Asian Development Bank

MEMORANDUM

Indonesia Resident Mission

9 July 2020

To: Bruce Dunn
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Concurrently Officer-in-Charge, SDTC-ENV

Through: Winfried F. Wicklein
Country Director, IRM

From: Helena Lawira
Senior Project Officer, IRM

Subject: **TA 8331-INO: Sustainable Forest and Biodiversity Management in Borneo – Terminal Evaluation Report Submission**

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1. The above TA was approved on 26 February 2013 and completed on 28 February 2018. This TA was financed on a grant basis by three sources of funding: Global Environmental Facility (GEF): $2,527,273, Climate Change Fund (CCF): $1,250,000, and the Regional Cooperation and Integration Fund (RCIF): $700,000; and administered by ADB. The TA was rated less than successful based on its relevance, effectiveness, and efficiency assessments. The technical assistance completion report was approved on 31 May 2019.

2. This terminal evaluation report (TER) assessed the TA project implementation processes, outputs and knowledge products and services developed and disseminated. This TER was circulated and reviewed by the ADB GEF Team and the GEF Operational Focal Point in Indonesia on 17 January 2020. Comments from the GEF Operational Focal Point in Indonesia have been incorporated in the final TER.

3. We are pleased to submit the TER as requirement upon completion of GEF-financed assistance.

Attachment: Terminal Evaluation Report and Comment Matrix

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Terminal Evaluation Report for GEF Project
TA 8331-INO: Sustainable Forest and Biodiversity Management in Borneo

I. PROJECT DESCRIPTION

1. The Heart of Borneo (HOB), covering about 22 million hectares and comprising approximately one-third of the island of Borneo,[1] is among the world's top priority areas for conservation. Its large carbon sequestration and storage capacity makes it an important component of the fast-shrinking band of equatorial forests that function as the "lungs of the earth." The ecosystem services provided by the HOB have significant impact on the lives of about 12 million local and indigenous peoples, including over 200 Dayak groups,[2] who depend heavily on its resources for their subsistence.

2. The HOB Initiative was established in 2007 by a joint declaration of the governments of Brunei, Indonesia and Malaysia. The aim of the initiative is to conserve the biodiversity of the HOB for the benefit of the people who rely upon it through a network of protected areas, sustainable management of forests as well as the development of sustainable land use through promotion of low impact livelihoods not reliant on over-extraction of natural resources. The Government of Indonesia, through the Ministry of Forestry (now Ministry of Environment and Forestry, MOEF), requested the Asian Development Bank (ADB) to provide technical assistance (TA) to strengthen the capacity of public and private sector institutions in sustainable biodiversity and forest management in the HOB. The TA amount was $4,477,273, with three sources of funding: Global Environmental Facility (GEF): $2,527,273, Climate Change Fund (CCF): $1,250,000, and the Regional Cooperation and Integration Fund (RCIF): $700,000. The TA aimed to address the persistent issues and problems that contribute to the forest degradation of Indonesian HOB by providing support to the Directorate of Environment Services and Conservation Areas (DESCA) of MOEF, as the project Executing Agency (EA), and the district forestry agency (later changed to provincial forestry agency) as the Project Implementing Agency (IA). GEF Chief Executive Officer (CEO) approved the TA project on 17 October 2012, while ADB approved the TA on 26 February 2013. The TA became effective on 26 March 2014. The Supplementary Appendix provides additional GEF background and details related to the Global Environment Benefits (GEBs) the project aimed to deliver.

3. The expected TA's impact was the sustainable use of forest resources in the Indonesian part of HOB. The outcome was improved management of natural resources and biodiversity in four districts in the HOB area in Indonesia. The TA had four main outputs: (i) strengthened capacity and institutions for sustainable forest and biodiversity management, (ii) Reduced Emissions from Degradation and Forest Degradation (REDD+) at the local level, (iii) establishment of pilot areas for Payment of Ecosystem Services (PES) and sustainable financing schemes for forest and biodiversity management, and (iv) delivery of effective project management.

4. The TA aligned with the GEF Biodiversity Focal Area and the Land Degradation-Sustainable Forest Management (LD-SFM)/Tropical Forest Account (TFA) funding window. The project objective was to ensure the sustainable management of forest resources and biodiversity in HOB by strengthening the capacity of the government, developing sustainable livelihood

[1] The territory of Borneo is divided among three countries: (i) Brunei Darussalam in the northwest covering about 0.3 million hectares; (ii) Sarawak, Malaysia covering about 3.4 million hectares along the northwest coast and Sabah, Malaysia covering about 5.8 million hectares along the northeastern tip of Borneo; and (iii) Indonesia for Kalimantan Island covering about 12.5 million hectares.

[2] Indigenous peoples of Borneo.

opportunities with local communities, and establishing sustainable financing schemes. Specifically, under GEF-4 SFM, the project supported the strategic objectives (SO) of:

(i) SO-1: Conservation and sustainable use of forest biodiversity; and
(ii) SO-2: Sustainable management and use of forests resources.

SFM in project measures are pursued through GEF-4 focal area strategic programs, including:

(i) SFM-SP1 (BD1) Sustainable Financing of Protected Area Systems. The project targeted community forest areas to catalyze revenue mechanisms to contribute protected area sustainable financing.

(ii) SFM-SP2 (BD3) Strengthening of Terrestrial Protected Area Networks. The project targeted strengthening of the institutional/policy level, and protected area site-level interventions. With regard to legal framework reforms, the project aimed to provide clearer direction in the management process for attaining sustainable forest resource and biodiversity management in HOB.

(iii) SFM/LD/TFA-SP-2 Supporting Sustainable Forest Management in Production Landscapes. The project fostered multiple land uses and provide connectivity and additional habitat for threatened species through addressing of land degradation in the protected area.

5. The TA completion review mission was conducted 12 October 2017 - 16 January 2018 (intermittent), with the purpose to evaluate the achievement of project at completion and draw the lesson learnt and recommendation. The Terms of Reference (ToR) of the mission was included in the Supplementary Appendix.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

6. The TA objective was consistent with the Indonesian Ministry of Forestry Strategic Plan (2010–2014), the National Action Plan for Greenhouse Gas Emission, National Draft Strategy for REDD (Readiness Phase, 2009–2012)[3] and the HOB National Strategic Plan of Action (NSPA) (2009–2013).[4] The objectives of NSPA were as follows: (i) support sustainable natural resources management in the network of conservation areas and protected areas (PAs), as well as production forests and other land uses; (ii) implement policy and law enforcement that support sustainable area management; and (iii) implement sustainable development based on scientific methods and local wisdom for community welfare improvement. The proposed project directly responds to these three objectives. It supported ADB's commitment to environmentally sustainable growth under Strategy 2020[5] and it aligned with ADB's Regional Cooperation and

[3] These plans reflect Indonesia's priorities for forest management, which include combating illegal logging, rehabilitation, conservation of forest and securing forest areas, and reduction of greenhouse gas emissions.

[4] Heart of Borneo–National Working Group. 2009. *National Strategic Plan of Action: Heart of Borneo*. http://www.hobgreeneconomy.org/downloads/Indonesia_strategic_plan_of_action_heartofborneo.pdf. This national document forms the basis for inclusion of Indonesia's priorities in the Trilateral Strategic Plan of Action that is under development by the Governments of Indonesia, Malaysia and Brunei.

[5] ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020.* Manila.

Integration Strategy,[6] the fourth pillar of which is cooperation in regional public goods. ADB's country strategy emphasized strengthening environmental and natural resource management in Indonesia. The TA was included in the country operations business plan, 2013–2014.[7]

7. TA minor change of scope and project implementation memo was approved on 13 June 2014, which (i) reduced the policy related activities as the government had undertaken policy reforms, (ii) added the national consultant inputs from 108 pm to 167 pm to strengthen the PES activities, and (iii) engaged individual national consultants to strengthen the coordination with the national and sub-national stakeholders. Consequently, the TA outputs were also revised in 2014 and the number project locations were adjusted to complete the activities within the original TA closing date. The project steering committee (PSC) mandated that REDD+ and PES pilots should occur within Forest Management Units (known as *Kesatuan Pengelolaan Hutan* or KPH). This decision aimed to increase the role of KPH in forest management and supporting implementation of the concept. This decision reduced the role of Kayan Mentarang National Park as the primary focus of the project and beneficiary of sustainable financing activities (i.e. REDD+/PES) as originally intended under the GEF CEO endorsed proposal, but added the role of Betung Kerihun National Park in project implementation because its location in West Kalimantan province where one REDD+/PES projects sites is located (Kapuas Hulu district). Two REDD+/PES sites were selected within KPH area in 2014, which are located in Malinau and Kapuas Hulu districts (North and West Kalimantan provinces). At completion, the project remained relevant to ADB country partnership strategy 2016-2019 in achieving the environmentally sustainable growth.

B. Project Outputs

8. Output 1: Policy and institutions for sustainable forest and biodiversity management strengthened was revised to Strengthened capacity and institutions for sustainable forest and biodiversity management in 2014. The first output was partially achieved. The TA improved the management capacity of public and private institutions that are working in HOB. Capacity building interventions were designed based on identified institutional weaknesses and strengths to carry out a policy reform agenda for forest resource management. Support to both Kayan Mentarang and Betung Kerihun national park management plans was delivered through biodiversity and socio-economic survey in forest areas as agreed with the head of national parks. The revised project outputs and the achievement at project closure was describe in Table 1. There are three outputs indicators in the original TA design and monitoring frameworks (DMF): (i) Draft national policy and institutional reform agenda for forest resource and protected area management enacted; (ii) 6% increase in effective area of habitat of flagship species in Kayan Mentarang National Park (compared to 2013 baseline by 2016); and (iii) Four (one each per district) participatory patrol units established in the four project districts. Due to change of TA outputs in 2014, these output indicators werenot relevant anymore. The baseline and achieved output indicators were not measured by the consultants as required in the DMF, as the project intervention was not focused only in Kayan Mentarang National Park as the original project design. Instead, the TA now provided support to update two national parks' management plans (Kayan Mentarang National Park and Betung Kerihun Danau Sentarum National Park, respectively). The output indicator (iii) was achieved in the two REDD+ pilot areas in Kapuas Hulu and Malinau districts.

[6] ADB. 2006. *Regional Cooperation and Integration Strategy.* Manila.
[7] ADB. 2012. *Country Operations Business Plan: Indonesia, 2013–2014*. Manila.

Table 1: Revised Output 1 and Achievement at Project Completion

Revised Project Outputs in 2014		Achievement at Project Completion
Output 1: Strengthened capacity and institutions for sustainable forest and biodiversity management		
1.1	Improve the understanding of HOB concept and program with the local stakeholders and enhance of their role toward HOB.	Implemented once in Balikpapan and once in Palangkaraya and considered completed but no record of feedback.
1.2	Improve mechanism and procedures to strengthen local cooperation and coordination in support of HOB.	Completed in Balikpapan and Palangkaraya.
1.3	Capacity building for enhancing sustainable forest and biodiversity management in HOB area.	Completed 20 trainings as per workplan.
1.4	Support implementation of management plan of either Kayan Mentarang or Betung Kerihun National Park.	Biodiversity and economic survey in national parks were completed and management plans socialized.
1.5	Strengthen institutional capacity and collaboration among the relevant local agencies in support of the HOB.	Completed in Balikpapan and Palangkaraya.
1.6	Conduct at least one tri-country roundtable dialogue with Brunei Darussalam, Indonesia and Malaysia each year.	HOB trilateral meeting conducted yearly, and the TA supported it (2017, 2016, 2015, 2014).
1.7.	Facilitate periodical roundtable meeting among local stakeholders in support of HOB.	Roundtable meeting implemented in Balikpapan and once in Palangkaraya.

