

Quarterly Progress Report cum PO's Report

Quarter: (Tick) 1/ 2/ 3/ 4

Project: India High Range Mountain Landscape

Date: 31.03.2022

1. Project Progress

Expected Project Outputs and Indicators including Annual Targets	Planned Activities (List all activities including M&E during the year)	Activity Progress in Quarter – Comments by PO	Comments by PO on the activity progress				Targeted Expenditure for the year	Actual Expenditure in Quarter 4	Reasons for Under Expenditure in Quarter X, if any
			Q 1	Q 2	Q 3	Q 4			
Outcome 1: Strengthened capacities for community based sustainable use and management of natural resources									
Outcome 1: Outputs 1.1 <i>Capacities of Local Self Governments and community organizations developed to plan for sustainable resource use</i>	1.1.1 <i>Workshops/meetings and consultations/discussions with relevant stakeholders on project related activities – (Government officials, Panchayath functionaries, elected representatives and community members)</i>	State Project Steering Committee State Project Steering Committee meeting was held online from the Office of Chief Secretary, Government Secretariat, Thiruvananthapuram on 18.01.2022. Key decisions were: 1. AWP for 2022-23 was approved. 2. Re-constitution of SPSC: The Chair agreed for reconstitution of the SPSC as suggested. The Coordinator, Navakeralam Karma Padhathi-II shall be added as a member of the State Project Steering Committee. The Principal Secretary, PIE&MD shall be appointed as Convenor of the SPSC.				Hon. Chief Secretary commended the work done under the project during the SPSC meeting and suggested other departments to emulate the success of the project; He also suggested to conduct a dissemination workshop			

3. The Chair gave consensus for the exit strategy including the proposed committee and members. The Committees shall be as below.

Landscape Level Advisory Committee

Chairman – District Collector, Idukki

Convenor – Sub Collector, Devikulam

Joint Convenor - Project Officer -

Conservation, UNDP

Members:

- DFO Munnar
- Dy. Director of Panchayaths – Idukki, Thirssur, Ernakulam
- Principal Agriculture Officer – Idukki
- Panchayath Secretaries – Devikulam Block (except Santhanpara), Adimali, Athirapilly, Kuttampuzha
- Devikulam BDO
- Haritha Keralam Mission – District Coordinator
- Suchitwa Mission District Coordinator
- Kudumbashree District Coordinator
- KDHP Representative
- KHTC Representative
- DTPC Coordinator
- Other members may be invited as per the discretion of the Chairman

State Level Advisory Committee

Chairman – Addl. Chief Secretary – Planning & Economic Affairs

		<p>Convenor – State Project Director, UNDP IHRML Project (Coordinator, Navakeralam Karma Padhathi II) Members:</p> <ul style="list-style-type: none">• Addl. Chief Secretary, LSG Department• Principal Secretary, Forests & Wildlife Department• Chief Wildlife Warden, Forests & Wildlife Department• Environment Director• Agriculture Director• Suchitwa Mission Director• State Nodal Officer, UNDP IHRML Project• Tourism Director• Director, ST Development Department• Chairman, Kerala State Biodiversity Board• Other members may be invited as per the discretion of the Chairman <p>The institutional framework for exit strategy shall be as below.</p> <p>State Project Steering Committee - SPSC chaired by Chief Secretary: - Align project objectives with state priorities</p> <p>Nodal Department Nodal Department –Planning and Economic Affairs Department - Planning, Monitoring & Evaluation of Annual Plans</p>								
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		<ul style="list-style-type: none"> - Developing indicators of progress & targets - Liaison with MoEFCC& State Departments for convergence and policy level changes - Resource mobilisation for achieving project objectives <p>Office of Sub-Collector Devikulam</p> <ul style="list-style-type: none"> - Provide leadership at landscape level and implement activities as per Annual Plans - Capacity Development of government staff, panchayath members & non governmental staff as required to mainstream biodiversity conservation - Ensure implementation of landscape level land use plans & strategies - Undertake IEC activities on biodiversity conservation and sustainable livelihoods <p>4. The exit strategy could involve a state level knowledge dissemination workshop towards the end of the project.</p> <p>Multi stakeholder meetings Stakeholder meetings by State Project Director in Munnar – Nallathanni river rejuvenation February 2022</p> <ul style="list-style-type: none"> • Waste water treatment for Nallathanni may be carried out with necessary permissions from the Grama Panchayath • Campaign for public involvement in the Nallathanni river rejuvenation may be conducted alongwith Intl Water Day on March 22nd 2022. 							
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		<p>Stakeholder meetings by State Project Director in Munnar – Munnar Green Corridor February 2022</p> <ul style="list-style-type: none">• A society be formed with governing body led by District Collector for manning the checkpoints for solid waste• 3 locations be identified for checkpoints• Collector to be custodian of this initiative <p>Stakeholder meetings by State Project Director in Munnar – Carbon Neutral Mankulam February 2022</p> <ul style="list-style-type: none">• Public meeting done with stakeholders especially with farmer groups• Carbon Neutral project was explained in detail <p>Lemongrass value chain An awareness workshop on Medicinal & aromatic plants was conducted at Marayoor under Aroma mission for community members, Grama Panchayat and other stakeholders during this quarter. The workshop covered areas of different aromatic crops suitable to the locality, agronomy practices to be followed etc</p> <p>Green Innovation Fund Green Innovation Fund (GIF) is a fund created to support the innovative efforts to respond to the challenge of climate change in the project landscape through entrepreneurship effort. GIF will be strategically positioned as a Start-up risk</p>							
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		<p>capital for entrepreneur. This will enable entrepreneurs to test innovative ideas in the market. GIF will also support innovators at all stages of their life cycle, from start-up and pilot-testing through to larger scale implementation.</p> <p>Apart from providing the Start-up risk capital, GIF would be accompanied by supporting the entrepreneur through mechanisms that help enhance the probability of success. The key areas of support provided are strategy, planning, marketing, and mentoring.</p> <p>A round table with experts on the Topic - Inclusive growth, Climate change and Startups was conducted during this quarter.</p>								
	<p><i>1.1.2 Develop IEC products on project related activities</i></p>	<ul style="list-style-type: none"> ○ An illustrated booklet on the Hornbills of the project landscape was prepared. The booklet is based on the recommendations of a detailed study conducted on the hornbills in the landscape, including their nesting habitats and foraging tree species. This is prepared in both Malayalam & English languages and includes a message from the Chief Minister of Kerala. <p>The handbook was released by the Honorable Chief Minister of Kerala in March 2022 by handing over the book to the Forest Minister</p> <ul style="list-style-type: none"> ○ Draft Green Plan Methodology handbook in English developed 						<p>Hon. Chief Minister appreciated the team and the SPV in coming up with the book on hornbills</p>		

		<ul style="list-style-type: none"> ○ Corporate gifts: Designing and production of Bamboo pens, cloth sleeve bags and Notepad showcasing the flora and fauna of the landscape done ○ Asianet Channel broadcasted a half an hour programme on the project intervention in paddy in Adimali Grama Panchayat on January 7th and 8th, 2022 ○ Video and photo documentation of the following activities were done in this quarter <ul style="list-style-type: none"> - Lemongrass extraction - Sugarcane SSI initiative at Marayoor - Green Islands at Marayoor - Waste management at Marayoor and Kanthalloor - Bhume women's collective working on upcycling of discarded clothes <p>A public transport bus was branded with biodiversity related stickering as part of the 50 years of Idukki celebrations</p>								
	<p><i>1.1.3 Training relevant stakeholders for mainstreaming BD considerations – (for Government officials, Panchayat functionaries elected representatives and community members)</i></p>	<p>A major intervention under the project is to mainstream biodiversity conservation in the local self-government institutions in the landscape. Local Self Government Institutions (LSGI) are mandated to develop annual plans, in consultation with the community members, which forms the basis for the activities of the LSGI for the entire year. The project aims</p>					<p>The Greening of the annual plans of panchayaths is a significant achievement of the project. A methodology handbook in three languages has also been released as part of this.</p>			

		<p>to convert the LSGI plans into green plans through a series of capacity building programmes with the LSGI members and officials.</p> <p>The District Planning Committee (DPC) approved annual plans of the 11 Grama Panchayaths in the landscape were collected for identifying the approved green plans and adding green components in the implementation. 50 projects were identified from 3 Grama Panchayaths for adding green components. Mahatma Gandhi National Rural Employment Guarantee Scheme's annual labour plan and budget were collected for analyzing the convergence opportunities of the respective Grama Panchayath plans. Modules on write shop for implementing officials regarding the incorporation of green components in the implementation plans are being prepared.</p> <p>Training for developing Local Action Plan for Climate Change and development of Five-year plans conducted with participation from 11 GPs. Forty-Five functionaries including implementing officers attended the 2-day training workshop.</p> <p>As a part of enterprise promotion for Haritha Karma sena for generating additional income, bee keeping training for 12 women members from Mankulam</p>							
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		<p>was done at Regal Bee Garden, Kanjar, Idukki during this quarter. Based on the training, women started the bee keeping activity.</p> <p>A training program on Mushroom cultivation was conducted for 25 Haritha Karma Sena members in Marayoor and Kanthalloor during this quarter.</p> <p>A two-day workshop on Conservation & Livelihood for students and youth were carried out in this quarter. The program worked collaboratively with Marayoor Grama Panchayat and Vijayapuram Social Service Society; 45 school students and college students participated.</p> <p>Visual media course for 20 SC-ST students from the landscape is progressing and reaching its closure.</p>								
	<p><i>1.1.4 Exposure visit of select stakeholders to other landscape approach-based conservation models</i></p>	<p>Following exposure visits were arranged for various stakeholders:</p> <p>Exposure visit was conducted to Organic Agri entrepreneur at Haripad (Alappuzha District) for the Organic farmers in Mankulam</p>								
	<p><i>1.1.5 Technical studies to establish baseline, assess impacts of current resource use</i></p>	<p>Completed in previous year</p>								

