Maintaining and Enhancing Water Yield through Land and Forest Rehabilitation (MEWLAFOR)

Part I: Project Information

GEF ID
10757

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Maintaining and Enhancing Water Yield through Land and Forest Rehabilitation (MEWLAFOR)

Countries
Indonesia

Agency(ies)
UNIDO

Other Executing Partner(s)
Ministy of Environment and Forestry, Directorate of Planning and Evaluation for Watershed Management

Executing Partner Type
Government

GEF Focal Area
Land Degradation

Taxonomy

Land Degradation, Focal Areas, International Waters, Freshwater, Aquifer, River Basin, Pollution, Nutrient pollution from all sectors except wastewater, Large Marine Ecosystems, Coastal, Land Degradation Neutrality, Land Productivity, Land Cover and Land cover change, Carbon stocks above or below ground, Sustainable Land Management, Community-Based Natural Resource Management, Restoration and Rehabilitation of Degraded Lands, Sustainable Livelihoods, Drought Mitigation, Income Generating Activities, Sustainable Forest, Improved Soil and Water Management Techniques, Influencing models, Demonstrate innovative approache, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Stakeholders, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Beneficiaries, Private Sector, Large corporations, SMEs, Gender Equality, Gender results areas, Capacity Development, Awareness Raising, Access and control over natural resources, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Innovation, Enabling Activities, Knowledge Exchange, Knowledge Generation, Targeted Research, Learning, Theory of change

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 0

Submission Date

11/26/2021

Expected Implementation Start

3/15/2022

Expected Completion Date

3/15/2025

Duration

36In Months

Agency Fee($)

168,655.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
LD-1-1	Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)	GET	813,331.00	6,750,115.12
LD-1-3	Maintain or improve flows of ecosystem services, including sustaining livelihoods of forest-dependent people through Forest Landscape Restoration (FLR)	GET	961,982.00	7,983,848.67
		Total Project Cost($)	**1,775,313.00**	**14,733,963.79**

B. Project description summary

Project Objective

To demonstrate an innovative approach to how a proactive multi-stakeholder private sector-catalyzed partnership for water stewardship can be upscaled to achieve transformational changes in the restoration of degraded terrestrial ecosystems.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Land restoration for water retention, sediment retention and improved livelihoods	Investment	Loss of 2,407 ha of protected forest and 19,929 ha of conservation forest avoided; up to 18 million t/year of erosion avoided; 121 t of N and 35 t of P input into the Brantas avoided annually; 7, 981,341 m^3 of water per year retained in the catchment area	1.1 Restoration of upstream agroforestry systems to revert land degradation, enhance water retention and groundwater replenishment and cater for alternative livelihoods 1.2 Restoration of riparian bamboo forests for sediment retention, water infiltration and pollution absorption and sustainable use of bamboo for value added product	GET	876,983.00	7,268,921.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: Nature Based Infrastructure and awareness creation for land and water conservation, sediment and water retention	Investment	204,880 m3 of water per year retained in the catchment area and awareness for integrated land and water conservation created for at least 24,000 people	**2.1** Construction of 597 absorption wells (2x2x2m) and awareness creation for enhanced water retention in the catchment area **2.2** Establishment of 8,000 biopori and awareness creation for water conservation in 40 schools	GET	558,330.00	4,648,333.79
Component 3: Strengthen the enabling environment to promote community-based land restorations	Technical Assistance	Institutional capacities of the MOEF regional office for an up-scaling of water stewardship initiatives and for the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests enhanced	3.1 Facilitation of active involvement of the staff of the Sidoaryo regional MOEF office in project execution and in the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests	GET	125,000.00	1,035,908.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 4: Monitoring and Evaluation	Technical Assistance	Impact of project tracked and reported as per GEF and UNIDO guidelines	4.1 Project progress monitoring and reporting 4.2 Midterm review and independent terminal evaluation conducted	GET	55,000.00	455,167.00
				Sub Total ($)	**1,615,313.00**	**13,408,329.79**

Project Management Cost (PMC)

GET	160,000.00	1,325,634.00
Sub Total($)	**160,000.00**	**1,325,634.00**
Total Project Cost($)	**1,775,313.00**	**14,733,963.79**

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNIDO	Grant	Investment mobilized	51,750.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	50,000.00
Recipient Country Government	Ministry of Environment and Forestry, Directorate General of Watershed Control and Protected Forest	In-kind	Recurrent expenditures	429,800.00
Recipient Country Government	Education Office, Local Government of Mojokerto District	In-kind	Recurrent expenditures	41,507.27
Recipient Country Government	Public Housing, Residential Area and Transportation Office, Local Government of Mojokerto District	In-kind	Recurrent expenditures	41,539.16
Recipient Country Government	Health Office, Local Government of Mokokerto District	In-kind	Recurrent expenditures	13,498.00
Recipient Country Government	Department of Agriculture, Mojokerto District Government	In-kind	Recurrent expenditures	474,451.79
Private Sector	PT Multi Bintang	In-kind	Recurrent expenditures	2,612,981.00
Private Sector	Heineken	Grant	Investment mobilized	100,000.00
Recipient Country Government	Public Works and Spatial Planning Office, Mojokerto District Government	In-kind	Recurrent expenditures	7,836,170.00
Other	Yayasan Lingkungan Hidup Seloliman	Grant	Investment mobilized	200,697.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Other	Yatim Sejahtera Fondation Mojokerto	In-kind	Recurrent expenditures	21,000.00
Private Sector	PT Generasi Baru Digital	In-kind	Recurrent expenditures	18,621.00
Private Sector	PT Titien Andaru Jaya	Grant	Investment mobilized	33,000.00
Other	Wehasta Foundation	Grant	Investment mobilized	210,481.00
Recipient Country Government	Environmental Office, Local Government of Mojokerto District	In-kind	Recurrent expenditures	1,957,958.00
Private Sector	Firitri Network	Grant	Investment mobilized	24,476.00
Private Sector	PT Putra Restu Ibu Abadi	Grant	Investment mobilized	430,000.00
Other	Yayasan Bambu Lestari/Sahabat Multi Bintang Indonesia Foundation	Grant	Investment mobilized	186,033.57
			Total Co-Financing($)	**14,733,963.79**

Describe how any "Investment Mobilized" was identified

(1) Official letters confirming project co-finance for investments mobilized and recurrent expenditures were secured during the PPG phase (see Annex O). Each letter expresses the type of co-financing provided; the amount of co-financing; that the co-financing supports the execution of the project; the timeframe over which co-financing is provided; and is signed and dated by the co-financier. Each letter is in English or accompanied by an English translation of the original. (2) The project has # confirmed co-financiers, which will provide US$ 14,733,963 in total project co-financing. There is a ratio of project co-financing to GEF project financing of 8:1. Describe how any ?Investment Mobilized? was Identified: (3) In line with the GEF Co-Financing Guidelines, the investments mobilized comprise relevant investments by project partners that are not operational costs. These resources were not previously identified or reported as co-financing toward another GEF-financed project or program. (4) The investments mobilized by UNIDO and Heineken consist of the support provided through the UNIDO-Heineken partnership to tackle water

scarcity. This partnership, which began in 2015, includes cooperating on the development of public-private partnerships (PPP) for water stewardship programs in water-stressed catchment areas around the world. The purpose of these PPPs is to engage with stakeholders and to mobilize resources for collaborative action to overcome cumulative stress on finite water resources in selected catchment areas. The MEWLAFOR project was conceived through this initiative. (See Annex H - Detailed Project History). (5) The investments mobilized by the listed private sector companies pertain to activities catalyzed by the Aliansi Air?a multi-stakeholder alliance for water stewardship in sub-catchment areas of the Brantas Basin in East Java, Indonesia. (The creation of the Aliansi Air was the key outcome of the UNIDO-Heineken partnership intervention in East Java). This co-financing was identified through a consultation process with the Aliansi Air and its members, carried out during the PPG and PIF phases. The Aliansi Air will play a key coordination and technical assistance role in project execution. (6) The investments mobilized by Yayasan Lingkungan Hidup (YLH) Seloliman and Yayasan Bambu Lestari pertain to ongoing activities that will support and complement project activities to restore upstream agroforestry schemes and riparian bamboo forests and to increase water conservation in the Brantas Basin and throughout Indonesia. Both organizations will play a key project execution role. Explanation of ?Recurrent Expenditures? Identified: (7) The in-kind contribution by PT Multi Bintang (the Heineken Operating Company in Indonesia and a member of the Aliansi Air) pertains to ongoing activities under its Nabung Banyu water stewardship program, which includes investments in water balancing, efficiency and reclamation activities for its breweries in Indonesia. Under Component 1 of the project, and through the coordination of the Aliansi Air and in consultation with the Ministry of Environment and Forestry (MOEF), a portion of this co-finance will restore 136 hectares (ha) of upstream agroforestry schemes in the Brantas Basin (1,000 trees/ha; 136,000 trees total). Note: Heineken and PT Multi Bintang have committed to additional water treatment, water reclamation and water restoration activities since PIF approval. And due to corporate internal considerations, a different decision on the cost coverage distribution between the mother company and the subsidiary, and investment mobilized and in-kind contribution, has been taken. (8) The in-kind contributions by the six Mojokerto Regency local government agencies and the Ministry of Public Works pertain to recurrent expenditures for activities aiming at improving the management of land and water resources in the region?including providing agricultural extension services; undertaking community awareness and engagement for improved management of natural resources and environmental protection; improving participatory management of irrigation systems; monitoring the status of terrestrial and aquatic resources; training communities in biopori infiltration hole making; and facilitating agroforestry plantation and forestry productivity. Under the project, the Agriculture Office of Mojokerto Regency and Environmental Office of Mojokerto Regency will participate in the determination and implementation of activities to restore upstream agroforestry systems and riparian bamboo forests. The Education Office of Mojokerto Regency, Health Office of Mojokerto Regency, Department of Public Housing, Residential Areas and Transportation, Mojokerto Regency and Department of Public Works and Spatial Planning, Mojokerto Regency will participate in the determination and implementation of activities to construct absorption wells and biopori and to create awareness for water conservation. This co-financing was confirmed through a consultation process led by the MOEF during an intensive project field survey conducted in the PPG phase.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNIDO	GET	Indonesia	Land Degradation	LD STAR Allocation	1,775,313	168,655
				Total Grant Resources($)	**1,775,313.00**	**168,655.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNIDO	GET	Indonesia	Land Degradation	LD STAR Allocation	50,000	4,750
				Total Project Costs($)	**50,000.00**	**4,750.00**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
3697.00	3697.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
3,180.00	3,180.00		

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
517.00	517.00		

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
22336.00	26033.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
22,336.00	26,033.00		

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Amount of Marine Litter Avoided

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	55432	9690000	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	55,432	9,690,000		
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2023			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	125,370	125,730		
Male	153,230	153,230		
Total	278600	278960	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF

(12) This document deviates from the PIF in the following ways:

Project Structure

This document elaborates on the project structure described in the PIF. While the Components and Outputs have not changed, there are now 14 activities mapped to the Components and Outputs. A summary table of this expanded overall project structure is presented under paragraph 31 below.

Project Budget

The budgeted GEF increment for each Output has not deviated from the PIF. However, the budget under Component 1 in the PIF ($876,983) was not disaggregated by Output. In this document, the budget for Component 1 is disaggregated by Output (Output 1.1 is $439,785 and Output 1.2 is $437,198).

Co-Finance

There are deviations in the co-finance amounts between the PIF and this document. One significant deviation is the co-finance provided by Heineken and PT Multi Bintang. Heineken and PT Multi Bintang have committed to additional water treatment, water reclamation and water restoration activities since PIF approval. And due to corporate internal considerations, a different decision on the cost coverage distribution between the mother company and the subsidiary, and investment mobilized and in-kind contribution, has been taken. Heineken had committed $1,040,000 in co-finance at PIF stage. In the PPG phase, Heineken confirmed co-finance of $100,000. PT Multi Bintang had committed $488,419 at PIF stage. In the PPG phase, PT Multi Bintang confirmed co-finance of $2,612,981. A second significant co-finance deviation involves the Public Works and Spatial Planning Agency of the Mojokerto Regency (local government). This agency indicated co-finance of $2,770,445 at PIF stage. In the PPG phase, the agency confirmed co-finance of $7,836,170 due to a recalculation of relevant projects and programs. Similarly, in a third significant deviation, the Environmental Office Mojokerto Local Government indicated co-finance of $443,661 at PIF stage. In the PPG phase, the agency confirmed co-finance of $1,957,958, also due to a recalculation of relevant projects and programs.

Activity Execution

In the PIF, the NGO, YLH Seloliman, and CSO, Bambu Petung, were proposed executors of the Outputs under Components 1 and 2. Bambu Petung is no longer operational. Given the expanded structure (the addition of seven activities to Components 1 and 2), a new execution scheme has been decided. Community Farmer Groups, YLH Seloliman, NGO Bambu Lestari and 40 schools in the project area will execute activities under Components 1 and 2 via the Swakelola (?self-manage?) modality (see 6. *Institutional Arrangement and Coordination* section below). Community Farmer Groups and members of the community will execute Activities 1.1.1, 1.2.1 and 2.1.1. YLH Seloliman will execute Activity 1.1.2. Bambu Lestari will execute Activity 1.2.2. And

the 40 schools will execute Activity 2.2.1. Component 3 will be executed by MOEF (BPDASHL Brantas Sampean).

Calculation of Core Indicators and Project Indicators

The objective of the UNIDO-implemented and IISD-executed GEF project ?Using Systemic Approaches and Simulation to Scale Nature-Based Infrastructure for Climate Adaptation? (GEF ID 10632) is to enhance adaptation to climate change by establishing the business case, building capacities and enabling increased investment in nature-based infrastructure. To this end, a financial and economic cost-benefit analysis of nature-based infrastructure solutions and a comparison with grey infrastructure solutions resulting in the same biophysical value (improvement on ecosystems services provided) is supported. The MEWLAFOR project was chosen as one of the first six projects accepted for support under GEF ID: 10632. As part of this process, a detailed calculation of the biophysical value expected to result from the MEWLAFOR project was conducted and a financial and economic cost-benefit analysis of the proposed nature-based infrastructure solutions was carried out (see Annex M). These results replace the PIF figures where there is indicator alignment and are reflected throughout this document accordingly. The following calculations have been adjusted:

- New: ?Up to 18 million t/year of erosion avoided; 121 t of N and 35 t of P input into the Brantas avoided annually; 7,981,341 m^3 of water per year retained in the catchment area?. Old: ?Up to 2,808 t/yr of erosion avoided, 81,8 t of N and 14.0 t of P input into the Brantas avoided (over 6 yrs) 1,368,993 m up to of water per year retained in the catchment area?
- New: ?204,880 m^3 of water per year retained in the catchment area?. Old: ?1,210,000 m3 of water per year retained in the catchment area?
- New: ?Greenhouse Gas Emissions Mitigated (metric tons of CO_2): 9,690,000 mt of CO_2?. Old: "Greenhouse Gas Emissions Mitigated (metric tons of CO_2): 55,432 mt of CO_2?

