Project Title: Indian High Range Mountain Landscape Project
Atlas Project ID: 00087493
Atlas Award ID: 00075746

Annual Progress Report
January - December 2020

PROJECT SNAPSHOT

Date:	February 2021
Award ID:	00075746
Project ID:	00087493
Project Title:	India High Range Landscape Project
Project Start Date:	May 2014
Project End Date:	March 2022
Donor:	Global Environment Fund Truste (GEF Trustee)
Implementing Partner:	Ministry of Environment, Forests and Climate Change, GOI State Government of Kerala
Total Project Budget (all years):	$ 6,275,000
Core Resources: Non-Core Resources: Government contribution:	USD 6,275,000 USD 28,000,000

Project Brief Description and Outputs:

The project will put in place a cross-sectoral land use management framework, and compliance monitoring and enforcement system to ensure that development in production sectors such as tea, cardamom and tourism is congruent with biodiversity conservation needs – to achieve the long term goal of conserving globally significant biological diversity in the High Ranges of the Western Ghats. It will seek to establish a conservation compatible mosaic of land uses, anchored in a cluster of protected areas, by engineering a shift in governance approach towards a cross-sectoral, coordinated planning, implementation and compliance monitoring so that cumulative direct and indirect impacts of different production activities across economic sectors on biodiversity is managed, reduced and mitigated. The project will deliver three outcomes: Outcome 1: Effective governance framework for multiple-use mountain landscape management in place; Outcome 2: Multiple use mountain landscape management is applied securing the ecological integrity of HRML; Outcome 3. Strengthened capacities for community based sustainable use and management of wild resources. In addition to national and local benefits, the project will result in significant global benefits such as: (i) no net loss of major habitat blocks totaling 164,700 ha in the High Ranges of Western Ghats; (ii) improved management effectiveness of 8 existing PAs (37,100) and new PA covering unprotected areas (11,650) and at least 84,600 ha of high value biodiversity areas accorded higher protection status (iii) direct reduction in pressures from production sectors on biodiversity conservation; (iv) and maintaining stable populations of globally threatened species such as the Nilgiri tahr and Grizzled giant squirrel.

Objective:

The long-term goal to which the project will contribute is the sustainable governance of globally significant biological diversity of India by mainstreaming conservation considerations into production activities in the mountain landscapes, while also taking into account development imperatives, need for sustaining livelihoods and also addressing retrogressive factors including impacts of climate change. The immediate objective of the project is to conserve the biodiversity of High Ranges of the Western Ghats in peninsular India from existing and emerging threats through building an effective collaborative governance framework for multiple use management of mountain landscapes. This will be achieved through the following Outcomes and associated Outputs.

Outcome 1: Effective governance framework for multiple-use mountain landscape management in place.

Outcome 2: Multiple use mountain landscape management is applied securing the ecological integrity of HRML

Outcome 3. Strengthened capacities for community based sustainable use and management of wild resources

List of focus States/districts

State	District	Grama Panchayaths
Kerala	Thrissur	Athirapilly
	Ernakulam	Kuttampuzha
	Idukki	Adimali
		Mankulam
		Munnar
		Devikulam
		Chinnakanal
		Edamalakudy
		Maryoor
		Kanthalloor
		Vattavada

Overall Project Quality Rating (mark on the scale of 1 to 5 as per the following criteria): **3**

Exemplary (5) *****	High (4) ****	Satisfactory (3) ***	Poor (2) **	Inadequate (1) *
All outputs are rated High or Exemplary	All outputs are rated Satisfactory or higher, and at least two criteria are rated High or Exemplary	One output may be rated Poor, and all other criteria are rated Satisfactory or higher	Two outputs are rated Poor, and all other criteria are rated Satisfactory or higher	One output is rated Inadequate, or more than two criteria are rated Poor

Budget 2020	USD $ 1,100,000
Expenditure 2020	USD $ 819,317
Delivery %	74%

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ACRONYMS

1. BD- Biological Diversity
2. CD- Capacity Development
3. CWRDM- Centre for Water Resources Development and Management
4. DMO- Destination Management Organisation
5. DPR- Detailed Project Report
6. DTPC- District Tourism Promotion Council
7. EDC- Eco- development committee
8. FDA- Forest Development Agency
9. GEF- Global Environment Facility
10. GIF- Green Innovation Fund
11. GP- Grama Panchayath
12. GPS- Global Positioning System
13. HCV- High Conservation Value
14. HRML- High Range Mountain Landscape
15. HVBAs- High Value Biodiversity Area
16. ICFRE- Indian Council of Forestry Research and Education
17. IGEA- Investment Grade Energy Audit
18. IHRML- Indian High Range Mountain Landscape
19. KABANI- Kuttampuzha and Mankulam Panchayaths Technical agency
20. KILA- Kerala Institute of Local Administration
21. KSUM- Kerala Startup Mission
22. KVK- Krishi Vigyan Kendra
23. LEC Lab- Landscape Ecology and Conservation Lab
24. LSG- Local Self Government
25. LULC- Land Use and Land Cover
26. MCF- Material Collection Facility
27. MEE- Management Effectiveness Evaluation
28. METT- Management Effectiveness Tracking Tool
29. MGNREGS- Mahatma Gandhi National Rural Employment Guarantee Scheme
30. MOEFCC- Ministry of Environment, Forests and Climate Change
31. NGO- Non-government Organisation
32. NTFP- Non Timber Forest Produce

33. PA- Protected Area
34. REDD- Reducing Emissions from Deforestation and Forest Degradation
35. RET- Rare Endangered and Threatened
36. SACON- Salim Ali Centre for Ornithology and Natural History
37. SHG- Self-Help Group
38. UNDP- United Nations Development Programme
39. VSS- Van Samrakshana Samiti

1. Executive Summary

The executive summary is a concise brief on the progress towards the project outputs during the reporting period. The section also includes key implementation challenges, lessons learned and way forward. It is also suggested to include key financial information, such as expenditure for the reporting period, cumulative expenditure and a delivery rate against budget.
(Suggested length - 400 words maximum)

The project will develop an effective multiple-use management framework for conserving biodiversity in the mountain landscape of the high ranges, the Western Ghats, India. Also addressing the challenges posed by climate change, Global warming and associated climatological aberrations which should be integrated at multiple planning levels so as to address the social vulnerabilities and environmental challenges.

With revised implementation strategy 2018 in place, the project has undertaken a number of innovative interventions and has been on track to achieve the desired results. However, due

to the outbreak of COVID-19 pandemic, the implementation of the project has been stalled and the delivery of the outcomes shall be affected.

The progress against different outcomes has been highlighted below:

Outcome 1:
Review of existing sectoral planning and governance system in the landscape is being undertaken to identify gaps and devise strategies for mainstreaming biodiversity considerations across production sectors. Capacity gap assessment are being undertaken by Kerala Institute of Local Administration for relevant stakeholders across various parameters. Customized training and capacity building programmes will be developed for enhancing the capacities of select stakeholders on landscape- based approach and mainstreaming BD and sustainable NRM practices. The Annual Plans of the Local Self Government Institutions in the project landscape are also being developed with integration of biodiversity values and sustainable practices related to agriculture, water conservation, soil conservation and livelihoods. The population of key species – Nilgiri Tahr has seen a considerable increase as per the census 2020 conducted by the Kerala Forest and Wildlife Department. However, the population of Giant Grizzled Squirrel has declined due to various reasons including roadkills. Eco-restoration activities have been initiated within and outside the forest areas to conserve and protect the habitats and species, thereby the management effectiveness of Protected Areas and areas outside the Protected Areas.

