00	1,69,203.00
8	Institutional charges	-	-	-
9	Total	2,78,46,481	2,34,76,136.93	43,70,344.07
10	Accrued bank Interest	7,77,062.00	6,82,222.00	94,840.00
11	Total	2,86,23,543.00	2,41,58,358.93	44,65,184.07

Certified that the 'Total Expenditure' of Rs.2,41,58,358.93 – 'Bank Interest' of Rs.6,82,222 = **Rs.2,34,76,136.93/ (Rupees Two Crore Thirty-Four Lakhs Seventy-Six Thousand One Hundred Thirty-Six and Ninety-Three Paise Only)** mentioned against Sr. No.9 was actually incurred on the project/ scheme for the purpose it was sanctioned.

Date:

-sd-

(Signature of
Principal Investigator)

(Signature of Registrar/
Finance Officer)

(Signature of Head
of the Institution)

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

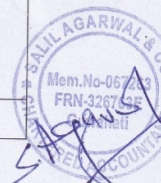
COMPETENT AUTHORITY

NATIONAL MISSION ON HIMALYAN STUDIES (GBP NIHE)

**Consolidated and Audited
Utilization Certificate (UC) and Statement of Expenditure (SE)**

For the Period: 22-12-2017 to 30-09-2021

1.	Title of the Project/Scheme/Programme:	NMHS Him-Nature Learning Centre- Assam
2.	Name of the Principle Investigator & Organization:	K.S.P.V. Pavan Kumar, IFS i/c Spl. PCCF (Biodiversity & Climate Change) Project-in-Charge, NLC-Assam Org: Assam State Biodiversity Board
3.	NMHS-PMU, G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal, Almora, Uttarakhand Letter No. And Sanction Date of the Project:	Letter No: NMHS-2017/Him-NLC- Assam-01/484 Date of Sanctioning of the Project: 22- 12-2017
4.	Amount received from NMHS-PMU, G.B. Pant National Institute of Himalayan Environment, Kosi- Katarmal, Almora, Uttarakhand during the project period (Please give number and dates of Sanction Letter showing the amount paid):	Letter No: NMHS-2017/Him-NLC- Assam-01/484 dated 22-12-2017 1 st Installment Amount Rs. 1,31,20,000/- Letter No- NMHS-2017/Him-NLC- Assam- 01/484 and GBPNI/NMHS- 2017-Him-NLC- Assam- 01/484/88/219/341/468 dated 04-03- 2020 2 nd Installment Amount Rs. 1,22,26,000/- (Letter No- GBPNI/NMHS-2017/Him- NLC-Assam- 01/484/88/219//341/468/162/85/30 dated 21-09-2021 3 rd Installment Amount (Salary Head) Rs.25,00,481/-
5.	Total amount that was available for expenditure (Including commitments) incurred during the project period:	Rs.2,78,46,481.00
6.	Actual expenditure (excluding commitments)	Rs.2,34,76,136.93



	incurred during the project period:	
7.	Unspent Balance amount refunded, if any (Please give details of Cheque no. etc.):	
8.	Balance amount available at the end of the project:	Rs.44,65,184.07
9.	Balance Amount:	
10.	Accrued bank Interest:	Rs.94,840.00

Certified that the expenditure of **Rs.2,34,76,136.93 (Rupees Two Crore Thirty-Four Lakhs Seventy-Six Thousand One Hundred Thirty-Six and Ninety-Three Paisa Only)** mentioned against Sr. No. 6 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date:

(Signature of
Principal Investigator)

Signature of Registrar/
Finance Officer)

(Signature of Head
of the Institution)

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBP NIHE)



Statement of Consolidated Expenditure

Assam State Biodiversity Board

Statement showing the expenditure of the period from 22-12-2017 to 30-09-2021

Sanction No. and Date : Letter No: NMHS-2017/Him-NLC-Assam-01/484 Dated 22/12/2017