(1) The global environment and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

(13) Land degradation is ?the deterioration or loss of the productive capacity of soil for present and future" (GEF, 2019). In its 2019 Special Report on Climate Change and Land, the Intergovernmental Panel on Climate Change (IPCC) calls land degradation ?a negative trend in land condition, caused by direct or indirect human-induced processes, including anthropogenic climate change, expressed as a long-term reduction or loss of at least one of the following: biological productivity, ecological integrity, or value to humans.?

(14) Globally, about 25 percent of the total land area has been degraded (GEF, 2019). The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) states that ?currently, degradation over the Earth?s land surface through human activities is negatively impacting the well-being of at least 3.2 billion people, pushing the planet towards a sixth mass species extinction, and costing more than 10 percent of the annual global gross product in loss of biodiversity and ecosystem services.? The IPBES further notes that if trends continue, 95 percent of Earth?s land area could become degraded by 2050. In other words, land degradation is

happening at an alarming pace. And it has become one of the world?s most pressing environmental problems (GEF, 2021).

(15) When land is degraded, soil carbon and nitrous oxide are released into the atmosphere. This makes land degradation a main cause of the acceleration of climate change. In turn, climate change exacerbates the rate and magnitude of several ongoing land degradation processes and introduces new degradation patterns (IPCC, 2019).

(16) Land degradation has profound implications for natural resource-based livelihood systems and societal groups. People in degraded areas who directly depend on natural resources for subsistence, food security and income, including women and youth with limited adaptation options, are especially vulnerable to land degradation. Land degradation reduces land productivity and increases the workload of managing the land, affecting women disproportionately in some regions. Land degradation can also act as a threat multiplier for already precarious livelihoods, leaving them highly sensitive to extreme climatic events, with consequences such as poverty and food and water insecurity; and in some cases, migration, conflict and loss of cultural heritage (IPCC, 2019).

(17) The impacts of land degradation extend beyond the land surface itself, affecting freshwater and marine systems, as well as people and ecosystems far away from the local sites of degradation (IPCC, 2019). Since it is fertile soil and forest vegetation that can best store water, land degradation is one of the main drivers and root causes of water scarcity. Land use transformation (such as the conversion of wetlands and forests to other uses) can cause increased nutrient (nitrogen and phosphorous) loads, which move through the source-to-sea continuum into marine environments to cause eutrophication, whereby excess nutrients stimulate high levels of plankton growth. When these plankton die, their decomposition by aerobic bacteria consumes so much oxygen in the water that major areas (Large Marine Ecosystems) can experience very low oxygen conditions, or hypoxia?causing significant ecosystem decline.

(18) The Covid-19 pandemic underscores the importance of healthy terrestrial ecosystems, as deforestation and other changes in land use can contribute to creating pathways for zoonotic disease transfer from animals to humans. The Convention on Biological Diversity Secretariat (2020) explains that ?By throwing ecosystems off balance, human activities have turned natural areas from our first line of defense into hot spots for disease emergence.? Put another way, accelerating land degradation directly affects human resilience to future zoonotic disease-based pandemics. Reversing this trend is therefore critical to restoring a balance between natural systems and human systems.

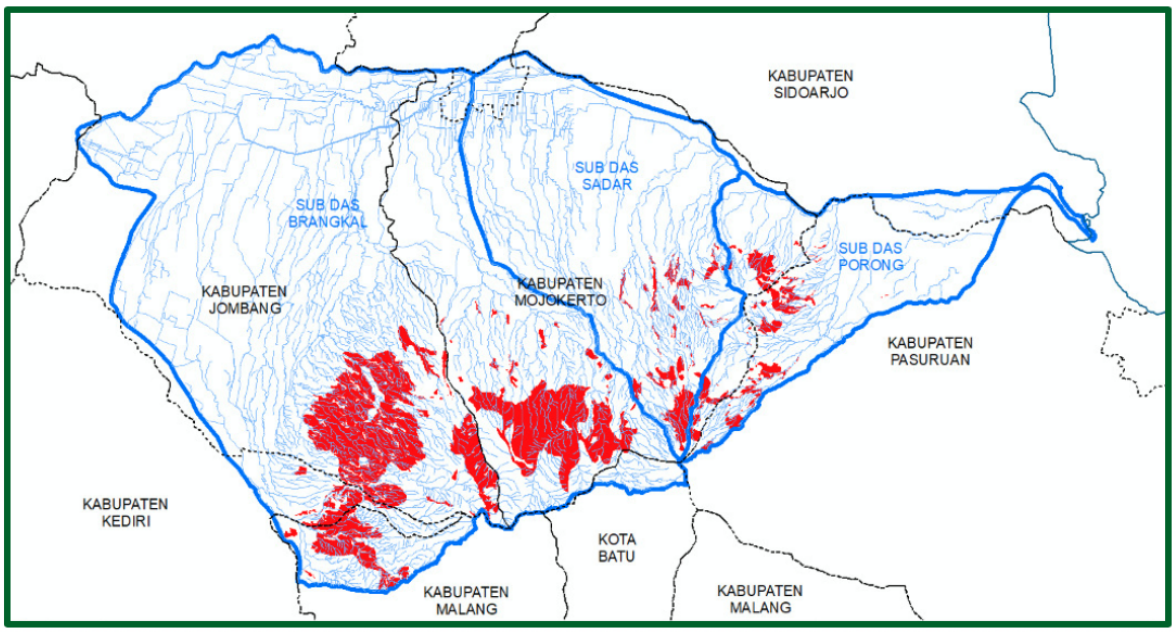
(19) In Indonesia, degraded land is referred to as ?*critical land*?. Based on MOEF data for 2020, Indonesia has 13.7 million ha of critical land (updated from PIF figure), which is largely due to inappropriate land use and land management. In general, a large percentage of land users do not utilize the land in accordance with its carrying capacity and do not adopt sound land and water conservation techniques.

(20) In the densely-populated East Java province in particular, land degradation is a serious problem. The Brantas River Basin makes up 25% of East Java (1.2 million ha), supplies water for various needs to more than 23 million people and a large number of industries, and provides vast ecosystem services to metropolitan and rural life. According to the Integrated Brantas Watershed

Management Plan for East Java Province (2010), ?The condition of the rain catchment area in the upstream part of the Brantas watershed is getting worse as a result of forest encroachment and land use that does not heed the rules of soil conservation and water conservation.? Under national regulation PP 37/2012 on Watershed Management, the Brantas Basin was classified as a ?critical watershed??defined as a watershed with degraded land areas that negatively affect water quality, quantity and continuity; the socioeconomic conditions for the resident population; and which requires investments in proper land use and water management. In Indonesia?s National Medium-Term Development Plan (RPJMN 2015-2019), the Brantas Basin, as one of 15 watersheds nationally, was labelled a priority intervention area that must be restored to regain its carrying capacity.

(21) The Brankal, Sadar and Porong sub-catchment areas of the Brantas?collectively referred to locally as the Cumpleng catchment?is home to some of the major industries in East Java. Deforestation and land degradation-induced water scarcity in the upper reaches of the sub-catchment areas (due to increased demand for forest resources and arable land for rainfed agriculture) is putting the sustainable provision of water to people and businesses at risk. MOEF indicates that 18,367 ha of critical land (updated from PIF figure) sits in the sub-catchment areas (see Table 3). This critical land area is depicted in Map (red).

Table 3: Critical Land in Brankal, Sadar and Porong Sub-Catchments	
Sub-Catchment	**Critical Land (ha)**
Brankal	14,899
Sadar	1,871
Porong	1,597
Total	18,367



Map 1: 2020 Critical Land Area in the Brankal, Sadar and Porong Sub-Catchments of the Brantas River Basin (source: MOEF, 2021)

Progressive deforestation and land degradation has distorted the hydrology of the sub-catchment areas in terms of quality and quantity of water yield.
(1) There is now a drastic decrease in the infiltration and sediment retention capacity of the land in the upper reaches of the sub-catchment areas;
(2) Precipitation occurring during intensive rainfall events in the rainy season can no longer percolate into the underground and replenish the aquifers, which leads to a reduced yield of downhill springs or to a complete drying up of perennial springs during the dry season;
(3) During the rainy season (when more than 80 percent of the annual rainfall occurs), the forests can no longer absorb and retain the heavy rainfall, leading to surface runoff, erosion and landslides.
(4) Unless retained, percolated and slowly-released by the forests, heavy rainfall in the upper reaches will cause the downstream river levels to rise and eventually flood riparian land.
(5) Eroded soil, with can include nitrate and phosphate from adjacent agricultural land areas, is reaching water bodies unhindered. These nutrient inputs to the water system can contribute to eutrophication and hypoxic zones (?dead zones?) where no form of aquatic or marine life can persist.
(6) About 75 percent of the Brantas Basin is non-forest area and less than 25 percent functions as forest area. This is in contradiction to national law 41/1999 on Forestry, which states that ?forest management must ensure the greatest welfare of the people and must contribute to increase the carrying capacity of any watershed, and thus forest coverage must be maintained in at least 30 percent of any watershed area?; and law 26/2007 on Space Management, which determines that forest areas must cover at least 30 percent of any watershed area.
(7) Mountains and upstream forests can no longer provide the ecosystem services required for water supply to downstream communities. PDAMs[1][1] are not able to supply sufficient water to the population and resident industries. Businesses have regularly had to reduce production or shut down production processes during periods of water scarcity.

This situation manifests itself elsewhere in Indonesia.

[1] Perusahaan Daerah Air Minum (Indonesian regional water utility company).

(22) Halting land degradation and overcoming land degradation-induced water scarcity will require innovative approaches and the active engagement and well-concerted cooperation of stakeholders, from government, private sector, academia, development partners, civil society and communities themselves. To ensure the environmentally, economically and socially sustainable supply of water to people and businesses, the following barriers need to be overcome (Table 4): (1) Barriers impeding industry engagement in water stewardship activities; (2) Barriers faced by resident communities to engage in sustainable land management practices; and (3) Institutional and capacity barriers.

Table 4: Barriers to be Addressed

Type of Barrier	Description
Barriers impeding	a. Lack of knowledge on the interrelatedness of deforestation/soil degradation/floods/droughts

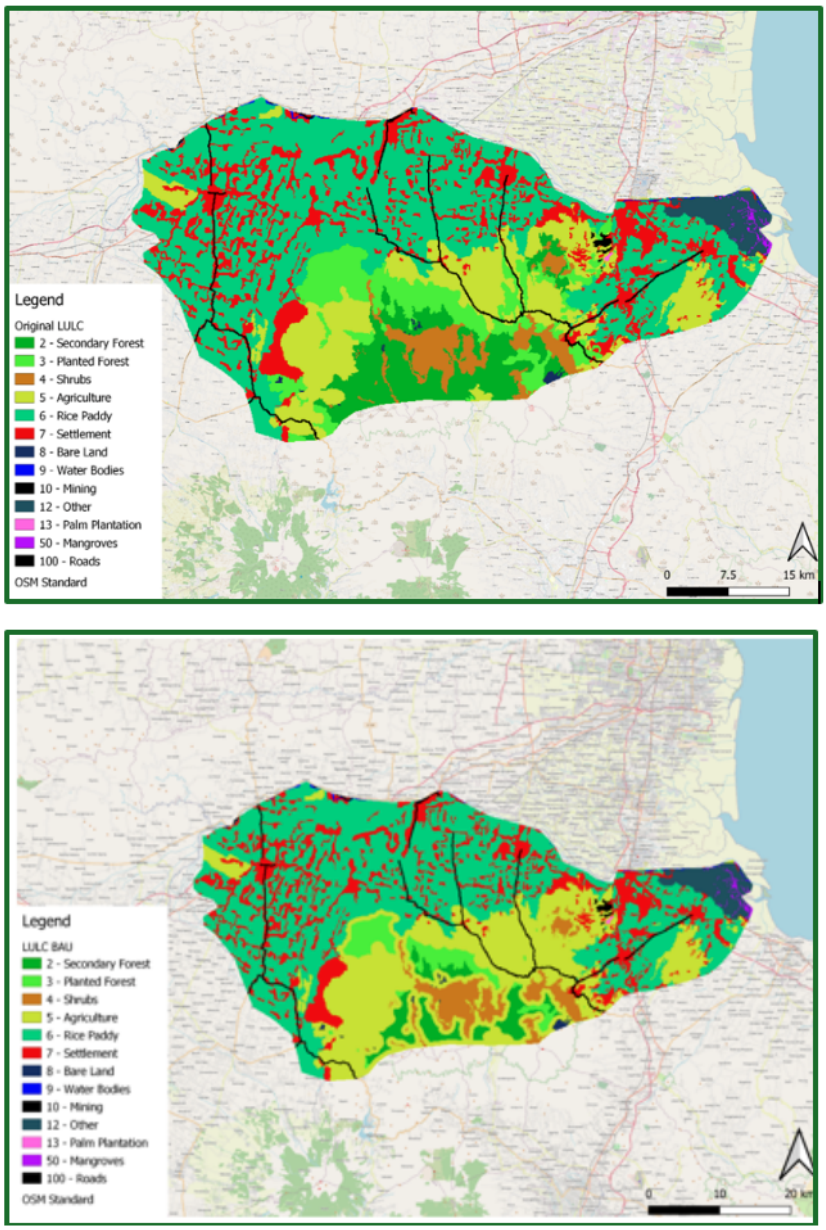
industry engagement in water stewardship activities	b. Many industries not yet directly affected lack awareness of the risks water scarcity constitutes for their business sustainability
	c. Many industries lack awareness on the possibilities and benefits to engage in water stewardship activities
	d. A ?this is not my business? and ?the problem is too big and too complex? attitude.
	e. Lack of available awareness creation services
	f. Lack of mutual trust between and among stakeholders
	g. Water stewardship activities of globally operating corporations pursue different goals and approaches
	h. Lack of understanding that companies, which compete in the marketplace, will have to cooperate to overcome the business risks to all of them stemming from land degradation-induced water scarcity.
	g. Lack of awareness of the important roles women should play in water stewardship programs
Barriers faced by resident communities to engage in sustainable land management practices	a. Lack of awareness of the impact of their activities on land degradation-induced water scarcity
	b. Lack of knowledge and limited experience with sustainable agroforestry and bamboo afforestation practices
	c. Lack of awareness on direct benefits/higher profitability of sustainable land management practices
	d. Limited access to markets for sustainably produced Non-Timber Forest Products
	e. Women have insufficient access to productive sources of livelihood
Institutional and capacity barriers	a. Low awareness and institutional capacities at the level of the MOEF?s regional offices for engaging in and catalyzing multi-stakeholder platforms to revert land degradation induced water scarcity
	b. Low capacity at the level of the MOEF?s regional offices to enforce the regulatory framework geared at avoiding the loss of protected and conservation forests
	c. Lack of awareness creation programs tailored to specific audience (industries/resident communities)
	d. Cooperation between government, civil society and private sector on water stewardship still needs to be consolidated
	e. Weak institutional capacity to upscale pilot initiatives
	f. Lack of qualified and well-trained experts
	g. Strong perceptions of the ?Konco wingking? culture that places women as complements to men rather than as individuals
	h. Extension service staff in forestry and agriculture are dominated by men, which results in a lack of opportunities for women to access training and improve skills in managing their own livelihoods