Outcome 2:
As per the revised implementation strategy, the Protected Areas under the project landscape have been reduced from 8 to 6. The scores for Management Effectiveness Evaluation for these PAs have been revalidated and endorsed. Based on the initial discussions with the State Forest Department, several interventions have been undertaken for improving the management effectiveness of the protected areas such as Removal of exotic and invasive alien species in 118 hectares area, eco-restoration of degraded shola patches and degraded swamps, updation and implementation of specie-specific plans and capacity building of relevant stakeholders for synergized actions for conservation. Initiative on reviving traditional agricultural practices and seed conservation for achieving food self-reliance has been initiated. Baseline survey for 'Organic Mankulam', an initiative to shift the farmers in Mankulam Panchayath into organic farming has been completed

Outcome 3:
258 community members/ LSG representatives (90% women and 10% men) have been trained on sustainable natural resource use/ mainstreaming biodiversity activities. Sustainable livelihood strategy has been developed for the project landscape to reduce the dependency of forest dependent communities on the natural resources. The project is also supporting the State in implementation of Subiksha Keralam Scheme of the Govt of Kerala (USD 400 million) for enhancing food security in Kerala in the wake of the COVID-19 pandemic. The project would be supporting the State in implementation of the scheme at local level by

a.   Identifying fallow lands through the help of local ward and panchayath level committees

b.   Forming farmer groups for taking up cultivation in fallow lands

c.   Encouraging cultivation of traditional varieties of rice seed

d.   Reviving cultivation of millet varieties

In the reporting period, two project steering committee meetings were held (at state and national level) for review and approval of the Annual Work Plans and to track the progress of the project. Issues and concerns of the responsible agencies at the State level w.r.t implementation arrangements and flow of funds were addressed. Since, the government has enforced restrictions on physical meetings, the next round of meetings for the Steering Committees at the state and national level shall be conducted virtually through government approved video-conferencing platforms. The project staff and other responsible agencies have been allowed to conduct field visits and implement activities as per the agreed workplan following the guidelines issued by the Government for the unlock phase of COVID-19.

2. Project Background

The background should be a short introductory of the project. The situation analysis and the objective sections of the Project Document can be referred to for this section. Also include an up-to-date overview of changes in the context and situations. (Suggested length - maximum half a page)

High Range Mountain Landscape (HRML) in the Western Ghats mountains of peninsular India is a globally significant biodiversity region. Its key attributes are: a) high levels of endemism and biological diversity; b) Important Bird Area; c) presence of globally threatened species of fauna and flora; d) part of one of the five viable breeding centre of tiger in India; e) harbour the largest global population of Nilgiri tahr and a significant population of Grizzled Giant Squirrel (both threatened species); f) catchment of three major river systems of peninsular India; g) strong eco-cultural affinities; and h) support important economic sectors like cardamom, tea and tourism. At present, HRML is a complex mosaic of land uses where conservation, economic production and livelihood requirements assume equal primacy and profoundly influence each other. These contribute to competitive use of natural resources and affecting vital ecological processes. The rapidly altering developmental context, demographic contours, resource use configurations place a challenge for HRML's long term ecological sustainability and livelihood security. The existing planning and policy framework, as well as the institutional arrangements in HRML are inadequate to address biodiversity conservation from a landscape perspective. The project aims to put in place a collaborative governance framework for multiple-use management of HRML. The project will attempt a paradigm shift from current sector-based planning to an approach for integrated multiple-use management of mountain landscapes to deliver global environmental benefits. The project aims to achieve this through the following Outcomes: a) Effective governance

framework for multiple-use mountain landscape management in place; b) Multiple-use mountain landscape management is applied securing the ecological integrity of HRML; and c) Strengthened capacities for community based sustainable use and management of wild resources.The project region covers 2190 sq. km spread across three districts of Kerala viz. Idukki, Ernakulam and Thrissur in Kerala.

3. Project Performance and Results

3.1. Contribution towards Country Programme Outcome

CPD Output 3.2: Effective solutions developed at national and sub-national levels for sustainable management of natural resources and ecosystems, ozone depleting substances, chemicals and wastes.

Indicator(s): 3.2.1 Number of policies and programme promoting sustainable livelihoods and incorporating gender responsive strategies for natural resources and ecosystems management.	Baseline: 4	Target(s): 6	Achievement(s): Demonstrative actions being undertaken under the project to inform policy decisions

Description of output level/outcome level <u>results achieved</u> in 2020:

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. A few activities that have brought out women empowerment or gender mainstreaming are the below:
- 800 women days of employment has been created through MGNREGS and the activities were channelized towards biodiversity conservation and eco restoration outside the forest areas by the active participation of women
- Around 100 women have received training in developing eco-friendly alternatives to plastics and other non-biodegradables.
- Interventions such as beekeeping and fish farming in the project landscape was primarily by the women groups.
- Gender and health dimensions are specifically considered in promoting the traditional agriculture practices and production in tribal settlements
- It is important to note that existence of Kudumbashree (Mission of the State Government of Kerala) networks of women at the local level plays a significant role in ensuring smooth implementation of the project activities

Means of Verification Quarterly and annual progress reports by UNDP, Government stakeholders' (including relevant line departments and State Governments) annual reports, and media coverage and records.

3.2. Progress towards Project Results/Outputs

Project Outcome 1 : Effective governance framework for multiple-use mountain landscape management in place

Output 1.1: Capacities of Local Self Governments and community organizations developed to plan for sustainable resource use
Output 1.2: Sustainable resource use practices demonstrated for improved quality of life
Output 1.3: Enhanced products/services value chains developed for providing ecologically sustainable livelihoods options
Output 1.4: Community-based models developed for sustainable access and use of forest resources by local communities

Indicator(s)	Baseline	Target(s)	Achievement(s)
1.1 Landscape Level Land use Plan (LLLUP) developed adhering to multiple use management decisions	0	1	The State of Sector documents are currently being prepared in consultation with relevant government departments and line agencies for production sectors in the landscape – Tea, Cardamom, Agriculture, Forestry, Oil Palm and Tourism. 20% of the process has been completed in consultation with the government counterparts and other relevant key stakeholders. Elevation, Slope, LULC 2000-2010 of all GPs completed; LULC and Time series analysis with inventory on decadal Land Use Land Cover change from 2000-2020 including Ground Truthing of Mankulam GP completed; Validation of remaining 10 GPs in progress; Review meeting on progress of second deliverable held on 16th October 2020. Draft first report submitted in November based on field visits and image analysis. Landscape Level Land Use Plan is being developed to enable Grama Panchayaths, Plantations and Forest Department to adopt multiple use management in their planning process. Some of the preliminary activities towards

			developing a land use plan that have been carried out are:

Mapping of spatial distribution of sectors with underlying attributes for the project landscape:

Time series analysis (1990, 2000, 2010 and 2020) using Landsat ETM completed for 11 GPs for 2000 and 2010

Completed spatial mapping of Land Use Land Cover using RESOURCESAT data for the 2200 Sq Km landscape (2020 data)

Inventory on decadal Land Use Land Cover change for 11 GPs based on 2000 and 2010 data generated

Digital Elevation Model generated

Ground truthing on the classification has been completed for 5 Grama Panchayaths and is ongoing for rest of the Panchayaths

State of sector document for production sectors in the landscape i.e. tea, coffee, cardamom, oil palm, forest plantations and tourism are being prepared; Draft state of sector for tourism sector has been prepared

Revision of Forest Management Plans (MP)and Working Plans (WP) with landscape approach is in progress; Revised draft Management Plans for Anamudishola National Park and |