1. Total outlay of the project : 3,76,34,312/-
2. Date of Start of the Project : 22-12-2017
3. Duration : 3 Years (9 months extended period)
4. Date of Completion : 30-09-2021
- a) Amount received during the project period : 2,78,46,481/-
- b) Total amount available for Expenditure : 2,78,46,481/-

S. No.	Budget head	Amount received	Expenditure	Amount Balance/ excess expenditure
1	Salaries	76,66,481.00	80,14,331.00	-3,47,850.00
2	Permanent Equipment Purchased (Item-wise)	-	-	-
3	Travel	20,00,000.00	9,02,875.00	10,97,125.00
4	Consumables	9,60,000.00	2,74,250.00	6,85,750.00
5	Contingencies	2,00,000.00	1,98,973.00	1,027.00
6	Activities And other Project Costs	1,60,00,000.00	1,32,34,910.93	27,65,089.07
7	Equipment	10,20,000.00	8,50,797.00	1,69,203.00
8	Institutional charges	-	-	-
9	Total	2,78,46,481	2,34,76,136.93	43,70,344.07
10	Accrued bank Interest	7,77,062.00	6,82,222.00	94,840.00

11	Total	2,86,23,543.00	2,41,58,358.93	44,65,184.07
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Certified that the 'Total Expenditure' of Rs.2,41,58,358.93 – 'Bank Interest' of Rs.6,82,222 = Rs.2,34,76,136.93/ (Rupees: Two Crore Thirty-Four Lakhs Seventy-Six Thousand One Hundred Thirty-Six and Ninety-Three Paise Only) mentioned against Sr. No.9 was actually incurred on the project/ scheme for the purpose it was sanctioned.

Date:

(Signature of
Principal Investigator)

(Signature of Registrar/
Finance Officer)

(Signature of Head
of the Institution)

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALYAN STUDIES (GBP NIHE)

76

EXPENDITURE STATEMENT
NATIONAL MISSION ON HIMALAYAN STUDIES
HIM-NATURE LEARNING CENTRE, ASSAM

Statement showing the expenditure of the period :April'2018 to March'2019

Sanction No. & Date :NMHS-2017/Him-NLC-Assam-01/484 dated 22-12-2017

1. Total outlay of the project : Rs.3,76,34,312/-
2. Date of the start of the project : 30-01-2019
3. Duration : 3years
4. Date of completion :
- a) Amount received during the financial year (2018-19) : Nil
- b) Unspent amount carried forward from previous financial year : Rs.1,31,05,729/-
- c) Total amount available for expenditure (a+b) : Rs.1,31,05,729/-

Sl.No.	Budget Head	Amount Carried forward	Amount Received	Amount received + amount carried forward	Expenditure	Amount balance/ excess expenditure
1.	Salaries	25,20,000.00	0.00	25,20,000.00	21,73,914.00	3,46,086.00
2.	Travel (Domestic)	10,00,00.00	0.00	10,00,00.00	4,07,271.00	5,92,729.00
3.	Contingency	83,685.00	0.00	83,685.00	64,759.00	18,926.00
4.	Consumables	4,80,000.00	0.00	4,80,000.00	1,52,916.00	3,27,084.00
5.	Activity & Other Project Cost	80,00,00.00	0.00	80,00,00.00	33,71,545.00	46,28,455.00
6.	Equipment	10,20,000.00	0.00	10,20,000.00	6,78,448.00	3,41,552.00
7.	Institutional Charges	0.00	0.00	0.00	0.00	0.00
8.	Accrued bank interest	2,044.00	5,00,184.00	5,022,28.00	276.00	5,01,952.00
9.	Total	1,31,05,729.00	5,00,184.00	1,36,059,13.00	68,49,129.00	67,56,784.00
10.	Amount allowed to be carried forward to the next financial year	-	-	-	-	67,56,784.00

Note: The list of Equipments purchased is attached at Annexure 1.