	<i>practices in the landscape</i>									
Output 1.2: <i>Sustainable resource use practices demonstrated for improved quality of life</i>	Waste Management outside forest areas <i>1.2.1 Implementation of "Green Munnar" Project for (Dumpsite clearance, treatment of bio & non-bio waste, campaigns for waste reduction, Septage treatment and Nallathanni river rejuvenation)</i>	Munnar Solid Waste Management Munnar is a popular tourism destination which faces several waste management related challenges including uncontrolled dumping of waste (over 40 dumping points have been identified across the landscape), large dump yards polluting the river streams and with high volumes of waste generated per day. To address these, the project aims develop some scientific solutions. In this regard, the following activities were undertaken in this quarter: <ul style="list-style-type: none"> - Check points and nodes for facilitation centres were finalised as part of developing a Green Corridor in Munnar. This requires a convergence from multiple panchayaths – Adimali, Pallivasal, Munnar and Devikulam and multiple departments including Panchayaths, District Administration, Kudumbashree, PCB, Suchitwa Mission and Clean Kerala Company - A draft DPR and a bye law were developed for the green check points which will be operationalized as a society under Kudumbashree - As part of the UNDP IHRML project, Material Recovery Facility unit has been established at Kallar with the support of Clean Kerala 					Munnar waste management is a major focus area of the project and the project has helped the grama panchayath to take positive strides towards this. The resource recovery facility for plastic waste has become operational and is a key achievement of the project. Segregated collection of waste is also initiated in several wards. This follows a cluster based approach for bio waste collection which is otherwise dumped into the river or dumpyards. These also help in reduction of green house gases. Beautification of Munnar is also happening through the Nallathanni river rejuvenation.			

		<p>Company. One unit of bailing machine, one unit of dust remover and another weighing machine have been installed. A conveyor belt was added to this. Training has been provided for the operations. Three employees are placed for sorting segregated plastics, 2 employees are designated for machinery operation and another two as helpers. The unit started functioning in December 2021 and has been operational from January 2022.</p> <ul style="list-style-type: none">- For bio waste management, the infrastructure facility of roofing was completed as a co-finance by the Grama Panchayath- Separate collection mechanism for bio & non bio waste established in Munnar- Ward 10 was selected for piloting- Field survey was done- Meetings with ward members and supervisors was conducted- Selected the Haritha Karma Sena members with the support of ward members and Kudumbashree- First level meeting with 20 selected HKS members - February- Scaling up to 4 wards as the first phase (9,10,11,19)- 3 Clean up drives conducted- 4 Trainings for Haritha Karma Sena were conducted							
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		<ul style="list-style-type: none">- Collection was inauguration on 1st March 2022- Biowaste is collected every day on a cluster basis- Non bio waste is collected twice a month from HHs- Userfees collection in Munnar 10th ward – INR 26,000/- <p>Nallathanni River Rejuvenation</p> <ul style="list-style-type: none">- There are three major rivers which are part of the river system in the Munnar region, they are: Nallathanni, Kallar and Kaviyar all of which join together to be called Muthirapuzha. River Nallathanni is one of the three rivers that flows through Munnar which originates from the hills of Anamudi and has a total stretch of 12 kilometres. It flows into the Mudhirapuzha, which is one of the major tributaries of the Periyar River, which is an important river for the livelihoods of thousands of people in Idukki and Kochi districts.- Once a pristine river which lived up to its name, 'Nallathanni (Good water)' River, which had abundant bio-diversity including mosquito repellent plants and many fishes is currently polluted. Along the catchments, the river flows through forests and tea plantations but as it enters Munnar Town, there are							
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		<p>several streams of wastewater from several commercial establishments being let into the river.</p> <ul style="list-style-type: none">- Conducted survey and prepared Detailed Project Report for Nallathanni River Rejuvenation covering the following:<ul style="list-style-type: none">○ Reconnaissance of Nallathanni river, its tributaries and catchment○ Mapping of active outfalls into the river○ Wastewater quantity measurements and quality assessments○ Collection of data from Munnar Gram Panchayat○ Stakeholder interviews and key informant interviews○ Rapid sanitation assessment through household and commercial establishment surveys- There are three identified outfall (with flow of water daily) in the Nallathanni river 2.2 kilometer stretch, which were mapped to be potential polluters of the river.- Based on the suggestions following interventions were suggested to be undertaken:<ul style="list-style-type: none">○ Participatory river cleaning drive○ Clearing of solid waste along the river stretch							
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		<ul style="list-style-type: none">○ Interception, diversion and treatment of wastewater inflow (S3 and S4 outfall)○ Landscaping for “Human-Waterbody Interface”○ Creating awareness and accountability among stakeholders <p>- River cleaning campaign and cleaning of river stretches by contractor</p> <p>The river cleaning committee has been formed with members from Panchayat, UNDP, CDD Society, BRCS, VSSS, MEWS and Recity. River cleaning campaign started as planned on 22nd March and 32 volunteer groups participated in the campaign. Sacks were designated for different categories of waste and the volunteers helped the public in identifying them. Munnar Sub Collector and other Panchayat officials joined the campaign to spread the word to public on the importance of the same.</p> <p>- Interception, diversion and treatment of wastewater inflow</p> <p>A detailed design and drawing have been prepared for primary, secondary and tertiary nature based treatment units at 2 locations. The detailed project report has been submitted to UNDP for the further submission of the same to the Munnar Grama Panchayat. This is to get the approval from the concerned</p>							
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		<p>authorities for implementing the pilot interventions. Approval is awaited. The implementation will start once Munnar Grama Panchayat / UNDP receives the approval letter.</p> <ul style="list-style-type: none"> - Landscaping for “Human-Waterbody Interface” Locally available grass species and the native plants like Duranta erecta, Elderberry, Melastoma etc are currently being procured locally for planting at the identified spots along river stretches. Not only it will enhance the beauty of the area, it will also help in reducing erosion and siltation. The planting plan for different intervention points are given below 							
	<p><i>1.2.2 Waste Management interventions in Athirapilly and other GPs in the landscape</i></p>	<p>Athirapilly</p> <ul style="list-style-type: none"> - Household level collection is ongoing - Waste collected in March 2022- 700 Kg - User fee coverage in % in March 2022- 56% - No. of HKS members who are active- 8 - Livelihood promotional activities: Mushroom cultivation, Setting up of a nursery (vegetables, bamboo saplings etc) with the support from MGNREGS and UNDP IHRML Project <p>Marayoor</p>				<p>A team of 5 Haritha Karma Sena members (or green warriors who are women SHG members engaged in waste collection and segregation and other associated green livelihood initiatives) visited Delhi and spoke about the experiences from Kerala on an Intl Womens Day programme organized by UN Women.</p>			

		<p>- Waste Management Campaigns and IEC programs conducted: 46</p> <p>- Additional livelihood related activities:</p> <ul style="list-style-type: none"> - Mushroom cultivation class - Sugarcane cultivation class - Vegetable cultivation class <p>- User fees amount collected: INR 1,20,040/-</p> <p>- Number of HKS members who are active: 30</p> <p>Kanthalloor</p> <p>- Campaigns and IEC programs conducted: 42</p> <p>- Additional livelihood related activities:</p> <ul style="list-style-type: none"> - Mushroom cultivation class - Sugarcane cultivation class - Vegetable cultivation class - Started one mushroom enterprise in Kanthalloor <p>-Amount of waste collected in March:</p> <ul style="list-style-type: none"> - Plastic bottle -160kg - Beer bottles - 4000/- - Paper -10kg - Plastic cover 400kg <p>- User fees amount collected: 95650/-</p> <p>- Number of HKS members who are active: 26</p> <p>Mankulam</p> <ul style="list-style-type: none"> - 26 Haritha Karma Sena members getting livelihood - 78% coverage of HHs for user fees - Total collection of plastic – 234 kg - Trainings provided as part of livelihood – Beekeeping, Mushroom cultivation and water filtration 								
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	<p><i>Water Resource Management</i> <i>1.2.3 Demonstration of measures for better water harvesting in the landscape based on the Integrated Watershed Management Plans prepared for 11 Gram Panchayats in consultation with all relevant stakeholders</i></p>	<p>The project has taken steps to analyze and improve the water quality of Nallathanni River in Munnar, as it is observed that the river has been polluted due to commercial establishments, solid waste dumping, pesticides and fertilizers used in tea plantation.</p> <p>The objective of the assignment is to identify the cause of the pollution in Nallathanni river through field investigations and water quality analysis and demonstrate identified key interventions within the selected 2km stretch of the river with nature-based solutions for ensuring improvement in the water quality, for sustaining the quality improvements efforts and public place making.</p> <p>Preliminary topography and reconnaissance survey conducted for identifying sources of pollution covering 2 Km stretch. The first phase of the project involved collection of primary and secondary which includes understanding town's solid and liquid waste management, quantity & quality assessments for Nallathanni river and outfalls which flow into it. In addition to that, potential land parcels for pilot interventions were scoped for and topographic survey was conducted along the river stretch.</p> <p>Identified 5 key interventions for water quality improvement</p>							
	<p><i>Carbon-neutral Panchayat</i> <i>1.2.4 Action based project to make</i></p>	<p>Through the project, a unique attempt is being made to develop Mankulam Grama Panchayath as a Carbon neutral panchayath. Mankulam Panchayath has over 1000 farmers practicing organic</p>				<p>There were many apprehensions about this project amongst some sections of the people in the panchayath. This was raised</p>			