			Pampadumshola National Park were completed. The Working Plans of Munnar Forest Division and Marayoor Forest Division is in progress
1.2 Sector-specific biodiversity-plans compatible with LLLUP developed leading to effective integration of biodiversity considerations into production practices	0	At least six Sector Plans (Forestry, Tourism, Tea, Cardamom, Agriculture and Tribal Development) and Biodiversity Conservation Plans (5) in place	Sector specific plans compatible with the Landscape Level Management Strategy (LLMS) is being developed under the broad heads of Grama Panchayaths, Plantations and Forest Area. 1. Grama Panchayaths: - The Annual Plans 2021-22 for 11 Grama Panchayaths developed incorporating Green components. This has been undertaken through workshops and handholding of panchayath officials and elected representatives. 250 persons (128 panchayath officials and 122 elected representatives) have been trained as part of the same - A guideline for developing Green Plans for Panchayaths has been published in vernacular language As part of developing a sustainable agriculture plan for the landscape, demonstration activities for one agriculture season has been carried out for promoting traditional agriculture practices and conservation of traditional seeds, organic agriculture promoted in an entire panchayath, organic cardamom cultivation, lemongrass cultivation, sustainable sugarcane cultivation, medicinal plant cultivation and vegetable cultivation - Tourism sectoral plan – Tourism department level committee formed based on consultations with State

			Government; Draft framework developed; - State of Sector document for Tourism has been prepared with recommendations on the legal & operational powers of the panchayaths on the tourism sector; a handbook for panchayaths being developed based on these recommendations - Draft Responsible Tourism protocols developed for accommodation units, LSGIs, transportation providers, Tourism destinations, Tourists in the project landscape; Stakeholder consultations being undertaken - Detailed Project Reports prepared for solid waste management in 7 Grama Panchayaths – Munnar, Athirappilly, Kuttampuzha, Mankulam, Chinnakanal, Marayoor & Kanthalloor - Draft framework prepared for a sectoral plan for a decentralised waste management system in the landscape 2. Plantations: - Preliminary recommendations for Tea, Coffee, Cardamom, Oil Palm and Forest plantations developed as part of the preparation of State of Sector documents. Field validation in process - Draft State of Sector report on plantation (Tea, Coffee, Cardamom, Oil Palm and Forest plantations) submitted for review - Energy efficiency plan developed for 2 types of tea factories – CTC and Orthodox to reduce dependency on fuel wood for energy needs;

			Recommendations in energy savings in both thermal (blocking air leakages, optimising humidifier, cleaning of tubes and ducts, bio mass gasification) and electrical energy (lightings, motors, solar power plant, improving power factor) validated 3. Forest Areas: - The management and working plans of wildlife and territorial divisions of forest department are incorporating landscape approach to conservation inside and outside PA respectively. - Review and redrafting of Management Plans and Working Plans with landscape approach & based on National Working Plan Code – Drafted 2 Management Plans for Pampadumshola and Anamudishola national park. Munnar and Marayoor Forest Division working plan is in progress Biodiversity Conservation Plans targeted include the below: - Conservation plan for shola patches within tea gardens - Conservation plan for Biodiversity Heritage Site in Mankulam - Inclusion of HVBA conservation within State Biodiversity Strategies and Action Plan - Conservation plan for revival of water channels for migratory birds in Thattekad Bird Sanctuary
1.3 Effective and functioning cross-sectoral, multi-stakeholder institution	0	1	Proposal has been submitted to the Government of Kerala on the formation of –

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(including conservation, livelihood and production) established.			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 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. Another proposal has been submitted to the Government of Kerala to institutionalise 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.
1.4 Number of key policy and management framework/ decisions adopted at local and state level related to sustainable mountain landscape management	0	7 (Wildlife Protection Act, Forest Conservation Act, Environment Protection Act, Forest Rights Act, Cardamom Rules, KDH Act, Land Assignment Act, Commodities Act), National Working Plan Code and other Management decisions	Management Plan Revision in accordance with Wildlife Protection Act and the guidelines of Working Plan Code for the conservation of the Endangered, Threated and Vulnerable species. Drafted 2 Management Plans and Revision of 2 Working plan is ongoing.
1.5 Improvement in Systemic Level Indicators of Capacity Development Scorecard (Annex 19)	1. Capacity to conceptualize and formulate policies,	1. Capacity to conceptualize and formulate policies, legislations, strategies, programme 80%	This has been conducted for the Panchayathi Raj Institutions with the latest UNDP Capacity Building score card. Capacities for

legislations, strategies, programme 40% 2. Capacity to implement policies, legislation, strategies and programmes 33% 3. Capacity to engage and build consensus among all stakeholders 15% 4. Capacity to mobilize information and knowledge 35% 5. Capacity to monitor, evaluate and report and learn at the sector and project levels. 30%	2. Capacity to implement policies, legislation, strategies and programmes 80% 3. Capacity to engage and build consensus among all stakeholders 15% 80% 4. Capacity to mobilize information and knowledge 35% 80% 5. Capacity to monitor, evaluate and report and learn at the sector and project levels. 30% 80%	Management and Implementation is 7%; Capacities for Strategy, Policy and Legislation development is 7%; Capacities for engagement is 40%; Capacities to Generate, Access and Use Information and Knowledge is 21%; Capacities to monitor and evaluate is 18%;

Description of project output level results achieved in 2020:

Output 1.1-Capacities of Local Self Governments and community organizations developed to plan for sustainable resource use is achieved through various activities including community level training programmes for Sustainable Tourism Initiatives at Kuttampuzha GP, rapid socio-economic assessment undertaken in GP's to understand the impact of Covid 19 and subsequent stakeholder interactions for supporting livelihood for the communities. Further to this assessment, various training programmes were held for vulnerable indigenous communities & farming groups on conservation-based agriculture methods, conservation of indigenous seeds, millets cultivation and importance of food crops cultivation.

 Training on passion fruit value chain interventions, conservation & propagation of Medicinal plants, training on traditional agriculture practices & seed conservation, Subhiksha Keralam initiative (initiative of Kerala govt to ensure food self-sufficiency and security in the context of Covid-19) were other capacity enhancement programmes for the farming community conducted in convergence with various government departments through LSG's. Other than these, consultations on implementation of comprehensive waste management mechanism at various GP's, were held under this project output to strengthen the waste management system at LSG level.

Some of the other interesting initiatives undertaken includes Green Appraisal Tool along with guidelines were developed to evaluate impact of panchayath plan/ project on Biodiversity conservation, sustainable livelihoods and disaster management, draft report on the Creation of Socio-Economic Data Base for Concurrent Evaluation for the project landscape was submitted by KILA under this project output, CWRDM had submitted draft final report on 'Hydrological investigations in HRML highlighting detailed water balance study with scientific modelling of available surface water, ground water, water demand, water balance and water quality analysis, a technical evaluation was also conducted by SACON during December 2020.

Output 1.2: *Sustainable resource use practices demonstrated for improved quality of life*
Under this output, the target on Waste Management outside forest areas is achieved through the implementation of "Green Munnar" Project (Dumpsite clearance, treatment of bio & non-bio waste, campaigns for waste reduction, Septage treatment

and Nallathanni river rejuvenation) initiated at Munnar GP. An action based research study on processing of bio waste has been initiated by IRTC (technical agency) by setting up an experimental facility in Kallar, Munnar near the dump site using WINRO composting Technology.