(2) The baseline scenario and any associated baseline projects

Baseline Scenario of Ecosystem Services

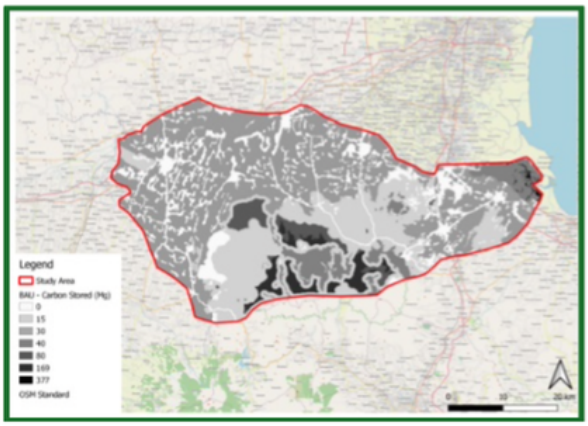
(23) The Sustainable Asset Valuation (SAVi) of Forest Restoration in the Brantas River Basin (carried out under GEF ID:10632) quantifies the ecosystem services and economic impacts of the planned reforestation and green infrastructure water retention wells under the MEWLAFOR

project. An Integrated Valuation of Ecosystem Services and Trade-offs (InVEST) model was used to quantify changes in ecosystem services when the degraded land is reforested. The analysis used a land cover map from 2018 developed by MOEF (Map 2 below). The assessment concluded that in the business as usual (BAU) scenario, where 22,336 ha of forest will be lost in the basin, land cover will look like Map 3 below.

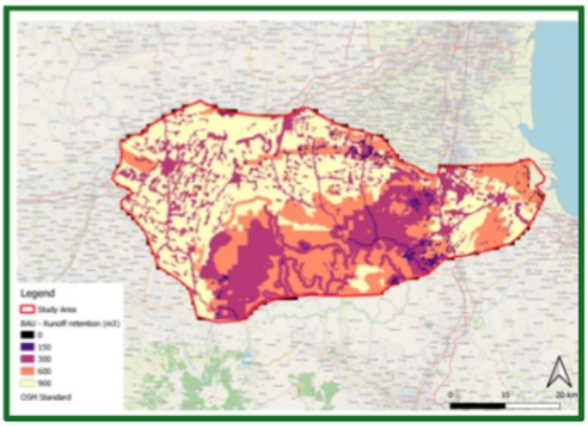


Top: Map 2: 2018 Brantas Basin Land Cover | Bottom: Map 3: BAU Brantas Basin Land Cover

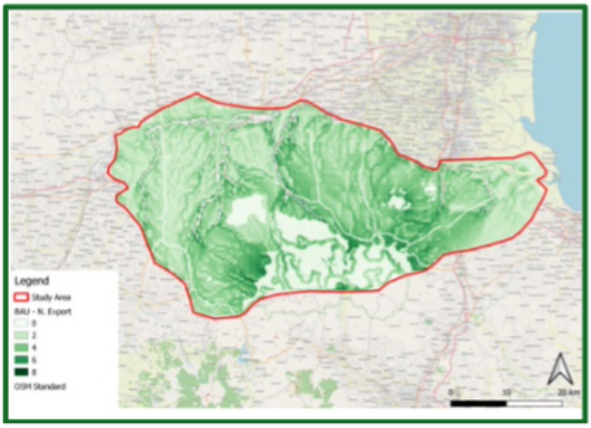
The SAVi?s spatially explicit analysis calculates the BAU scenario and the alternative scenario using the GEF increment for carbon storage, water retention, sediment retention, and decreased nutrient delivery (nitrogen and phosphorous). The baseline BAU scenario for these ecosystem services is presented in the maps below. The alternative scenario for these ecosystem services using the GEF increment, compared to the BAU, is included under section 6: ?Global environmental benefits?.



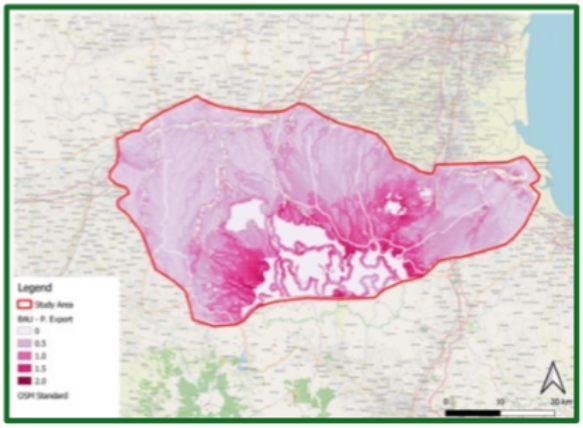
Map 4: BAU Carbon Storage
Total carbon stored is 6,091,730 mt



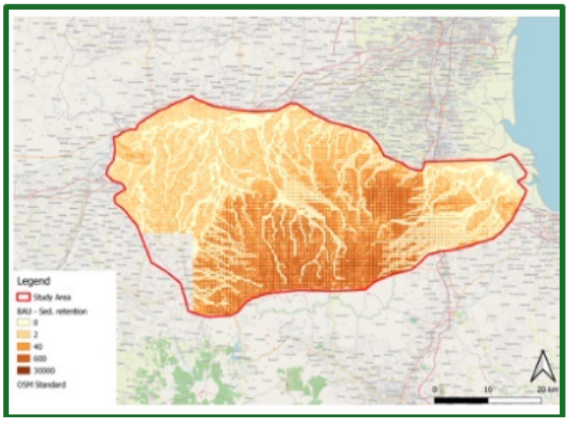
Map 5: BAU Water Retention (231 mm rainfall event)
Total runoff retention is 129,849,733 m^3 annually



Map 6: BAU Nitrogen Export
Total nitrogen export is 577,081 kg annually



Map 7: BAU Phosphorous Export
Total phosphorous export is 113,690 kg annually



Map 8: BAU Sediment Retention
Total sediment retention is 81,335,596 t annually

Select Baseline Initiatives and Projects Aligning with the Project

(24) *Land Degradation Neutrality Targets*

The Government of Indonesia's efforts to restore critical land has been underway for more than fifty years, through various forest rehabilitation programs and policies. By law and

regulation, MOEF holds the authority to overcome land degradation. In 1998, the Government of Indonesia joined the global effort to tackle land degradation through ratification of the United Nations Convention to Combat Desertification (UNCCD) through Presidential Decree 135/1998. A National Action Programme for Combatting Land Degradation in Indonesia was submitted to UNCCD in 2002.

The Land Degradation Neutrality (LDN) initiative launched by UNCCD was enshrined in the UN Sustainable Development Goals (SDGs) as Target 15.3 - *By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world*. Land Degradation Neutrality (LDN) is defined as ?a state whereby the amount and quality of land resources necessary to support ecosystem function and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems? (UNCCD, 2021). Indonesia is one of 127 countries committed to set LDN targets under the UNCCD.

Based on available data, the average rate of deforestation in Indonesia for the 2014-2018 period was 600,000 ha per year. According to the 2020 MOEF Performance Report (2021), between 2015 and 2020, 2.9 million ha of land was restored across the country (average of 483,000 ha per year). Comparing the four years of overlapping data, Indonesia has not been able to significantly reduce the area of critical land in the country. With 13.7 million ha of critical land, it is a large challenge for MOEF to achieve its 2030 Land Degradation Neutrality (LDN) Target (which is set for 2040).

(25) *1,000 Bamboo Villages*

The 1,000 Bamboo Villages Program is the flagship project of Bambu Lestari to build village-based restoration economies across Indonesia. At its core, the program is designed to empower local farmers, who are trained and mobilized to create their own sustainable bamboo forest system, with lasting success. The 1,000 Bamboo Villages model was presented at Paris COP21 in 2015 by MOEF and Bambu Lestari to help deliver on the country?s contributions to global climate change mitigation. The 1,000 Bamboo Villages initiative as made good progress but now needs catalyzed momentum to strategically forge a path toward building the critical mass of villages required to establish the enabling environment to reach the 1,000 bamboo villages across Indonesia goal over the next decade. If the program can build more than 800 additional villages and reach its target, more than 2 million ha of land will be restored in the country; US$2 billion to US$4 billion in revenue per year will be generated; and 210,000 farmer households will be empowered.

(26) *Integrated Forest Based Area Management Project for the Lumajang District*

The MOEF recently launched the preparatory activities for the self-funded *Integrated Forest Based Area Management Project for the Lumajang District*. The Lumajang District is in the immediate neighborhood to the MEWLAFOR project intervention area and both projects have a common goal to establish alternative agroforestry schemes for land restoration and water body protection.

(27) *Coca-Cola?s Absorption Well Demonstration Project*

As part of its water stewardship efforts, The Coca-Cola Company established 1,200 absorption wells on the northern slopes of the Gunung Welirang. This work was carried out in cooperation

with Yayasan Lingkungan Hidup Seloliman. Each of these wells has a reported water retention capacity of approximately 2,000 m3 per year. PDAM Kabupaten Mojokerto, which uses the Jubel spring on the northern slopes as a raw water source, has reported that these infiltration wells have had a very positive impact on the yield of the spring.

(28) *The Aliansi Air*

UNIDO is the United Nations specialized agency with the mandate to promote inclusive and sustainable industrial development and to promote the circular economy. As such, UNIDO can enter into partnerships with private sector entities with high levels of corporate social responsibility and/or sustainability commitments in order to jointly further the sustainable development agenda and to partner on environmental stewardship approaches.

In February 2015, UNIDO signed a memorandum of understanding with Heineken International B.V?as a globally operating beverage industry corporation that has committed, through its Sustainability Strategy, ?Brewing a Better World,? to inclusive growth; protecting water resources; reducing CO_2 emissions; source sustainability; and advocating for responsible consumption, communities, and the health and safety of its people?to cooperate in three areas: water stewardship, renewable energy and energy efficiency, and local sourcing of input materials. Under the water stewardship component, the partnership focuses on the development of public private partnerships (PPPs) for water stewardship programs in water-stressed catchment areas. The purpose of these PPPs is to engage with stakeholders and to mobilize resources for collaborative action to overcome cumulative stress on finite water resources in selected catchment areas. Joint activities have/are concentrating on breweries in Egypt, Ethiopia, Mexico, Nigeria and Indonesia. These initiatives complement Heineken?s commitment to reduce water consumption in its breweries located in these regions.

In order to ensure that all stakeholders in the basin area share a common vision of the root causes of land degradation and of the resulting cumulative water stress, as well as the necessary collaborative mitigation measures, the 30 most relevant stakeholders from government (Central, Province, Kabupaten, Kota), the private sector and civil society were invited by MOEF, PT Multi Bintang (the Heineken operating company in Indonesia) and UNIDO to a three-day stakeholder engagement workshop. The participants were presented with one single question: ?What is necessary to successfully guarantee the socially, environmentally and economically sustainable supply of water to people and businesses [in the Brantas Basin: Cumpleng Catchment Area: Brankal, Sadar and Porong Sub-Catchment Areas]?? The stakeholders identified 12 priority measures, key conclusions and detailed implementation recommendations in a participatory bottom-up planning process (see Table 5).

Table 5: Identified Priority Measures

(1) Conservation of Cumpleng Catchment Area;
(2) Establishment of absorption wells;
(3) Protection of water sources through forest and land rehabilitation using CSR programs;
(4) Community education on the importance of planting trees (1 house 5 trees) through local regulation (PERDA) to be applied at the neighbourhood level (RT or RW);
(5) Education of children on environmental awareness;
(6) Availability of PERDA/PERBUP in each area for groundwater and surface water abstraction and use;
(7) An end to illegal piping of water sources;
(8) Majapahit local wisdom;
(9) Development of a Roadmap for sustainable sub-catchment area (Cumpleng River) management;
(10) Law enforcement of the existing regulations and reduction of regulatory overlaps;
(11) Reduction-Reuse of water and recycling of waste water treatment plant (WWTP) output;
(12) Collaboration among stakeholders in the form of (a) establishing stakeholder coordinating team, (b) developing collaborative programs, and (c) monitoring and evaluating implementation.

The restoration of forests and the establishment of a collaborative multi-stakeholder platform for the restoration of critical ecosystem services were identified as priority measures to overcome land-degradation-induced water scarcity in the three sub-catchment areas. In the closing session of this workshop, the stakeholders representing major industries in the catchment areas committed to support the establishment of a multi-stakeholder alliance for water stewardship.

With financial support provided by these industries, a second stakeholder meeting, in November 2016 in Seloliman, was organized. In this meeting, the stakeholders from government, the private sector, academia and civil society agreed to establish the *Aliansi Air* (Water Alliance) as a multi-stakeholder alliance for water stewardship for the Brankal, Sadar and Porong sub-catchments. This decision was formalized in a notary decree in March 2017 and the Aliansi Air and its statutes were officially recognized by the minister of justice and human rights in April 2017.

Catalyzed by industries with a serious engagement in sustainability issues, the Aliansi Air has an objective to discuss, consult, coordinate and communicate with all stakeholders involved in water management in the watershed areas surrounding the Mojokerto Regency in East Java Province (which is part of the Surabaya metropolitan area). The Aliansi Air has been successful in establishing cooperative relationships and promoting transformational changes with state institutions, the private sector, academia and civil society pertaining to sustainable use and conservation of water resources in the sub-catchment areas. A particular focus of the Aliansi Air is to engage a steadily growing number of the 800-plus private sector entities and industries operating in the sub-catchment areas in water stewardship activities and to strengthen cooperation between the private sector, government and other stakeholders.