9. Output 2: Land use and forestry practices improved was revised to pilot the REDD+ implementation at local level in 2014. This second output was partially achieved. The output 2 had the following two indicators: (i) four REDD+ assessment sites and at least one REDD+ demonstration site, and (ii) three percent (3%) reduction in illegal logging activities (compared to 2013 baseline by 2016). The first revised indicator was achieved. The TA assessed more than four REDD+ pilot demonstration sites and established two pilot demonstration sites in Nanga Lauk village in Kapuas Hulu district (which falls under the legal designation *hutan desa,* or village forest) and Punan Adiu village in Malinau district (which is *hutan adat,* or customary forest). The TA adopted the Plan Vivo Standard, an internationally recognized framework for community-based land use and forestry activities, to implement REDD+ activities. PES schemes were established in the two pilot villages, Nanga Lauk village in Kapuas Hulu district (which falls under the legal designation *hutan desa*, or village forest) and Punan Adiu village in Malinau district (which is *hutan adat*, or customary forest). In parallel with REDD+ schemes development, community livelihood training and pilot activities were conducted, and equipment was provided, to improve villagers' livelihoods. Before a carbon offset certificate to ensure self-funding for forest protection can be obtained, some REDD+ certification requirements, such as regular forest patrol, must be fulfilled. If the community only focuses on meeting their daily livelihood requirements, they will not be able to implement the REDD+ scheme, therefore various community livelihood trainings were conducted with some equipment provision. The community REDD+ schemes established in the

two pilot villages were accepted by the Plan Vivo Foundation, and the first annual implementation report was submitted in 2019. The report indicated the achievement of the target indicators and buyer for the certificate has made an agreement with the community representatives. The second indicator was not achieved due to lack of baseline and reliable regular monitoring data as illegal logging activities were not monitored by the local government. The project supported the national parks, the community, and local government for sustainable forest management by conducting land use change monitoring to indirectly assess the illegal logging activities.

Table 2: Revised Output 2 and Achievement at Project Completion

Revised Project Outputs in 2014		Achievement at Project Completion
Output 2: Exercise the Reduced Emissions from Degradation and Forest Degradation (REDD+) implementation at local level		
2.1	Asses at least 4 REDD+ and establish at least 1 REDD+ demonstration sites in a community owned forest which includes assessment of REL, leakage, and establishing method of MRV tier 1-3 for the area.	Field assessments were conducted in Malinau District and Kapuas Hulu District in January 2016. Three villages were considered in Malinau and six villages were considered in Kapuas Hulu. Nanga Lauk and Punan Adiu were selected as the focus of REDD+ pilot.
2.2	Introduction of concept of REDD+ to the relevant community owned forest including concept of leakage.	As Plan Vivo scheme was selected for REDD+ pilot, the facilitators were representatives of local NGOs. They were supported by the REDD+ expert under the project management consultant to introduce the concept of REDD+ to the community.
2.3	Produce local and provincial (if needed) fiscal regulation and mechanisms to support the establishment of carbon offset through REDD+ scheme.	Both REDD+ and PES policy and fiscal matters should be considered, and the activities were merged (output 3). District regulation on PES in Kapuas Hulu was at the final stage of discussion in the district parliament.
2.4	Obtained credible carbon community certificate for the demonstration sites.	The Project Identification Note and Project Design Document for both REDD+ pilot villages were completed and accepted by Plan Vivo. Plan Vivo certificate planned to be obtained in 2019 for Nanga Lauk.
2.5	Improve local capacity in carbon offset network, negotiation and requirement.	The REDD+ expert trained the Plan Vivo Facilitators and their NGO colleagues as potential trainers of the communities of the two villages.
2.6	Identify or provide potential carbon investors.	List of potential carbon offset buying companies in Indonesia were identified. A letter of intent from a carbon buyer was obtained for Nanga Lauk.

10. Output 3: Potential PES and sustainable financing schemes for forest and biodiversity management was changed into pilot area for PES and sustainable financing schemes for forest and biodiversity management in 2014. The third output was partially achieved. The output 3 had three indicators: (i) four business case scenarios developed supporting implementation of two

PES financing mechanisms, (ii) sustainable financing manual developed to support national and ecoregion PES expansion, and (iii) five percent (5%) increase in income of local project cooperators (environmental service providers), where at least 30% are women (compared to 2013 baseline by 2016). The first indicator was partially achieved as only two business case scenarios were developed under the REDD+ pilots related to output 2 (carbon PES). The TA developed non carbon PES scheme for the Verified Conservation Areas (VCA) in the two REDD+ pilot demonstration sites under output 2. The second indicator was achieved. The TA developed a draft district regulation for PES that included sustainable financing arrangement. The third indicator was not achieved due to lack of baseline data and definition of environmental service providers. The project took socio economic data as part of the support to the national parks. Since the PES sites are not under the national parks, but under the FMU, the data could not be used to measure the achievement of the third indicator. Other ecosystem services are often linked to carbon-based benefits. Conservation of water, biodiversity and sustainable management of non-timber forest products naturally enhances carbon stocks and feed opportunities for carbon-based benefits. The potential quantifiable and marketable ecosystem services, apart for carbon, are biodiversity and ecotourism. As the range of options for PES schemes was constrained due to limited demand for ecosystem services across the private sector, the most feasible marketing strategy for ecosystem services was therefore to offer a bundle of Plan Vivo certificates with biodiversity services. The approach taken was to register the two village areas as VCAs. Under the community livelihood programs, ecotourism potential was developed. There is no agreement among the sellers and buyers to implement the PES, because the VCA scheme is planned to be marketed with the carbon offset scheme under the second output. However, the district regulation on PES in Kapuas Hulu and Malinau districts were drafted.

Table 3: Revised Output 3 and Achievement at Project Completion

Revised Project Outputs in 2014		Achievement at Project Completion
Output 3: Pilot area for Payment for Ecosystem Services and sustainable financing schemes for forest and biodiversity management.		
3.1	Identifying, measuring and assessing the potential and marketable ecosystem services in 2 or possibly 4 pilot areas within the HOB.	Biodiversity and ecotourism were assessed as a potential and marketable ecosystem services in both REDD+ pilot areas. Documents for registering both projects for VCA certification were prepared.
3.2	Identifying prospective buyers (i.e., mining, palm oil, forest concession and tourism).	In conjunction with output 2 for carbon PES or REDD+, list of prospective buyers in Indonesia were identified.
3.3	Improving institutional and technical capacity including structuring agreement sellers and buyers of ecosystem services and implementing PES agreement.	District regulation on PES in Kapuas Hulu was at the final stage of discussion in the district parliament.
3.4	Identify or possibly obtain PES verification from credible assessor.	The VCA audits were carried out by an external auditor the two pilot sites were officially registered on 1 December 2017.
3.5	Produce the local and provincial (if needed) regulation and mechanism in support of PES.	The REDD+ expert trained the Plan Vivo Facilitators and their NGO colleagues as potential trainers of the communities of the two villages.

11. Output 4: effective project management was partially achieved. The Project Management Unit office was located at the EA office (DESCA) in Bogor, comprised of the government counterpart staff from DESCA. The Project Implementing Units (PIUs) were originally the environmental agency at both district of Putussibau and Malinau, and both of district governments issued a decree to enable counterpart staff provision and office space provision for PMC experts. In the end of 2016, the decentralization law revision started to be effective, which shifted the authority of forest management from the district to the province. West Kalimantan provincial government re-issued the PIU decree in 2017. The EA also provided limited space for the PMC to closely work with the EA. ADB recruited one individual consultant as a field coordinator to enable effective coordination with the project implementing agencies in Putussibau and Malinau districts, and also one individual consultant as a project coordinator/ team leader to support PMC, ADB, and the EA in coordination with all related stakeholders and gave support during project start up, especially during several changes of the team leader under PMC. Although the government has provided office space for PMC to work closely with the government counterpart staff, the PMC contract type as a partially lump sum contract make it not possible to ensure that PMC experts worked in the Government's premises to interact with the Government staff on regular basis. It indirectly affected the speed of project implementation and the timeliness of PMC to submit the contract deliverables.

12. This project output had three indicators: (i) implementation of TA activities and corresponding disbursement and utilization of TA funds are as programmed for 2013–2016, (ii) one monitoring, reporting, and verification system deployed for the HOB Indonesia, and (iii) two knowledge products (one each for REDD+ preparedness and PES schemes) disseminated through national, regional, and global knowledge networks. The first indicator was achieved as the IAs established the PIUs and provided counterpart staff to implement TA activities. The second indicator was not achieved, as there was no one institution tasked for monitoring, reporting, and verification system deployed for HOB Indonesia. Developing one system agreeable to all the relevant institutions would go beyond the TA scope and implementation period. The third indicator was achieved. The TA produced the REDD+ project design documents and disseminated TA knowledge and lessons through national, regional, and global knowledge networks, such as HOB trilateral meetings in Indonesia, Governors' Climate and Forest Task Force forum in West Kalimantan, and the International Union of Forest Research Organizations 125th Anniversary Congress in Germany.

Table 4: Revised Output 4 and Achievement at Project Completion

Revised Project Outputs in 2014		Achievement at Project Completion
Output 4: Pilot area for Payment for Ecosystem Services and sustainable financing schemes for forest and biodiversity management.		
4.1	Project management office and three project implementation unit.	Project management office under Directorate of Environmental Services and Conservation Areas was established. Two project implementation units was established in Kapuas Hulu and Malinau districts, then in 2017 the project implementing units was shifted to the provinces as the revision on decentralization law started to be effective.
4.2	Conduct in-country clinics.	Several meetings in Banjarmasin and Balikpapan for HOB meetings with stakeholders were conducted.

Revised Project Outputs in 2014		Achievement at Project Completion
4.3	Effective monitoring, reporting and verification system.	MRV reports were produced for both REDD+ pilot areas.
4.4	Dissemination TA knowledge and lesson through national, regional and global knowledge networks.	The TA disseminated TA knowledge and lessons through national, regional, and global knowledge networks, such as HOB trilateral meetings in Indonesia, a Governors' Climate and Forest Task Force forum in West Kalimantan, and the International Union of Forest Research Organizations 125th Anniversary Congress in Germany.
4.5	Provide exit strategy for the project to ensure sustainability and replicability of the TA outcomes.	The Plan Vivo projects at both village sites will be implemented in 5-year project periods. One pilot area who has obtained letter of intent from the carbon investor would ensure the sustainability of the community-based REDD+ scheme.

C. Project Costs

13. The total project fund was $4,477,000 from three funding sources: GEF ($2,527,000), Regional Cooperation and Integration Fund (RCIF) ($700,000), and the Climate Change Fund (CCF) ($1,250,000). The GEF CEO endorsement stated that the approved total project cost was $8,977,273, with co-financing from ADB ($3,950,000), World Wild Fund (WWF) ($2,000,000), and the Government of Indonesia ($500,000). The realized amount under ADB co-financing was $1,950,000, sourced from the RCIF and the CCF. Co-financing plan from WWF and the Japan Fund Poverty Reduction (ADB) were not materialized. The government provided counterpart support in the form of office accommodation, transport, remuneration, per diem for counterpart staff, and other in-kind contribution. The TA defined a financing plan for the three funding sources. The proceeds of the GEF grant and the other funds were directly administered by ADB. The PMC, a consulting firm based in UK (LTS International), was mobilized in September 2015, with a partial lump-sum contract of $3,658,276, including $1,798,000 under the provisional sum allocated for trainings, workshops, study, surveys, and equipment.