The Waste Management interventions in Athirapilly and other GPs in the landscape is achieved through installing   a Material Collection Facility for non-bio waste at Athirappilly. This has been constructed by the Panchayth with technical assistance from the UNDP IHRML project. The MCF was constructed as a co-financing component by the Gram Panchayath by contributing an amount of Rs.11.5 Lakhs. Door to door collection of waste has also been started as part of source level segregation of bio-waste and waste reduction. Detailed BOQ has been prepared for Aroormuzhi community hall node. This node is being planned as a green literacy center which will capture the themes of Reduce-Reuse-Recycle principle for solid waste. DPR for solid waste management for the Panchayath is also finalized and submitted for the approval. At Kuttampuzha, activities for strengthening the waste management system has initiated under the project. The DPR for solid waste management for the Mankulam Panchayath has also been finalized and submitted for the approval.

Under the 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, CWRDM refunded the unspent budget to UNDP CO due to limitations in field visits and further implementation. Therefore, this activity is put on hold and the target is not made any significant achievement in this year.

For action based project to make Mankulam a carbon neutral Panchayat, terms of reference has been prepared and preliminary consultations were held for developing a consortium of scientific and community experts for the implementation of Carbon Neutral Panchayath. The detailed project report is already submitted.

Output 1.3:*Enhanced products/services value chains developed for providing ecologically sustainable livelihoods options*

Under this output, the target on Sustainable livelihood practices for Tribal communities NTFP (including branding & marketing of Vamasree shops & products), Bamboo & Reed Agri and allied sectors is met by Building roadmap and assessment of bamboo/ reed in Project landscape through stakeholder consultations, Study on Market Mapping & Value Chain analysis of Vegetables in convergence with agriculture department & KAU, Initiated the process for the design of Ecoshop under Malayattoor FDA, Medicinal Plants for livelihood generation for farmers at Marayoor, Kanthaloor and Adimali GP, lemon grass value chain intervention etc. Various interventions on Sustainable livelihood practices around biodiversity including Propagation of traditional agriculture practices and seed conservation assistance were provided to forest dependent and small & marginal farmers. Other notable results achieved includes Passion fruit value chain intervention under Sustainable livelihood practices for farming community and supporting institutions, Green Innovation Fund (GIF) under Innovation and enterprise support around ecologically sustainable livelihoods options etc.

Overall Output Status (mark the output on the scale of 1 to 5 as per the following criteria): **3**				
Exemplary (5) *****	High (4) ****	Satisfactory (3) ***	Poor (2) **	Inadequate (1) *
The project is expected to over-achieve targeted outputs and/or expected levels of quality, and there is evidence that	The project is expected to over-achieve targeted outputs and/or expected levels of quality	The project is expected to achieve targeted outputs with expected levels of quality	The project is expected to partially achieve targeted outputs, with less than	Project outputs will likely not be achieved and/or are not likely to be effective in supporting the achievement of targeted outcomes

outputs are contributing to targeted outcomes			expected levels of quality	

Means of Verification:
- Landscape Level Land Use Plan endorsed by Grama Panchayaths, Plantation Sector stakeholders and Forest Department
- Sectoral plans
- Annual Plans of Panchayaths adhering to the Green appraisal tool.
- Forest management Plans & Working Plans adopting Landscape approach
- Biodiversity Conservation Plans
- Endorsement by State Level Steering Committee
- Quarterly and annual progress reports by UNDP
- Government stakeholders' (including relevant line departments and State Governments) annual reports
- media coverage and records.

Project Outcome 2: Multiple use mountain landscape management is applied securing the ecological integrity of IHRML

Output 2.1: Capacities of conservation and production sector personnel developed for applying landscape approaches into sectoral planning and operations

Output 2.2: Mainstreaming of bio-diversity concerns in key production sectors demonstrated

Output 2.3: Best practices documented and disseminated for improving decision making on sustainable resource management

Indicator(s):	Baseline:	Target(s):	Achievement(s):
2.1 Improved management effectiveness PAs as measured and recorded by Management Effectiveness Tracking Tool (METT) (Note: endorsed change to reduce number of PA sites)	168 out of 300 (Baselines need to be re-established as PA sites are shifting)	Increase in METT scores by 10 percent by year 3 By 20 percent by year 5	METT assessment for PAs has been done during May 2020. The scores are given below Eravikulam National Park - 85 Chinnar Wildlife Sanctuary - 81 Pampadumshola National Pak - 81 Anamudi Shola National Park - 80 Kurinjimala Sanctuary - 79 Thattekad Bird Sanctuary - 78 484 out of 594 Next assessment will be done in December 2021
2.2 Proportion of degraded habitats rehabilitated within the PA system (NEW Indicator approved; it was 'Increase in area under PA system')	To be established - baseline degraded areas to be measured for revised indicator (NEW baseline for revised indicator)	30% increase (NEW target for revised indicator, TBC once baseline established)	
2.3 Number of new demonstration programmes/ featuring biodiversity friendly	0	20	• Project on reviving traditional agricultural practices and seed conservation for achieving food self-reliance was initiated

production practices (e.g. curing units/ energy efficiency options/ farming practices) adopted			reaching out to 1160 community members, across the project landscape in 345 acres. • A biodiversity plot managed by a tribal women's group was established in Adimali Grama Panchayat to revive and conserve the different tubers, millets and vegetable varieties. • Promotion of Mankulam Panchayath as an organic panchayath - Baseline survey of completed, currently certification process for 1000 farmers and development of 100 model farmers in progress • Pilot project on safe to eat/ organic cultivation of Cardamom is initiated with 17 farmers in Chinnakanal with focus on capacity building & demonstrations in Good Agricultural Practices (GAP) • Demonstration of paddy cultivation in degraded land in Marayoor, Kanthalloor, Adimali & Mankulam grama panchayats • Demonstration of Sustainable Sugarcane Initiative in Marayoor-Kanthalloor – 8 model plots set up in Marayoor and Kanthalloor - targeting reducing water usage, usage of inputs by 20% and increase in productivity by 15% • Setting up of homestead medicinal gardens was carried out with 1899 families across four Grama Panchayats • Green Innovation Fund launched in partnership with Kerala Startup Mission to promote technology innovation in the space of

			biodiversity conservation; 11 startups selected to work in the landscape addressing biodiversity challenges in the following areas • Sustainable Agriculture • Waste Management, alternative materials, and sanitation • Clean Water Sustainable Tourism, biodiversity & wildlife and disaster management
2.4 Areas of forest fragments/ HVBAs in tea gardens inventorised and secured (Note: this indicator was missing from results framework and has been re-added in 2019 based on ProDoc)	0	4,000 ha	GPS based mapping of shola forests inside and adjoining tea estate were mapped and categorized based on present ownership status. There are 331 patches of remnant shola patches with an extent of 5608 ha. The taxonomic inventory of selected shola patches also done for flora and fauna. Strategy for securing the remnant shola patches need to be developed with stakeholder consultation. Specific plan for securing Shola forests is being prepared. Individual proposals are being prepared for each shola patch by the Munnar Forest Division.
2.5 % reduction in fuel wood consumption for processing in tea and cardamom using energy efficient technology and improved design (indicator, baselines and targets will have to be re-visited once the Sector Plans are prepared by mid-term) (Note: this indicator was missing from results framework and has been re-added in 2019 based on ProDoc)	Baseline to be established in the first year	10% decline over baseline usage	Investment Grade Energy Audit has been done at two tea factories of KDHP for assessing the baseline. Thermal Energy in the form of firewood hold 94 % of the total energy consumed in CTC factory. This quantifies to thermal energy (biomass) of 22.92 kWh/kg of CTC production Thermal Energy in the form of firewood hold 97 % of the total energy consumed in Orthodox tea factory. This quantifies to thermal energy (biomass) of 26.14 kWh/kg of production of Orthodox production

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Description of project output level <u>results achieved</u> in 2020:
Output 2.1:Capacities of conservation and production sector personnel developed for applying landscape approaches in to sectoral planning and operations
Geospatial mapping of the landscape using high resolution satellite imagery and ground information
Inventories of high value biodiversity areas & assessment of flora and fauna of selected sholas inside tea estate needed to be completed and with reference to this, SACON has submitted Mapping of Spatial distribution of sectors with following attributes; which includes Elevation, Slope, LULC 2000-2010 of all GPs completed; LULC and Time series analysis with inventory on decadal Land Use Land Cover change from 2000-2020 including Ground Truthing of Mankulam GP completed; Validation of remaining 10 GPs is in progress. Other than this, State of Sector document with sectoral biodiversity plans is been developed for an acreage of approx. 40,000 hectares falling under Tea, Coffee, Cardamom, Oil palm and Forest plantation for mainstreaming biodiversity considerations into the policies and practices of sectoral stakeholders.