	<i>Mankulam a carbon neutral Panchayat</i>	<p>agriculture and is very rich in forest cover.</p> <p>The first stage of this effort is to understand the quantum of carbon emissions and carbon sinks in the panchayath.</p> <p>Draft content for a flyer on Carbon Neutral Mankulam was developed. Survey on baseline energy and emission conducted and a mobile application developed for the same. Survey on baseline livestock practices and composting techniques conducted.</p> <p>Inception report submitted on methodology and data collection template</p> <p>Baseline emission calculations based on 500 sample size completed and presented to Panchayat. Sectors identified for major emission contributors. Energy, Waste, Animal Husbandry and Transportation are the sector in decreasing order of emission. Soil investigation results and recommendation shared to 60 farmers for enhancing crop yield.</p> <p>Carbon Neutral Mankulam stakeholder meeting conducted and preliminary findings presented.</p>				<p>in social media platforms like Whatsapp. The project team conducted a series of discussion both online and offline to assuage these concerns.</p>			
<p>Output 1.3: Enhanced products/services value chains developed for providing ecologically sustainable livelihoods options</p>	<p><i>1.3.1 Sustainable livelihood practices for Tribal communities NTFP (including branding & marketing of Vamasree shops & products), Bamboo & Reed Agri and allied sectors</i></p>	<p>NTFP (including branding & marketing of Vanasree shops & products)</p> <p>A detailed estimate and drawings are being prepared based on the model Eco-shop design concept along with the 3D design. The concept and design frameworks were previously discussed with the forest officials under Malayattoor division. The current plan is</p>				<p>The quarter has been important period for agriculture related activities as land preparation and planting of various crops happens during the onset & return of Monsoon. Even though Covid restriction was in place, team was able to undertake several livelihood</p>			

	<p>☐ <i>Enhancement of reservoir fish production and creation of livelihood opportunities for the tribal community in Munnar Landscape through development of aquaculture practices of native species,</i></p> <p>☐ <i>Lemongrass value chain intervention,</i></p> <p>☐ <i>Sustainable Farming, Value addition and Market linkage of Tribal community at Athirappilly</i></p> <p>☐ <i>Medicinal plant-based value chain approach</i></p>	<p>to develop the model Ecoshop as a community institution. Chilla market (tribal community market) branding exercise were carried out and logo concept was shared with forest department officials. Consultations with forest department officials at Marayoor were carried out regarding the branding.</p> <p>Honey processing unit and storage facility was established at Malayattoor FDA with convergence from Trifed. This would help in increasing the efficiency and ensuring standardizing in the process. This processing facility would act as a model for other FDAs to follow.</p> <p>As part of facilitating marketing linkages for NTFP products, under IHRML project, Vazhachal FDA and Dhaara livelihood initiative is organizing the second phase of tuber festival from 26th till 27th March 2022.</p> <p>Native fish species promotion</p> <p>As part of the activity on “Enhancing reservoir fish production and creation of livelihood opportunities for the local community through development of aquaculture practices of native fishes”, Kerala University of Fisheries and Ocean Studies (KUFOS) has developed the captive breeding technology for the mass scale seed production of endemic fish species in the Western Ghats, <i>Systomus Sarana</i>. Inauguration of the seed distribution of native fish species was done by Grama panchayath</p>				<p>activities for improving the livelihood possibilities for tribal communities.</p>			
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		<p>president, Kuttampuzha. 56 community members from three wards (35-ST) are reached out in the first phase. As of March 2021, over 20,000 native fish seedlings are released in the reservoir area. This is done in convergence with various stakeholders such as Grama Panchayath, Kudumbashree mission, and tribal department.</p> <p>Bamboo & reed-based interventions: A six-day Skill training for two batches of training workshops in Elamblasserykudi Muthuvan settlement in Mamalakandam, Kuttampuzha panchayat. The two batches of trainings were held in a row from 25th – 30th January 2021 and 31st January – 4th February 2022. The training aimed for enhancing product quality and product diversity in bamboo & reed handicrafts.</p> <p>Bamboo nursery set up during this quarter with 3000+ saplings with 16 varieties at Carmel vocational centre, Adimali which will be run by inmates of special school and vocational training centre for neurodivergent people. The inmates also undergone a three-day training nursery management technique.</p> <p>Athirappilly Tribal Valley Agricultural Project (ATVAP) Convergence is established with the Department of Agriculture as part of the Athirappilly Tribal Valley Agricultural Project (Rs 100 million project for a duration of three years) for the digital mapping of the farms. ATVAP envisages to improve the livelihood of tribal farmers through the adoption of better</p>							
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		<p>farming practices, better output from unit farm area, Organic and rainforest certified products, value addition of farm products and exploring the tribal farm tourism potential of the location. Pilot digital mapping exercise completed during this quarter.</p> <p>Homestead Medicinal Plant garden Expansion of the cultivation of indigenous medicinal plant species which can be utilized by the households for remedial purpose along with contributing towards biodiversity conservation. A total of 4106 of homestead medicinal gardens setting with 59542 plants was initiated across seven GPs. Inauguration of the Medicinal Plants Nursery and planting of medicinal plants at Athirappilly was carried out during this quarter. 3500 medicinal seedlings are being prepared for distribution. This would help as an additional income to the Haritha Karma Sena members.</p> <p>Lemongrass value chain The assignment aims to strengthen the Lemon grass value chain for conservation based and sustainable livelihood practices in the project landscape. The intervention will include the assessment of current cultivation practices, climatic conditions for suitability of variety and practices, evaluating the current processing techniques and scope for improvement, introduction of energy efficient model distillation units, developing marketing linkages, training for production of</p>							
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		<p>value-added products and exploring the possibility of cultivation of other medical and aromatic plants</p> <p>A 500 kgs energy efficient distillation unit was installed at Puthukudy tribal, Marayoor during this quarter. The trial runs of the distillation unit were carried out three times and the results in terms of energy efficiency and output is encouraging.</p>							
	<p><i>1.3.2 Sustainable livelihood practices around biodiversity</i></p> <ul style="list-style-type: none"> ☐ <i>Revival, Conservation and propagation plan for traditional practices and seed varieties among communities</i> ☐ <i>Preparation of spatial crop plan based on the assessments of anomalous cropping practices, recommendations for sustainable cropping patterns and its pilot implementation</i> ☐ <i>Access and Benefit Sharing - Documentation and developing models</i> ☐ <i>Promotion of organic/ safe to eat agriculture practices</i> ☐ <i>Agroforestry, floriculture, beekeeping</i> 	<p>Propagation of traditional agriculture practices and seed conservation activities</p> <p>In this quarter, awareness sessions on Organic inputs preparations were conducted at tribal settlements of Adimali, Vattavada, Grama Panchayaths in Idukki District and Kuttampuzha Grama Panchayath in Ernakulam District. Consultations were carried out with Agriculture department officials and Panchayat functionaries various GPs during this quarter.</p> <p>As part of the revival of fallow Paddy land (also considered as sanctuaries of biodiversity), paddy cultivation started in Kattamudi Adimali GP after a gap of over 15 years. Support was facilitated in convergence with Agriculture department for tribal farmers collective as part of strengthening community institution. Different suitable local variety rice seeds were distributed in these farmer collective</p> <p>The harvest festival was held during this quarter in Pettimudi and Ozhivathadam paddy fields. Pettimudi got a good harvest this year. Harvesting of Rice diversity plot has also completed. In</p>				<p>The quarter has been important period for agriculture related activities as land preparation and planting of various crops happens during the onset of Monsoon. Even though Covid restriction was in place, team was able to undertake a number of livelihood activities for improving the livelihood possibilities for tribal communities. Activities are on track though there has been delay due to Covid pandemic.</p>			