D. Disbursements

14. As of TA account closing date on 30 April 2019, out of the total fund of $4,477,000, the project utilized a total amount of $3,328,710 (74.4%). The total undisbursed project budget was $1,148,562.98 or 26% of the total TA amount. The disbursed GEF grant was $1,738,925.25 (69% of the GEF fund) leaving an uncommitted and undisbursed balance of $788,347.25 (31% of the GEF fund). From the total TA undisbursed fund of $1,148,290, the undisbursed amount of the GEF was 68.7%, CCF was $101,889 (8.9%) and the RCIF was $258,326 (22.4%).

15. Most of the TA fund (81%) was committed under the PMC contract, so the disbursement progress went along with PMC contract payment milestone progress, starting with contract effectiveness in September 2015. In 2016, delay in contract deliverables submission by the PMC adversely impacted the disbursement progress. Starting from 2017 disbursement rate was progressively increasing. The undisbursed TA amount was largely coming from undisbursed provisional sum allocation of the PMC contract ($828,689) for trainings, workshops, study, surveying, and equipment. As most of the workshops and trainings were conducted in 2017, the provisional sum budget under the PMC contract could not be fully disbursed. Large part of the

provisional sum reimbursement claims was submitted after the TA completion date on 28 February 2018. Consequently, disbursement of the provisional sum was continued until the TA account closing on 30 April 2019.

E. Project Schedule

16. The original implementation schedule allocated 36-months for project implementation (September 2013 to August 2016). However, the TA was effective over one year after its approval (24 March 2014) and the PMC was mobilized in September 2015. The TA closing date had to be extended for 18 months, from 31 August 2016 to 28 February 2018 because of the TA start-up delay. The PMC contract was originally for 27-month implementation period, and then it was extended to 30 months until the project closing date of 28 February 2018. The 30-month project implementation schedule was insufficient to fully achieve the outcome, and it was exacerbated by the delays in implementation start up. At the TA completion, the communities still required for support for the Plan Vivo and VCA certification to enable a tangible benefit and continuation of livelihood activity, such as market access. Furthermore, the PES regulations had not yet been enacted in the district of Kapuas Hulu and Malinau at project completion, pending for the district parliament's approval. The project needed to run over a minimum 36-month period to deliver the project outcomes. The project experienced start-up delays due to (i) reorganization in the Ministry of Environment and Forestry in 2014 impacted the planned TA implementation arrangement; (ii) changes of TA outputs and implementation arrangement in 2014; (iii) there was no clearly defined capacity building scope in PMC contract, so that the PMC had to develop an agreed capacity building workplan before it can commence implementation; and (iv) several changes of the PMC team leader in the initial stage of contract implementation.

F. Implementation Arrangements

17. The EA was DESCA under the Directorate General of Natural Resources and Ecosystem Conservation at the MOEF. The PIUs originally comprised of the forestry and relevant agencies in Kapuas Hulu and Malinau districts. It was changed to the provincial agencies (west and north Kalimantan provinces) in 2017 as the impact of decentralization law revision which shifted the authority of forestry management from the district to the province. The decree for PIU member was reissued in 2017 by each province. There was a TA steering committee comprised of several directorates in MOEF related to climate change and REDD+, who gave guidance on the TA direction, but still not adequate to quickly solve the TA implementation challenges. Coordination with the Coordinating Ministry of Economic Affairs, as the coordinator of HOB initiative, which ideally would align the TA, the national HOB action plans, and the regional development planning, was limited because they were not officially part of the project structure. The EA did not have the necessary mandate to cover the entire TA scope as their authority is limited to the environmental services in the conservation area, however the EA regularly coordinated with the directorate general for climate change of MOEF on REDD+ related issues.

18. The PMC contract comprised of 8 international (30 person-month/pm) and 13 national experts (124 pm). In hindsight the project would have benefitted from more long-term positions than the high number of consultants engaged for limited period of time. Community-based work requires both intensive and extensive on-going engagement with local people to build awareness, understanding, support, and action. Although, the PMC contract was a partial lump sum contract, it did not make any difference on the expert's inputs. The expert's inputs affected the output and contract deliverables submission, which ultimately impacted the disbursement progress. Large part of the provisional sum under the PMC contract (40%) for capacity building, survey and studies activity was without detailed TOR and this resulted in delay of the overall TA implementation

schedules. Approval of the capacity building plan and the project annual workplan, followed by approval for budget and TOR for each project activity required additional time and administration works.

19. Project monitoring and evaluation (M&E) was not addressed under the PMC. Under the effective project management component (i.e. Output 4.3), the TOR state that the PMC should create an effective monitoring, reporting and verification system (MRV). This terminology is typically applied within REDD+ projects for carbon accounting/monitoring purposes. MRV should have been incorporated under the output 2 rather than under the output 4. This confusion in terminology was also reflected in the individual consultant positions, which focus on MRV – rather than including a requirement for both an MRV Specialist and a M&E Specialist. There was a national consultant hired by ADB as a coordinator/ team leader consultant, separated from the PMC team, that partly contributed to M&E function to the project. Unfortunately, due to the separate contract with PMC, the function was perceived more as an external M&E by the PMC team.

G. Technical Assistance

20. As the project was classified and administered as a TA, there was no other related TA with the project.

H. Consultant Recruitment and Procurement

21. All of the consultants were recruited by ADB, with no-objection from the EA. Originally, 39 person-months of international consultant inputs and 108 person-months of national consultant inputs were envisaged as a project management consultant engaged through a firm. The actual consultant inputs were 36 international person-months and 191 national person-months. Recruitment of PMC took about 1 year, and consultant mobilization was started in September 2015, with a partial lump-sum contract of $3,625,276, including $1,765,000 under the provisional sum allocated for trainings, workshops, study, surveying, and equipment. Other consultants are recruited as individual consultants or resource persons.

I. Safeguards

22. There was no safeguards framework prepared for the TA. As one of the REDD+/VCA pilot area is in a customary forest in Punan Adiu district, North Kalimantan, the TA benefited the customary community through the capacity building and support for the sustainable forest management and alternative livelihood.

J. Monitoring and Reporting

23. The PMC produced all TA quarterly reports as their contract deliverables. Biannual project monitoring meeting were conducted by the national development planning agency, and the EA submitted the TA progress report to secretary general of the MOEF and the national development planning agency to be discussed during the monitoring meetings. The GEF country focal point is under the secretary general of MOEF. ADB also submitted annual GEF Project Implementation Report (PIR) through the ADB GEF focal point in Manila.

III. EVALUATION OF PERFORMANCE

A. Relevance

24. The TA was relevant to the Indonesian Ministry of Forestry Strategic Plan (2010–2014), the National Action Plan for Greenhouse Gas Emission, National Draft Strategy for REDD (Readiness Phase, 2009–2012) and the HOB NSPA (2009–2013). It also supported ADB's commitment to environmentally sustainable growth under Strategy 2020 and was aligned with ADB's Regional Cooperation and Integration Strategy, the fourth pillar of which is cooperation in regional public goods. ADB's country strategy emphasized strengthening of the environmental and natural resource management in Indonesia. The TA was also aligned with the GEF Biodiversity Focal Area and the Land Degradation-Sustainable Forest Management (LD-SFM)/Tropical Forest Account (TFA) funding window. The project outputs were adjusted in 2014 to improve its relevance to the country's focus in sustainable forest management outside the national parks (FMU) and HOB stakeholder's coordination and capacity building. At project completion, the project remains relevant to the country and ADB operational policies.

B. Effectiveness

25. The project is less than effective in achieving the outcome and outputs. The outcome was improved management of forest resources and biodiversity in four districts in HOB Indonesia, with two outcome indicators: (i) 2% decrease in forest loss, and (ii) 5% reduction in incidence of wildlife and biodiversity poaching in the project area. The first indicator was achieved. Since the REDD+ activity was implemented in two districts, one project outcome indicator of forest loss was measured through the land cover change analysis from 2010 to 2016, in which the net forest losses in those districts were 0.03 percent and 0.07 percent. The second indicator cannot be measured due to lack of reliable poaching data.

26. The project partially achieved its four outputs, as described in paragraphs 8-12, based on the assessment of the original output indicators. In 2014 the outputs were adjusted but their indicators were not adjusted, resulted in less accurate assessment at the TA completion due to the use of original outputs indicators.

C. Efficiency

27. The project is less than efficient, because it had to be extended for 18 months, and not all of the outputs were achieved, and there were 26% TA fund that remained undisbursed at project completion.

D. Sustainability

28. The project is likely to be sustainable, despite uncertainty over the sustainability of the capacity building benefits due to lack of measurement methodology. The two PES schemes (REDD+ and VCA) are likely to be sustainable because (i) Nanga Lauk village is receiving continued support as one of the ADB Forest Investment Program (FIP) target villages, (ii) a letter of intent from a carbon offset buyer for Nanga Lauk has been obtained and the agreement with the carbon buyer was signed in May 2019 for the 25 years commitment to finance the forest management plan of Nanga Lauk village forest, and (iii) the other pilot area (Punan Adiu) could pursue again the FIP Forest Investment Program dedicated grant mechanism last call of proposal this year for indigenous people to enable PES implementation. The community at Nanga Lauk

will be able to implement their forest management plan as the long-term funding commitment was signed in 2019. Furthermore, the Government issued national regulations for the use of economic instruments in natural resources management and REDD+ project implementation in late 2017, which will be the legal basis for continuing REDD+ and PES implementation.

E. Development Impact

29. The project has achieved important steps in the path to make impact on the sustainable use of forest resources in the HOB Indonesia. Much work remains to galvanize the project's achievements over the past 30 months to ensure full achievement of project impact that will be indicated by the increase of forest cover, carbon sequestration capacity, and increase in the gross domestic product of villages within protected areas. REDD+ and VCA model in both village forest and customary forest might have a strong likelihood to become a fully replicable model if financing can be secured with strong support from the Government and the community. Also, the clarity of that REDD+ mechanism to be counted as contribution to the country national determined contribution (NDC) target will be helpful for replication of similar schemes in other forest villages or customary forest. The community livelihood might increase after the project, with current other support from the Government for the village economic activity, such as village business entity (*badan usaha milik desa*). The project made several HOB coordination meetings for all government and non-government stakeholders that would support the coordinating ministry of economic affairs and MOEFr for further development plan of HOB area.

30. The goal of GEF-4 biodiversity focal area was the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. The TA supported two objectives of the goal: (i) improve the sustainability of protected area systems; and (ii) mainstream biodiversity conservation and sustainable use into production landscapes/ seascapes and sectors. The project supported both Kayan Mentarang National Park and Betung Kerihun National Park management plans and delivered capacity building activities under TA Output 1. The project developed the two village-level REDD+/PES projects within their associated production forest management units, delivered through Outputs 2 (REDD+) and Output 3 (PES).

31. The goal of GEF-4 climate change mitigation strategy consisted of six objectives, and the project supported two objectives: (i) Promote conservation and enhancement of carbon stocks through sustainable management of land use, land-use change and forestry; and (ii) Support enabling activities and capacity building. The project developed the two village-level REDD+/PES projects within their associated production forest management units delivered through Output 2 (REDD+) and Output 3 (PES). These REDD+/PES models are available for post project rollout to new areas under future HOB initiatives and projects. The catalytic role of the TA was to enable the community to manage their forest sustainably and increase their income from a sustainable livelihood.