1 | Page

Certified that the expenditure of **Rs.68,49,129.00 (Rupees Sixty Eight Lakhs Forty Nine Thousand One Hundred Twenty Nine only)** mentioned against Sl.no.9 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date: -21-01-2020

Parimita Deka
Signature of Support Staff-
Accounts

S. Aggarwal
(Signature of
Chartered Accountant)
UDIN NO :- 20067263AAAAAB1994



[Signature]
(Signature of
Nodal Officer)

Nodal Officer
ASBB-NMHS-Him-NLC, Assam

[Signature]
(Signature of Head
of the Organization)
Project-In-Charge
ASBB-NMHS-Him-NLC, Assam

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBPNIHESD)

EXPENDITURE STATEMENT
NATIONAL MISSION ON HIMALAYAN STUDIES
HIM-NATURE LEARNING CENTRE, ASSAM

Statement showing the expenditure of the period :April'2019 to March'2020

Sanction No. & Date :NMHS-2017/Him-NLC-Assam-01/484 dated 22-12-2017

1. Total outlay of the project : Rs.3,76,34,312/-
2. Date of the start of the project : 30-01-2019
3. Duration : 3years
4. Date of completion :
- a) Amount received during the financial year (2019-20) :Rs.1,22,26,000/-
- b) Unspent amount carried forward from previous financial year : Rs.62,56,600/-
- c) Total amount available for expenditure (a+b) : Rs.1,84,82,600/-

Sl.No.	Budget Head	Amount Carried forward	Amount Received	Amount received + amount carried forward	Expenditure	Amount balance/ excess expenditure
1.	Salaries	3,46,086.00	26,46,000.00	29,92,086.00	24,62,100.00	5,29,986.00
2.	Travel (Domestic)	5,92,729.00	10,00,000.00	15,92,729.00	3,51,220.00	12,41,509.00
3.	Contingency	17,955.00	1,00,000.00	1,17,955.00	69,886.00	48,069.00
4.	Consumables	3,27,084.00	4,80,000.00	8,07,084.00	64,428.00	7,42,656.00
5.	Activity & Other Project Cost	46,28,455.00	80,00,000.00	1,26,28,455.00	17,75,927.00	1,08,52,528.00
6.	Equipment	3,41,552.00	0.00	3,41,552.00	17,299.00	3,24,253.00
7.	Institutional Charges	0.00	0.00	0.00	0.00	0.00
8.	Accrued bank interest	0.00	1,79,299.00	1,79,299.00	0.00	1,79,299.00
9.	Total	62,53,861.00	1,24,05,299.00	1,86,59,160.00	47,40,860.00	1,39,18,300.00
10.	Amount allowed to be carried forward to the next financial year	-	-	-	-	1,39,18,300.00

- The bank interest for the previous financial year 2017-18 amounting to Rs.2,739/- was adjusted in the 2nd year instalment, accordingly carried forward amount is adjusted.
- Bank Charges for previous financial year 2017-18 and 2018-19 amounting to Rs.276/- and Rs.695/- respectively has been adjusted in Contingency Head.

Certified that the expenditure of **Rs.47,40,860.00 (Rupees Forty seven lakhs forty thousand eight hundred and sixty only)** mentioned against Sl.no.9 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date: 10-08-2020

Panismita Deka
(Signature of
Support Staff- Accounts)

[Signature]
Signature
Name: Shri K.S.P.V Pavan Kumar, IFS
Head of the Organisation/Principal Investigator
Project-In-Charge
ASBB-NMHS-Him-NLC, Assam

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBPNIHESD)


EXPENDITURE STATEMENT
NATIONAL MISSION ON HIMALAYAN STUDIES
HIM-NATURE LEARNING CENTRE, ASSAM

Statement showing the expenditure of the period : April'2020 to March'2021

Sanction No. & Date : NMHS-2017/Him-NLC-Assam-01/484 dated 22-12-2017

1. Total outlay of the project : Rs.3,76,34,312/-
2. Date of the start of the project : 30-01-2018
3. Duration : 3 years
4. Date of completion :
- a) Amount received during the financial year (2020-21) : Nil
- b) Unspent amount carried forward from previous financial year : Rs.1,39,18,300/-
- c) Total amount available for expenditure (a+b) : Rs.1,39,18,300/-