Output 2.2: Mainstreaming of biodiversity concerns in key production sectors demonstrated
Energy Audit: For establishing the baseline, an Investment Grade Energy Audit (IGEA) is being carried out in two factories viz a viz orthodox and CTC facilities in the landscape. The output of the IGEA will be to develop a strategy towards reducing energy usage in tea factories. The draft IGEA report is developed highlighting the baseline of electrical and thermal energy consumption of two tea factories in the landscape. The draft report provides energy conservation measures and recommendations in withering, drying and grading processes as well as in electrical and lighting systems. The draft second progress report on preliminary assessment report submitted on 1st September 2020. A technical review meeting on the findings was organized on 9th September 2020 for quality check. The report will be published in Q3*
Second progress report based on preliminary field visits submitted. Third progress report submitted on Investment Grade Energy Audit including points emerged during draft report discussion.

Sustainable Tourism Initiatives:

- High value low impact tourism models at Kuttampuzha and Mankulam Panchayaths

Technical agency (KABANI) completed resource mapping in Kuttampuzha and Mankulam Panchayaths
- Organized 2 Volunteer training and resource mapping workshop in Kuttampuzha and 1 in Mankulam (26 participants)
- Orientation workshop for Haritha Karma Sena members at Kuttampuzha (11 participants) on 22 October 2020
- Documented the complete list of potential service providers and key stakeholders in the two grama panchayaths
- Identified and listed 27 home stay providers, 3 tented accommodations, 48 Guides, 30 Transporters, 18 Volunteers each in Kuttampuzha and 8 home stay providers, 3 tented accommodation, 2 women Transporters, 9 Volunteers in Mankulam
- Identified Trekking/Hiking routes outside forest - 5 in Kuttampuzha and 5 in Mankulam - Detailed route map and package (stories etc) documented - Vellaramkuth walk, Bhoodhathankettu trekking(forest department), Kuttampuzha to mamalakandam
(cycling path).trekking, hiking, Injathotti thookkupalam village visit (river crossing farm visit), Small walk (800mtr) to Knacheri temple to explore the forest and trekking path, Kallelimedu (river crossing, trekking,)(FD), Kuttampuzha to Vadattupara forest trekking and river crossing (FD)
- Mankulam: Trekking to thalumkandam(Homestay, nature walk, tented accommodation), Tiger cave trekking

- Identified Service providers and organising trainings to be conducted in January 2021- Identification of 20 home stay providers, 10 tented accommodation, 10 Guides, 10 Transporters in Kuttampuzha Meeting with Director, KADS(technical agency for developing organic mankulam) Thodupuzha on 8ᵗʰ Dec and decided on plan of collaboration with organic farmers for developing farm tourism packages at Mankulam
- Meeting with Dr. Sugathan, Ornithologist, Thattekkadu Birds Sanctuary on 8ᵗʰ Dec. Discussed on the training through ornithology course offered in collaboration with UNDP IHRML project to ten community members from kuttampuzha and Mankulam; Scope of Salim Ali's Old House building into a destination point (similar to art gallery); Scope of developing a biodiversity park in
Kuttampuzha (in the forest land on the way to Pooyamkutty)
- Meeting with Agriculture Officer – 17ᵗʰ Dec - Collected few more contact details of farmers. There are three-four major paddy fields in locations such as Mamalakandam,
Vadattuppara, Kuttiyamchal etc. which can be included in the village walk package
- Consultation meetings done with
Kudumbashree/Haritha Karma Sena / Farm tourism providers/ the Forest DepartmentMankulam DFO & Range Officer / GP secretary-Kuttampuzha and Mankualm and other relevant stakeholders in 2 panchayaths to discuss on the sustainablility plan and progress of the project
- Module developed for Capacity building programmes for service providers

- Responsible Protocol Development and Demonstration
- Preparation of responsible tourism protocol for mountain landscape ongoing

Green Islands: Green islands aim at developing biodiversity demonstration plots and ensure community participation for biodiversity conservation. It is done in convergence with the MGNREGS workforce. Planting completed 12 plots across 7 Panchayaths have been identified – Marayoor, Kanthalloor, Chinnakanal, Mankulam, Adimali, Kuttampuzha and Athirapilly. 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

Updating State Biodiversity Strategies and Action Plan: Terms of Reference prepared for approval and preliminary consultations held for developing a participatory approach for demonstrating financial solutions in biodiversity conservation and the detailed proposal submitted along with detailed strategy for resource mobilisation.

Overall Output Status (mark the output on the scale of 1 to 5 as per the following criteria): **3**

Exemplary (5) *****	High (4) ****	Satisfactory (3) ***	Poor (2) **	Inadequate (1) *
The project is expected to over-achieve targeted outputs and/or expected levels of quality, and there is evidence that outputs are contributing to targeted outcomes	The project is expected to over-achieve targeted outputs and/or expected levels of quality	The project is expected to achieve targeted outputs with expected levels of quality	The project is expected to partially achieve targeted outputs, with less than expected levels of quality	Project outputs will likely not be achieved and/or are not likely to be effective in supporting the achievement of targeted outcomes

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Means of Verification:
- Progress reports submitted by the technical agencies.
- Investment Grade Energy Audit (IGEA) after demonstration for energy efficiency measures
- Quarterly and annual progress reports by UNDP
- Government stakeholders' (including relevant line departments and State Governments) annual reports
- Media coverage and records.

Project Outcome 3: Strengthened community capacities for community based sustainable use and management of wild resources

Output 3.1: Landscape level management plans and sustainable resource management systems in place

Output 3.2. Institutional platforms of multiple stakeholders evolved and strengthened at appropriate levels for planning and reviewing sustainable resource use

Output 3.3: Management effectiveness of designated biodiversity rich ecosystems are strengthened to address existing and emerging challenges to ecosystem conservation and services

Output 3.4 Rare Endangered and Threatened (RET) ecosystems and endemic species are secured through improved conservation measures

Indicator(s)	Baseline	Target(s)	Achievement(s)
3.1 Number of development plans of PRIs/ CBOs that incorporate bio-diversity friendly practices	0	11	The Annual Plans 2021-22 for 11 Grama Panchayaths are being developed as Green Plans. This is done through workshops and handholding of panchayath officials and elected representatives. 250 persons (128 panchayath officials and 122 elected representatives) have been trained as part of the same
3.2 Number of community representatives/ PRIs trained in biodiversity mainstreaming activities	0	500	Total achieved as of December 2020 = 529 • 40 tribal women trained on commercial beekeeping in Kuttampuzha • Enrolled 5 candidates from forest depended community for doing course on Advanced wood working at IWST, Bangalore • 15 VSS/ EDC members conducted exposure visit to Keystone Foundation, Kotagiri for sustainable harvesting & processing of NTFP • 111 women entrepreneurs trained in waste collection, segregation at source and management of waste collected in 6 Grama Panchayaths • 245 members trained for developing a community-based tourism model focusing on biodiversity conservation and local economic development initiated in Kuttampuzha and Mankulam; Trainings provided to Home Stay owners, guides, and taxi drivers in Kuttampuzha