F. Performance of the TA Recipient and the Executing Agency

32. The TA Recipient, MOF, provided support during TA effectiveness and discussion with the EA about TA extension in 2018. The EA participated in all ADB TA review missions, and also provided office space to PMC administration staff and experts. The EA, PIUs in both provinces and districts, and the steering committee members provided adequate support to manage the institutional challenges posed by the change of PIUs from the districts to provinces started in 2016. Therefore, the government performance is satisfactory.

G. Performance of the Asian Development Bank

33. ADB conducted TA review missions annually from 2015 to 2017. Several changes of ADB project officers during TA implementation went smoothly and the TA administration was delegated to Indonesia Resident Mission starting on 1 January 2015 to enable faster project implementation. ADB's performance is satisfactory.

H. Overall Assessment

34. The TA overall assessment is less than successful:

Table 5: Overall Ratings

Criteria	Rating
Relevance	Relevant
Effectiveness	Less than effective
Efficiency	Less than efficient
Sustainability	Likely sustainable
Overall Assessment	Less than successful
Development impact	Satisfactory
Borrower and executing agency	Satisfactory
Performance of ADB	Satisfactory

ADB = Asian Development Bank.
Source: Asian Development Bank.

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues and Lessons

35. The TA could not fully achieve the outputs by the TA closing date because more time was needed to have PES agreement (carbon and non-carbon) between the community and the buyer, as well as the project start up delay. The planned TA implementation period of 3 years was reduced to an actual time of 2.5 years, which is not adequate to develop two REDD+ and non-carbon PES schemes. Long term agreement (25 years) with the private sector buyer to finance the REDD+ scheme of one village forest managed by the community was achieved in 2019, one year after the project closing date.

36. The lessons are: (i) adequate consultation with the subnational governments needs to be done during the TA design stage to confirm their commitments and avoid start-up delay, (ii) roles of the national project steering committee need to be agreed upfront to have effective support during TA implementation, (iii) a lump-sum contract was not suitable for the TA implementation consultant because PES demonstration activities at the district level and capacity building for communities and the government required large field inputs with a flexible schedule, (iv) capacity building scope should be predefined in the terms of reference of the firm's contract, particularly for a lump-sum contract, to avoid delay in the delivery of trainings and TA implementation; and (v) clearly defined outcome indicators and corresponding baseline data are needed to measure achievements.

37. Ensure that the project preparation grant phase includes extensive consultation, especially with the government agencies (i.e. central, provincial and district level) that will be

involved in the project's steering committee and/or project implementation. Pre-project intensive consultation is important to ensure the project design is locally appropriate and has full government support, permitting the project to be implemented as designed and approved. There was insufficient consultation with government during project formulation, as the project did not incorporate the FMU criteria into the project implementation arrangement design and the GEF CEO endorsed document could not be implemented as planned. Project design also need to carefully consider organization structure and its implementation arrangement, especially for the project that will involve many entities in the central and local governments. More project entity will need more time to engage, socialize and make agreement among the entities. However, a REDD+ pilot always needs many entities to be involved in the field. Although the TA managed to have minor change of scope and implementation arrangement in 2014, delay of the implementation was unavoidable.

38. Projects should be designed with quantifiable objectives, outcomes, outputs, indicators and verifiers that are wholly appropriate to the project. Furthermore, the project must contain an internal monitoring and evaluation component that permits: collection of data required to evaluate the project effectively based on the project design and monitoring indicators and verifiers, accurate quantification of the GEF GED, and quantification of project progress in accordance with the project design an monitoring framework. Any adjustments made should be followed by the adjustment of the indicators.

39. Natural resources management projects by nature take a long time to implement. Community-based natural resources management projects take even longer. Socio economic aspect needs to be equally emphasized in REDD+ project, because that is the key aspect for a sustainable forest management. In the limited project implementation timeframe, the project was able to execute alternative livelihood trainings and support to the community in REDD+ pilot sites. Future projects should consider longer project timeframes in the order of five years in order to internalize externalities and maximize the probability of achievement and sustainability of project outcomes.

B. Recommendations

40. Significant population of the country depend on the forest for their livelihoods, and many of them are categorized as poor community. Forest protection needs to go along with the socio-economic development for the community who depend on the forest. Social forestry schemes have been one of the main country's development agenda, and REDD+ pilots can be synchronized with the social forestry schemes, to gain the benefit of sustainable forest and biodiversity conservation, better income for the community who managed the forest, and achievement of the country's emission reduction target from forestry sector.

41. On the recommendation related to project implementation, reasonable anticipation for the project delay is needed, although changes along the project implementation may go beyond the project control, such as institutional changes in the ministry and shifting of the authority from the district to the province. The flexibility of the project to adapt with the changes along the implementation will determine the timely achievement of the project objectives. Continuous monitoring and evaluation tools to be guided by the steering committee is needed to track the project progress regularly and take necessary actions.

42. It is recommended to: (i) further asses and scale up the workable funding scheme for community-based forest management, to be aligned with the country's social forestry schemes; (ii) intensify the work with other HOB countries to have a broader context for HOB transboundary

landscape management; and (iii) closely involve the coordinating ministry of economic affairs or the national development planning agency in TA design and implementation, in addition to the environmental/forestry agency, to enable forest protection measures to be mainstreamed into the green economic development plan of HOB.

PCR Supplementary Appendix for GEF Projects

A. GEF Background

1. The project was endorsed by GEF CEO on 17 October 2012 with a total GEF funding of USD2,527,273, excluding the ADB fee, and co-financing of USD6,450,000 from the government, non-government partner, and ADB. The project was approved by ADB on 26 February 2013 and implementation started on 24 March 2014. There was one-year gap period between ADB approval and TA effectiveness (implementation) due to discussion with the Government on the TA outputs and implementation arrangement. The project was initially developed as a 36-month intervention, but the project timeframe was reduced to 30 months. The co-financing plan from non-government partner and part of ADB co-financing (JFPR) were not materialized during implementation.

2. Minor change of the project in 2014 shifted its focus from *strengthening policy* to *increasing capacity* under Output 1; deleted activities supporting *Improved land use and forest management* under the original Output 2 and eliminated sustainable community livelihood activities that were to be delivered through a related ADB project (JFPR) in the buffer zone of Kayan Mentarang National Park. The project also changed its primary focus location on Kayan Mentarang National Park to forest management units located in Malinau and Kapuas Hulu. Kayan Mentarang national park were still be included under output 1 (increasing capacity and improved protected area management effectiveness), and also added with another national park in West Kalimantan, namely Betung Kerihun Danau Sentarum national park. The proposed project is aligned with the Biodiversity Focal Area and the LD-SFM/Tropical Forest Account (TFA) funding window. Specifically, under GEF-4 SFM, the project supports strategic objectives (SO) of SO-1: Conservation and sustainable use of forest biodiversity, and SO-2: Sustainable management and use of forests resources. The anticipated global environmental benefits at output level, stated in the GEF CEO endorsed document included:

(i) 1.36 million ha of PAs in HOB under effective management (with an indirect impact on a further 2.72 million, or combined 4.08 million ha covering 32.36% of the Indonesian HOB).
(ii) Protected Area (PA) planning and management capacities strengthened, leading to a 6% increase in effective critical habitat for the globally endangered species.
(iii) Decrease by 2% in projected deforestation over a conservative lifetime length of ten years (2013-2022), leading to an avoided loss of 6,655 hectares of tropical forest from conversion to other land uses, which will continue to support globally important biodiversity, as well as the services of HOB ecosystems and critical catchment areas.
(iv) Estimated lifetime direct carbon emissions avoided through project interventions of 3.233 million tonnes CO_2; and lifetime indirect GHG emissions avoided of 44.5 million tonnes CO_2.
(v) 2,000-hectares of REDD+ pilot implementation, supporting direct carbon sequestration of ca. 62,674 tonnes CO_2.
(vi) Improved enforcement systems for PAs and buffer zone landscapes, improved monitoring systems, strengthened policy and regulations for PAs and SFM in forest landscapes, and increased public awareness.
(vii) Establishment of 2 PES models to support sustainable financing and community livelihoods in forest landscapes. Mobilization of at least $18 million in funds for further SFM and REDD+.

B. PCR Terms of Reference

3. A final review mission was carried out during 12 October 2017 – 16 January 2018 (intermittent) where accomplishments of the project were discussed and assessed. The mission visited Kapuas Hulu district (West Kalimantan Province) and Malinau district (North Kalimantan Province), and also attended the HOB 2017 trilateral meeting in North Kalimantan. The Mission held discussions with officials of the Ministry of Finance (MOF), the EA, PIU, the GEF country focal point at the MOEFr, the beneficiaries and the consultants. The TA final workshop was conducted on 28 February 2018, to present project achievements, lesson learnt, and recommendations for follow-up activities.

C. Implementation

4. There were no specific implementation arrangements for GEF financed components. GEF funds were used to finance 29% of the PMC contract and 100% of the provisional sum allocated in PMC contract for the activity implementation. The EA kept the GEF country focal point informed of project progress via distribution of quarterly and annual project reports and yearly project steering committee meeting.

D. Relevance, Impact, Outcomes and Outputs

(i) Relevance

5. The project was aligned with the national Government's plan on the HOB and REDD+, and the community REDD+ and VCA PES pilots were also aligned with the President's commitment in 2014 to issue 12.7 million hectares of state forests under private, customary and community forest tenures by 2024. At project completion, local governments and the national parks expressed their priorities which could not fully addressed by the project, such as comprehensive biodiversity surveys (TNKM), increasing community welfare (Malinau), driving ecotourism and strategic tourism sites (Kapuas Hulu), as highlighted by the evaluation missions to both Kapuas Hulu and Malinau conducted by a GEF consultant in January 2018[8]. Both national parks would have appreciated greater involvement in both the project design to ensure their priorities were fully accommodated and project implementation[9]. Nevertheless, all parties welcomed the project interventions and agreed that it had supported their institutions. Communities were especially appreciative of the project and resultant increase in awareness delivered through project interventions.

6. The project delivered the GEBs in line with GEF-4 biodiversity and climate change mitigation strategies. The project developed the pilot sites and delivered the necessary REDD+/PES building blocks to mainstream these types of projects within Indonesian HOB in the future. These community-based models are especially relevant to the current government's target of allocating 12.7 million hectares of forest lands under community management within the next six years. Development of draft PES regulations was also an important step to prepare the legal framework for future scale up of community-based REDD+/PES models in HOB.

[8] Both Malinau and Kapuas Hulu governments expressed disappointment with the lack of benefits from conservation district status – and want to see concrete benefits from REDD+ flowing to their constituent communities, something that has been talked about since 2007 but which still remains elusive.

[9] Project implementation units were essentially passive participants in a central government delivered project. National parks had no hands on role in project implementation nor direct allocated budget although they joined most of the project activity. Kayan Mentarang national park was particularly disappointed that the project shifted its focus location from the national parks to a near-inactive FMU.

(ii) Assessment of outputs, outcomes and impact

Component 1: Strengthening policies and institutions for sustainable forest and biodiversity management

7. Component 1 is assessed as moderately successful. This component aimed to strengthen regional, national and local capabilities for the HOB and protected area management. The project minor change in 2014 dropped the output related to policy reform, and also the focus to Kayan Mentarang national park was divided with the addition of Betung Kerihun national park as both national park to be inline with the location of two REDD+ pilot areas in West and North Kalimantan. The project emphasized the institutional strengthening through training and capacity building, and also supported the HOB trilateral meetings and roundtable meetings. However, the output of mechanisms and practical procedures supporting ecoregional cooperation was not formally established.