		<p>Ozhivuthadam, the fallow was cultivated after an interval of 5 years.</p> <p>Spatial Crop Planning The socio economic, crop cultivation and crop demand survey of the households from 3 Panchayaths were completed. The chemical analysis of the soil samples collected from three GPs at ICAR National Bureau of Soil Survey & Land Use Planning (NBSS & LUP) was also done. Draft report on spatial crop planning has been prepared.</p> <p>Agroforestry The primary objective is to develop agro-forestry models for small and medium landholdings in the selected Panchayats in the project landscape.</p> <p>Organic Village – Mankulam (Idukki District) This activity promotes organic agriculture with focus on capacity building, organic certification and building market linkages which will help to ensure increase in income of the farmers and converting the entire Mankulam Grama Panchayath into an organic village. The activity envisages bringing about market linkages and developing value chain links for organic commodities. Farmer selection for organic certification is in progress. Spices board has sanctioned to establish a training centre in Organic and natural farming, IPM and GAP to our Organic farming partner KADS for a total amount of INR 10.44 lakhs. Project team closely worked with KADS in developing proposal and presentation to Spices Board for the same.</p>							
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		<p>Organic Cardamom Under this activity, field activities in progress for developing 50 demonstration plots on organic farming practices in cardamom cultivation in Chinnakanal and Mankulam GP (Idukki District). Farmer awareness workshops on Organic Cardamom cultivation was conducted in Mankulam during their quarter. Additional 50 new farmers in Mankulam were added under this project during the quarter and field training initiated for the new batch of 50 farmers in this quarter.</p> <p>Conservation of Orchids An Orchidarium and Orchid Interpretation Centre was set up in Eravikulam National Park and opened to public. A booklet on Orchids in the National Park was prepared. The documentation of existing diversity of orchids was carried out and 55 species of Orchids have been identified based on the taxonomic inventory developed and out of which, 14 are strictly restricted (highly endemic) to western ghats. Field training was provided by JnTBGRI was provided to Eco Development Committee members during this quarter</p>							
	<p><i>1.3.3 Sustainable livelihood practices for farming community and supporting institutions</i> ☐ <i>Passion fruit value chain interventions</i> ☐ <i>Study and implementation on</i></p>	<p>Passion fruit value chain intervention Development of passion fruit model farm was initiated during this quarter. The processing unit was established with the farmers collective at Mankulam for</p>				<p>Project proposal was developed for the project - restoration of landscape area with invasive and alien species, for enhancing the income of farmers with the</p>			

	<p><i>Market Mapping & Value Chain analysis of Veg and fruits</i></p> <p>☐ <i>Strengthening Farmer/ tribal institution for increasing their impact</i></p>	<p>producing value added products from passion fruit.</p> <p>Vegetable value chain Vegetable clusters at Adimali and Kuttampuzha was initiated during this quarter with over 110 families each in both the Panchayats. The focus is on home stead veg cultivation for majority of the household.</p> <p>Strengthening Farmer/ tribal institution for increasing their impact As a part of strengthening the farmer collectives, we have facilitated availing a grant of INR 7.44 lakhs to KADS and INR 7.29 lakhs to MAMPCO, Mankulam from Small Farmers Agri Consortium, Dept of agriculture, Kerala under the MSME scheme. Project team closely worked with KADS and MAMPCO in developing proposal, documents and presentations for submission to SFAC. Facilitating market linkages and system building support for NTFPs collective based in Athirappilly GP who are from tribal communities in the landscape is in progress. Branding completed for the collective. Cumulative sale amount crossed six lakhs during this quarter.</p> <p>As a part of strengthening tribal community led institutions, the project is supporting the revival of Tribal Welfare Society Marayoor, a society started and run by the tribal people. During the Covid19 epidemic, the society had to shut down their operations and our team helped in revival of the society in the last six months by way of institutional building, branding,</p>				<p>support from local self-governments and community which would be taken in the next quarter.</p>			
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		accounting, market linkages etc. They have crossed a turnover of over 4 lakhs during the last six months. During the last week of March, Tribal Welfare Society Marayoor team had participated in a two-day marketing event at Thodupuzha, Idukki and have done a sale of INR 51,000.							
	<p><i>1.3.4 Innovation and enterprise support around ecologically sustainable livelihoods options</i></p> <ul style="list-style-type: none"> ☐ <i>Green Innovation Fund</i> ☐ <i>Developing a farm tourism model around fruit cultivation</i> ☐ <i>Intervention in Jaggery value chain</i> 	<p>Green Innovation Fund</p> <p>Green Innovation Fund (GIF) is a fund created to support the innovative efforts to respond to the challenge of climate change in the project landscape through entrepreneurship effort. GIF will be strategically positioned as a Start-up risk capital for entrepreneur. This will enable entrepreneurs to test innovative ideas in the market. Green Innovation Fund Demo day was conducted on 20 Feb 2022 for the startups for showcasing their innovation. A round table with experts on Inclusive growth, Climate change and Startups was also conducted as a part of it.</p> <p>Athirappilly GP president inaugurated the distribution event of Zewa Pod-Portable biowaste management unit developed by Zewa Ecosystems (GIF start up) on 16th Feb 2022. 14 fish farmers are identified for the same. Black soldier fly/larvae technique is utilised for converting the food waste into high protein fish feed and rest as compost.</p>				During the quarter, knowledge track series was carried out among the selected startups as a part of incubation process. Knowledge series helped the startups to relook at their business plan, operations and implementation strategy. Startups has started their field level pilots during this quarter.			
Output 1.4: Community-based models developed for	<i>1.4.1 Developing a comprehensive strategy based on evaluation of socio-economic study of Edamalakudy</i>	Not taken up because of Covid restrictions							

sustainable access and use of forest resources by local communities									
	<i>1.4.2 Implementation based on the comprehensive strategy for Edamalakudy</i>	Not taken up because of Covid restrictions							
	<i>1.4.3 Facilitation in implementation of Community Forest Right in project landscape.</i>	Discussions were held with the communities in October 2021 regarding Forest Rights. Necessary information dissemination was provided. Field level mapping using GPS tracking of all the settlements and their cultivation land has been completed. A report on how to implement the various provisions of FRA is being prepared by the GIS Cell- Munnar FDA established under IHRML Project.							
	<i>1.4.4 Technical Experts/Consultants extended to MoEFCC, Haritha Kerala Mission and State Forest Department (Salaries)</i>	Consultancy charges and PMU costs							
		Outcome Total					32000	37252	
Outcome 2: Multiple use landscape management is applied to secure the ecological integrity of the High Range landscape									
Output 2.1: Capacities of conservation and production sector personnel developed for applying landscape approaches	<i>2.1.1 Geospatial mapping of the landscape using high resolution satellite imagery and ground information (different sector & ecological attributes) Inventorizing high value biodiversity areas & assessment of flora and</i>	The decadal time series analysis of 11 Grama Panchayaths from 1990-2000-2010 is completed. High resolution mapping (2020) including ground truthing of 7 GPs completed. Preliminary inferences on change in landuse pattern identified. Draft final time series analysis of 11 GPs from (1990-2000-2010-2020) completed and submitted to PMU. Draft high resolution spatial map produced (A0 size physical copy) for 7 GPs.							The activity is on track. Ground truthing needs to be carried out on priority.

<i>in to sectoral planning and operations</i>	<i>fauna of selected sholas inside tea estate</i>									
	2.1.2 Develop & validate state of sector documents for mainstreaming into the policies and practices of sectoral stakeholders (Tea, Coffee, Cardamom, Oil, Forest plantations and Tourism sectors)	State of Sector document with sectoral biodiversity plans is being developed. Draft sectoral strategies for production sectors developed. Revised final State of Sector document submitted for comments and review.					Draft version of the State of sector document with recommendations for interventions in the Plantation sectors have been developed.			
Output 2.2: Mainstreaming of bio-diversity concerns in key production sectors demonstrated	2.2.1 Demonstration of developed potential strategies in plantation sector (tea, cardamom, coffee, forest plantations)	Energy Audit Energy saving recommendations in the Investment Grade Energy Audit was carried out previously at two factories of Kannan Devan Hills Plantation Company Ltd. These recommendations were endorsed during the online meeting, held in April 2021, along with few suggestions; Revised final report was submitted in May 2021 for review. Final report on IGEA report for CTC and Orthodox factories submitted to PMU. KDHP in principle agreed for carrying out interventions to minimize energy loss in tea production.					The audit has been finalized. The demonstration based on the audit recommendations are to be taken forward.			
	2.2.2 Demonstration of developed potential strategies in Tourism sector in the landscape	Sustainable Tourism Initiatives High value low impact tourism models at Kuttampuzha (Ernakulam District) and Mankulam Panchayath (Idukki District) A Sustainable community tourism model is being piloted in Kuttampuzha and Mankulam panchayaths where tourism development is in its infancy. This will be market linked replicable and sustainable tourism model with measurable benefits					Mankulam tourism website was launched by the Coordinator, Navakeralam Karma Padhathi 2			