			• 250 members trained in greening PRI annual plans; Representatives and officials of 11 GPs and 4 Block panchayath are being trained for developing green annual plans. • As on December 2020; three trainings including one Training of Trainers were conducted and 250 people (128 panchayath officials and 122 elected representatives) were trained
3.3 Number of new micro-enterprises at individual/SHG/ CBO/ and other local institution levels based sustainable resource use	0	Target to be defined after design of the micro-plans	Progress towards starting new enterprises in the landscape: • **Orientation workshop for women collectives in Bamboo & reed** completed and skill mapping for community members in process. Facilitated market linkages for Bamboo artisans who are from tribal communities in the landscape • **Passion fruit value chain activities** was initiated with community mobilization and production side activities. Over 7500 passion fruit saplings were distributed to community members across 5 grama panchayats. Initial discussion with farmer collective for value addition completed in Mankulam • **Athirappilly Tribal Valley Agricultural Project (ATVAP)**: In convergence with the agriculture department for Athirappilly Tribal Valley Agricultural Project (project cost of INR 100 Mn project over three years) the activity envisages to improve the livelihood of tribal farmers through the adoption of better 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 Athirapilly. As part of this initiative, revival of the community organization - Sholayar Girijan Cooperative Society was done, Society board was reconstituted by inducting new office bearers and the Society started functioning. Capacity building for 5-member team on digital topographic mapping completed.

			• **Lemon grass value chain activities** initiated with production side intervention support to 220 tribal farmers and orientation programme for stakeholder, currently developing market linkages for community members in lemongrass.
			• Initiated baseline under Organic Mankulam project to develop certified organic production in a value chain mode to link growers with consumers. The activities initiated include the value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing, packaging, marketing and brand building initiative and converting the Mankulam village into organic village. Under Organic Mankulam project, farmer selection for certification in progress. It is planned to reach out to 1000 farmers under Organic Mankulam project. During the financial year 2020-21, 88155 Kg of Cocoa and 26,280 kgs of Cocoa till now during the financial year 2021-22 was marketed by the implementing partner.
			• **Orchidarium and Orchid Interpretation Centre** Near Eravikulam National Park has been set up and opened to public; the objective is to promote conservation of orchids in Western Ghats and as a livelihood option for tribal communities. The documentation of existing diversity of orchids was carried out and 55 species of Orchids have been identified based on the taxonomic inventory conducted and out of which 14 are strictly restricted (highly endemic) to western ghats.
			• **Native fish based micro enterprise in Kuttampuzha & Athirappilly:** Captive breeding technology of brood of a native species developed. Around 3500 juvenile seeds of Systomus sarana was ranched at Idamalayar reservoir for enhancing reservoir fish production which will help improve the livelihood of tribal

			communities who are residing at the bank of Idamalayar reservoir. • **Homestead Medicinal Plant gardens:** setting of homestead medicinal gardens were initiated with 1899 families. • Based on the model Ecoshop design concept and 3D design which shared with forest officials in Malayattoor, a detailed estimate and drawings are being prepared and currently planning to develop the model Ecoshop through community institution. As a part of strengthening, **Chilla market (tribal community market) Pilot run** of the automation of Chilla market was carried out before full scale migration. Branding exercise were carried out and logo concept was shared with forest department officials.
3.4 % reduction in biomass consumption in lemon grass enterprises through adoption of improved technology.	494,361 kg/ year	10 percent reduction by 3rd year and 20 percent by project end.	Improved technology identified for reducing biomass consumption.
3.5 Appropriate model agreement between different agencies on the effective implementation of FRA as evidence through sustainable use and protection of biodiversity in Edamalakudy Panchayat	0	1	Training completed on FRA Implementation process for 25 Forest Department officials and VSS members in November 2020 Because of restrictions in movement to the Edamalakudy Panchayat on account of COVID-19, this activity was not taken up. This will be taken up only after COVID-19 related situation eases out. Since the area is out of mobile network coverage, online interactions cannot be taken up.

Description of project output level results achieved in 2020:

Output 3.1: Landscape level management plans and sustainable resource management systems in place

● **Improved Protected Area Management**:

  ■ SACON has started mapping of extent of original grassland in the project landscape based on time-series Distribution of exotic tree species inside Marayoor Sandalwood reserve has been mapped.

  ■ Shola ecosystems outside the PAs and inside the tea estate (Munnar Forest Range) has been mapped using precision GPS. The total extent of shola patches mapped is 5600 ha with nearly 331 patches. The taxonomic inventory of shola species is in progress.

- The local movement paths/ elephant corridor and elephant crossing areas across the National Highway has been mapped for developing the conservation strategy.

- Kerala Forests and Wildlife Department is in the process of developing proposal for submitting the same to National Highway Authority for developing alternatives like constructions of ramps/sloppy structures.

- The sites for establishing sensor for alerting elephant entry into settlement area has been identified. Proposals were received from few of the agencies to install sensors t these locations.

- **Protection of sandal wood forests through improved technologies (establishing digital fences in selected priority areas)**: Initiated discussion with few agencies like IWST (ICFRE) and their technologies were reviewed for selecting Suitable techniques for sandalwood protection. Few agencies visited the Sandalwood Reserve for explaining the technologies.

Output 3.2. : Institutional platforms of multiple stakeholders evolved and strengthened at appropriate levels for planning and reviewing sustainable resource use
- **Community based bird conservation at Thattekad and adjoining areas Conducting certified course on ornithology and birding for tribal youth**: Basic equipment for birding course purchased. Course material reviewed by experts, suggestions incorporated, and revised material prepared. Translation to local language ongoing. Procedures were initiated for the feasibility of getting recognition of the training courses with institution/ university.
- **Strengthening of Chilla market through automation of existing market system- Establishing goods transportation facilities for tribal NTFPs and Agriculture produces from tribal settlements**: Agreement with Kerala Start up Mission made. Potential technical agencies for automation of Chilla Market shortlisted and the selection was done, post which Online meeting with startups was conducted and Final shortlisting of startups for automation of Chilla Market was also completed.