Sl.No.	Budget Head	Amount Carried forward	Amount Received	Amount received + amount carried forward	Expenditure	Amount balance/ excess expenditure
1.	Salaries	5,29,986.00	0.00	5,29,986.00	21,10,281.00	-15,80,295.00
2.	Travel (Domestic)	12,41,509.00	0.00	12,41,509.00	55,794.00	11,85,715.00
3.	Contingency	48,069.00	0.00	48,069.00	40,013.00	8,056.00
4.	Consumables	7,42,656.00	0.00	7,42,656.00	28,642.00	7,14,014.00
5.	Activity & Other Project Cost	1,08,52,528.00	0.00	1,08,52,528.00	27,76,121.00	80,76,407.00
6.	Equipment	3,24,253.00	0.00	3,24,253.00	0.00	3,24,253.00
7.	Institutional Charges	0.00	0.00	0.00	0.00	0.00
8.	Accrued bank interest	1,79,299.00	3,73,914.00	5,52,313	1,79,299.00	3,73,914.00
9.	Total	1,39,18,300.00	3,73,914.00	14,29,1314.00	51,90,150.00	91,04,064.00
10.	Amount allowed to be carried forward to the next financial year	-	-	-	-	91,06,064.00


 Project-In-Charge
 ASBB-NMHS-Him-NLC, Assam
 13/09/2021

- The bank interest for the previous financial year 2019-2020 amounting to Rs.1,79,299/- was carried forward and returned in the financial year 2020-2021.
- Bank Charges for the financial year 2020-2021 amounting to Rs.46/- has been adjusted in Contingency Head.

Certified that the expenditure of **Rs.51,90,150.00 (Rupees Fifty-One Lakh Ninety Thousand One Hundred and Fifty only)** mentioned against Sl.no.9 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date: 12-07-2021

Ananya Chakraborty
(Signature of
Support Staff- Accounts)

Signature
Name: Shri K.S.P.V Pavan Kumar, IFS
Head of the Organisation/Principal Investigator

Project-In-Charge
ASBB-NMHS-Him-NLC, Assam

OUR REF. No.

ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBPNIHESD)

EXPENDITURE STATEMENT
NATIONAL MISSION ON HIMALAYAN STUDIES
HIM-NATURE LEARNING CENTRE, ASSAM

Statement showing the expenditure of the period : April'2021 to September'2021

Sanction No. & Date : NMHS-2017/Him-NLC-Assam-01/484 dated 22-12-2017

1. Total outlay of the project : Rs.3,76,34,312/-
2. Date of the start of the project : 30-01-2018
3. Duration : 3years
4. Date of completion : 30-09-2021
- a) Amount received during the financial year (2020-21) : Nil
- b) Unspent amount carried forward from previous financial year : Rs.91,02,064/-
- c) Total amount available for expenditure (a+b) : Rs.91,02,064/-

Sl.No.	Budget Head	Amount Carried forward	Amount Received	Amount received + amount carried forward	Expenditure	Amount balance/ excess expenditure
1.	Salaries	-15,80,295.00	25,00,481.00	9,20,186.00	12,72,648.00	-3,52,462.00
2.	Travel (Domestic)	11,85,715.00	0.00	11,85,715.00	88,692.00	10,97,023.00
3.	Contingency	8,056.00	0.00	8,056.00	8000.00	56.00
4.	Consumables	7,14,014.00	0.00	7,14,014.00	28,265.00	6,85,748.00
5.	Activity & Other Project Cost	80,76,407.00	0.00	80,76,407.00	53,11,317.93	27,65,089.07
6.	Equipment	3,24,253.00	0.00	3,24,253.00	1,55,050.00	1,69,203.00
7.	Institutional Charges	0.00	0.00	0.00	0.00	0.00
8.	Accrued bank interest	3,73,914.00	94,840.00	4,68,754.00	3,73,914.00	94,840.00
9.	Total	91,02,064.00	25,95,321.00	1,16,97,385.00	72,37,886.93	44,59,497.07
10.	Amount allowed to be carried forward to the next financial year	-	-	-	-	44,59,497.00