Select Examples of Aliansi Air in Action

- ? Through Aliansi Air coordination, PT Pria cooperated with the CSO Komunitas Puspa Maja in the implementation of a water conservation and pollution abatement program for Mojokerto?s Batik industry?which is dominated by micro and small enterprises. Due to a shift away from natural and biodegradable dyes to artificial colors, these enterprises contribute considerably to water body pollution. Some 75 micro and small enterprises were trained in how to replace chemicals previously used to color batik with natural dyes.
- ? PT Multi Bintang, the Indonesian Heineken operating company, has decided to closely cooperate with the Aliansi Air in the implementation of its water stewardship program,

Nabung Banyu. Under Nabung Banyu, upstream forests (on the slopes of Gunung Welirang) are being restored (1,000 trees/ha), and absorption wells and biopori are being established in schools as part of an awareness creation and education program on water conservation.

? The Aliansi Air coordinated the process to mobilize financial support provided by PT Pria to the former local CSO Komunitas Bambu Petung for the implementation of a program to restore riparian bamboo forests on the lower reaches of the rivers in the catchment area. This program aimed at conservation and economic empowerment by supporting the restoration of bamboo forests and the sustainable use of bamboo for value-added products (furniture and handicraft).

? With funding by PT Pria, PT Coca-Cola Amatil and PT Multi Bintang, and in close cooperation with the Environment and Education Agencies of Mojokerto, the Aliansi Air catalyzed a program to demonstrate the infiltration of rainwater and percolation of surface runoff into the ground to enhance water retention and groundwater replenishment. Some 2,500 biopori were established in five schools and the establishment of absorption wells was demonstrated.

? To reduce the solid waste load being discharged into water bodies, the Aliansi Air has facilitated the launch of a waste bank program for the rural parts of the Mojokerto region.

? The Aliansi Air mobilized financial support from the Irrigation Agency of Mojokerto and PT Multi Bintang for the local NGO Brantas Berdaya to launch the *River School Program*. The Program aims at educating and training people in managing and protecting river ecosystems and conserving endemic fisheries through bio-monitoring.

? To demonstrate the technical feasibility and cost effectiveness of water reclamation in industrial production processes in water-stressed catchment areas, PT Multi Bintang has invested in a water reclamation installation in its Tangerang production facility. The Aliansi Air will become involved in sharing the results of this installation with industries in the Cumpleng catchment area.

? With support provided by PT Multi Bintang, the Aliansi Air has cooperated with the Student Association of Mass Communication Airlangga in the implementation of a social media campaign on the topic of ?Water and Me?.

? The Aliansi Air brought the Komunitas Sifon, the Jawa Pos media group (Radar Mojokerto) and the Mojokerto City government together to support Brantas Berdaya in the implementation of the Brantas Endemic Fisheries program. Under this initiative, 15,000 fish fingerlings for endemic species were released to allow for revenue generation for local people from fisheries.

? The Aliansi Air coordinated the process to facilitate the Education Agency of Mojokerto by PT Pria and PT Multi Bintang in support of the implementation of the Adiwiyata ?Green School? program. This program aims to introduce behavioural change and change management in children, aged 6-18, toward a green environment.

The Aliansi Air?s Organization Committee meets with the Secretary of the Mojokerto Regency on a monthly basis to report on activities. Each year, the Aliansi Air organizes a meeting of its members to discuss strategic water management-related issues. For the period of 2021-2024, the Aliansi Air will focus on four ?solution areas?: (1) promoting harmonized basin and sub-catchment-level policies and plans to ensure local government, sub-district entities and communities at the village level are actively and efficiently involved in solving restoration and

river protection issues; (2) conserving and restoring the sub-catchment areas to maintain the quantity of river water and shallow groundwater; (3) establishing waste banks and waste traps in villages along the river and tributaries to reduce inorganic waste into the water system; and (4) enriching river biodiversity through facilitating regular monitoring by riparian communities.

Given the sheer scope of the problems associated with critical land area in Indonesia, and the challenges for its reversion, it is recognized that, without the active engagement of multiple stakeholders?and the private sector taking a leading role in this engagement?it will not be possible to overcome the issues of deforestation and land degradation-induced water scarcity in the Brantas Basin and throughout the country. The Aliansi Air has been extremely successful in mobilizing resources from private sector entities and the government for the implementation and the coordination of water stewardship activities for land and water conservation. A significant upscaling of its activities is an identified pathway toward achieving the transformational change required.

(3) The proposed alternative scenario with a brief description of expected outcomes and components of the project

(29) In May 2018, the Aliansi Air and the Mojokerto Regency government requested support from UNIDO?through the development of a Medium-sized Project for consideration by the GEF?to implement the priority measures identified at the October 2016 workshop and for an upscaling of the activities already undertaken. The MEWLAFOR project was therefore developed in response to the commitment of the government and stakeholders dwelling in the Brankal, Sadar and Porong sub-catchment areas to tackle land degradation and land degradation-induced water scarcity and to help stakeholders overcome identified barriers to ensuring the environmentally, economically and socially sustainable supply of water to people and businesses.

(30) This project will take a public-private partnership approach to assist the Government of Indonesia to improve its program in community-based restoration of degraded land ecosystems and the development of environmental service schemes carried out in priority sub-catchment areas of the Brantas Basin in East Java. The project also aims at strengthening institutions at all levels (community, district/city, provincial and national), enhancing coordination and collaboration across sectors and regions are required for an upscaling of public-private partnerships for environmental stewardship, and building a better enforcement of the regulatory framework to avoid the loss of protected and conservation forests in Indonesia. Stakeholder engagement and coordination will be led by the Aliansi Air.

(31) The project is composed of four Components:

- ? Component 1: Land restoration for water retention, sediment retention and improved livelihoods
- ? Component 2: Nature-based infrastructure and awareness creation for land and water conservation, sediment and water retention
- ? Component 3: Strengthen the enabling environment to promote community-based land restoration
- ? Component 4: Monitoring and Evaluation

Within these four Components, there are seven Outputs and fourteen Activities. Table 6 presents the overall project structure.

Table 6: MEWLAFOR Project Structure
Component 1 - Land Restoration for Water Retention, Sediment Retention and Improved Livelihoods
Output 1.1: Restoration of Upstream Agroforestry Systems to Revert Land Degradation, Enhance Water Retention and Groundwater Replenishment and Cater for Alternative Livelihoods
Activity 1.1.1: Planting Agroforestry Schemes (Pattern Plant) (251 ha)
Activity 1.1.2: Marketing Non-Timber Forest Products
Output 1.2: Restoration of Riparian Bamboo Forests for Sediment Retention, Water Infiltration and Pollution Absorption and Sustainable Use of Bamboo for Value Added Product
Activity 1.2.1: Planting Bamboo Forests (Kakisu) (130 ha)
Activity 1.2.2: Building Sustainable Value-Added Chains for Bamboo
Component 2 - Nature-Based Infrastructure and Awareness Creation for Land and Water Conservation, Sediment and Water Retention
Output 2.1: Construction of 597 Absorption Wells (2x2x2 m) and Awareness Creation for Enhanced Water Retention in the Catchment Area
Activity 2.1.1: Constructing Absorption Wells (597 Units)
Activity 2.1.2: Promoting Water Stewardship Across the Brantas Basin and Beyond
Output 2.2: Establishing 8,000 Biopori and Awareness Creation for Water Conservation in 40 Schools
Activity 2.2.1: Demonstrating Practical Water Conservation Measures
Component 3 - Strengthening the Enabling Environment to Promote Community-Based Land Restoration
Output 3.1: Facilitation of Active Involvement of the Staff of the Sidoaryo Regional MOEF Office in Project Execution and in the Better Enforcement of the Regulatory Framework Geared at Avoiding the Loss of Protected and Conservation Forests
Activity 3.1.1: Building Capacity in Regulatory Enforcement and Project Upscaling
Activity 3.1.2: Planning Water Conservation Measures for the Brantas Basin
Activity 3.1.3: Developing Strategic Communications for Upscaling and Knowledge Transfer
Activity 3.1.4: Transferring Knowledge at Global and National Events for Upscaling
Component 4 - Monitoring and Evaluation
Output 4.1: Project Progress Monitoring and Reporting
Activity 4.1.1: Progress Monitoring and Reporting
Output 4.2: Midterm Review and Independent Terminal Evaluation
Activity 4.2.1: Midterm Review
Activity 4.2.2: Independent Terminal Evaluation

Component 1: Land Restoration for Water Retention, Sediment Retention and Improved Livelihoods

(32) In the three sub-catchment areas in which the project will be implemented, the MOEF has designated 9,944 ha as buffer zone between the agriculturally used areas and the remaining protected forest (7,293 ha) and conservation forest (19,929 ha). Under Component 1, the measures implemented with GEF incremental funding, as well as with the co-financing provided by PT Multi Bintang and by the Mojokerto Regency, is expected to put 3,697 ha of landscapes in the buffer zone under improved practices. This corresponds to approximately one third of the total area designated as buffer zone in the three sub-catchment areas. Consequently, it can be estimated that these measures will also protect at least one third of the remaining protected forest (2,407 ha) and avoid any encroachment of the remaining conservation forest (19,929 ha). In total, some 26,033 ha of landscapes are

estimated to come under improved management. This will be corroborated by the training and capacity building measures to enhance the institutional capacities of the MOEF regional office in Sidoarjo for the upscaling of water stewardship activities and for the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests in Indonesia (Component 3).

(33) The outcome of this Component is expected to be a significant contribution to revert land degradation, alleviate water scarcity and improve socioeconomic conditions of the predominantly agriculture-depending population in the sub-catchment areas. In addition to the 26,033 of landscapes coming under improved management, erosion is estimated to be reduced by 18 million t per year, and 121 t of N and 35 t of P is expected to be absorbed annually. Furthermore, the agroforestry and bamboo planting activities could increase groundwater recharge by up to 6.1% per year in the catchment area.[2]2 The water retained can be used by communities and industries. Additionally, some 9.6 million mt of CO_2 is estimated to be captured by the agroforestry schemes and bamboo forests.

(34) This Component aims to help stakeholders overcome the following identified barriers to ensuring the environmentally, economically and socially sustainable supply of water to people and businesses:

- ? Lack of awareness of the impact of their activities on land degradation-induced water scarcity
- ? Lack of knowledge and limited experience with sustainable agroforestry and bamboo afforestation practices
- ? Lack of awareness on direct benefits/higher profitability of sustainable land management practices; and
- ? Limited access to markets for sustainably produced Non-Timber Forest Products (NTFP).
- ? Women have insufficient access to productive sources of livelihood
- ? Extension service staff in forestry and agriculture are dominated by men, which results in a lack of opportunities for women to access training and improve skills in managing their own livelihoods.

(35) Component 1 contains two Outputs:

- ? Output 1.1 Restoration of upstream agroforestry systems to revert land degradation, enhance water retention and groundwater replenishment and cater for alternative livelihoods
- ? Output 1.2 Restoration of riparian bamboo forests for sediment retention, water infiltration and pollution absorption and sustainable use of bamboo for value added products

Output 1.1 Restoration of Upstream Agroforestry Systems to Revert Land Degradation, Enhance Water Retention and Groundwater Replenishment and Cater for Alternative Livelihoods

(36) Due to land use change and deforestation, the water retention and groundwater replenishment capacities of upstream forests in the three sub-catchment areas have been seriously reduced. This disturbance in the hydrological cycle has resulted in the increased occurrence of surface runoff (floods) and erosion during the rainy season (when up to 80 percent of the annual precipitation occurs in intensive rainfall events) as well as in droughts during the dry season.

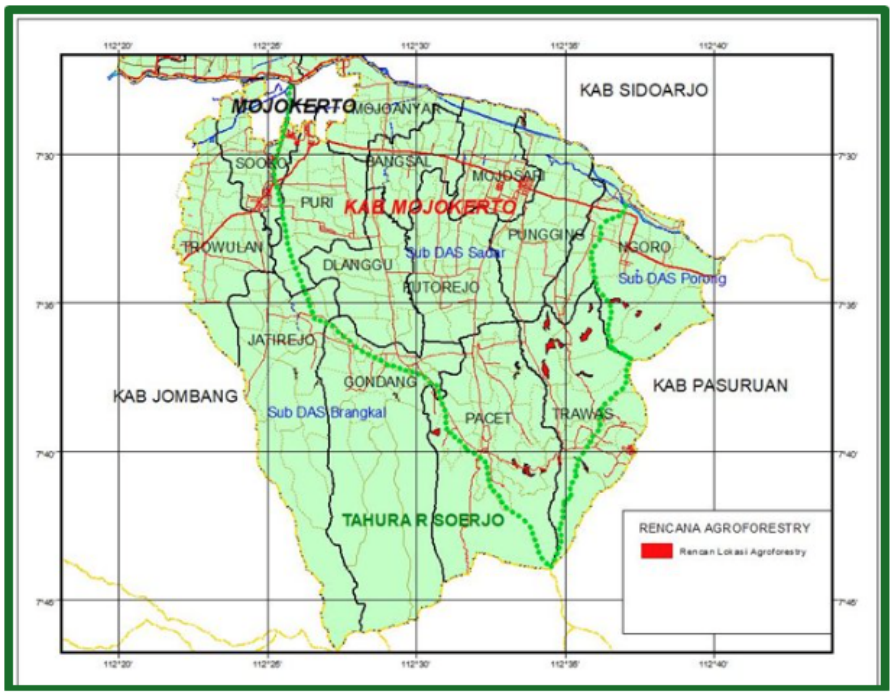
(37) Under Activity 1.1.1, resident communities will be engaged in a participatory process to restore 387 ha of agroforestry schemes in the upstream parts of the three sub-catchment areas. According to the Government of Indonesia?s Regulation (Permen LHK No. 105 of 2018) on the *Procedure for the Implementation, Supporting Activities, Provision of Incentives, as well as Development and Control of Forest and Land Rehabilitation Activities*, ?Agroforestry is the optimization of land use with a combination system of woody plants, fruit trees, or seasonal crops so that ecological and economic interactions are formed between their constituent components?. The experiences gained from the pilot agroforestry schemes already established with financial support by PT Multi Bintang have demonstrated that local communities can derive a higher financial return from sustainably-harvested NTFPs than from income-generating activities that are forest-destructive. Activity 1.1.2 will work to provide the necessary financial incentive to resident communities to adopt agroforestry practices as required for the sustainability of the intervention beyond the project implementation period.

Activity 1.1.1 - Planting Agroforestry Schemes (Pattern Plant)(251 ha)

(38) The agroforestry schemes will be established on the degraded land (deforested land and land degraded due to agricultural activities) in the fringe between the remaining community forest and agriculturally used land and serve as a buffer zone. The GEF increment will be used to restore 251 ha, and PT Multi Bintang, under the coordination of the Aliansi Air and in consultation with MOEF, will restore 136 ha. To put these buffer zones under improved management practices will also avoid the loss of the remaining natural forests (protected forests and conservation forests).