		<p>for the local community and biodiversity of the landscape. Panchayath specific sustainable plan is developed, and various service providers are being trained under this activity. Capacity building & handholding done for 110 service providers and 9 packages based on experiential tourism developed.</p> <ul style="list-style-type: none">- Assessment of Farm tourism packages were completed in this quarter. The report is used as a base document for developing packages and products.- Assessment of all services (Accommodation units, Walking trails, Activities, Food and transportation, Guiding) completed. This was done by personally visiting each service provider and assessing based on a checklist . Licensing process of the service providers in two Panchayats is ongoing.- An Exposure visit for the service providers was organized with a similar community-based tourism programme in Wayanad District in March. This helped them to understand more about the implementation and operations. Refresher training were organized for the service providers in both the destinations. Marketing promotion through social media and website is in progress- The State Project Director launched the website for Mankulam community tourism in February 2022.							
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		<ul style="list-style-type: none"> - Developed a working system for the village level coordinators and website managers in Mankulam and Kuttampuzha Panchayaths. <p>Responsible Tourism Protocol Development and Demonstration</p> <p>In order to address the need for a responsible tourism approach in project landscape, it is aimed to develop a biodiversity integrated Responsible Tourism protocol. Responsible Tourism protocol will include tourism operators, hoteliers, local self-governments, government agencies, local community, civil society organisations and tourists to take responsibility, take action to make the tourism in the locality more sustainable. Demonstration of the Responsible Tourism strategies, protocols, and implementation framework in mass tourism destinations like Munnar, Athirapally, Kanthalloor and Vattavada initiated under this activity.</p> <ul style="list-style-type: none"> - Responsible Tourism Protocols for Accommodation units, Tour operators, Tourism Spots, Tourists and Local Self Government Institutions prepared. - Trainings connected with the agri tourism network of Tourism department was conducted for te farm tourism service providers in the landscape. - Monitoring and evaluation committees was formed for the implementation of RT protocol 																
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		<p>Demonstration of RT Protocol in Accommodation units</p> <ul style="list-style-type: none">- 10 Model RT Accommodation units identified and supported in the project area (Accommodation units following Responsible Tourism concepts in their property like employing local community members in their property in various sections, supporting the cultural activities of the local community, various environmental supporting measures including water and energy conservation, practicing reuse, recycling and proper waste segregation and management, protecting local flora and fauna etc). This has been started with KTDC Tea County Munnar- as model RT accommodation unit.- Demonstration of eco restoration activity in tourism accommodation units - Green Habitat at Munnar Tea county A green island (Micro forest) with indigenous species of trees from the Munnar region were used to developed this biodiversity park. 650 trees in 48 species have been planted here.- Linkage established between RT classified Accommodation units and existing waste management system in Local Self Governments							
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		<p>- Awareness generation programmes in for accommodation units and in micro destinations and tourism spots managed by DTPC - waste segregation from the origin-Munnar region is planned in next quarter</p>							
	<p><i>2.2.3 Removal of invasive and exotic species and Eco-restoration of degraded locations outside forest areas</i></p>	<p>Green Islands / Biodiversity Parks</p> <p>Green islands/ Biodiversity parks aim at developing biodiversity demonstration plots and ensure community participation for biodiversity conservation. It is done in convergence with the MGNREGS workforce. Maintenance is ongoing in 12 plots across 7 Panchayaths – Marayoor, Kanthalloor, Chinnakanal, Mankulam, Adimali, Kuttampuzha and Athirappilly. Saplings were sourced from Central Nursery by Forest Department, MGNREGS nursery and Social Forestry Nursery. Around 1220 saplings, including medicinal plants varieties and native fruit trees, were procured, and planted across the 12 locations generally linked with local educational institutions.</p> <p>Based on discussions done with Adimali Govt. School for starting a biodiversity knowledge centre, a separate building has been allocated for this purpose. Discussion and concurrence have been</p>				<p>A team was formed with participants from the Haritha Keralam Mission and State Biodiversity Board to explore the possibility of setting up a biodiversity resource centre in Adimali, Idukki District. Discussions have been done with the school officials who have offered to provide a building for this purpose. The District Panchayath under whose jurisdiction, the Govt. High School, has come ahead and supported this initiative and is helping the project carry forward these activities.</p>			

		taken from District Panchayath which has decision rights over the school.							
	<i>2.2.4 Adopting Soil stabilization measures outside forest, especially at identified landslide prone areas in Devikulam block such as along the National High Way from Munnar to Chinnakanal by planting vetiver, shola species and other deep rooted species along the synforms.</i>	River side planting at Adimali Grama Panchayath during this quarter with reed and vetiver. Bamboo Cribwall build on the side of the river banks during this quarter.							
Output 2.3: <i>Best practices documented and disseminated for improving decision making on sustainable resource management and use</i>	<i>2.3.1 Updation of State biodiversity strategies and action plan</i>	The plan of action for Biodiversity Expenditure Review (BER) by KSBB was endorsed in May 2021. First Roundtable discussion held on Biodiversity Expenditure Review with participation of 25 officials from 21-line departments for finalizing the schemes and programmes identified for BER and for clarifying data information gaps in June 2021. A template for preliminary data collection on activities leading to biodiversity conservation, issues, future projects, programmes etc was developed and to be shared with the stakeholders. Biodiversity Expenditure Report developed. SBSAP – First state level online Inception workshop conducted on 27 October 2021 with experts and presentation of Biodiversity Expenditure Report (BER). Inception report submitted along with approved BER. 44 major stakeholders				The activity is on track.			

		<p>including institutions and departments identified.</p> <p>Second state level physical consultation held from 7-8 November 2021 with 12 sectoral themes for developing sectoral strategies.</p> <p>LBSAP - First online consultation with GP functionaries and BMC members held on 26 November 2021 to collate secondary information on biodiversity and framework for LBSAP at Athirapilly. Second physical consultation held on 16 December 2021 with 29 participants to validate LBSAP framework.</p> <p>Draft SBSAP developed and shared in public domain for comments and suggestions. Draft Resource Mobilisation Strategy document submitted.</p>							
	<p><i>2.3.2 Develop key policies and management framework/ decisions adopted at local and state level related to sustainable mountain landscape management</i></p>	<p>Landscape level Multi Stake holder Management Strategy framework has been developed.</p> <p>Data collection template for Landscape Level Multiuse Management Plan developed with the sections – administrative, socio economic, socio demographic, land use, human & animal health, temperature, rainfall, water, soil, waste, extreme events, contact details, and forest</p> <p>Field visit was conducted by the team and discussions with various stakeholders held</p>							
	<p><i>2.3.3 Technical Experts/Consultants extended to MoEFCC, HarithaKeralam Mission</i></p>	<p>Consultancy charges and PMU costs</p>							

	<i>and State Forest Department (salaries)</i>								
		Outcome Total					109300	113670	
Outcome 3: Commonly accepted governance framework for multiple-use high range landscape management evolved									
Output 3.1: <i>Landscape level management plans and sustainable resource management systems in place</i>	<i>Improved Protected Area Management</i> <i>3.1.1 Measures to mitigate threats such as forest fire, road kills etc in biodiversity conservation</i> <i>Technologies for monitoring wildlife movement - installation of thermal sensor at Malayattoor & Chalakkudy as part of reducing human wildlife conflict</i>	<p>GIS center, established by the Vazhachal Forest Development Agency, has started functioning. Various spatial information has been collated so far and a geo database has been developed for planning. Forest fire management and mitigation plan was prepared by this cell for the Vazhachal Forest Division. Potential zones were identified for riparian eco restoration by the GIS cell.</p> <p>Periodic maintenance and revamping of tree ladders at 14 locations across the Chinnar Wildlife Sanctuary to reduce road kills of IUCN red listed species like Grizzled Giant Squirrel (Near Threatened) and Nilgiri langurs (endangered).</p> <p>Thermal sensors are conceived as warning system for wildlife and entry to the human settlements in the forest fringes. This warning will be issued to the inhabitants of the settlements and to Rapid Response Teams. It was decided to pilot the thermal sensors at Malayattoor Forest Division during the technical scrutiny of the activity proposal.</p>							The activity is on track
	<i>3.1.2 Management and reduction of waste inside the forested areas supporting Green Grass Project</i>	Identified waste generation hotspots within and outside Protected Areas and finalized the forward linkages and systems to be established in each hotspot.							The activity is on track