Component 2: Management of Land Use, Land Use Change, and Forestry

8. Component 2 is assessed as successful, although the it was two REDD+ pilot area, not four per original target, but the covered areas (18,926Ha) exceeded the original target of 2,000 Ha. This component will establish REDD+ demonstration sites to showcase REDD+ strategies. Adjustment of the number of project areas was part of the project changes in 2014.

Component 3: Sustainable Financing Mechanisms

9. Component 3 is assessed as successful. This component will contribute to improving the developing PES system in the HOB, and in Indonesia and the eco-region as a whole. The project supported two non-carbon PES schemes attached to two of the REDD+ pilot locations, namely verified conservation areas. Also, the project supported development of the district regulation (Malinau and Kapuas Hulu districts) on PES implementation. Investment in REDD+ villages have been continued with the Forest Investment Program since 2017 in 17 villages in West Kalimantan province (Grant 0501-INO: Community Focused Investment to Address Deforestation and Forest Degradation).

Component 4: Sustainable Livelihood Systems for Indigenous Peoples (funded by the Japan Fund for Poverty Reduction, JFPR)

10. Component 4 cannot be assessed because JFPR funding was not materialized. Nevertheless, the project supported livelihood training and equipment provision for both REDD+ pilot sites in two villages.

Component 5: Project Management

11. Component 5 is rated as moderately successful. This component generally concerned with the timely execution/operations of the project, formulation of Monitoring Reporting and Verification (MRV) systems, and the documentation and dissemination of knowledge products on REDD+ and PES schemes. The country developed the MRV system, but not coordinated at the tri-national level. The project disseminated knowledge and lessons through national, regional, and global knowledge networks, such as HOB trilateral meetings in Indonesia, Governors' Climate and Forest Task Force forum in West Kalimantan, and the International Union of Forest Research

Organizations 125th Anniversary Congress in Germany. The project had to be extended for 18 months to cover the start-up delays, and it is not adequate to full achieve all of the targets.

12. The progress/status of outputs and activities under each of the five project components are summarized and rated in Table 1 below.

Table 1: Achievement of Outcomes and Outputs in the GEF Project Framework

Expected outcomes	Expected outputs	Progress/Status (as of 28 February 2018)	Rating (HS/S/MS/ MU/U/HU)
Component 1: Strengthening policies and institutions for sustainable forest and biodiversity management			
Policies and institutions for sustainable forest and biodiversity management strengthened	1.1. Draft national policy and institutional reform agenda for forest resources and biodiversity management and sustainable finance.	N/A as the output was dropped in 2014 (minor change of TA outputs and activities).	N/A
	1.2. At least one tri-country roundtable dialogue among Brunei Darussalam, Malaysia, and Indonesia held each year from 2013–2015.	Achieved, the project supported HOB trilateral meeting in 2014, 2015, 2016, and 2017.	S
	1.3. Mechanisms and practical procedures supporting ecoregional cooperation implemented.	Partially achieved, ecoregional cooperation was discussed in HOB trilateral meeting but no established mechanism and practical procedures.	MS
Improved management effectiveness of Kayan Mentarang National Park (1.36 million ha under improved operational management). Increase in habitat quality for flagship species in Kayan Mentarang National Park (6% increase in Effective habitat area)	1.4. Implement foundational measures of the Kayan Mentarang National Park Management Plan, including: • Participatory delineation and marking on the ground of ca. 720 km of park boundary. • Establishment of ca. 1,000 ha conservation village models (cum REDD+ pilot areas) as part of protection forest and PA co-management strengthening. (Linked to JFPR, see Comp. 4) • IEC advocacy on PA protection, sustainable use and management (e.g., produce one video presentation on park management and reproduce 1,000 copies for distribution to local government units and schools; conducted 30 awareness raising meetings; and install 30	Partially achieved. The project supported two national parks (Kayan Mentarang and Betung Kerihun) for the biodiversity survey and socio-economic surveys, as well as their national park management plan. The project did not measure the increase in habitat quality for flagship species. The project established two REDD+ pilot areas covering more than 1,000 Ha (18,926 ha)	MS

	information billboards)		
	1.5 Four joint agency/ Community participatory patrol units established in the four districts (one each per district).	Partially achieved. Two Community participatory patrol units established in the two villages, as the REDD+ pilot areas	MS
Component 2: Management of Land Use, Land Use Change, and Forestry			
Land use and Forestry practices Improved GHG emissions from forest lands reduced by 62,674 tCO2e over 10 years. Illegal logging rates reduced	2.1 Design of four REDD+ demonstration sites covering 2000 ha; two of which will be further up-scaled through FIP – see Output 3.3	Partially achieved. Two REDD+ demonstration sites covering 18,926 ha; one of which was Further up-scaled through Grant 0501-INO project in Nanga Lauk village.	S
Component 3: Sustainable Financing Mechanisms			
Sustainable financing Mechanisms developed	3.1. Four PES schemes designed; with two PES pilots implemented and supported by PES M&E --linked to JFPR sustainable livelihoods project, see Component 4.	Two non-carbon PES attached to the two of the REDD+ pilot locations. The JFPR project was not materialized during implementation.	MS
An est. 5% increase in income of local project cooperators (environmental services providers), where at least 30% of which are women.	3.2. One operational guideline/manual for the application of PES financing mechanisms formulated	The project supported the district regulation on PES.	S
Financial resource Mobilization to upscale REDD+ in West Kalimantan	3.3. Forest Investment Program resources of $17 million mobilized for additional community-focused investments to address deforestation and forest degradation in West Kalimantan	Forest Investment Program (FIP) started in 2017, and one of the REDD+ pilot site in West Kalimantan became one of FIP target villages.	S
Component 4: Sustainable Livelihood Systems for Indigenous Peoples (funded by the Japan Fund for Poverty Reduction, JFPR)			
Improved livelihood practices for ca. 1,898 Dayak beneficiary households in project sites established.	4.1. Enhanced village-level regulations and enforcement system for forest protection	JFPR project component was not materialized	N/A
Income of pilot Households increased by 10%.	4.2. Livelihood skills and support system interventions piloted in 13 villages including • participatory baseline survey on livelihood systems and supply chains; • participatory village planning;	JFPR project component was not materialized. Nevertheless, under the GEF fund, the project supported livelihood training and equipments.	N/A

	• establishing and piloting PES mechanisms and capacity, including benefit sharing mechanisms (linked to output 3.1 and 3.2); • training and capacity support for alternative livelihoods; • information dissemination and outreach.		
30% of mothers in project site using introduced health and sanitation practices.	4.3. Support for application of knowledge on improved nutrition and sanitation in 13 villages.	JFPR project component was not materialized	N/A
Component 5: Project Management			
Effective project Management established	5.1. MRV system developed for HOB Indonesia and coordinated at the trinational Level.	The country is developing MRV system, but not coordinated at the trinational level.	MS
	5.2. Two knowledge and lessons (REDD+ and PES schemes) captured and disseminated through national, regional and global knowledge networks.	Fully achieved. The TA disseminated TA knowledge and lessons through national, regional, and global knowledge networks, such as HOB trilateral meetings in Indonesia, Governors' Climate and Forest Task Force forum in West Kalimantan, and the International Union of Forest Research Organizations 125th Anniversary Congress in Germany.	S
	5.3. Timely implementation and disbursement of project activities and funds, respectively.	Partially achieved. The project was extended for 18 months	MS

Note: HS= Highly Satisfactory; S= Satisfactory; MS= Moderately Satisfactory; MU= Moderately Unsatisfactory; U= Unsatisfactory; HU= Highly Unsatisfactory.
Source: Asian Development Bank.

(iii) Likelihood of achieving outcomes and impacts

13. The outcome was defined as "*Improved management of forest resources and biodiversity in four districts in the Indonesian portion of the HOB*", and the impact was defined as "*Sustainable use of forest resources in Indonesian HOB*". The outcome could not be fully achieved given the original projects focus on two districts rather than four as defined in the outcome statement. Forest resources management improvements have been achieved in two community REDD+/VCA pilot areas covering some 18,926 ha, and also within the two national parks. However, the quantitative measurement of the outcome was measured by the outcome indicators (2% decrease in forest loss), the land cover land use change analysis during project implementation showed the achievement of this indicator. The other outcome indicator (5% reduction in incidence of wildlife and biodiversity poaching) was not measured due to lack of reliable data for both the baseline and project completion.

14. The likelihood of impact achievement beyond the project lifetime will depend on the sustainability and scale up of the project intervention. One of the REDD+ pilot sites (Nanga Lauk) has secured 25 years financing agreement from the carbon offset buyer, so the forest and biodiversity management will be likely to continuously improved. In the other hand, the Punan Adiu customary forest has not yet secured the MOEF approval for its customary forest status, although the district administration has acknowledged it. The project contributed to improved capacity of government officials across 17 districts of Indonesian HOB, two REDD+ models and two VCA models under different land tenures during the project period and drafted two PES regulations for consideration by district level governments. Derivative PES implementing regulations in the two districts have also not been drafted under the project.

(iv) Theory of Change

15. The Theory of Change (ToC) recognizes that the project and the social, ecological, and economic processes are operating at different timeframes and invariably there will be an intermediate state between completion of a project and the achievement of the impact(s) of the intervention. Based upon this analysis, it should be possible to identify whether the project follows a logical pathway and is likely to result in lasting impacts. The ToC analysis of the Project is described as below.

16. **Intermediary state and impact.** Overall, the project has clear intervention logic and the outcome can realistically be obtained through the proposed outputs of the project. However, the indicators to measure the outcome achievement could not be fully measured and reflected the achievement. Changes of the outputs and activities in 2014 did not change the outcome, while it affected the four districts target mentioned in the outcome. The completion of outputs at project completion has led to the partial achievement of the outcome. Capacity building, workshop and training to all stakeholders increased the capacity of institution and community for the improvement of forest management. REDD+ pilot in two villages, bundled with the verified conservation area have shown a workable community-based forest management scheme. Community livelihood was also supported as part of the improved forest management scheme. But to demonstrate the impact of sustainable use of forest resources in Indonesian HOB, a clearer strategy for scaling up of REDD+ and PES schemes are required at all levels together with a comprehensive monitoring system that can track impact.

17. **Impact drivers and assumptions.** In order to move beyond project outcome and the intermediary state of implementation of REDD+ and PES to achieve impacts on sustainable use of forest resources in HOB, it is necessary to ensure REDD+ funding scheme and to improve the monitoring and assessment of the socio-economic and global environmental benefits of REDD+ for the national economic development and/or carbon emission reduction target. There is also a need to strengthen the regional sharing and transfer of knowledge on REDD+ experiences and processes to ensure scaling up and sustainability of forest management system in HOB Indonesia areas. A strategy and plan of action needs to be developed to encourage upscaling of practices principally through extension, to achieve adoption more widely than just in pilots or demonstrations.

(v) Assessment of Progress to Impact

18. The project's progress to impact is described as follows:

(i) Capacity of government officials within institutions that have direct influence over sustainable use of forest resources has been increased. The project has gone some way to achieving this outcome, but it is virtually impossible to quantify the impact capacity building activities have on the impact statement in the absence of a logical framework and associated monitoring and evaluation data. Even if monitoring data had been collected, compiled and analyzed, there is no direct link between capacity building and sustainable use of forest resources due to externalities outside the control of the individuals trained.