For this upstream agroforestry restoration program, the target is to ensure that 400 trees per ha will reach maturity on the 251 ha restored with GEF funding. For the 136 ha that will be restored by PT Multi Bintang (under the coordination of the Aliansi Air), the target is 1,000 trees/ha. In total, some 236,400 trees are expected to be implanted. In a business as usual scenario (BAU) (for a 231 rainfall event event), total water retention in the project area is about 130 million m^3 annually. Through the GEF increment and co-finance by PT Multi Bintang, the restoration of 387 ha of upstream agroforestry schemes, along with the restoration of bamboo riparian forests under Activity 1.2.1, is expected to result in retaining up to 7.98 million m^3 more water annually than the BAU scenario would (about 138 million m^3 annually). Rather than running off quickly on the surface of the steep slopes of the Gunung Welirang and causing erosion and further land degradation, this water will percolate into the soil and become available as groundwater, and finally as spring water and stream flow in surface water bodies during the dry season.

(39) A PPG phase field survey led by MOEF identified indicative locations for 265 ha of agroforestry across five districts in the project area (identified in red in Map 9 and listed in Table 7 below). The indicative locations using the GEF increment will be narrowed to 251 ha at the start of project implementation.



Map 9: Indicative Locations of Agroforestry Schemes in the Project Area
(For GEF Incremental Funding - 251 ha Agroforestry Scheme)

Table 7: Indicative Area for Agroforestry Schemes			
No.	**Sub-DAS**	**District**	**Area (ha**
1	Brankal	Jatirejo	10
2	Brankal	Gondang	10
3	Brankal and Sadar	Pacet	65
4	Porong	Trawas	140
5	Porong	Ngoro	40
		TOTAL	265

(40) This activity will be carried out under the Government of Indonesia?s *Swakelola* ?self-management? modality under Presidential Decree No. 12 of 2021 concerning the procurement of goods and services (see section 6. *Institutional Arrangement and Coordination* section below). In particular, this activity will be executed under *Swakelola Type 4: Community-Based Management* and will be executed by the targeted community farmers groups themselves. Twenty-five (25) community farmers groups will be identified from within the indicative locations to carry out this work. Each community farmers group will be responsible for executing approximately 10 ha each to reach the 251-ha target. A development team, composed of representatives from BPDASHL Brantas Sampean, the local government unit, the Aliansi Air and YLH Seloliman, will be formed and tasked to provide activity socialization, coordination, technical guidance and supervision to ensure the activity is successfully executed.

(41) Activity execution will follow the Government of Indonesia?s Regulation (Permen LHK P.02 junto P.105on the *Procedure for the Implementation, Supporting Activities, Provision of Incentives, as well as Development and Control of Forest and Land Rehabilitation Activities,* which sets out specific procedures for the proper implementation of an

agroforestry restoration scheme. The budgeted costs for the agroforestry restoration are in line with the MOEF?s standard unit price index. **(Total Project Budget: US$391,829)**.

(42) The agroforestry scheme planting will take place in year one (Y1), and plant maintenance will be done in Y1, year two (Y2) and year three (Y3). The planting scheme will be carried out in four stages: (1) Preparation; (2) Provision of Seeds; (3) Planting; and (4) Maintenance.

(1) Preparation

? At the start of project execution, a *Planting Plan* will be prepared. The Planting Plan will include details on the specific locations of planting; the number and types of seeds to be planted; the planting scheme and sequence; the socioeconomic and institutional conditions of the planting area; the budget (including costs of materials, equipment and wages); details about formal and customary land rights and informal land use patterns in the specific locations; and the timeline for implementation (considering the planting seasons).

? Once this technical plan is prepared, but before the planting scheme commences, the 25 community farmers groups will take part in a one-day group training to build their capacities in planting and maintenance techniques to effectively carry out the work. Six representatives from each of the 25 community farmers groups (150 people) will receive this training. These representatives will then train their community groups upon returning to their respective villages. The specific location of this training will be determined during project execution.

? The planting area will also be arranged, including through carrying out boundary checks and constructing inspection roads; and readying infrastructure and equipment, including work huts, planting stakes, signboards, tools and materials.

(2) Provision of Seeds

? This stage includes the establishment of nurseries, determining the specific plant species to be planted, and procuring seeds through certified seed suppliers and distributors. The agroforestry restoration process will consist of (a) planting staple crops by type of plant timber and/or NTFP trees, with at least 400 trees/ha, and (b) planting intercrops, fences and firebreaks using lamtoro, gamal, secang, coffee or calliandra. To ensure the sustainability of the afforestation and achieve the necessary community buy-in, a blend of 60 percent endemic trees for timber and 40 percent multi-purpose trees species (MPTS) will be planted.

(3) Planting

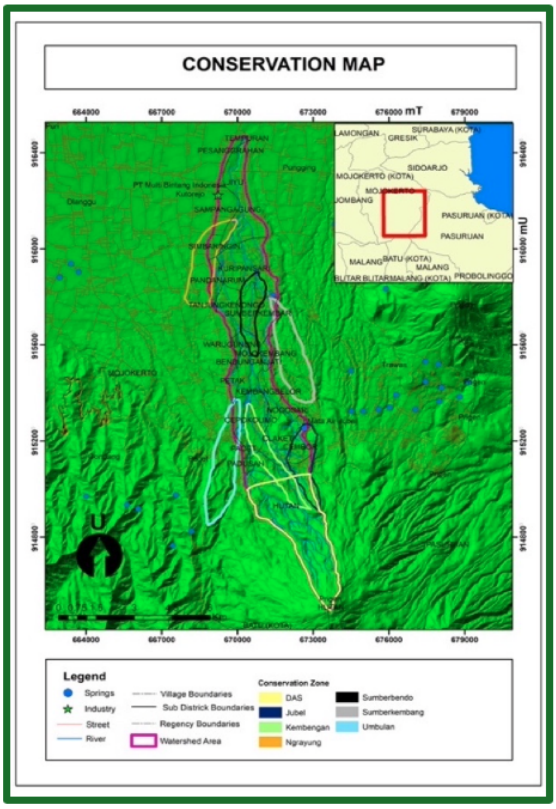
? Planting will be done in eight stages: (a) land clearing; (b) manufacturing and installing line stakes; (c) making plant paths; (d) manufacturing and installing plant stakes; (e) making plant holes at each plant stake; (f) basic fertilizing; (g) distributing seeds to plant holes; and (h) planting.

(4) Maintenance

? Plant maintenance in Y1 will include weeding, fertilization, eradication of pests and diseases, and stitching (10 percent of amount planted). Maintenance in Y2 and Y3 will be done up to three times per year, and include weeding, fertilizing, eradicating pests and diseases, and stitching (Y2: 20 percent of amount planted; Y3: 10 percent of amount planted).

Plant growth success will be monitored and assessed at each stage of the activity. The methodology for this exercise is set in Appendix VII of the Regulation (Ministry of MOEF No 105 of 2018).

(43) The restoration of 136 ha by PT Multi Bintang (under the coordination of the Aliansi Air) will take place in the yellow zone in Map 10 below. This area will be identified by PT Multi Bintang in close consultation with MOEF to ensure the agroforestry scheme complements and does not overlap with the 251-ha scheme through the GEF increment. This restoration will also follow procedures set out in the 2018 Regulation.



Map 10: Indicative Area for Agroforestry Schemes in the Project Area
(For PT Multi Bintang (Aliansi Air) - 136 ha Agroforestry Scheme)

Activity 1.1.2 - Marketing Non-Timber Forest Products

(44) Non-Timber Forest Products (NTFP) are any product, other than timber, that is naturally produced in forests and can be harvested for human use without cutting down trees. In other words, NTFPs provide value from standing forests. Products that can be harvested from a forest create alternative sources of income to clear cutting for agriculture or logging for timber. And because NTFPs are regenerative and require minimal management, they promote the long-term survival of forests and the well-being of communities that depend on them. Market segments for NTFPs include edible products, medicinal and dietary supplements, decorative products, landscaping inputs, and supplies to arts and crafts. There is a growing demand in Indonesia?s urban middle-income population for such products, and these products can fetch high prices on the market.

(45) However, while many communities are producing products that fall into these categories, the markets are generally informal (as many NTFP?s occupy "niche" markets, which tend to be small and dispersed) and are relatively complex compared to those for timber and more traditional agriculture goods. It is also difficult for small-scale producers, who seek to commercialize NTFPs, to have access to information about potential markets and have any control over the prices they receive. In other words, they may not know how to obtain and make use of information that would help them make informed decisions about what to sell and where and when to market their products in order to earn the maximum profits from their efforts. Increased awareness can promote measured approaches to NTFP harvesting, fair prices for harvesters, and a healthy respect for the scarcity and local importance of these resources.

(46) This Activity will build the capacity of the 25 community farmers groups involved in the agroforestry schemes under Activity 1.1.1, in marketing their NTFPs, as well as provide start up support to establish and develop a Kelompok Wanita Tani (KWT) (women?s farmers group) in the project area to empower women to actively engage in agroforestry restoration activities and competitively bring their NTFPs to market.

(47) In Y1, a market analysis of the potential for NTFP in the Brantas Basin region will be conducted by a consultant. This study will capture the current market for NTFPs; the economic potential of NTFPs; and what investments are needed in regional infrastructure for production, training and organization of extractive communities, and marketing support. The results will be used to inform a curriculum for a field school on marketing NTFPs and the agenda for an industry roundtable. The study will also assist local policymakers in formulating effective programs and strategies to encourage the commercial production of NTFPs and strengthen the NTFP market in the region, and to scale up efforts to cater for alternative livelihoods to revert land degradation and enhance water retention and groundwater replenishment. **(Total Project Budget: US$6,294)**.

(48) In Y1, a community focus group discussion (FGD)/survey will be conducted by an experienced gender analyst on gender aspects of community forest restoration and marketing NTFPs. It will be used to collect sex disaggregated data and information on the involvement of women and men in marketing the most valuable NTFP products, including bamboo, and understanding the status of women organizations (and perceptions of their participation) in the project area. The data will help set a baseline to increase the share of women engaged in restoration activities and NTFPs by 2024. The data will complement the market analysis of NTFP described above. Suggested research tools for this FGD/survey are presented in Annex J. **(Total Project Budget: US$4,117**).

(49) In Y1, a KWT women?s farmers group, consisting of 25 women members, each residing in the project area, will be established and supported to take part in the agroforestry restoration and NTFP marketing capacity building activities. The activity will provide start up support, including through operational and technical advice to build a cohesive and sustainable KWT working structure. This will include travel and logistical support for a ?farmer-to-farmer? visit to a nearby successfully-functioning KWT to learn best practices and lessons in KWT operations and to build a sense of ownership and empowerment among the KWT members as they organize their own operation. The goal is to set the building blocks for KWT financial sustainability and independence. The KWT will manage its own income from NTFP sales, with profits distributed

among members and invested back into the KWT. The KWT members will participate in the Activity 1.1.1 agroforestry restoration; a tailored and intensive field school focusing on gender considerations in marketing NTFP; and an industry roundtable event under this Activity 1.1.2. **(Total Project Budget: US$5,035)**.

(50) In Y2, a traveling field school will be developed and will hold seminars in each of the five districts where the project?s agroforestry restoration under Activity 1.1.1 will take place (Jatirejo, Gondang, Pacet, Trawas, and Ngoro). The learning cycle will build awareness in the value of NTFP, market trends, microeconomics and the current business environment in the Brantas Basin; help participants understand foundational approaches to sustainable harvesting and processing of NTFP (with learning by doing exercises); and explore ways and means to bringing these products to market and fetch a fair price. Participants will include selected representatives from each of the 25 community farmer groups participating in Activity 1.1.1 (75 participants total; 15 participants per seminar). The activity will take steps to ensure there is a gender balance in participation. **(Total Project Budget: US$10,000)**.

(51) In Y2, a tailored and intensive capacity building program will be developed and implemented for the established KWT. The learning modules will consist of the topics covered in the field school described above, but will be presented from a gender-sensitive perspective to empower the KWT members to access markets and financing for their products and turn the KWT into a thriving and sustained collective. This training will be led by female experts and training modules will be built in consultation with female experts and community leaders **(Total Project Budget: US$7,000)**.

(52) In Y3, an NTFP industry roundtable ?Temu Niaga? will be organized, which will see participation from the business community, government, NGOs, CSOs, academia, members of the KWT, and the 75 field school participants. Through structured discussions, formal (and informal) networking segments, and an exhibition, this event will be an opportunity for the KWT members and field school participants to interact directly with industry and other stakeholders and potentially spark business relationships and mentorships. The industry roundtable will be convened through a partnership among the Aliansi Air, the Indonesia Business Council for Sustainable Development and Forum DAS. Following the field schools and industry roundtable, the field school participants and KWT members will be equipped to teach their respective communities about what they learned and follow up on and seek potential partnerships to bring their mature NTFPs and future NTFPs under the project?s agroforestry restoration schemes to market. **(Total Project Budget: US$10,000)**.

(53) The field school, KWT establishment, KWT capacity building program, and the industry roundtable will be managed under *Swakelola Type 3 - Implemented by Community Organizations* and executed by YLH Seloliman. YLH Seloliman has extensive experience in community-based agroforestry activities and field school implementation in the project region and has well-established cooperation patterns and trust with local communities. The Aliansi Air will serve in a coordinating role.

Output 1.2: Restoration of Riparian Bamboo Forests for Sediment Retention, Water Infiltration and Pollution Absorption and Sustainable Use of Bamboo for Value Added Products

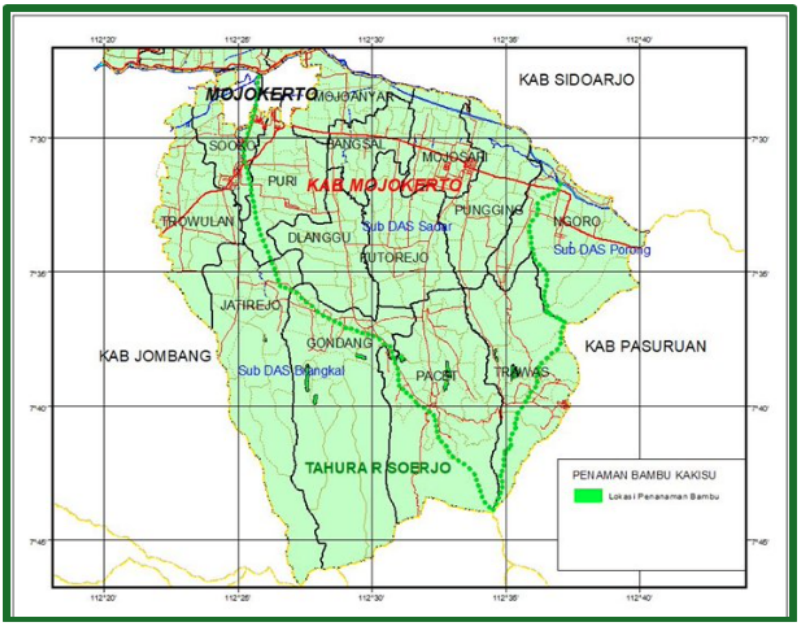
(54) Due to its biological characteristics and growth habits, bamboo is an ideal economic investment and has enormous potential to alleviate many environmental problems. It is able to thrive on degraded soils and steep slopes where many plants cannot grow. Being a perennial monocot plant, it has extensive fibrous roots that make it capable of stabilizing loose soil to prevent soil erosion. Its net-like root system creates an effective mechanism for watershed protection, stitching the soil together along fragile river banks, deforested areas and in places prone to earthquakes and mudslides (FAO, 2018). Bamboo also serves to provide organic matter, conserve biodiversity, beautify the landscape, and essentially contribute to the purification and regulation of the environment.