	<p><i>3.1.3. Protection of sandal wood forests through improved technologies (establishing digital fences in selected priority areas)</i></p>	<p>Marayoor sandal wood forest is a unique ecosystem in the project landscape. The primary objective of this activity is to establish digital environmental sensors as part of introducing smart forest approach in protecting the unique Marayoor sandalwood from theft and reducing the manual labour cost for better management of the sandalwood area. The activity entails a feasibility study to develop a solution for timely detection and prevention of unauthorized axing/ chopping-off of valuable trees, which would indirectly monitor the health and growth of these trees, thereby contributing to the social goal of conserving forests and protecting flora and fauna and providing a sustainable solution to meet this objective.</p> <p>The limitations of conventional methods of sandalwood protection were identified. In order to overcome the issues identified it was proposed to do digital fencing. This will also aid in free wildlife movement.</p> <p>Theft prone areas were identified and /locations for installing the sensors were shortlisted.</p> <p>Advertisement released in newspaper for identifying agencies as part of this activity. The scrutinizing the various proposals for finalizing the agency is ongoing.</p> <p>As a measures to prevent sandal tree smuggling, the FDA has been installed solar lights at 15m interval for 1km in the</p>				The activity is on track			
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		prone areas from Akkaraseema to Pathuveed. This is highly successful and the official records shows the attempt for smuggling has been reduced in the hotspot.							
Output 3.2. <i>Institutional platforms of multiple stakeholders evolved and strengthened at appropriate levels for planning and reviewing sustainable resource use</i>	<i>3.2.1 Training forest dependent communities, VSS, EDCs & frontline forest officials on: Livelihood skill development (advanced wood working course to 25 tribal youth) Eco tourism destination management: Visitor management and disaster risk reduction in eco- tourism destinations Local Action Plan for Climate Change in 8 FDAs (106 VSS & EDCs Advanced community research improvement: census techniques & habitat monitoring protocol by giving training and involving tribal communities</i>	Virtual Capacity building trainings has been provided to Vana Samrakshana Samithi members at Vanashree eco shops. Vanasree is an initiative of the Forest Department to add value and market the products of Joint Forest Management Committees and Eco Development Committees. This initiative was started in 2011-12 and currently, it has a network of 41 collection centres, 11 value addition centres and 37 Vanasree shops in the state to procure, add value and market NTFPs.					The activity is on track		
	<i>3.2.2 Community based bird conservation at Thattekad and adjoining areas Conducting certified course on ornithology and birding for tribal youth Publishing book on bird in local language</i>	The Thattekkad Bird Sanctuary is one of the six Protected Areas in the Project landscape. The Sanctuary and adjoining areas are crucial link of the landscape due to its topographic position and altitudinal gradients. Major forests of the Sanctuary include tropical evergreen, semi-evergreen, moist deciduous forests, riparian forest and teak plantation. Sanctuary harbors about 322 species of birds including					The activity is on track		

	<i>Developing Salim Ali sathram as heritage building</i>	<p>several species of migratory and endemic birds.</p> <p>Draft version of the ornithology course book on birds (field guide) has been developed.</p> <p>Virtual Capacity building sessions conducted for forest trainers</p>							
	<i>3.2.3 Strengthening of Chilla market through automation of existing market system- Establishing goods transportation facilities for tribal NTFPs and Agriculture produces from tribal settlements</i>	<p>The Kerala Forest Department of Marayoor Sandal Division in Idukki district started a local open market called 'Chilla' ('Protection' in English), to ensure the farmers at the tribal settlements in the region get a fair price for their organically grown agricultural produce. The main aim of the market is to help the tribal farmers sell their products and livestock from their tribal settlements at a reasonable price.</p> <p>Considering the challenges at Chilla market, it is important to explore the possibility of Process automation at Chilla market. Process automation is the use of technology to automate business processes to sequentially transition from one task to the next with minimal human intervention.</p> <p>The primary objective of the assignment is to undertake an intervention in the process automation of Chilla market which will help in easy operations and can reap major benefits.</p> <p>As a part of strengthening, Chilla market (tribal community market) branding exercise were carried out and logo concept was shared with forest department officials for approval.</p> <p>Pilot run of the automation of Chilla market was successfully carried out</p>				The activity is on track			

	<p><i>maps, studies, surveys, research publications and so on.</i></p>	<p>habitat and reducing the threats to wildlife, its habitat, and the human-wildlife interface.</p> <p>Decision support system – GIS Cell established at Munnar Wildlife Division and Munnar Territorial Forest Division. Data compilation and collation of various spatial information, as a continuous process for updating the geodatabase .</p>							
	<p><i>3.2.6 Upgradation of eco-tourism destination and interpretation centre to address the special needs and make them differently abled friendly at Athirappally and Thattekad including development of eco-tourism website for differently abled</i></p>	<p>Handrails have been installed at Athirappilly waterfall's tourism spot to make it disabled-friendly. This tourism spot is managed by Vazhachal Forest Development Agency. Eravikulam National Park has an eco-tourism center managed by the Anamudi forest development agency. Since it is one of the major tourism centers, visitations are very high. The visitors need to walk through a gradient place inside the park at the tourism zone to see the Nilgiri Tahr, an endangered species. The aged and the differently abled people will find it difficult to walk through the park. To make the destination differently abled friendly, buggy cars were recommended.</p> <p>Buggy car has been purchased at Eravikulam National Park and test running of the same is doing now. The test running has been become a big success. In addition to this, to make the destination differently abled friendly, an information centre has been proposed with braille codes and audio visual effects.</p>				<p>The activity is on track</p>			
	<p><i>3.2.7 Developing green building code with</i></p>	<p>As part of technical scrutiny, it was decided to convert the Mankulam Anti-Poaching camp shed into a green</p>				<p>The activity is on track</p>			

	<i>energy efficient facilities & piloting the same in the landscape (Divisional Office, Forest Station IB and Check post – one each)</i>	building with solar powered energy facilities. Installed solar power lights at two antipoaching camps (Kallar and Virinjapara – Idukki District), which is located deep inside the forests.								
	<i>3.2.8 Establishment of live museum at Marayoor</i>	As part of the technical scrutiny done by State Nodal Officer, Chief Wildlife Warden, Forest Department and Sr. Technical Advisor, UNDP, it was decided to reallocate this fund for another activity.					To be reallocated.			
	<i>3.2.9 Facilitating landscape level multi stakeholder forum for sustainable landscape management</i>	<p>Proposal has been submitted to the Government of Kerala on the formation of –</p> <ul style="list-style-type: none"> ○ Landscape Level Advisory Committee with the District Collector, Idukki as the Chairperson and the Sub Collector, Devikulam as the Convenor and representation from the key stakeholders in the landscape being members ○ State Level Advisory Committee with the Addl. Chief Secretary, Planning and Economic Affairs as the Chairperson and State Project Director as the Convenor and representation from the key departments related to Natural Resource Management & Biodiversity being members <p>The functions of the committee will be to act as a multi stakeholder forum to monitor the project activities and to enable cross stakeholder convergence.</p>					The activity is on track			

		Another proposal has been submitted to the Government of Kerala to institutionalize the above cross sectoral forum as the institution to carry forward the initiatives taken up during the project period. The proposal was discussed with the Addl Chief Secretary, Planning & Economic Affairs, Govt. of Kerala.							
	Enhancing management effectiveness of HVBA's								
Output 3.3: <i>Management effectiveness of designated biodiversity rich ecosystems are strengthened to address existing and emerging challenges to ecosystem conservation and services</i>	<i>3.3.1. Establishment of cyber wildlife crime control cell at Forest Head Quarters</i>	As part of conserving the wildlife population by effective interventions, preliminary works for the setting up of cyber monitoring cell with wildlife crime database management system and capacity building of enforcement agencies dealing with cyber wildlife trafficking by providing professional assistance and training in a phased manner is in progress. The occurrences of cyber wildlife crime trafficking not only in the project landscape but also in the entire State such as the networks of poachers, traders, virtual markets, and the consumers through the online platform shall be monitored and disrupted through a centralized monitoring cell through trained professionals. Discussions were held with the Chief Wildlife Warden on setting up the cell at Forest HQ. As per the decision of the Chief Wildlife Warden, the cell will be integrated with the Forest Department's cyber cell. The infrastructure will be provided by the Forest Department and				The activity is on track			

		<p>the technical facilities will be provided by the UNDP Project.</p> <p>An MoU has been signed between Anamudi FDA and Punaloor FDA of Southern Forest Circle to establish a statewide cell to control cyber wildlife trafficking. The infrastructure of the cell is being revamped by the Forest Department as co finance and the procurement of equipment is ongoing.</p>						
	<p><i>3.3.2. Review of Management Plan guidelines; Review of State Forest Policy Review and validation of METT and MEE scores of PAs within the project landscape to identify gaps</i></p>	<p>Management Plans of Anamudi Shola National Park and Pampadum Shola National Park has been prepared and submitted for approval.</p> <p>The preparation of Management Plans of Chinnar Wildlife Sanctuary and Thattekkad Bird Sanctuary is ongoing. Stakeholders meeting and expert consultation has been completed at Thattekkad Bird Sanctuary. Draft Working Plan of Marayoor is completed and submitted for approval. Preparation of Working Plans of Munnar, and Mankulam Forest Divisions are ongoing. The draft Management Plans of Chinnar Wildlife Sanctuary, Eravikulam National Park, Kurinjimala Wildlife Sanctuary and the Thattekkad Bird Sanctuary is being scrutinized and reviewed by experts.</p>				The activity is on track		
	<p><i>3.3.3 Developing eco-compatible habitat monitoring cell inside Eravikulam National Park Esatablishment of habitat and wildlife health monitoring cell at Thattekkad</i></p>	<p>Eravikulam National Park forms the largest conservation landscapes in the Western Ghats with several rare and endemic species including largest viable population of Nilgiri tahr in the world. With these diverse values the park is holding, monitoring of the various habitat types becomes a challenging task. To improve the habitat, permanent monitoring stations are envisaged in an eco-friendly manner.</p>				The activity is on track		