(ii) REDD+/ VCA model in village forest (Nanga Lauk) developed and delivering sustainable financing to communities to continue emission reduction and biodiversity conservation activities. The REDD+/VCA model has been developed (i.e. Project Design Document/ PDD and Forest Management Plan), validated and a Plan Vivo certificate will be issued within 12 months following validation, where communities comply with their inherent responsibilities. Sustainable financing has been secured for Nanga Lauk, as in 2019 the agreement has been signed with the carbon buyer.

(iii) REDD+/VCA model in customary forest developed and delivering sustainable financing to the Punan Adiu community to continue emission reduction and biodiversity conservation activities. The REDD+/VCA model has been developed (i.e. PDD and the forest management plan), validated and a Plan Vivo certificate will be issued within 12 months following validation, where communities demonstrate compliance with their inherent responsibilities under the PDD. Financing has not yet been secured and the forest area has yet to secure its customary forest status over the intended 17,430 ha, started with the acknowledgement from the Malinau district government in 2017.

(iv) The district PES regulations and associated implementing regulations enacted for the Districts of Malinau and Kapuas Hulu. The regulations have been drafted and are awaiting enactment by local parliaments. Work has not yet started on the implementing regulations. When the REDD+/VCA models starts for implementation, it is expected that the legal framework will be in place to replicate these models in both districts.

(v) Funding secured to rollout REDD+/VCA models in Kapuas Hulu and Malinau districts. There was a plan to continue with FIP investment to support on-going efforts within the two community REDD+/VCA sites to become financially self-sustaining. In 2018, Nanga Lauk village was included in FIP project.

In summary, the project has achieved important steps in the path to its impact, but work remains to galvanize the project's achievements over the past 30 months to ensure full achievement of project impact. Demonstrating the willingness to pay for environmental services is of key importance to future roll out efforts in both Kapuas Hulu and Malinau.

E. Assessment of Global Environmental Benefits (GEB) and Catalytic Role

19. **Biodiversity**. Outputs 1, 2 and 3 contributed to improving biodiversity conservation. Biodiversity conservation efforts in the REDD+/ VCA pilot project areas should result in protection of key biodiversity in the long-term as payments for environmental services and alternative livelihoods deliver sufficient income to reduce hunting, fishing and agricultural pressures. Zoning of forest areas, introduction of local/customary regulations governing exploitation of natural resources, including definition and application of sanctions will also support to behavioral change

in the mid to long term. Details of each output's contribution to biodiversity (environmental benefit) is described further here:

(i) Output 1 focused on improving capacity of both national parks, as well as the staff forestry agency in the districts and provinces, and the forest management units – primarily through delivery of training to national park staff in Spatial Monitoring and Reporting Tool (SMART) patrols, as well as implementing supporting activities related to national park management plans (i.e. management plan socialization, biodiversity surveys and socio economic surveys). The outcome is improved capacity to manage the national park, and the impact will be improved management and protection of biodiversity within both national parks.

(ii) Output 2 supported patrolling activities, biodiversity surveys, site conservation planning, and management plan development within the two community projects. Patrols were aimed at directly protecting biodiversity contained within the community sites: 1,430 ha of Nanga Lauk village forest; and 17,450 ha of the Punan Adiu customary forest. The outcome of these biodiversity related activities will be the issuance of Plan Vivo certificates to both communities, which aims to generate the impact of sustainable finance for on-going patrols and long-term conservation of biodiversity in both sites. The impact also includes the availability of two REDD+ models for replication elsewhere in Indonesian HOB, potentially catalyzing addition biodiversity conservation measures within other community forests.

(iii) Output 3 supported activities similar to those undertaken in Output 2 but which were reframed within the context of the VCA standard (i.e. the same activities and data sets supported compliance with both the Plan Vivo standard (i.e. REDD+ or carbon storage environmental service) and VCA standard (i.e. maintenance of biodiversity environmental service). The outcome of the activities is compliance with the VCA standard, and the impact will be the ability for communities to generate sustainable finance from on-going conservation of biodiversity. The impact also includes the availability of two VCA models for replication elsewhere in Indonesian HOB, potentially catalyzing addition biodiversity conservation measures within other community forests.

20. **Climate Change Mitigation**. Output 2 directly contributed to climate change mitigation given its focus on developing REDD+ models and reducing greenhouse gas (GHG) emissions, while Outputs 1 and 3 indirectly contributed to climate change mitigation because they encourage/support sustainable forest management (i.e. retention of standing forest). However, the indirect contributions of output 3 are the same as output 2 because the sites are at the same location and so the indirect climate change mitigation benefits of Output 3 need not be discussed further.

21. Output 2 activities resulted in the development and validation of project design document (PDD) for the two pilot sites. The impact of these activities will be the issuance of two Plan Vivo certificates and the ability of communities to market emission reductions to finance ongoing activities to reduce emissions of GHG from REDD+. The impact of the activities in terms of global environmental benefits are detailed in Table 2 and include mitigation of 149,868 tons of CO_2 equivalent during the project lifetime (i.e. 30 months), and expected mitigation of an additional 1,049,073 tons CO_2 equivalent post project (i.e. assuming 20 years project lifetime). The impact

also includes the availability of two REDD+ models for replication elsewhere in Indonesian HOB, potentially catalyzing addition emission reductions in other community forests.

Table 2: Climate Change Mitigation Global Environmental Benefits

Project Sites	PDD Net Annual Climate Benefit MT CO2e/year	Direct Climate Benefits at Project Midterm (13 months)	Direct Climate Benefits at Project Close (30 months)	Direct Climate Benefits (20 Years)	Post Project Direct Climate Benefits (01-Mar-2018 to 31-Dec-2035)
Punan Adiu customary forest	55,216	59,817	138,040	1,104,320	966,280
Nanga Lauk village forest	4,731	5,125	11,828	94,620	82,793
Projected CO_2 Emission Reductions (MT)	59,947	64,943	149,868	1,198,940	1,049,073

22. Output 1 activities contributed to improved capacity of national park staff leading to the assumed outcome of improved management of both national parks. The impact of improved park management leads to indirect reduction of greenhouse gas emissions as forests are theoretically maintained intact. However, the tenuous link between capacity building (i.e. SMART patrol training), improved management and the assumed outcome of reduction in GHG emission did not justify calculation of assumed indirect emission reductions. Supporting data was also not available[10].

23. The catalytic role and key replication potential of the project includes:

(i) District level PES Regulations. The project supported development of draft PES regulations in two districts (Malinau and Kapuas Hulu). These district-level regulations will deliver the broad legal framework for future PES projects in these districts once they have been approved and enacted by the respective District-level parliaments. These PES regulations also offer material considerations for other HOB districts looking to develop similar regulations.

(ii) The project developed two REDD+ models under the Plan Vivo carbon certification scheme: one model focusing on REDD+ within the Punan Adiu Customary Forest; and the other model focused on REDD+ within the Nanga Lauk Village Forest[11].

- The Customary Forest REDD+ model can be applied in similar Dayak communities located in Malinau and perhaps elsewhere in North Kalimantan where similar socio-political conditions exist. The nature of Customary Forests,

[10] Land cover change calculations developed by the project management consultant (PMC) for Kayan Mentarang national park unfortunately did not include calculations for parts of the national park included in Nunukan. For Betung Kerihun national park, there was a 46,595 ha difference between the total area analyzed by PMC and the reported total area of the National Park – so the resultant uncertainty / errors associated with this difference compounded by the tentative assumptions that training of national park staff will result in reduction of GHG emissions did not merit further attempts to estimate indirect GHG emission reductions.

[11] There is no difference between Village forest and Customary forest tenures in terms of REDD+ other than Village forests tend to be easier and faster to secure than Customary forest and Village forests will typically be smaller in total area compared to Customary forests.

while having basis in law, is still considered somewhat controversial and can only be applied in Kalimantan in situations where there are no overlapping claims between neighboring Dayak groups which otherwise may lead to social conflict. These conditions exist in Malinau, but not yet in Kapuas Hulu. Future financing for model rollout is may be possible from Lestari Capital[12] as well as from traditional donor-based development projects.

- The Village Forest REDD+ model can be applied in village forests throughout the HOB, given this model is fully aligned with the current legal framework and government priorities. Allocation of Village Forests to local communities is gathering momentum following the current government's targets to issue 12.7 million hectares to local communities within the coming years. Opportunities for expansion of this model are significant where financial resources and technical assistance are available. Future financing and TA for model roll out is likely possible from Lestari Capital as well as from traditional donor-based development projects.

(iii) Similar to the REDD+ models discussed above – the project developed two non-carbon PES models under the VCA certification scheme: one model focusing on VCAs within the Punan Adiu Customary Forest; and the other model focused on VCA within the Nanga Lauk Village Forest. The opportunities for scaling up of both of these PES models are the same as described above for the REDD+ models. VCA models are particularly suited to unplanned deforestation offset schemes such as those developed under the Roundtable Sustainable Palm Oil (RSPO) certification scheme.

(iv) Increased Government Capacity for Sustainable Management. While it is difficult to quantify the future impact of TA capacity building activities aimed at increasing awareness and capacity of stakeholders within the 17 districts comprising the Indonesian HOB, capacity building activities delivered under Output 1 will likely have a net positive future impact on sustainable forest and biodiversity management in Borneo. The increased awareness and capacity of stakeholders may catalyze management improvements on an incremental basis.

24. Key lessons related to the achievement of the global environmental benefits in relation to the project design and monitoring frameworks (DMF). The projects stated impact and outcome were highly generic, and not realistic given the very limited scale of the project's site interventions. Indicators used to verify achievement of the project's long-term objective and outcome were transferred from the CEO Endorsed project frameworks to the project DMF, thus, did not fully accommodate adjustments made to the project's scope and location post GEF award. Future projects need to be better formulated to ensure targets and indicators are realistic and easily measured.

[12] Lestari Capital is developing a fund to finance conservation and carbon projects. LC will secure funds initially from RSPO member companies that need to offset unplanned deforestation and then uses this capital to invest in to forest assets to deliver the required conservation offsets. LC also offers to purchase discounted carbon credits from the forest assets participating in the fund activities.

F. GEF Tracking Tools

25. The shift in project scope and locations post GEF award impacted delivery of the global environmental benefits defined in the CEO endorsed document. The key elements of the tracking tools impacted by the project as implemented are detailed in Table 3-7.

Table 3: Biodiversity Strategy (1): Objective 1. Kayan Mentarang National Park

TRACKING TOOL COMPONENT	APPRAISAL	MID-TERM	COMPLETION
1. Total area (ha)	1,306,500	1,271,696	
2. Local designation of protected area	IUCN Category 2, National Park		
3. METT score[13]	71	60	68
4. Perceived Funding Gap (IDR)[14]	-14,012,702	-1,503,625,000	-5,516,455,000

Table 4: Biodiversity Strategy (1): Objective 1. Betung Kerihun National Park

TRACKING TOOL COMPONENT	APPRAISAL[15]	MID-TERM	COMPLETION
1. Total area (ha)	N/a	816,693.4	
2. Local designation of protected area	N/a	IUCN Category 2, National Park	
3. METT score[16]	N/a	68	68
4. Perceived Funding Gap (IDR)[17]	N/a	-1,483,384,061	-5,661,834,263

Table 5: Biodiversity Strategy (1): Objective 2. Biodiversity in Production Landscapes

TRACKING TOOL COMPONENT	APPRAISAL	MID-TERM	COMPLETION
1. Target sector	Forestry	Other	Other
2. Landscape area directly covered by the project (ha)[18]	1,242,500	18,926	18,926
3. Landscape area indirectly covered by the project (ha)[19]	3,172,500	6,525,035	6,525,035

[13] The management effectiveness tracking tool (METT) score reflect evaluations by TNKM staff and stakeholders. The mid-term evaluation was conducted internally by TNKM, ADB and the TER consultant. Differences in scores likely result from increasing understanding of the application of the METT, changing circumstances within the national park, as well as an administrative incentive to report higher scores in order to qualify for additional central government budget for the national park. The full evaluations at project start midterm and closure are detailed in the relevant project biodiversity tracking tools.