(55) Under this Output, the community-based restoration of bamboo riparian forest will be facilitated. Under Activity 1.2.1, it is expected that 130 ha of riparian bamboo forest will be restored in water bodies in the three sub-catchment areas. Under Activity 1.2.2, riparian communities engaged in the bamboo reforestation process will be empowered to produce value-added bamboo products at the village level and equipped with the building blocks for an integrated forest-to-factory production system.

Activity 1.2.1 - Planting Bamboo Forests (Kakisu)(130 ha)

(56) The GEF increment will be used to plant 130 ha of riparian bamboo forest (400 stools per ha) in the middle reaches of the three sub-catchment areas. Bamboo forests are reported to be able to intercept up to 14.5 percent of annual rainfall. In a business as usual scenario (BAU) (for a 231 rainfall event event), total water retention in the project area is about 130 million m^3 annually. The restoration of 130 ha of riparian bamboo forest, along with the restoration of 387 ha of agroforestry schemes under Activity 1.1.1, up to 7.98 million m^3 more water will be retained annually than the BAU scenario would in the project area (about 138 million m^3 annually).

(57) The PPG field survey identified indicative locations for 160 ha of riparian bamboo plantation across four districts in the project area (identified in green in Map 11 and listed in Table 8 below). The indicative locations will be narrowed to 130 ha at the start of project implementation.



Map 11: Indicative Locations of Bamboo Plantation in the Project Area
(For GEF Incremental Funding - 130 ha Bamboo Plantation)

Table 8: Indicative Area for Bamboo Plantation			
No.	**Sub-DAS**	**District**	**Area (ha**
1	Brankal	Jatirejo	10
2	Brankal	Gondang	50
3	Brankal and Sadar	Pacet	50
4	Porong	Trawas	50
		TOTAL	160

(58) This activity will be carried out *Swakelola Type 4: Community-Based Management*, and will be executed by the targeted community groups themselves. Twenty-five (25) community farmers groups will be identified from within the indicative locations to carry out this work. Each community farmers group will be responsible for executing approximately 6 ha each to reach the 130-ha target. A development team, comprised of representatives of BPDAS Brantas Sampean, the local government unit, Aliansi Air, Forum DAS and Bambu Lestari, will be formed and tasked to provide activity socialization, coordination, technical guidance and supervision to ensure the activity is successfully carried out.

(59) Activity execution will follow Government of Indonesia 2019 Regulation on *Technical Instructions for Planting Bamboo in Protected Forests* (P.11/PDASHL/SET/KUM.1/5/2019), which sets out specific procedures for the proper implementation of a bamboo plantation in protected areas. The budgeted costs for the bamboo forest restoration are in line with the MOEF?s standard unit price index. **(Total Project Budget: US$384,222)**.

(60) The planting scheme will be carried out in four stages: (1) Planning; (2) Preparation; (3) Planting; and (4) Maintenance.

(1) Planning

? At the start of project execution, a *Planting Plan* will be prepared. The Planting Plan will include details on the specific location and area of planting; the selection of bamboo plant; the planting scheme and sequence; the socioeconomic and institutional conditions of the planting area; the budget (including costs of materials, equipment and wages); details about formal and customary land rights and informal land use patterns in the specific locations; and the timeline for implementation (considering the planting seasons).

? During the Planning phase, the selection of bamboo plant and the procurement of seeds (which will be ready-to-plant bamboo seedlings) through registered seed suppliers will take place. The spacing technique will also be determined, which depends on the type of bamboo selected. In areas with a slope, planting will be carried out in a triangular/zig-zag cropping pattern to reduce soil erosion.

(2) Preparation

? Once this technical plan is prepared, but before the planting scheme commences, the 25 community farmers groups will take part in a group training to build their capacities in planting and maintenance techniques to effectively carry out the work. Six representatives from each of the 25 community farmers groups (150 people) will receive this training. These representatives will then train their community groups upon returning to their respective villages. The specific location of this training will be determined during project execution.

? The planting area will be arranged, including through carrying out boundary checks and constructing inspection roads; cleaning the area by cutting down nuisance plants and shrubs that are too dense and block light to the plantation; and readying infrastructure and equipment, including work huts, planting stakes, signboards, tools and materials.

(3) Planting

? Bamboo planting will be carried out in the rainy season (November-December), as the newly planted bamboo plants will require significant water. Water pumps will be brought in, if required, to water the area during the dry season.

? Planting will be done in the following eight stages: (a) land clearing; (b) manufacturing and installing line stakes; (c) making plant paths; (d) manufacturing and installing plant stakes; (e) making plant holes at each plant stake; (f) basic fertilizing; (g) transporting bamboo seedlings to planting site through specialized transit methods; and (h) planting.

(4) Maintenance

? Bamboo maintenance is divided into two stages: (1) the stage before reaching a normal clump, which includes weeding and loosening the soil around the plant; and (2) the stage after normal clumping, which includes pruning branches. Pruning activities will be carried out at the beginning of the rainy season to stimulate growth of bamboo shoots and to enlarge bamboo stems. In Y1, maintenance will include weeding, fertilization, eradication of pests and diseases, and stitching (10 percent of amount planted). In Y2 and Y3, maintenance will be done up to three times per year, and include weeding, fertilizing, eradicating pests and diseases, and stitching (Y2: 20 percent of amount planted; Y3: 10 percent of amount planted).

Plant growth success will be monitored and assessed at each stage of the activity. The methodology for this exercise is set in the 2019 Regulation.

Activity 1.2.2 - Building Sustainable Value-Added Chains for Bamboo

(61) Bamboo can be sustainably harvested without losing its ecological function. In addition to its land restoration credentials, bamboo provides important additional benefits as a commodity. Fast growing and easy to harvest, bamboo can be used to earn income within as little as three years, making it a sustainable alternative to several types of wood (Bamboo Lestari, 2020). Bamboo plays a role in poverty alleviation, enabled in part by the shift from low-end crafts to high-end value-added commodities (FAO, 2018) and from an increasing recognition of bamboo?s extreme versatility. It has uses in food, textiles, and energy, as well as in construction and the wood industry. Its tensile strength is 28,000 pounds per square inch, compared to 23,000 pounds per square inch for steel, making it one of the strongest, yet flexible building materials (Bamboo Lestari, 2020).

(62) Value-added bamboo product activities implemented by the local CSO Komunitas Petung, an organization that is no longer operational (previously identified in the PIF as a project partner), have demonstrated that these activities do result in the necessary financial returns for local communities as to make them an attractive alternative. When sold in a processed form, which communities can do somewhat easily, the value added is about six times the price of a single bamboo pole (Bambu Lestari, 2019). The global bamboo market is projected to reach US$93 billion by 2025 (Bamboo Lestari, 2019).

(63) To reap the greatest benefits from bamboo in a sustainable way, it needs to be harvested selectively and responsibly. This activity will build the capacity of community farmers groups to develop a cost-effective supply chain for bamboo through increasing the level of production and realizing the empowerment of a village-based restoration economy.

(64) In Y1, an industry mapping study and market analysis will be conducted by a consultant to help the community farmers groups better understand the supply chain landscape for value-added bamboo products. In Y3, it will be used to match farmers with appropriate industry counterparts for potential business partnerships. **(Total Project Budget: US$6,993)**.

(65) In Y2, the activity will set up an intensive field school in the Activity 1.2.1 bamboo forest restoration area (the area herein referred to as the ?bamboo village?). The field school will include participation from the 25 farmers groups involved in Activity 1.2.1. At the field school, bamboo farmers will be directly engaged in applying sustainable community-based agroforestry techniques to achieve sufficient well-managed bamboo resources. This field school will support, build and strengthen institutional development within the community farmers groups so that they are able and independent to carry out bamboo business activities (including in developing clear business plans). The field school will also aid the communities to think through the following considerations post-harvest: (1) identification of post-harvest technology needed to increase the added value of production; (2) how to facilitate the creation of product diversification according to market demand; (3) how to effectively consider the availability of market information and marketing networks; (4) how to carry out production promotion and market development; and (5) how to

develop product distribution patterns. This is an important phase of education and empowerment to ensure the farmers can meet the quality requirements of potential buyers. The communities will be facilitated to better organize themselves as legal entities (including establishing binding internal group rules for decision making and resolving conflicts) so as to be able to enter the bamboo-based agro-industry market competitively. **(Total Project Budget: US$20,070)**.

(66) The opportunity of value-added processing allowing farmers to derive benefits from bamboo?s vast potential cannot be truly realized without village-based industrial processing. In Y1, the activity will lead an effort to secure co-financing for a value-added processing factory for the ?bamboo village?. (The factory cost is about US$200,000).[3][3] If built, the factory will enable the ?bamboo village? to activate the village industry and begin the process of signing offtake agreements with industrial buyers. The factory will allow farmers to produce two main types of products: strips and pellets. Strips are the raw material for bamboo planks. Pellets are a by-product of the strip production and are an excellent source of carbon neutral bioenergy that can generate electricity and provide a safe fuel for cooking. The factory will include both a crushing machine, to produce semi-processed bamboo material for industry, and a high-pressure smoke preservation system, to preserve the bamboo and reach maximum endurance. The farmers will be trained in its operation. With the factory in place, the farmers will receive a better price for their semi-processed bamboo and the manufacturers will benefit from a shorter chain of production. The Aliansi Air and Bambu Lestari will coordinate the process to secure financing and build the factory. To effectively transform into a true ?bamboo village?, the activity will seek to expand the village area beyond the 130-ha area using the GEF increment and the five percent bamboo planted in Activity 1.1.1 under the agroforestry restoration, to run the forest to factory production system with maximum efficiency and impact. About 2,000 ha of land is optimal. In Y1, the activity will support the government to develop and mobilize a national strategy for the 1,000 Bamboo Villages initiative, in alignment with relevant ministries of finance, trade and industry. The activity will facilitate a stakeholder meeting to build out and mobilize the strategy, involving the relevant ministries, community representatives, Bambu Lestari, the private sector and microfinance institutions. A strategy validation meeting will also be held in Y1. **(Total Project Budget: US$14,545).**

(67) In Y3, the activity will facilitate a ?matchmaking program?, helping to pair the established bamboo village farmer cooperative with entities in the local business community. As partners to the farmers, the business community can assist and provide convenience in production facilities (in the event the village factory does not materialize), capital and marketing, while the business community obtains certainty in their business raw materials. In the matchmaking program, the activity will set a series of meetings between industry, microfinance institutions, local government and the farmers groups to spark investment in the forest to factory value chain for the project?s bamboo village. These business meetings will be facilitated using the industry mapping study carried out in Y1. The Aliansi Air, Forum DAS, the Indonesia Business Council for Sustainable Development, and Bambu Lestari will coordinate these meetings. **(Total Project Budget: US$5,857)**.

(68) If village production factory financing is secured and the factory is built, it is expected that in the two to three years following the project?s completion, the first round of harvesting and processing can begin, and a sustainable village-based restoration economy will be fully operational.

This activity will be promoted as a visible pilot to take to scale throughout the Brantas Basin and in other priority basins in Indonesia. The activity is a true example of incremental funding. It follows the *1,000 Bamboo Villages* model, which was presented at the Paris COP21 in 2015 by MOEF and Bamboo Lestari to help deliver on the country?s contributions to global climate change mitigation. Through strategic outreach and communications, the activity will use the pilot to provide visibility to the *1,000 Bamboo Villages* initiative and catalyze the momentum MOEF and Bambu Lestari need to forge a path toward the critical mass of villages the program requires to establish the enabling environment to reach the 1,000 bamboo villages goal across Indonesia over the next decade.

(69) The field school, matchmaking program and national strategy will be managed under *Swakelola Type 3 - Implemented by Community Organizations*, and executed by Bambu Lestari. Bambu Lestari has extensive experience in community-based bamboo forest restoration, including through its *1,000 Bamboo Villages* program, and has well-established cooperation patterns and trust with local communities. The Aliansi Air will serve in a coordinating role.

Component 2: Nature-Based Infrastructure and Awareness Creation for Land and Water Conservation, Water and Sediment Retention

(70) Under Component 2, the measures implemented with GEF incremental funding are expected to retain and replenish 204,880 m3 of water per year in the sub-catchment areas.[4]4 These measures to revert land degradation will contribute to reduce erosion, alleviate water scarcity, and improve water security in the sub-catchment areas for communities and businesses. By directly reaching some 4,000 students with water stewardship awareness creation measures in schools in the project area under Component 2, it can be expected that each child reached will become a change agent, passing their knowledge to at least six other family members, so that the awareness creation measures will reach at least 24,000 people throughout the sub-catchment areas.

(71) This Component aims to help stakeholders overcome the following identified barriers to ensuring the environmentally, economically and socially sustainable supply of water to people and businesses:

- ? Lack of awareness creation programs tailored to specific audiences (industries/resident communities)
- ? Lack of knowledge on the interrelatedness of deforestation/soil degradation/floods/droughts
- ? Lack of available awareness creation services
- ? Cooperation between government, civil society and private sector on water stewardship still needs to be consolidated
- ? Many industries lack awareness on the possibilities and benefits to engage in water stewardship activities
- ? A ?this is not my business? and ?the problem is too big and too complex? attitude
- ? Water stewardship activities of globally operating corporations pursue different goals and approaches
- ? Lack of mutual trust between and among stakeholders

? Lack of understanding that companies, which compete in the marketplace will have to cooperate to overcome the business risks for all of them stemming from land degradation-induced water scarcity
? Lack of awareness of the important roles women should play in water stewardship programs.
? Strong perceptions of the ?Konco wingking? culture that places women as complements to men rather than as individuals
? Women have insufficient access to productive sources of livelihood

(72) Component 2 contains two Outputs:
? Output 2.1: Construction of 597 absorption wells and awareness creation for enhanced water retention in the catchment areas
? Output 2.2: Establishment of 8,000 biopori and awareness creation for water conservation in 40 schools.