Output 3.3: Management effectiveness of designated biodiversity rich ecosystems are strengthened to address existing and emerging challenges to ecosystem conservation and services
- **Review of Management Plan guidelines:** The management Plans of two Protected Areas and Working plan of One Territorial Forest Division has been completed and drafted the new Management Plan and Working Plan (with National Working Plan Code) in a landscape approach. The review and drafting of Management Plan of Chinnar Wildlife Sanctuary and Marayoor Sandal Forest Divison is in progress. The species specific plan for managing the exotic invasive species in the landscape is prepared and has been incorporated in the Management and Working Plans of the respective Forest/Wildlife Division.
- **Review of State Forest Policy:** A core team has been formed for facilitating the review of Kerala State Forest Policy. The gaps in the existing State Forest Policy has been identified and based on that a draft workplan has been prepared. The same has been presented before the CCF Council by the State Nodal Officer.
- **Review and validation of METT and MEE scores of PAs within the project landscape to identify gaps**: The METT scores for the six PAs (Eravikulam National Park, Anamudishola National Park, Pambadumshola National Park, Chinnar Wildlife Sanctuary, Kurinjimala Sanctuary and Thattekkad Bird Sanctuary) has been calculated and baseline established Completed review and validation of METT scores in all PAs in the project landscape and identified the gaps. The latest Management Effectiveness Evaluation (MEE) scores identify 3 of the PA s, Chinnar (84.17%), Pambadum Shola (70.83%) and Anaimudi Shola (66.67%) in the landscape, in the 'very good', 'good', and 'good' category respectively. Management Effectiveness Tracking Tool (METT) scores for 6 PAs has been generated and baseline established as below Eravikulam National Park - 85 Chinnar Wildlife Sanctuary - 81 Pampadumshola National Pak - 81 Anamudi Shola National Park - 80 Kurinjimala Sanctuary - 79 Thattekad Bird Sanctuary - 78 Re-established baseline - 484 out of 594

- **Habitat Improvement – Strategies and Implementation**: Road kills, exotic invasion, forest fire and biotic pressure are the major identified threats inside the forested areas. Different consultations meetings were conducted at ground level forests staffs for identifying the threats. Expert consultations were made to address these threats. To address the road kills of arboreal animals tree ladders/canopy bridges were developed inside Chinnar Wildlife Sanctuary. Monitoring of road kill incidents inside the Sanctuary is continuing. Mapped the locations of issues like wildlife cross, waste dumping, landslide areas inside the Chinnar Wildlife Sanctuary for anchoring the signages Developed guidelines and strategy for standardizing the signages. Drafted various signages and awareness boards along the road passing through the Chinnar Wildlife Sanctuary. Integrated Fire management Plan (draft) has been developed to reduce the forest fire incidents. To address the road kills and giving awareness to the public 14 signages were installed along the State Highway at Chinnar Wildlife Sanctuary. At 8 locations canopy bridges were constructed and maintained. A GIS cell for improving the forest management is established at Vazhachal Forest Division.

- **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 within PAs and other degraded areas including improvement iof Nilgiri Tahr habitat in Meesappulimala**: Total extent of exotic invaded areas in Pampadumshola, Anamudishola, Kurinjimala Sanctuary and inside the ranges of Munnar Forest Division has been assessed. The total extent of degraded areas is 1604 ha. Removal of exotic trees from 118 ha has been initiated. The restoration includes planting of shola species, Strobilanthes kunthiana (Neelakurinji) and high-altitude grass species. The strategies for restoration of riparian species were prepared by expert consultation. Piloting of removal exotics and restoration of 118 ha montane shola grassland ecosystems in the landscape is an ongoing activity.

- **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** : The strategies for restoration of riparian species were prepared by expert consultation. Nursery for riparian species established at Vazhachal. Detailed mapping of potential areas for restoration has been done and site specific plans were developed. The total possible area for planting, number of species required for planting and modes of stabilization techniques etc were decided. Consultative meeting with stakeholders were conducted during the months of November and December 2020. Training to VSS members is given during the month of December 2020. Initiated developing riparian species nursery at Athirappilly.

- **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**: Planting of Vetiver plant for soil stabilization and conservation in three locations such as Adichilthottil, Perumbara and Arekkappu tribal settlements is initiated. Around 5000 Vetiver plant species (Ramacham) has been planted as a step towards soil stabilization. It is done as part of the Athirappilly Tribal Valley Agricultural Project and MGNREGS

- **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 cofinancing)**: The local movement paths/ elephant corridor and elephant crossing areas across the National Highway has been mapped for developing the conservation strategy. Kerala Forests and Wildlife Department is in the process of developing proposal for submitting the same to National Highway Authority for developing alternates like constructions of ramps/sloppy structures. The sites for establishing sensor for alerting elephant entry into settlement area has been identified. Consultation were made with few agencies to demonstrate the sensor techniques. The agency visited the locations and mapped the area.

- **Facilitating the preparation of comprehensive plan for protecting the Anayirangal elephant ecosystems in Chinnakkanal**: The local movement paths and elephant corridor has been mapped for developing the conservation strategy. The revised proposal has been submitted to the Kerala Forests and Wildlife Department, incorporating suggestions from Chief Conservator of Forest, High Range Circle.

Output 3.4: *Rare Endangered and Threatened (RET) ecosystems and endemic species are secured through improved*	

- **Establishment of nurseries with micro- propagation facility for RET species at Devikulam**: Few shola species were identified, and seeds were collected and kept inside nurseries for germination. Experiments on various propagation techniques for shola species is ongoing.
- **Establishment of centralised grassland/shola/ nursery at Devikulam & Pampadumshola**: Nursery for high altitude mountain grassland and some of the shola species were established at Devikulam. Total number of shola species is 24 with 35,000 saplings. Mother beds for grassland species (2 species) is also established at Devikulam.
- **Riparian species at Vazhachal:** Riparian species nursery for 5 species established. The total number of seedlings is 4015.Initaited establishment of riparian species nursery at Athirapilly.

Overall Output Status (mark the output on the scale of 1 to 5 as per the following criteria): **3**

Exemplary (5) *****	High (4) ****	Satisfactory (3) ***	Poor (2) **	Inadequate (1) *
The project is expected to over-achieve targeted outputs and/or expected levels of quality, and there is evidence that outputs are contributing to targeted outcomes	The project is expected to over-achieve targeted outputs and/or expected levels of quality	The project is expected to achieve targeted outputs with expected levels of quality	The project is expected to partially achieve targeted outputs, with less than expected levels of quality	Project outputs will likely not be achieved and/or are not likely to be effective in supporting the achievement of targeted outcomes

Means of Verification:
- Verification of 2021-22 annual plans using green methodology developed by KILA
- Letter of endorsement by Grama Panchayaths/ Forest Department
- Progress report of partner agencies
- Model Agreement Document between different agencies on the effective implementation of FRA
- Investment Grade Energy Audit (IGEA) after demonstration for energy efficiency measures
- Progress Reports submitted by Technical agencies.
- Quarterly and annual progress reports by UNDP
- Government stakeholders' (including relevant line departments and State Governments) annual reports
- Media coverage and records.

4. Project Risks and Issues

This section identifies and analyses project risks and issues that:
1) had an impact on project deliverables[1] (quality, schedule, etc.) During the reporting period, or
2) were newly identified during the reporting period and are being addressed by the project (in the case of risks, "addressed" means to mitigate their effects or decrease the likelihood of impact, and in the case of issues, how to resolve them).

Brief overall narrative of project risks and issues*:*
The project is currently in an exceptional 34-month extension period approved last year. While some progress has been made since the project's re-inception following a long grievance-related delay, delivery has been challenged by widespread flooding in Kerala and the COVID-19 pandemic. The

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[1] A deliverable is defined as the result of an activity or in other terms the product which contributes to the achievement of project outputs).

outbreak of COVID-19 pandemic has severely affected the progress of the project. Implementation has also been disrupted by ongoing efforts to navigate a complex government funds flow mechanism for donor-funded projects in a way that does not impede progress – a risk that is still unresolved.