[14] The perceived funding gaps for ideal park management were defined by the national park staff under part 1.2 of the biodiversity tracking tool Objective 1 section III. Please refer to the tracking tool for full details.

[15] TNBK was not evaluated at project start because it was not part of the project as per the CEO endorsed proposal. It was added as a project site post CEO endorsement.

[16] The management effectiveness tracking tool (METT) score reflect evaluations by TNBK staff and stakeholders. The mid-term evaluation and project close scores are the same because park staff stated that there were no changes between the mid and project closure period. The full evaluations at project midterm and closure are detailed in the relevant project biodiversity tracking tools.

[17] The perceived funding gaps for ideal park management were defined by the national park staff under part 1.2 of the biodiversity tracking tool Objective 1 section III. Please refer to the tracking tool for full details.

[18] Landscape area directly covered by the project (ha) calculated at project start included protected areas, which are not relevant to this objective i.e. misreported. At project midterm and closure the areas of production forest were reported as the sum of both project sites i.e. Punan Adiu customary forest and the Nanga Lauk village forest.

[19] Landscape area indirectly covered by the project at project start is not well understood. The tracking tool notes report "The indirectly covered area is estimated at about 9.063 million hectares. This represents the remaining balance of the total forest areas (conservation, protection, production and other types of forests) of HOB, which has a total are of 12.613 million hectares. The numbers reported at midterm and project closure represent the total area of production forest within the Heart of Borneo minus the two project sites. Please note that these figures are approximate and are derived from the National Strategic Plan of Action Heart of Borneo 2015-2019 which increases

TRACKING TOOL COMPONENT	APPRAISAL	MID-TERM	COMPLETION
4. Payment for the provision of water supply and reduction of pollution in oil palm plantations in the Melawi district (ha)[20]	524,000	-	-
5. Payment for the provision of water supply for rubber plantations in the Gunung Mas and Katingan districts (ha)[21]	118,000	-	-
6. Pollution and carbon emission fee from timber concessions in Malinau (ha)[22]	302,000	-	-
7. Payment for water supply and charging of pollution fee from coal mining in the Malinau district (ha)[23]	300,000	-	-
8. Payment for Environmental Services (USD)[24]	0.00	0.00	0.00

Table 6: Climate Change Mitigation Strategy (2): Objective 5. LULUCF

TRACKING TOOL COMPONENT	APPRAISAL	MID-TERM	COMPLETION
4. Conservation and enhancement of carbon in forests, including agroforestry (ha)	18,400	2,107,315	2,107,315
5. Conservation and enhancement of carbon in nonforest lands, including peat land (ha)	-	-	-
6. Avoided deforestation and forest degradation (ha)	18,400	18,926	18,926
7. Afforestation/reforestation (ha)	-	-	-
8. Good management practices developed and adopted (climate change mitigation tracking tool score)	2 and 3	2	4
9. Carbon stock monitoring system established (climate change mitigation tracking tool score)	3	3	4
10. Lifetime direct project GHG emission avoided (tonnes CO_2 eq)[25]	3,233,140	46,413	149,868
11. Lifetime direct post project GHG emission avoided (tonnes CO_2 eq)[26]	-	-	1,049,073

the area covered under the HOB from 12,624,380 hectares in the 2009 Plan to 16.835.379 hectares under the 2015-2029 Plan.

[20] Payment for the provision of water supply and reduction of pollution in oil palm plantations in the Melawi district was eliminated from the project scope under the PDM and so is not reported on at midterm nor project closure. At project start the information was reported as the number of hectares over which payments were expected under the project.

[21] Payment for the provision of water supply for rubber plantations in the Gunung Mas and Katingan districts was eliminated from the project scope under the PDM and so is not reported on at midterm nor project closure. At project start the information was reported as the number of hectares over which payments were expected under the project.

[22] Pollution and carbon emission fee from timber concessions in Malinau was eliminated from the project scope under the PDM and so is not reported on at midterm nor project closure. At project start the information was reported as the number of hectares over which payments were expected under the project.

[23] Payment for water supply and charging of pollution fee from coal mining in the Malinau district was eliminated from the project scope under the PDM and so is not reported on at midterm nor project closure. At project start the information was reported as the number of hectares over which payments were expected under the project.

[24] No payments for ecosystem services were realized during the project period neither for carbon nor biodiversity.

[25] The numbers decline significantly from the predicted emission reductions envisaged at project start because the project location changed post GEF CEO endorsement. The majority of inputs to TNKM (1,306500 ha) were eliminated /significantly reduced and REDD+ emission reduction activities exclusively focused on to the two community sites totaling 18,926 ha.

[26] The amount of direct post project GHG emission reductions was quantified for the two community sites at project close to indicate the anticipated long-term impact of the project on climate change mitigation.

TRACKING TOOL COMPONENT	APPRAISAL	MID-TERM	COMPLETION
12. Lifetime indirect GHG emission avoided (tonnes CO_2 eq)	44,501,944	-[27]	Data deficient[28]
13. Lifetime direct carbon sequestration (tonnes CO_2 eq)[29]	62,673	-	-
14. Lifetime indirect carbon sequestration (tonnes CO_2 eq)[30]	-	-	-

26. Tracking tools at project start were completed in 2012. Not all data were inputted correctly especially the Climate Change Mitigation tracking tool. These data were left as they are, and not altered. Tracking tools were not updated during the mid-term evaluation in 2016, likely because of confusion surrounding the differences in activities between the CEO endorsed document and project activities as implemented. Tracking tools at mid-term were subsequently updated by the GEF terminal evaluation consultant in October 2017. Data inputted was done retroactively based on the perceived project status representative at that point in time. Sections of both tracking tools were considered not applicable by the TER consultant including:

(i) Biodiversity Strategy Objective 1 Section III: the project as implemented did not include a sustainable financing component for protected areas, protected area networks nor sub-systems.
(ii) Biodiversity Strategy Objective 2 Part IV Market transformation: the project as implemented did not include a market transformation component.
(iii) Biodiversity Strategy Objective 2 Part VI. Tracking Tool for Invasive Alien Species Projects in GEF 4 and GEF 5: the project as implemented did not include an invasive species component.
(iv) Biodiversity Strategy Objective 3 Build Capacity for the Implementation of the Cartagena Protocol on Biosafety (CPB): the project as implemented did not include a biosafety component.
(v) Climate Change Mitigation Objective 1, 2, 3, 4 and 6: the project as implemented did not include any of these components.

For Climate Change Mitigation Objective 5, there was insufficient data to calculate the lifetime indirect GHG emissions avoided at project closure because the project did not include a M&E component to collect and compile the necessary data[31]. The complete set of Tracking Tools as developed at project start, mid-term and closure have been delivered to the IA/EA and the GEF Focal Point for Indonesia.

[27] Not required in the tracking tools at project mid-term.
[28] Land cover change calculations developed by the PMC for TNKM unfortunately did not include calculations for parts of the national park included in Nunukan. For TNBK there was a 46,595 ha difference between the total area analyzed by PMC and the reported total area of the National Park – so the magnitude of the resultant uncertainty / errors associated with this difference compounded by the tentative assumptions that training of national park staff will result in reduction of GHG emissions did not merit estimation of indirect GHG emission reductions.
[29] Tree planting activities envisaged at project start in the buffer zone of TNKM were eliminated from the PDM, so the planned tree planting activities did not take place. Hence there was no direct carbon sequestration to report at mid-term or at project close.
[30] The project at CEO endorsement did not anticipate delivering Lifetime indirect carbon sequestration and so was not reported on at project start, mid-term nor at project close.
[31] Land cover change calculations developed by the PMC for TNKM unfortunately did not include calculations for parts of the national park included in Nunukan. For TNBK there was a 46,595 ha difference between the total area analyzed by PMC and the reported total area of the National Park – so the resultant uncertainty / errors associated with this difference compounded by the tentative assumptions that training of national park staff will result in reduction of GHG emissions did not merit estimation of indirect GHG emission reductions.

G. Sustainability

27. The sustainability of project outcomes are vested in: (i) Increased government capacity and awareness to sustainable forest and biodiversity management in HOB districts; (ii) Community-based REDD+ and PES models available for future rollout across the HOB; and (iii) REDD+ and PES regulatory frameworks in Malinau and Kapuas Hulu districts. The project has laid the necessary foundations to facilitate scaling up of impact across the HOB through on-going initiatives such as the ADB Forest Investment Program (Grant 0501-INO: Community-Focused Investments to Address Deforestation and Forest Degradation). The perceived financial, socio-political, institutional framework / governance and environmental risks to the on-going community REDD+ and PES projects are briefly outlined below.

28. **Financial risks.** After the project completion, there were risks that the community group at the REDD+ and PES projects in Punan Adiu and Malinau districts need supports to have Plan Vivo certificate issuance and the buyers for the REDD+ emission reductions and conservation offsets accruing to PES projects. Discussions were on-going with the FIP to allocate funding for continued support to both communities during this crucial stage in the pilot development cycle. Nanga Lauk has been included in FIP target villages since 2018. Funds and technical assistance are also needed to be allocated to facilitate enactment of umbrella PES and to develop implementing regulations to facilitate model roll out.

29. **Socio-political risks**. The social and political risks impacting the sustainability of the REDD+ and VCA projects remain high in the event of uncertainty on the project continuation. The key social risk is in the form of demoralized communities. Where communities do not secure buyers for their realized ecosystem services, and/or are abandoned with no on-going support, and/or do not secure legal tenure for their proposed project areas, there is a strong possibility that they will focus their attention on their day-to-day activities and livelihoods. If this occurs then project gains over the past 30 months may be lost, in addition to the loss of these sites as demonstration projects to inspire other communities and local governments within the HOB.

30. The political risks impacting the sustainability of the REDD+ and VCA projects include lack of local government ownership over the project outcomes due to their peripheral involvement in project design and implementation. It is likely that local government ownership over these projects will ignite where the projects are proven to be successful and hence deliver political capital. These political risks will remain high, unless there is strong political will from the central government for REDD+ and biodiversity PES.

31. There was a strong indication from the central government as the MOEFr issued the REDD+ implementation decree in December 2017, which came into effect in January 2018. All other MOEFr laws and regulations, which are in contradiction with this law are no longer valid, and all existing carbon projects must fully align with this REDD+ implementing law by 31 December 2019. The new REDD+ implementation law operates at national and sub-national levels (i.e. at provincial level). Sub-national efforts will feed into national level accounting mechanisms. The passage time and associated experience will demonstrate how this new framework will impact projects accredited to third party certified standards, especially with regard to payments for emission reductions from overseas. In theory in-country payments should not be affected.