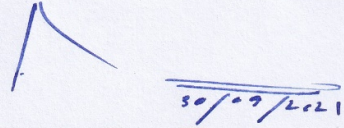
Project-In-Charge
ASBB-NMHS-Him-NLC, Assam

1 | Page

Certified that the expenditure of **Rs.72,37,886.93/- (Rupees Seventy-Two Lakhs Thirty-Seven Thousand Eight Hundred and Eighty-Six and Ninety-Three Paise Only)** mentioned against Sl.no.9 was actually incurred on the project/scheme for the purpose it was sanctioned.

Date: **30-09-2021**

Ananya Chakraborty
(Signature of
Support Staff-Accounts)


Signature
Name: Shri K.S.P.V Pavan Kumar, IFS
Head of the Organisation/Principal Investigator

Project-In-Charge
ASBB-NMHS-Him-NLC, Assam

OUR REF. No.


ACCEPTED AND COUNTERSIGNED

Date:

COMPETENT AUTHORITY
NATIONAL MISSION ON HIMALAYAN STUDIES (GBPNIHESD)

Consolidated Interest Earned Certificate

Please provide the detailed interest earned certificate on the letterhead of the grantee/Institution and duly signed.

 Indian Bank इलाहाबाद ALLAHABAD ई-मेल/e-mail : khanapara@indianbank.co.in वेबसाइट/Website : www.indianbank.in	इंडियन बैंक Indian Bank Khanapara Branch Anjana Complex, 1 st Floor Panjabari-VIP Jn Road Six Mile, Khanapara Guwahati -781022(Assam) दूर/Tel : 0361 2335201
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To Whom It May Concern

This is to certify that, ASBB NMHS HIM NLC ASSAM, under Assam State Biodiversity Board at Aranya Bhavan, 3rd Floor, Panjabari, Guwahati-781037 is maintaining a Savings Bank Account no.6596812782 with Indian Bank, Khanapara Branch Since 09/01/2018.

The below are the details of quarterly interest credited to the account, since opening of the account:

Sl.No.	Date of Credit	Interest Credited
1.	31/01/2018	2739.00
2.	30/04/2018	121796.00
3.	30/06/2018	81412.00
4.	30/09/2018	114721.00
5.	31/12/2018	102657.00
6.	31/03/2019	79598.00
7.	30/06/2019	55372.00
8.	30/09/2019	43445.00
9.	31/12/2019	32994.00
10.	31/03/2020	47488.00
11.	30/06/2020	112271.00
12.	30/09/2020	100313.00
13.	31/12/2020	87368.00
14.	31/03/2021	73962.00
15.	30/06/2021	57547.00
16.	30/09/2021	37293.00
Total		11,50,976.00

Regards

Branch Manager
Indian Bank
Khanapara

Date: 30/10/2021



Annexure-III

Consolidated Assets Certificate

Assets Acquired wholly/ substantially out of Government Grants (Register to be maintained by Grantee Institution)

Name of the Sanctioning Authority: “National Mission on Himalayan Studies” G.B. Pant National Institute of Himalayan Environment and Sustainable Development.