Output 2.1: Construction of 597 Absorption Wells and Awareness Creation for Enhanced Water Retention in the Catchment Areas

(73) Over the last decade, land degradation has led to a drastic reduction in the yield of all the natural springs located at the foothills of the Gunung Welirang. Many springs fall dry in the dry seasons and two thirds of them have fallen permanently dry over the last decade. Rapid change of land use and resulting land degradation in the sub-catchment areas is considered to be the main reason for this development. The forest areas have lost their soil stabilizing and rainwater retention capacity, as well as their groundwater replenishment potential. The establishment of absorption wells (sumar resapan) has proven to be an effective and efficient technical measure to ensure that surface water runoff can percolate in the underground and replenish the aquifers that feed the natural springs. For example, as part of its global water balancing program, The Coca-Cola Company funded the establishment of 1,200 absorption wells in the upper reaches of the sub-catchment areas. These absorption wells are reported to have a very positive impact on erosion reduction and the yield of natural springs. In the stakeholder engagement workshop, the establishment of additional absorption wells was unanimously identified as a priority measure to overcome land degradation and land degradation-induced water scarcity in the three sub-catchment areas.

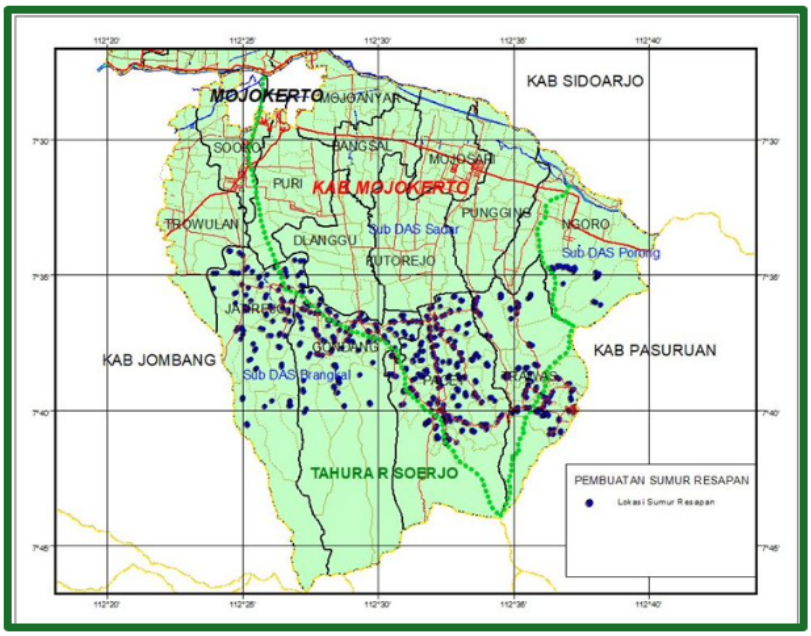
(74) Under Activity 2.1.1, 597 absorption wells will be installed in the project area. Under Activity 2.1.2, the project will promote water stewardship throughout the Brantas Basin through various awareness creation modalities, including organizing a contribution to both the World Land Degradation Day and World Water Day; developing a ?Brantas Box? learning toolkit for school children; organizing water stewardship investment forums (including a forum dedicated to empowering women in water stewardship initiatives); and facilitating a pilot water stewardship twinning program for experiential and ?south-south? learning.

Activity 2.1.1 - Constructing Absorption Wells (597 Units)

(75) An absorption well is a water conservation green infrastructure technique to reduce surface runoff and increase infiltration so as to prevent or reduce the occurrence of flooding and waterlogging; to reduce surface runoff to maintain and increase the groundwater level; to

reduce erosion and sedimentation; to prevent water intrusion and land subsidence; and to reduce the concentration of groundwater pollution. In Y2, this activity will construct 597 absorption wells for enhanced water retention in the three sub-catchment areas. The absorption wells will be constructed in the middle to upper-middle watershed area.

(76) The PPG field survey identified indicative locations for 600 absorption wells across seven districts in the project area (identified as blue dots in Map 12 and listed in Table 9 below). The indicative locations will be narrowed to 597 units at the start of project implementation.



Map 12: Indicative Locations of Absorption Wells in the Project Area
(For GEF Incremental Funding - 597 Absorption Wells)

Table 9: Indicative Area for Absorption Wells

No.	Sub-DAS	District	Units
1	Brankal	Jatirejo	90
2	Brankal	Gondang	110
3	Brankal and Sadar	Pacet	215
4	Porong	Trawas	110
5	Porong	Ngoro	35
6	Porong	Pungging	20
7	Sadar	Kutorejo	20
		TOTAL	600

(77) The construction of absorption wells will be carried out under *Swakelola Type 4: Community-Based Management* and will be executed by the targeted community groups themselves. One hundred and fifty (150) participants will be identified from within the indicative locations to carry out this work. Each participant will be responsible, with support from their community groups, for executing approximately four absorption wells in their respective villages to reach the 597 absorption well target. A development team, comprised of representatives of BPDASHL Brantas Sampean, the local government unit, Aliansi Air, Forum DAS and YLH Seloliman, will be formed

and tasked to provide activity socialization, coordination, technical guidance, and supervision to ensure the activity is successfully carried out.

(78) Activity execution will follow the Government of Indonesia?s 2018 Regulation on the *Procedure for the Implementation, Supporting Activities, Provision of Incentives, as well as Development and Control of Forest and Land Rehabilitation Activities* (P.105/MENLHK/SETJEN/KUM.1/12/2018), which sets out specific procedures for the proper construction and maintenance of an absorption well. The budgeted costs for the absorption wells are in line with the MOEF?s standard unit price index. **(Total Project Budget: US$285,324)**.

(79) The absorption well construction program will be guided by a comprehensive technical plan that will be prepared at the start of activity execution. After the technical plan is completed, but before construction begins, the 150 participants will be trained on the steps to constructing and maintaining an absorption well. The location(s) of this training will be determined during project execution.

(80) The absorption wells will be constructed according to the following steps: (1) field cleaning carried out around the absorption well site; (2) confirming the specific location measurements and providing benchmarks to determine the position and location of the building, spillway and tank; (3) manufacturing, which involves profile installation, soil excavation, construction of well walls, building the control basin, constructing waterways, conducting layer filling to filter water that will be absorbed into the soil, installing gutters and runoff channels, and installing well covers; and (4) Maintenance, which cleaning gutters, drains, control tubs and drain channels, and conducting periodic mud dredging, as appropriate.

(81) In Y2, a traveling field school, carried out by a consultant (firm) will hold a basic learning cycle one-day seminar in each of the seven districts where the project?s absorption well construction scheme will take place (Jatirejo, Gondang, Pacet, Trawas, Ngoro, Pungging and Kutorejo). This field school will build awareness of water stewardship good practices, and provide information on the interrelations and links between land degradation and water scarcity, land restoration, water conservation, and the principle of water retention and artificial groundwater recharge. It is expected that this field school will reach some 210 participants (30 participants per seminar) and their families. Under the assumption that the 210 participants will communicate what they have learned to six family members, it is expected that some 1470 people will be reached **(Total Project Budget: US$9,790)**.

Activity 2.1.2 - Promoting Water Stewardship in the Brantas Basin and Beyond

(82) Stewardship means the responsible planning and management of resources. Water stewardship is defined as using water in a way that is socially equitable, environmentally sustainable and economically beneficial. This is achieved through a stakeholder-inclusive process that involves site and catchment-based actions (UNIDO). This activity will promote good water stewardship throughout the Brantas Basin by helping basin stakeholders understand their own water use and shared risk in terms of water governance, water balance and water quality; and measures to combat land degradation-induced water scarcity.

(83) Schools play a vital role in spreading environmental messages. Children reached can act as important environmental change agents throughout their communities. Under this premise, in Y1 the activity will design a comprehensive educational package for teachers, the ?Brantas Box?, to create awareness and understanding about the environmental issues in the Brantas Basin and about community water stewardship. A consultant will be hired to prepare the Brantas Box. The Brantas Box will follow the format of the ?Danube Box? and the ?Kura Box?, which were developed, with GEF support, for children between the ages of 9 and 12 residing in the Danube River Basin (*https://www.danubebox.org)* and Kura Basin (*https://kura-river.org/resolveuid/45797a10-1db1-4f9f-9553-81c3c698468e*). A handbook for teachers will cover topics such as the water cycle; the Brantas Basin ecosystem; functions and values of land and water, including ecosystem services; the impacts of climate change on the Basin; the Sustainable Development Goals; the concepts of land degradation and land degradation-induced water scarcity; and measures children and their families can take to combat the environmental issues in the Basin. In addition to the handbook, the Brantas Box will contain various exercise sheets, instructions for role-playing games and outdoor activities, quizzes, experiments, and fact sheets. These materials are designed to stimulate children to explore ecological issues that go beyond their immediate experience of nature and to encourage them to analyze their personal lifestyles and their family?s/community water stewardship practices. The materials will be produced in Indonesian (Bahasa). The Brantas Box materials will be physically produced/printed and disseminated to each of the 40 schools undertaking the biopori installation program under Activity 2.1.2. **(Total Project Budget: US$36,442)**.

(84) In Y2 and Y3, and in partnership with various community organizations, businesses and local government, the activity will facilitate a contribution to both the World Land Degradation Day and World Water Day, which will include community outreach events and a strong social media campaign (to reach some 5,000 stakeholders). These contributions will be an opportunity to present the MEWLAFOR project and socialize the activities with basin stakeholders. Events may include technical demonstrations of absorption wells and biopori; a basin-wide art extravaganza where artists and children display art on themes of water stewardship; a Brantas Basin photography competition; a river cleanup program; engagement games; *Learning Stations*;[5]5 and the official release of the Brantas Box. To promote gender and social inclusion (GESI) considerations in water conservation efforts throughout the basin, the activity will develop a GESI-sensitive awareness campaign and materials for showcasing and distribution on World Land Degradation Day and World Water Day. **(Total Project Budget: US$10,140)**.

(85) In Y1, a community focus group discussion (FGD)/survey will be conducted by an experienced gender analyst on gender aspects of water conservation activities in the Brantas Basin. Sex-disaggregated data and information on participation in community decision making processes around water conservation measures and understanding the status of women organizations (and perception of their participation) in the project area will be collected. The data will help set a baseline to increase the share of women engaged in water conservation activities and will be used to inform the GESI-sensitive awareness campaign described above. Suggested research tools for this FGD/survey are presented in Annex J. **(Total Project Budget: US$4,117)**.

(86) In conjunction with World Land Degradation Day and World Water Day in Y2 and Y3, the activity will support the national DAS forum to organize two water stewardship investment forums

(virtual or face-to-face; approximately 150 participants per forum), which will centre on enhancing dialogue among basin stakeholders to stimulate water stewardship investment to help build a resilient social and economic recovery to the Covid-19 pandemic through new and ongoing programs. The investment forum in Y3 will focus on investing in female micro and small producers and enhancing women?s participation in community decision making and involvement in nature-based infrastructure development. The activity will support the national DAS forum to identify company representatives, sub-basin managers, water stewardship champions, and other relevant stakeholders to attend these forums and ensure ?the right people are in the room?. Aliansi Air and Forum DAS will help coordinate this support. The national DAS forum will be supported to work to onboard the Alliance for Water Stewardship (AWS) (Yayasan Aliansi Wali Sumber Daya Air) and the Indonesia Business Council for Sustainable Development (IBSD) in the coordination of the investment forums. AWS and IBSD have a significant membership of high-profile companies operating in Indonesia, including Nestl?, The Coca-Cola Company, HSBC, Cargill, L?Or?al and Unilever. Coordination of the investment forums will include making use of the AWS?s 2019 analysis report on the drivers for good water stewardship and uptake of AWS certification in the Brantas Basin. More than 2,000 business sites were mapped and analyzed, and multiple past and present programs were assessed to analyze lessons on water stewardship in the basin and to identify opportunities for strategic partnerships across stakeholders and sectors. The national DAS forum will be supported to reach out to prominent women?s organizations and Delft University of Technology to support forum coordination.. Delft University received funding from the Government of the Netherlands in 2020 to carry out activities in the Brantas Basin related to private-public partnerships to improve water quality governance. **(Total Project Budget: US$87,412)**.

(87) To complement the investment forums, the activity, through coordination support provided by the national DAS forum, will establish a pilot learning exchange program between identified stakeholders in the three sub-catchment areas and identified stakeholders elsewhere (in priority basins throughout Indonesia) doing exemplary work in water stewardship (and vice versa). The PMU will work with project stakeholders to develop and solicit twinning proposals; match participants with similar goals, objectives and activities; coordinate logistics; ensure sustained follow-up; monitor impact; and document and disseminate the experiences and lessons learned widely. Three matched twinnings will be carried out in Y2 and three matched twinnings will be carried out in Y3. The twinnings will contribute to enhancing scalability of project outcomes basin-wide and nationally through the transfer of expertise and practical skills via direct personal knowledge transfer. At least three of the six twinnings will involve the participation of women and women?s organizations **(Total Project Budget: US$16,466)**.

Output 2.2: Establishment of 8,000 Biopori and Awareness Creation for Water Conservation in 40 Schools

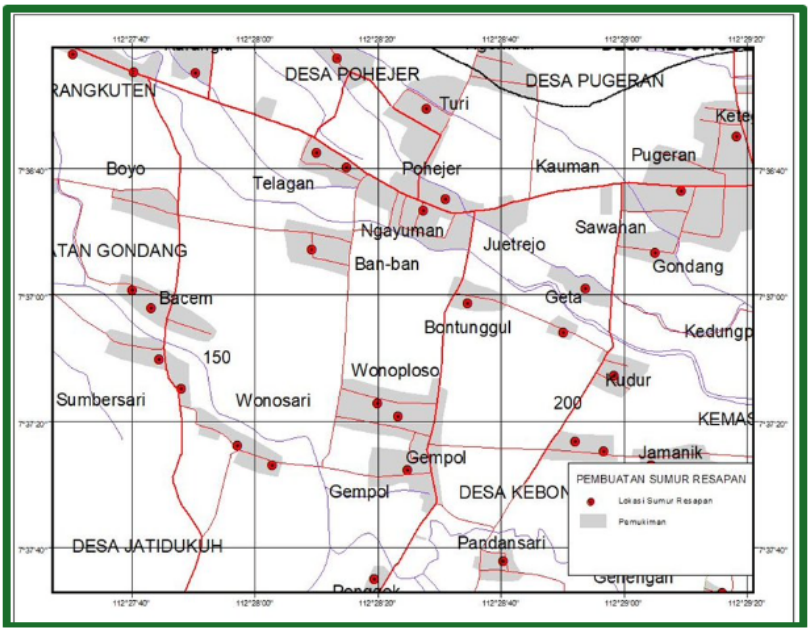
(88) To create awareness for water retention and to demonstrate the effectiveness of nature-based infrastructure, an educational program will be developed and launched in 40 schools in the project area. The curriculum will be derived from the Brantas Box developed under Activity 2.1.1, with specific lesson plans curated from the Brantas Box toolkit by each teacher. Some 100 children in every school will be educated on land and water resource management and land and water conservation issues.