For implementation progress, the delivery of the project is 23% and is a matter of concern considering the time taken to begin the implementation phase. The project has received a one-time extension till March 2022. In order to expedite the implementation of the project, the flow of funds from the centre to the state should be smooth. This is a critical risk to the project as noted in adjustments section. This would require interventions both at centre and state level and discussions are underway to streamline the funds transfer.

a. **Updated Project Risks and Actions**
   Project Risk 1:Heavy rains, flash floods and landslides impact on-ground implementation of activities in the project landscape.
   *Actions taken:*The Project Management Unit works closely with the Government departments and line agencies, especially the State Disaster Management Authority to mitigate such risks involved.

b. **Updated Project Issues and Actions**
   Project Issue 1:
   Actions taken:
   Project Issue 2:
   Actions taken:

5. **Lessons Learned**

This section should capture the lessons learned to ensure on-going learning, knowledge sharing and communication within the organisation and with the partners/donors. It should include analysis on the following contents:
   1) *Key project successes and factors which supported these successes;*
   2) *Difficulties encountered and measures taken to overcome these difficulties;*
   3) *Analysis on what could have been done differently / better to attain the project results;*
   4) *Recommendations to improve future programming.*
(Suggested length – half a page to 1 page)

- The project has been working to mainstream biodiversity consideration across production sectors while sustaining the lives and livelihoods of local communities. The project has created diverse options of sustainable livelihoods for the local communities for reducing their dependency on the natural resources through green entrepreneurship.
- The project is supporting a three-pronged strategy to enhance existing livelihoods, promote new and alternate options of livelihoods and support skill- based employment opportunities and

sustainable natural resource management. The promotion of value-chains and market driven solutions will allow local communities to benefit from the economic systems that facilitates local entrepreneurship.

● The project will also focus on strengthening the capacities of local level institutions and communities for sustainable natural resource use and conservation. Ensuring food security through improved cropping systems and better quality of water are one of the major components of the project which will have a positive impact on the lives of people. The project will also contribute to restoring the degraded ecosystems considering the post flood scenario in the state which will in turn help the local communities.

● The project has been able to mobilise community stakeholders (90% women) towards adopting nature based sustainable livelihoods and natural resource management. Sustainable livelihood strategy has been developed for the project landscape to reduce the dependency of forest dependent communities on the natural resources.

● The project has also bought forth some innovative actions for conservation including the Green Innovation Fund in the collaboration with the Start Up Mission of the Government which will identify and support green entrepreneurs for piloting select interventions on biodiversity conservation, human wildlife conflict, waste management, water resource management and climate action. The project has also helped the State in piloting artificial intelligence based waste management systems which will be replicated beyond the project landscape through government financing.

● Role of government departments and agencies, technical agencies, subject matter experts and field staff would be highly critical to achieve the desired outcomes within the project period. Despite the challenges, the project has benefited from strong government ownership and other project governance including timely meetings of the project board to assess and consider progress towards resolving the opposition to the project.

● The project partnered with Kudumbashree - a community organization of Neighborhood Groups (NHGs) of women in Kerala, which has been recognized as an effective strategy for the empowerment of women in rural as well as urban areas: bringing women together from all spheres of life to fight for their rights or for empowerment. The overall empowerment of women is closely linked to economic empowerment.

● The Annual Work Plan of the project has been screened by the UNDP CO Gender Focal Point and specific activities have been made gender sensitive. The activities undertaken advances gender equality and women's empowerment by enhancing their participation in panning and implementation of conservation action, and also by giving them equal opportunities to take decision.

RECOMMENDATIONS

1) Continue discussions with government to finalize decisions on project funds flow as a priority, with full consideration of existing and potential implementation risks, and close engagement of BRH

2) Maintain close attention on the project risks and complete regular reporting against project risk management plan

3) Prepare for the project mid-term review including recruitment of evaluation team and completion of required M&E and GEF tracking tool updates

4) Finalize outstanding baseline updates and remaining target revisions (with adoption by Project Steering Committee) and provide to Bangkok for addition to the PIMS+ results framework

5) Complete an inception report pulling together findings from local-level meetings and documenting stakeholder attendance and inputs

6) To maintain close stakeholder engagement, consider holding a participatory review following the MTR to discuss the MTR recommendations and management response

7) Finalize the revision of the project SESP with review and support from safeguards specialists in Bangkok, with development and update of required management plans as determined in the SESP (e.g. gender action plan, indigenous peoples plan, stakeholder engagement plan).

6. The Way Forward/ Key Priorities for 2021

This section should summarize the achievements, challenges and lessons learned as well as explain the way forward, including relevance of the project and necessary revisions that will be made to the project and plans of the upcoming reporting period. Any funding gaps, resource requirements as well as further partner engagement plans can be specified in this section. This should include any modifications that need to be made to indicators, baselines, targets as well data collection and monitoring to track progress

If this is a Final Report and if applicable, also mention on sustainability of the project and/or plans on future projects that may supplement / scale up the achievements of this project.
(Suggested length – half a page to 1 page)

For progress towards development objective and outcomes, much work is underway. Draft framework has been developed for devising a landscape level strategy and action plan through a participatory approach. Sectoral plans for Forestry, Agriculture, Tea, Coffee, Cardamom, Tourism and Tribal Development are being reviewed in consultation with the State.

In order to improve the management effectiveness of the Protected Areas under the project landscape, several interventions have been undertaken including the removal of exotic and invasive alien species, eco-restoration of degraded shola patches and degraded swamps, updation and implementation of specie-specific plans and capacity building of stakeholders.

The project has been able to mobilise community stakeholders (90% women) towards adopting nature based sustainable livelihoods and natural resource management. Sustainable livelihood strategy has been developed for the project landscape to reduce the dependency of forest dependent communities on the natural resources.

The project has also bought forth some innovative actions for conservation including the Green Innovation Fund in the collaboration with the Start Up Mission of the Government which will identify and support green entrepreneurs for piloting select interventions on biodiversity conservation, human

wildlife conflict, waste management, water resource management and climate action. The project has also helped the State in piloting artificial intelligence based waste management systems which will be replicated beyond the project landscape through government financing.

The project is supporting the State in its efforts to address the COVID crisis especially w.r.t ensuring food security by converting fallow lands into cultivable lands. This is being done through formation of farmer groups and promotion and revival of traditional varieties of crops . Due to the restrictions imposed due to COVID-19, the local communities faced challenges in linking to the markets for sale of their produce which in turn increased their dependence on natural resources. The project team helped the State in piloting e-markets and building linkages with the outside markets for sale and income enhancement of communities. These actions are well aligned with objectives and outcomes of the project outlined in the project document and do not require any budget shifts/changes.

The Annual Plans of local level institutions are also being appraised and greened under the project using innovative green appraisal tool. Local Climate Action Plans and Peoples Biodiversity Registers are being prepared to strengthen biodiversity governance and climate change mitigation at local level.

For implementation progress, the delivery of the project is 23% and is a matter of concern considering the time taken to begin the implementation phase. The project has received a one-time extension till March 2022. In order to expedite the implementation of the project, the flow of funds from the centre to the state should be smooth. This is a critical risk to the project as noted in adjustments section. This would require interventions both at centre and state level and discussions are underway to streamline the funds transfer.

Role of government departments and agencies, technical agencies, subject matter experts and field staff would be highly critical to achieve the desired outcomes within the project period. Despite the challenges, the project has benefited from strong government ownership and other project governance including timely meetings of the project board to assess and consider progress towards resolving the opposition to the project.

KEY PRIORITIES FOR 2021

1. Green Accelerator Lab Initiative launched and operationalised for identification of innovators for mainstreaming biodiversity considerations
2. Drafting a framework for Updating of Kerala State Biodiversity Strategies And Action Plan
3. Demonstrate pilots for effective waste management in 3 Panchayats
4. Demonstrate innovative solutions for conservation of Giant Grizzled squirrel within the Protected Areas
5. Analyse gaps in production sectors for mainstreaming biodiversity - Tea, Forestry, Cardamom etc.
6. Identify at least 2 value chains and plans developed for diversification of livelihoods of local communities through value addition

Anusha Sharma

Anusha Sharma