1. Sl. No. NMHS-2017/Him-NLC-Assam-01/484
2. Name of Grantee Institution: Assam State Biodiversity Board
3. No. & Date of sanction order: NMHS-2017/Him-NLC-Assam-01/484 Date:22-12-2017
4. Amount of the Sanctioned Grant: Rs. 10,20,000
5. Brief Purpose of the Grant: Buying equipment for the NLC, Assam project for smooth functioning of office day to day work.
6. Whether any condition regarding the right of ownership of Govt. in the property or other assets acquired out of the grant was incorporated in the grant-in-aid Sanction Order: YES
7. Particulars of assets actually credited/ acquired: Computer(5), Laptop(2), Camera(2), Projector(2), Printer(2), UPS(5), External Hard disk(7), Almirah(2), Scanner(1), Speaker(2), Mobile(1), Wireless Mouse(1), AC(1), Tally Software(1), D-Link(5), Printer Cable(1). Details at Schedule-II of the Audit Report.
8. Value of the assets as on 30th September, 2021: Rs.8,50,797/-
9. Purpose for which utilized at present: Official use for NLC, Assam Office.
10. Encumbered or not: yes; Non-Functional of AC provided by the department.
11. Reasons, if encumbered: Non-functioning of AC which was later replaced.
12. Disposed of or no: No
13. Reasons and authority, if any, for disposal: NIL
14. Amount realized on disposal: NIL

Any Other Remarks: The office of the NLC-Assam was placed at 3rd floor, Aranya Bhawan, Panjabari and the cubicles and central AC provided by the department were damaged. Accordingly, the cubicles were repaired and a spilt AC procured.

-sd-

**(PROJECT INCHARGE/
INVESTIGATOR)
(Signed and Stamped)**

**(FINANCE OFFICER)
(Signed and Stamped)**

**(HEAD OF THE INSTITUTION)
(Signed and Stamped)**

Annexure-IV

List or Inventory of Assets/ Equipment/ Peripherals (Refer Schedule-II- Details of Fixed Assets as on 30/09/2021 of the Audit Report.)

S. No.	Name of Equipment	Quantity	Sanctioned Cost (in Rupees)	Actual Purchased Cost (in Rupees inclusive of all taxes)	Purchase Details
1.	Desktop & laptop	Desktop-5 Laptop-2	10,20,000/-	3,24,200.00	4 Desktop:JC/18-19/388 & JAIN COMPUTERS DATE: 09/05/2018 1 desktop: JC/18-19/1655 Dated 13 th September,2018 1 Laptop:JC/18-19/425 & JAIN COMPUTERS DATE: 04/06/2018& 1 Laptop:JC/18-19/425 & JAIN COMPUTERS DATE: 09/05/2018
2.	Printer	Laser jet pro M203dw-1 & Epson Printer-1		38,200.00	Laser jet pro M203dw: JC/18-19/388 & JAIN COMPUTERS DATE: 09/05/2018 Epson Printer: JC/18-19/673 Jain Computers dated:31/05/2018
3.	Tally Software	1		23,540.00	Tally Software: GUW/I/02344 CAS Computers dated 19 th May, 2018
4.	Cable USB Printer & D-Link	D-Link-5 Cable-1		3,400.00	JC/18-19/1011& JAIN COMPUTERS DATE: 06/07/2018
5.	Epson projector & hard disk	Epson Projector(1) & Harddisk(1)		31,400.00	JC/18-19/1011 & JAIN COMPUTERS DATE: 06/07/2018
6.	I ball speaker & Mouse	I Ball speaker(1) Mouse(1)		950.00	JC/18-19/1097 & JAIN COMPUTERS DATE: 16/07/2018
7.	DSLR Camera	1		94,000.00	GST/18-19/788 & Himtech CorporationDATE: 27/08/2018