		<p>The construction of earthen structures is completed and installed self-generating power source. The procurement of equipment for installation is going on.</p> <p>The revamping of the infrastructure for the habitat monitoring cell is done by the co-financing from Forest Department at Thattekkad.</p> <p>Various equipment required for establishing the habitat monitoring cell at Thattekkad has been procured and installed. The cell is now become functional and started monthly monitoring and assessment of different environment and wildlife habitats.</p>										
	<i>3.3.4. Development of detailed project report - Centralized Hospital for Elephants at Vadakkanchery & State level Digital Forensic Lab at Forest Head Quarters</i>	As part of the technical scrutiny done by State Nodal Officer, Forest Department, Chief Wildlife Warden, Forest Department and Sr. Technical Advisor, UNDP, it was decided to utilize the funds allocated to this activity elsewhere.							To be reallocated.			
	<i>Habitat Improvement – Strategies and Implementation</i>											
	<i>3.3.5 Removal of plantations (Wattle and Eucalyptus), Eradication of alien weeds, from PAs and outside PAs, Removal of alien species from the high altitude montane grassland (inside and outside the PAs), Restoration of identified vulnerable and degraded forest areas (including shola/ grasslands segments</i>	Monitoring plots were identified to evaluate the efficacy of restoration process. 3 zones at Anaimudi Shola National Park and 4 zones at Pambadum Shola National Park were identified. Permanent sampling plots were established and month wise data on biodiversity and regeneration of exotic species are being collected. This is for developing framework for restoration of the landscape.							The activity is on track			

	<p><i>within PAs and other degraded areas including improvement of Nilgiri Tahr habitat in Meesappulimala (Removal of exotics and restoration of grasslands) & designing a long term sustainability plan for Nilgiri Tahr</i></p>	<p>Controlled removal of exotics from the forest areas of Pampadumshola, Kurinjimala and reserve forests of Munnar is ongoing.</p> <p>1 Lakh seedlings of Kurinji species has been produced and planting of the same at the restoration sites is completed.</p> <p>Removal of exotics and planting of native grass species inside the Protected Areas is in progress and planting completed around 40 ha.</p> <p>In the Reserve Forests, initiated removal of exotics and planting of native grass and shola species about 58.5 ha under Munnar Forest Division.</p> <p>Towards improving the habitats of Nilgiri Tahr, an MoU has been developed between Munnar FDA and Kerala Forests Development Corporation. Mapping of exotics using GPS is in progress.</p> <p>An exposure visit for the Divisional Manager has been conducted to the ongoing restoration sites under IHRML landscape. Preliminary study on the status of invasion is being studied by the experts of KFRI</p> <p>Short video developed on ecosystem restoration for Forest day and World Environment Day.</p>							
	<p><i>3.3.6 Bamboo ecosystems -mapping of species, age and developing conservation measures such as</i></p>	<p>Engaged one project staff for GPS based mapping of the bamboo ecosystem. Mapping of bamboo ecosystems inside Thaattakkad Bird Sanctuary has been completed with assessment on its</p>				<p>The activity is on track</p>			

	<i>measures to prevent exotic invasion and forest fire) at Thattekkad Bird Sanctuary</i>	approximate age and species is undertaken. A report on the same has been submitted to the Forest Department. An expert consultation meeting has been proposed in the month of May 2022 to develop conservation strategy based on the findings of the study.								
	<i>3.3.7 Conservation of special habitat like Hornbill and Vayal ecosystems based on the recommendation from the study titled 'Ecosystem requirements of Hornbill' 2019-2020</i>	This activity is seasonal in nature and proposed to revive during dry season.					The activity is on track			
	<i>3.3.8 Reviving of aquatic ecosystems at Thattekkad Bird Sanctuary and establishing sustainable monitoring systems for improving the migratory bird habitat</i>	Out of the 14 waterholes in Thattekkad Bird Sanctuary, removal of IAS species (<i>Cabomba caroliniana</i> , <i>Limnophila heterophylla</i> , <i>Salvinia species</i>) from 7 waterholes has been completed. Nearly 3.5 Tons of IAS were removed, and habitat of aquatic migratory birds were improved. This activity is seasonal in nature and proposed to revive during dry season. The revival of canal systems to bring water from Periyar River into the waterholes created for aquatic birds including migratory birds in Thattekkad Bird Sanctuary is ongoing. About 350 m long canal has been reconstructed and the dilapidated sluice were being replaced. Revival of remaining 75 m has been affected by the dam closure in the Periyar River at Bhoothathankett.					The activity is on track			

	<p><i>3.3.9 Rejuvenation of flood affected Riparian vegetation (Stabilization of Riverbanks by geotextiles and other environment friendly techniques, planting of suitable riparian saplings) – Chalakkudy River & tributaries of Periyar River</i></p>	<p>In Vazhachal Forest Division, five potential locations were identified for restoration. 20 species of riparian plants were identified for replanting. Nearly 5000 saplings will be procured this year before the onset of monsoon. In the consecutive years, the plants required for restoration will be availed from the newly established nursery itself. The planting and monitoring of riparian seedlings with riverbank stabilization is continuing and as of now around 10,000 seedlings belongs to 24 riparian species were raised in decentralized nurseries and were planted along Chalakkudy River in Athirappally Gramapanchayats. As part of the Azadi Ka Amrut Mahotsav celebrations, two events were held on December 21st, 2021 in the project landscape along Chalakkudy River by planting 50 seedlings of native species and Pambar River by conducting a natural walk to the Pambar riparian belt at Chinnar Wildlife Sanctuary and a biodiversity conservation awareness program for 20 School and College students to highlight the interventions done through the project in protecting the biodiversity alongside these rivers. The planting and monitoring of restoration sites is being done with the support of VSS.</p>				The activity is on track			
	<p><i>3.3.10 Scientific video documentation of unique features in the landscape such as elephant congregation</i></p>	<p>Video documentation of eco restoration of degraded forest areas has been completed Draft booklet on “Orchids of Eravikulam National Park” is developed</p>				The activity is on track			

	<i>at Anakkulam and best practices of the Project such as Chilla Market, tree ladder etc in the form of documentaries, coffee table books, short films and IEC materials</i>	Video documentation of traditional seed conservation at tribal settlements of Chinnar Wildlife Sanctuary is ongoing Concept note prepared for Chilla Market video documentation. Video documentation of revival of aquatic ecosystem is in progress.							
	<i>3.3.11 Study on home ranges - Nilgiri Tahr, Nilgiri Martin, Frogmouth and other key species</i>	As part of the technical scrutiny done by the State Nodal Officer, Chief Wildlife Warden, and Sr. Technical Advisor, UNDP, it has been decided that the funds allocated for this particular activity to study on home ranges of Nilgiri Tahr and Nilgiri Marten can be utilized in some other activity.					To be reallocated		
	<i>3.3.12 Demonstrating measures to conserve the soil and water resources inside and outside the Protected Areas by improving the existing water retaining facilities and checking gully formation in the high-altitude grasslands.</i>	Implementation plan has been developed by Munnar and Mankulam FDA to conserve soil and water resources. Gully plugging and desilting were proposed at five sites in Mankulam Forest Division and three sites in Munnar Forest Division. A training workshop is also planned to conduct at Mankulam on soil and water conservation.					The activity is on track		
	<i>Human Wildlife Interface management</i>								
	<i>3.3.13 Management of human-wildlife interface (identification and mapping of corridors, development of early warning systems and other short term and long-term strategies with potentials of co-financing)</i>	The sites for establishing sensors for alerting elephant entry into settlement area has been identified. Consultation was made with few agencies to demonstrate the sensor techniques. The agency visited the locations and mapped the area. Work order will be issued after getting permission from the Chief Conservator of Forests, High Range Circle.					The activity is on track		

		<p>Technical agency has been identified for Mapping of corridors in the landscape. They have submitted the technical and financial proposal which has been scrutinized and await approval from CCF. An application has been developed by one of the Green Innovation Funded startups and two consultation meetings held between agency and FDA to address gaps in mobile app developed. Based on the suggestions of the forest officials, the system is upgrading to meet their requirements to resolve the cases of wild animal entry into the human habitation.</p> <p>A proposal for erecting solar power fences for about 20 km has been submitted to Chief Wildlife Warden for an amount of INR 2 crores.</p> <p>Solar Power fence of 2.5km has been erected at Kurathikudy, of Adimali Grama Panchayat by the Munnar forest Division as part of developing short term measures on human elephant conflict mitigation.</p>								
	<p><i>3.3.14 Facilitating the preparation of comprehensive plan for protecting the Anayirangal elephant ecosystems in Chinnakkanal</i></p>	<p>The Conservation plan developed for protecting the Anayirangal elephant ecosystems in Chinnakkanal has been presented before the Chief Conservator of Forests Council of the Kerala Forest and Wildlife Department. Based on the suggestions provided, field data is being collected.</p> <p>A mitigation plan for elephant crossings along National Highway was developed and has been submitted to National</p>								