32. **Institutional framework and governance risks**. The institutional framework and governance risks impacting the sustainability of the community-based REDD+ and VCA projects remain relatively high at the close of the project. Punan Adiu has still not secured the status of its

forest areas customary forest. It is also unlikely that the 17,496 ha forest area requested by Punan Adiu will actually be endorsed by local government, nor released in its entirety by the MOEF. The exact size and official location of Customary Forest allocated to Punan Adiu is still under deliberation. The Plan Vivo facilitator, LP3M, is well placed to support the licensing process especially at district level, however it requires on-going support and capacity building to fulfill its PlanVivo role.

33. Nanga Lauk village on the other hand successfully renewed its village forest license in 2017, covering some 1,430 ha. Expansion plans to include a neighboring 4,500 ha forest area under the Village Forest have been put on hold. Nevertheless, the legal basis for management of forest lands covered by the REDD+ and VCA projects is secure. The Plan Vivo facilitator, PRCF Indonesia, is also well placed to deliver on-going support to local communities.

34. While MOEFr's policies are supportive of social forestry and community-based forest enterprises, including targets of allocating more than 12.7 million hectares of state forest lands under some form of community ownership/management by 2024, the government has not achieved its interim targets. Furthermore, rollout of this program over 6.3 million hectares of this target is dependent on re-election of the current president for a second term in office.

35. The trading of conservation offsets or biodiversity 'credits' also has no concrete basis in law. There is no current non-tax state revenue (*Pendapatan Negara Bukan Pajak* or PNBP) tariff covering sales of conservation off-sets or biodiversity 'credits' generated in State forest lands based on the government regulation number 12 year 2014 regarding non-tax state revenue for the forestry sector. However, local government laws drafted under the project are currently under consideration within district parliament's of both Malinau and Kapuas Hulu. Enactment of these laws will provide some form of legal basis for communities to trade their realized ecosystem services.

36. **Environmental risks**. Based on feedback from both national and local project stakeholders there are no anticipated environmental risks that will poses a threat to the sustainability of the project outcomes. There are also no anticipated environmental risks associated with the community REDD+ and PES projects with the exception of uncontrolled wildfire and planned provincial road construction close to the Punan Adiu customary forest. The community's standard operating procedures under Plan Vivo and VCA mitigate fire risks originating within lands under community control, and negotiations on road placement indicate that it will not pose a direct threat to the Punan Adiu customary forest.

H. Monitoring and Evaluation Framework and Institutional Arrangements

(i) Monitoring and Evaluation Design

37. The project's monitoring and evaluation (M&E) design is presented in the form of the *Project Design Matrix*, which was adapted from the CEO endorsed *Project Design and Monitoring Framework* contained in the original proposal. Neither a logical framework nor a *Monitoring and Evaluation Plan* were developed during the project implementation period to quantify progress and achievement of project outcomes. While the PMC's terms of reference under Output 4 included a sub-activity to "*Create an effective monitoring, reporting and verification system*" the PMC stated that the PMC contract did not include position allocation for M&E consultant. The project DMF was evaluated during ADB project review missions that were conducted once per year.

(ii) M&E Plan Implementation

38. ADB opted for a simple, qualitative approach to monitoring project progress through delivery of regular monthly reports, quarterly reports and annual project reports, coupled with quarterly briefings to the project steering committee (PSC). These reports were well prepared and informative, although often not delivered in a timely manner by the PMC. ADB also conducted external review missions in October 2016 (GEF mid-term evaluation), October 2017 (ADB / DESCA end of project evaluation mission), and August 2017- February 2018 (the GEF terminal evaluation). Whilst these review missions were informative and provided useful insights to the project partners, PSC would have significantly benefitted from continuous internal M&E. Development & implementation of a M&E Plan would have resulted in more rapid feedback to management on the effectiveness and impact of field interventions and likely resulted in translation of the GEF GEB detailed in the CEO endorsed document into the new project design framework.

39. M&E of the two community REDD+ and PES projects was accommodated through inherent requirements of both the Plan Vivo and Verified Conservation Area (VCA) processes which require monitoring and evaluation of: forest degradation, biodiversity conservation, sustainable forest management, frequency and occurrence of forest fires, fire control, and enhancement of carbon stocks at provincial and district levels. These data informed development of the necessary baselines and project documentation required for Plan Vivo and VCA certification. The Plan Vivo facilitators (PRCF Indonesia and LP3M) and associated communities have received training in monitoring and evaluation activities required by Plan Vivo and VCA to collect, analyze and report the requisite data after project closure. Additional guidance will likely be required for Plan Vivo facilitators, especially LP3M.

(iii) Budgeting and Funding for M&E Activities

40. The overall project budget was sufficient to have developed and implemented a quality project M&E system. PMC's response to the tender document included budget for M&E, but this was not approved by ADB. The PMC contract was therefore issued without budget for undertaking continuous project M&E activities.

(iv) Monitoring of Future Impact

41. Given the project was formally close on 28 February 2018, opportunities for monitoring of future project impact are limited. However future projects financed through ADB and/or projects endorsed by MOEF that target the HOB and/or REDD+/PES interventions should aim to encourage the roll out of community-based REDD+ and PES models developed over the past 30 months. ADB / DESCA could monitor: (i) The number of additional communities adopting similar REDD+ and PES models; (ii) The total area over which these models are being implemented; and (iii) Calculate the GEBs in terms of greenhouse gas emissions reduced as a result of model rollout. These data could then be fed back to the GEF focal point for Indonesia as a supplementary update on the projects broader impact.

42. In terms of the proposed post-project support to both Punan Adiu and Nanga Lauk communities, ADB and the Government need to incorporate a monitoring and evaluation component into any agreed bridge funding and technical assistance. Relevant indicators may include but not be limited to:

- Rate of deforestation in project sites (%).
- GHG emissions reduced by end 2018 compared to the project baseline.
- Number of hectares of forest under Plan Vivo certificates[32].
- Number of hectares of forest under VCA certificates.
- IDR value generated from REDD+ interventions.
- IDR value generated from VCA interventions.
- % increase in household incomes compared to project baselines.
- Issuance of umbrella PES regulations in the districts of Malinau and Kapuas Hulu.
- Issuance of PES implementing regulations in the districts of Malinau and Kapuas Hulu.

[32] Please note that this figure may change if MOEF does not release the full 17,500 ha area under Customary forest as proposed by Punan Adiu community.

Annex to Supplementary Appendix – Project Identification & Project Data Required by GEF

a. Project Identification

GEF Project ID:	3435
GEF Agency Project ID:	TA 8331
Countries:	Indonesia
Project Title:	Sustainable Forest and Biodiversity Management in Borneo
GEF Agency (or Agencies):	Asian Development Bank

b. Dates

Milestone	Expected Date	Actual Date
CEO endorsement	Jul 2012	17-Aug-2012
Agency approval date	Sep 2012	26-Feb-2013
Implementation start	Jan 2013	07-Apr-2014
Midterm evaluation	Nov 2014	19-Oct-2016
Project completion	Jan 2016	16-Feb-2018
Terminal evaluation completion	Feb 2016	28-Feb-2018
Project closing	Feb-2016	28-Feb-2018

c. Project Framework

Project Component	Activity Type	GEF Financing ($)		Co-Financing ($)	
		Expected	Actual	Expected	Actual
1. Strengthening policies & institutions for sustainable forest and biodiversity management (PDM Component 01: Capacity building)	TA	1,309,845.00	1,654,412.31	2,568,277.50	2,790,962
2. Management of Land use, land use change and forestry (Component deleted from the PDM)	TA	-	0.00	1,279,220.46	
3. Sustainable Financing Mechanisms (PDM components 02 & 03: REDD+ & PES Pilots)	TA	1,024,090.20	0.00	375,620.88	
4. Sustainable Livelihood systems for Indigenous peoples (Component deleted from the PDM)	TA	-	0.00	1,026,408.00	

Project Component	Activity Type	GEF Financing ($)		Co-Financing ($)	
		Expected	Actual	Expected	Actual
5. Project Management (PDM Component 04: effective Project Management)	TA	193,337.80	84,512.94	1,200,473.16	210,000
TOTAL		**2,527,273**	**1,738,925.25**	**6,450,000.00**	**3,000,962**[33]

d. Co-Financing

Source of co-financing	Type	Project Preparation ($)		Project implementation ($)		Total ($)	
		Expected	Actual	Expected	Actual	Expected	Actual
Govt Contribution	In-kind	-	-	500,000	1,201,178[34]	500,000	1,201,178
GEF Agency: ADB	Grant	210,000	210,000	3,950,000	1,589,784[35]	4,450,000	1,799,784
Bilateral Agency	-	-	-	-	-	-	-
Multilateral Agency	-	-	-	-	-	-	-
Private Sector	-	-	-	-	-	-	-
NGO	Grant	-	-	2,000,000	0.00	2,000,000	0.00
Other	-	-	-	-	-	-	-
TOTAL	Mix	210,000	210,000	6,450,000	2,790,962	6,660,000	3,000,962

[33] The differences between the project components at CEO endorsement and as detailed in the PDM make it difficult to allocate co-financing under the project component headings contained in the table. Furthermore co-financing was allocated in two separate tranches – one tranche paid the PMC fees the other the provisional sum. The relative allocation of the PMC fees to each project component is unknown. Hence the total co-financing allocated to the project is simply reported in the TOTAL row.

[34] Government co-financing is higher than expected as they have included full market rate for contributions for project personnel

[35] Only from RCIF ($441,673) and CCF ($1,148,111), JFPR fund was not materialized

Comments from GEF Indonesia Operational Focal Point (OFP) and ADB Responses

No.	GEF OFP Comments	ADB Responses
1	Please reconsider the rating of sustainability assessment "likely sustainable". It is not clear in the report how the project beneficiaries could continue the project activities sustainably. In this case, degrading the sustainability rating could be an option to revise the report.	After the project completion in 2018, the project was able to secure 25 years funding from the carbon offset mechanism through the Lestari Capital and Plan Vivo scheme for one of the REDD+ pilot site in Nanga Lauk village. (https://investor.id/business/cargill-alokasikan-us-35-juta-dukung-desa-nanga-lauk-lestarikan-dan-lindungi-hutan) On 4 December 2019 the agreement was signed for $3.5 million funding commitment. Para 28 is added: "The community at Nanga Lauk will be able to implement their forest management plan with the long term funding commitment that has been signed in 2019." The rating of "likely sustainable" is kept the same.
2	The section of "issues, lessons and recommendations" needs to include the discussion about project organization structure, which significantly affected the project implementation arrangement. The project involved many entities such as EA, IA, PSC, PMU, PIU, ADB, national park, and FMU.	Para 37 is added: Project design also need to carefully consider organization structure and its implementation arrangement, especially for the project that will involve many entities in the central and local governments. More project entity will need more time to engage, socialize and make agreement among the entities. However, a REDD+ pilot always needs many entities to be involved in the field.
3	In para. 9, please discuss what the project did to overcome the issue of lack of baseline data and no regular monitoring data on illegal logging.	Para 9 is added: The project supported the national parks, the community and local government for sustainable forest management to conduct monitoring including land use change monitoring to indirectly assess illegal logging.
4	In para. 10, please discuss what the project did to overcome the issue of lack of baseline data and definition of " environment services providers" (Five percent (5%) increase in income of local project cooperators)	Para 10 is added: The project took socio economic data as part of the support to the national parks. Since the PES sites are not under the national parks, but under the FMU, the data could not be used to measure the achievement of the third indicator.