8.	Almirah	1	15,706.00	JFS/18-19/391&Jajodia Furniture Solutions Date: 29/08/2018
9.	Projector	1	24,900.00	JC/18-19/1848 & JAIN COMPUTERS DATE: 05/10/2018
10.	Onoma Book Shelf	1	15,152.00	Invoice No.945 Samrat Furniture House Dated: 27/11/2018
11	Hard disk (Sharma)	3	14,400.00	Sharma Computers invoice No.391 Dated: 21 November,2018
12	Canon Camera	1	14,500.00	Jain Computers JC/18-19/2009 Dated: 30/10/2018
13	Hard disk & Scanner	Harddisk-3 Scanner-1	19,850.00	Jain Computers JC/18-19/2402 Dated: 24/12/2018
14	Usha Stand fan	1	2,250.00	M/S. Hemant Electricals 298 Dated: 15/03/2019
15	Bluetooth Speaker	1	9,300.00	JC/287Jain Computers Dated: 08/05/2018
16	Mobile Purchase	1	6,499.00	Invoice No:3324512 dated:06/05/2019
17	Zebronic UPS	1	1,500.00	JC/784 Jain Computers dated: 15/07/2021
18	AC Installation	1	46,300.00	GHY/VB/08/Construction/8312
19	Cubical repairing	1	1,08,750.00	GHY/VB/08/Construction/8312

N.B. Installation charges are included

-sd-

(PROJECT INCHARGE / INVESTIGATOR)

(Signed and Stamped)

(FINANCE OFFICER)

(Signed and Stamped)

Annexure-V

Letter of Head of Institution/Department confirming Transfer of Equipment Purchased under the Project to the Institution/Department

To,

The Convener, Mountain Division
Ministry of Environment, Forest & Climate Change (MoEF&CC)
Indira Paryavaran Bhawan
Jor Bagh, New Delhi-110003

Sub.: Transfer of Permanent Equipment purchased under Project titled “NMHS Him-Nature Learning Centre, Assam” funded under the NMHS Scheme of MoEF&CC – reg.

Sir/ Madam,

This is hereby certified that the following permanent equipment purchased under the aforesaid project have been transferred to the Implementing Organization/ Nodal Institute i.e. to the Assam State Biodiversity Board after completion of the project:

S. No.	Name of Equipment	Quantity
1.	Desktop & laptop	Desktop-5, Laptop-2
2.	Printer	Laser jet pro M203dw-1 Epson Printer-1
3.	Tally Software	1
4.	Cable USB Printer & D-Link	D-Link-5, Cable-1
5.	Epson projector & hard disk	Epson Projector(1) & Hard disk(1)
6.	I ball speaker & Mouse	I Ball speaker(1) Mouse(1)
7.	DSLR Camera	1
8.	Almirah	1
9.	Projector	1
10.	Onoma Book Shelf	1
11.	Hard disk (Sharma)	3
12.	Canon Camera	1
13.	Hard disk & Scanner	Harddisk-3 Scanner-1
14.	Usha Stand fan	1
15.	Bluetooth Speaker	1
16.	Mobile	1
17.	Zebronics UPS	1
18.	AC	1
19.	Cubical repairing	1 Unit

-sd-

(K.S.P.V Pavan Kumar, IFS)
Addl. PCCF (Biodiversity & Climate Change)
Project In-charge, NLC

Name of the Implementing Organization: Assam State Biodiversity Board

Date:

Copy to:

1. The Nodal Officer, NMHS-PMU, National Mission on Himalayan Studies (NMHS), G.B. Pant National Institute of Himalayan Environment (NIHE), Kosi-Katarmal, Almora, Uttarakhand-263643

Annexure-VI

Details of Declaration and Refund of Any Unspent Balance

Please provide the details of refund of any unspent balance and transfer the balance amount through RTGS (Real-Time Gross System) in favor of **NMHS GIA General** and declaration on the official letterhead duly signed by the Head of the Institution.

Kindly note the further Bank A/c Details as follows:

Name of NMHS A/c: NMHS GIA General
Bank Name & Branch: Central Bank of India (CBI), Kosi Bazar, Almora, Uttarakhand 263643
IFSC Code: CBIN0281528
Account No.: 3530505520 (Saving A/c)

In case of any queries/ clarifications, please contact the NMHS-PMU at e-mail:
nmhspmu2016@gmail.com