		<p>Highway Authority of India through PCCF, Kerala Forests and Wildlife Department.</p> <p>Monitoring the movements all the elephants in and around Anayirangal is doing on every day and is plotting through GIS applications.</p> <p>Multistakeholder meeting has been conducted at Chinnakanal Grama Panchayat as part of developing conflict mitigation plan. It was proposed to construct 20km fence around identified settlements in Chinnakanal Grama Panchayat. The proposal for INR 2 Crore has been submitted to Chief Wildlife Warden through Divisional Forest Officer, Munnar.</p> <p>The National Highway Authority has been sanctioned amount of INR 6,96,36,488/ towards implementing mitigation plan based on the proposal submitted.</p>							
	<p><i>3.3.15 Establishment of Veterinary Care unit - rescue and rehabilitation centre; Establishment of Monkey Rescue Centre at Malayattoor</i></p>	<p>This has not been initiated and will be taken up once the revision of Letter of Agreement is approved.</p>							
<p>Output 3.4: <i>Rare Endangered and Threatened (RET) ecosystems and endemic species are secured</i></p>	<p><i>3.4.1 Establishment of nurseries with micro-propagation facility for RET species at Devikulam</i></p>	<p>Studies are being carried out to understand the mode of propagation of 21 shola species (Rare Endangered and Threatened). The nursery for the generation of seedlings have been established.</p> <p>The nursery at Anamudishola is raising 2500 and above seedlings of 21 species</p>							

<i>through improved conservation measures</i>		<p>of IUCN Redlisted and endangered shola grassland species.</p> <p>Mapping of shola eco systems in and around tea plantations has been completed. The biodiversity assessment of shola ecosystems has been completed.</p> <p>Proposals for EFL has been drafted by the Munnar Forest Division based on the shola inventory.</p>								
	<p><i>3.4.2 Establishment of centralised grassland/shola/ nursery at Devikulam & Pampadumshola. Sandalwood nursery at Marayoor. Riparian species nursery at Chalakkudy & Vazhachal</i></p>	<p>Mother beds for two grassland species is established at Devikulam and Pampadumshola National Park (924 & 720 numbers respectively)</p> <p>45000 seedlings of 11 shola species are raised at the Central Nursery, Devikulam, Idukki District Nursery for sandal wood plant species has been established. 10,000 seedlings are being propagated at the nursery in Marayoor, Idukki District.</p> <p>1 Lakh seedlings of Kurinji species has been produced at the Pambadum Shola National Park and have planting has been started at restoration sites in Kurinjimala Wildlife Sanctuary. Both the Protected Areas are in the Idukki District. Nurseries for Munnar Territorial and management of nurseries by FDA; sandalwood planting;</p>					The activity is on track			
	<p><i>3.4.3 Technical Experts/Consultants extended to MoEFCC, Haritha Keralam</i></p>	<p>Consultancy charges and PMU costs</p>								

	<i>Mission and State Forest Department (Salaries)</i>									
		Outcome Total 3						1050 0	6188	
Reversal										
							Sub Total: \$ 157,112			
							Project Management Expenses: 7,224			
							Grand Total: \$ 164,336			

2. PO's Overall Analytical Report

2.1. Narrative – based on PO's own assessment, BTORs and other reports

2.1.1. Comments on progress in project as per QPR, and on whether the project is on the right track:

The project is on track and has picked up significant pace. The suggestions provide in the Mid Term Review on certain implementation arrangements have been designed and positioned accordingly. These include posting a Project Coordinator and a Technical Advisor, as well as ensuring M&E at the Country Office level.

The frequency of FPIC meetings has also been increased to ensure that the communities and Panchayath representatives are completely on board with the project activities.

A visit was made by a team from the Special Purpose Vehicle headed by the State Project Director to various project sites. Interactions with different officials was conducted and it was possible to highlight various project activities to the panchayath.

2.1.2. List of project issues/ risks that the PO wants to ensure are included and addressed in the PSC:

List of issues:

1. Project extension on account of time lost due to Covid and fund transfer delay

2.1.3. List of issues that the PO wants to escalate to unit Heads/ senior management:

List of issues:

1. The project continues to face apprehensions on certain project activities being contradictory to the interests of few sections of the community; The project team and the SPV have tried to assuage these fears through local level meetings and block/ district level meetings.

2.2. Section on Gender and Inclusion

2.2.1. What were risks related to:

a) mainstreaming gender

The project takes into consideration the gender dimensions while undertaking activities related to biodiversity conservation and sustainable livelihoods. Several interventions have been undertaken w.r.t training and capacity building for alternate livelihoods and sustainable natural resource management wherein 90% participants were women. The key risks related to mainstreaming gender includes:

1. Social stigma associated with sanitation workers especially in the Covid period leads to women green entrepreneurs (Haritha Karma Sena) not getting expected support from the general public in carrying out their responsibilities
2. Climate vulnerabilities leading to failure of crops being promoted through the project (like sustainable sugarcane farming, lemongrass, traditional seeds like millets/ rice varieties etc.) where women were taking lead
3. Lack of markets for products from the women led enterprises
4. Gender roles with regards to natural resources like women can take up livelihood opportunities close to home, men to take up activities that involve more skill & training, etc.
5. Unavailability of a credible database on LGBTQ community for gender mainstreaming of genders other than male & female

b) concerns of women and men belonging to the marginalized groups e.g. related to participation, access and control of resources and benefits, etc.?

1. Loss of livelihood opportunities as a result of Covid related restrictions
2. Climate vulnerabilities leading to failure of crops being promoted through the project (like sustainable sugarcane farming, lemongrass, traditional seeds like millets/ rice varieties etc.)
3. Lack of markets for products

2.2.2. What were challenges related to:

a) mainstreaming gender and

1. Covid lockdown and health concerns accentuated the stigma associated with the sanitation workers who are women SHG members or Haritha Karma Sena. This was one of the reasons why they could not go for household collection of solid waste in the project area.
2. Unavailability of a credible database on LGBTQ community for gender mainstreaming of genders other than male & female
3. Because of restrictions in movement of people and closure of shops and other commercial establishments, women have lost livelihood opportunities including Employment Guarantee Schemes

b) concerns of women and men belonging to the marginalised groups, e.g. related to participation, access and control of resources and benefits, socio-cultural/institutional obstacles, etc.? Any new upcoming opportunities/ ideas on facilitating gender & inclusion in the project?

1. Loss of livelihood opportunities as a result of Covid related restrictions
2. Climate vulnerabilities leading to failure of crops being promoted through the project (like sustainable sugarcane farming, lemongrass, traditional seeds like millets/ rice varieties etc.)

2.3. Any innovations/ success stories (completed or ones to watch for) that PO wishes to bring on board or for Communications to follow up:

1. Sustainable Sugarcane initiative – SSI focus on improvement of value chain of Sugarcane with focus on production side intervention for small and marginal farmers in Marayoor and Kanthalloor Panchayaths
2. Green Innovation Fund - Green Innovation fund has been launched for social enterprises to address biodiversity conservation challenges in the landscape.
3. Carbon Neutral Mankulam - Through the project, a unique attempt is being made to develop Mankulam Grama Panchayath as a Carbon neutral panchayath. Mankulam Panchayath has over 1000 farmers practicing organic agriculture and is very rich in forest cover.
4. GIS Cell - GIS center, established by the Forest Development Agencies of Vazhachal, Anamudi and Munnar have started functioning. Various spatial information has been collated so far and a geo database has been developed for planning. Forest fire management and mitigation plan was prepared by this cell for the Vazhachal Forest Division.
5. Biodiversity Parks - Green islands/ Biodiversity parks aim at developing biodiversity demonstration plots and ensure community participation for biodiversity conservation. It is done in convergence with the MGNREGS workforce. Maintenance is ongoing in 12 plots across 7 Panchayaths – Marayoor, Kanthalloor, Chinnakanal, Mankulam, Adimali, Kuttampuzha and Athirappilly. Saplings were sourced from Central Nursery by Forest Department, MGNREGS nursery and Social Forestry Nursery. Around 1220 saplings, including medicinal plants varieties and native fruit trees, were procured, and planted across the 12 locations generally linked with local educational institutions.
6. Sustainable Tourism initiatives - High value low impact tourism models at Kuttampuzha (Ernakulam District) and Mankulam Panchayath (Idukki District). A community centered sustainable tourism model is being developed for the two panchayaths. The sustainable tourism plan is developed based on resource mapping and stake holder consultations done in the two Panchayaths. Experiential tourism packages and products promoted for local economic development. Websites developed for the two panchayaths.
7. Visual Media course - One of the videos taken as part of Covid awareness, features a tribal community member – Laya. Laya is the coordinator of a partner agency working on waste management as part of the project. The video was produced by Arjun Murali, another tribal community youth in the project landscape who is also a student of the Visual media course that has been launched in July 2021. The course supports 25 youth, like Arjun, from underprivileged communities (Scheduled Caste and Scheduled Tribes) from the landscape on visual media.

2.4: Any partnerships / success stories (completed or ones to watch for) that PO wishes to bring on board or for Communications and partnerships team to follow up:

1. Recity – Partnership with Recity group which operates with CSR funding from Nestle for Munnar Waste Management
2. TRIFED – for marketing initiatives of tribal NTFP products

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Ruchi Pant