(89) The students and their teachers will engage in the establishment of 200 biopori in every school. In total, 8,000 biopori will be established. While the installation of the 8,000 biopori will only result in an additional groundwater recharge of about 16,000 m3 per year, some 4,000 children will be reached, whom can then disseminate their newly-acquired skill, and knowledge on water conservation and community environmental stewardship, to their families and friends (24,000 people).

Activity 2.2.1 - Demonstrating Practical Water Conservation Measures

(90) Biopori is a method of replicating the natural process of rapid infiltration of storm water from the surface to greater depths. The benefits of biopori holes include: (1) increased surface water absorption; (2) reduced local flooding (waterlogging); and (3) enhanced groundwater recharge. A simple biopori system consists of a vertical cylindrical hole that is reinforced with a plastic pipe with small holes and covered with a lid with small holes. This construction effectively increases the land surface area by expanding it downward. The holes are then filled with organic waste to trigger the biopori environmental benefits. Organisms in the soil move toward the organic waste, creating biopori hole paths and porosity. These biopori holes absorb surface runoff to increase groundwater recharge. The activity of soil organisms also works to improve the health of the soil and the roots in nearby plants. The organic waste eventually turns to compost, which can be used as natural fertilizer for plants. Additional organic waste can then be added to the hole to maintain this organic process in perpetuity. The technique was developed in Indonesia.

(91) The PPG field survey identified indicative locations for 8,000 biopori in 40 schools across seven districts in the project area (identified in clusters as red dots in Map 13 and listed in Table 10 below).



Map 13: Indicative Locations of Biopori in the Project Area
(For GEF Incremental Funding - 8,000 Biopori in 40 Schools)

Table 10: Indicative Area for Biopori			
No.	**Sub-DAS**	**District**	**Units**
1	Brankal	Jatirejo	1,200
2	Brankal	Gondang	1,400
3	Brankal and Sadar	Pacet	1,600
4	Porong	Trawas	1,800
5	Porong	Ngoro	800
6	Porong	Pungging	600
7	Sadar	Kutorejo	600
		TOTAL	8,000

(92) The biopori installation will occur in Y2. This installation will be carried out under Swakelola Type 2 - Implemented by Other Government Agencies and will be executed by the 40 schools. Aliansi Air will serve in a coordinating role. The Education Regional Office will coordinate this activity.

(93) Activity execution will follow the Government of Indonesia?s 2018 Regulation on the *Procedure for the Implementation, Supporting Activities, Provision of Incentives, as well as Development and Control of Forest and Land Rehabilitation Activities* (P.105/MENLHK/SETJEN/KUM.1/12/2018), which sets out specific procedures for the proper construction and maintenance of biopori. The budgeted costs for the biopori are in line with the MOEF?s standard unit price index. **(Total Project Budget: US$80,730)**.

(94) A biopori is constructed using a biopori drill. To make the drilling process easy, water is applied to loosen the soil. The drill removes 50-100 cm deep x 10 cm wide of soil straight down, before hitting the groundwater table. The lip of the biopori cylinder is reinforced with cement to prevent soil erosion. Organic waste (dry leaves, kitchen waste) is then inserted into the cylinder. The cylinder is covered with a filtered cover to keep debris out of the cylinder. Converted compost is extracted using the biopori drill. Biopori equipment packages (drills, cement, pipes, covers) and an instruction manual that explains how to install a biopori will be provided and distributed to all 40 participating schools.

(95) Physical copies of the Brantas Box will also be delivered to the 40 participating schools. Educators will be encouraged to design lesson plans based on the handbook and the various learning tools assembled in this toolkit (see Activity 2.1.2 above).

Component 3: Strengthen the Enabling Environment to Promote Community-Based Land Restoration

(96) Under Component 3, the project will strengthen the enabling environment to upscale project results and promote community-based land restoration. The outcome of this component will be that the MOEF regional office in Sidoaryo will have enhanced institutional capacities to enforce the regulatory framework geared at avoiding the loss of protected and conservation forests and to upscale water stewardship activities within the sub-catchment areas and beyond.

(97) This Component aims to help stakeholders overcome the following identified barriers to ensuring the environmentally, economically and socially sustainable supply of water to people and businesses:

? Low awareness and institutional capacities at the level of the MOEF?s regional offices for engaging in and catalyzing multi-stakeholder platforms to revert land degradation-induced water scarcity

? Low capacity at the level of the MOEF?s regional offices to enforce the regulatory framework geared at avoiding the loss of protected and conservation forests

? Weak institutional capacity to upscale pilot initiatives

? Lack of qualified and well-trained experts

(98) Component 3 contains one Output:

? Output 3.1: Facilitation of active involvement of the staff of the Sidoaryo Regional MOEF Office in project execution and in the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests.

Output 3.1: Facilitation of Active Involvement of the Staff of the Sidoaryo Regional MOEF Office in Project Execution and in the Better Enforcement of the Regulatory Framework Geared at Avoiding the Loss of Protected and Conservation Forests

(99) Under this Output, four activities will be carried out to allow for the systematic integration and the training of the MOEF?s regional office in Sidoaryo (as well as of other government officials participating in the project) to enhance its institutional capacities to become fully involved in the water stewardship activities in the Brankal, Sadar and Porong sub-catchment areas and to upscale this project to other tributaries to the Brantas, as well as to other catchment areas in Indonesia and globally. This will be catalytic for the further upscaling of public-private partnerships in the domain of environmental stewardship, as required for transformational change.

(100) Under Activity 3.1.1, a structured peer-to-peer learning program will be implemented to strengthen the capacity of MOEF?s regional office in Sidoaryo (as well as other participating MOEF officials and local government officials participating in the project) to better enforce Indonesia?s legal and regulatory framework for forestry management and to strategically steer the project so it can effectively be upscaled and achieve transformational change. Under Activity 3.1.2, individual water conservation master plans for the Brankal, Sadar and Porong sub-catchments will be produced to strengthen the policy environment for good water governance in the Brantas Basin. Under Activity 3.1.3, a series of strategic communication products will be developed and a targeted communications strategy will be carried out to effectively transfer knowledge and lay the groundwork to take the project to scale. Under Activity 3.1.4, the project will disseminate knowledge, increase project visibility for replication, and seek upscaling partnerships at targeted global and national dialogue events.

Activity 3.1.1 - Building Capacity in Regulatory Enforcement and Project Upscaling

(101) Forest law enforcement in Indonesia is regulated by the Law on Forestry (No. 41/1999) and the Law on Conservation of Living Resources and their Ecosystems (No. 5/1990), which define a

range of forest crimes and associated penalties, from fines to prison terms. In 2013, the government issued the Law on the Prevention and Eradication of Forest Destruction (No. 18/2013). It aims to strengthen forest law enforcement by (1) mandating the establishment of a specific institution directly responsible to the President; (2) targeting organized forest crime; (3) having more coverage than the Forestry Law, to also include palm oil plantations and mining in forested areas; and (4) allowing the utilization of corporate criminal liabilities. Within MOEF there is a specialized Directorate General (DG) of Law Enforcement of Environment and Forestry, which is tasked with the formulation and implementation of policies aiming to reduce disturbances and threats to forests and the violation of forest and environmental laws and regulations. In terms of field personnel, the DG employs forest rangers and civil servant investigators.

(102) In Y2, four to six government officials from the MOEF Sidoaryo Regional Office (and potentially from other relevant government agencies) will participate in a technical learning exchange mission (akin to a twinning) on best practices in forestry law enforcement. Participants will be identified and nominated by MOEF. This technical learning exchange mission will see the participants travel to the offices and field of a government counterpart inside or outside the region identified as having demonstrable successful practices and replicable experiences in forest law enforcement operations against three illegal forest activities: (1) forest area encroachment; (2) illegal logging; and (3) illegal wildlife trade. In Y3, the participating officials will share lessons learned from this exchange at a workshop on how Indonesia can better enforce its regulatory framework against these illegal forest activities. The workshop will include approximately 15-20 representatives from the Government of Indonesia?s forestry and forestry-related agencies, and will be led by national and international experts and facilitators. The outcome of this workshop will be (1) increased capacity to enforce the regulatory framework geared at avoiding the loss of protected and conservation forests; and (2) based on identified deficiencies in forest law enforcement operations, a set of recommendations for uptake by MOEF and relevant agencies to facilitate better enforcement measures throughout the country?s regulatory framework for forestry law, both systemically and systematically. **(Total Project Budget: US$27,500)**.

(103) In Y2, members of the MOEF and PMU will participate in a GEF project-to-project twinning to build capacity to strategically take the MEWLAFOR demonstration project to scale to deliver transformational change and durable global environmental benefits. Nominated participants will spend up to one week in the offices and field of a second or third-generation GEF project (selected from within any of the GEF focal area project portfolios) that began as a pilot and has valuable and shareable experiences and lessons learned on the mainstreaming, replication, scaling up and market change processes of true transformational change. Following the twinning exchange, the participants will better understand pathways to scale the project up and will have built capacity to manage a transition phase from demonstration and ?proof of concept? that aims to strengthen stakeholder confidence in the approaches promoted by the project to a next-phase project that has large-scale buy-in and transformative ambitions. The participants will prepare a twinning report to document internal knowledge gained and to disseminate this knowledge to benefit the broader GEF portfolio of projects. **(Total Project Budget: US$8,000)**.

(104) In Y1, all MOEF Sidoaryo Regional Office staff and the PMU will undergo sensitization training on why gender matters in water stewardship initiatives and law enforcement. Officials will complete two course modules on topics pertinent to the project through the UN Women?s eLearning Campus.

Activity 3.1.2 - Planning Water Conservation Measures for the Brantas Basin

(105) In line with Aliansi Air?s strategy to promote and harmonize basin and sub-catchment level plans and policies throughout the Brantas Basin, through a stakeholder participatory process the activity will develop water conservation master plans for each of the Brankal, Sadar and Porong sub-catchment areas. All three master plans will be developed in Y1 and will serve as a reference for the implementation of the project. Each master plan will be designed according to Law 7/2004 on Water Resources and its regulations and ministerial regulation PP/42/2008. The 20-year master plans will be strategic, tactical and operational in character and will address the main topics delineated in Law 7/2004: conservation; utilization of water resources; mitigation of floods and droughts; data and information systems; and community participation and institutional strengthening. In addition to the long-term dimension, each master plan will include a medium-term dimension (four five-year programs) and a short-term dimension (annual work plans, required each year). Development of these master plans will be coordinated by the Ministry of Public Works and Housing, with coordination support provided by the Aliansi Air and Forum DAS. **(Total Project Budget: US$21,100)**.

Activity 3.1.3 - Developing Strategic Communications for Upscaling

(106) The Activity will develop strategic messaging around the project?s development issues, activities, events and results through a targeted communications strategy, with the goal to effectively transfer project knowledge and lay the groundwork to take the project to scale. This will be done through a series of strategic communication products.

(107) In Y1, a simple visual identity package, comprising a logo and branding guidelines, will be developed to ensure the project?s activities, products, events and results are recognizable as a cohesive unit; to promote stakeholder association and ownership; and to provide a project identity that resonates with stakeholders and the wider development community for strategic marketing, awareness creation and outreach purposes. **(Total Project Budget: US$1,500)**.

(108) In Y1, a project website will be designed to serve as a digital brochure for the project and to easily and accessibly communicate project information, products, tools, resources, events, results and logistics. The website will also help the project manage information transfer risks during the pandemic. It will be continuously populated and upkept in Y2 and Y3. **(Total Project Budget: US$2,000)**.

(109) In Y1, Y2 and Y3, a strong social media presence for the project (including on the Twitter, Facebook and YouTube platforms) will be instituted to expand project visibility, provide timely project information and updates, communicate early results, and increase project connections with stakeholders. Traditional media will also be utilized, including radio and newspapers, to reach a wide audience. **(Total Project Budget: US$5,256)**.

(110) In Y3, a series of result stories using the *Told with Exposure* software, or similar solution, will be prepared to communicate good practices and experiences and lessons learned under

the project, and to demonstrate how this pilot project can be taken to scale. These stories will be disseminated via the project website, social media channels, and at various outreach and global and national events. **(Total Project Budget: US$8,000)**.

(111) In Y3, a short animated film will be produced, showcasing the project?s activities, success stories, and the difference the project can make if taken to scale. The film will be disseminated via the project website, social media channels, and at various outreach and global and national events. **(Total Project Budget: US$8,000)**.

(112) In Y2, and updated in Y3, a traveling exhibition booth will be designed (rollups, posters, promotions) to be utilized to achieve outcomes under Activity 3.1.4 and Activity 2.1.2. **(Total Project Budget: US$1,499)**.

Activity 3.1.4 - Transferring Knowledge at Global and National Events for Upscaling

(113) The project will disseminate knowledge, increase project visibility for replication, and seek upscaling partnerships at targeted global dialogue events?including the UNCCC and UNCCD COPs, the GEF Biennial International Waters Conference, the Stockholm World Water Week, and the World Water Forum?and national conferences as they arise.

(114) In Y3, the activity will support the participation of project representatives in these international events, including for participation in conference planning committees, discussion panels, plenary addresses, and exhibition halls. Participation will transfer knowledge and share lessons that might be beneficial in the design and implementation of similar ongoing/pipeline projects or programs and to seek to identify relevant lessons learned by similar projects in order to integrate them and improve the delivery and upscaling of the project. The activity will organize one side event at a global conference, organized within the sidelines of the official sessions of the UNCCC or UNCCD COPs, or as a participant-led workshop at the GEF International Waters Conference or interactive session at Stockholm World Water Week or the World Water Forum. The side event will provide an opportunity for the project to convene Parties, accredited observer organizations and/or other conference delegates for knowledge sharing, capacity building, networking for potential partnerships, and exploring actionable options for meeting development challenges around land degradation and land degradation-induced water scarcity. **(Total Project Budget: US$13,182)**.

(115) To reach stakeholders and potential stakeholders in Jakarta and other priority basins throughout Indonesia) for replication and scaling, the activity will support the travel and participation of project representatives in yet identified national forums (Y2 and Y3). **(Total Project Budget: US$1,979)**.

(116) A one-day national workshop will be organized in Y3 to disseminate, review, discuss and validate sex disaggregated data, information and lessons learned from the community focus group discussions (FGDs)/surveys conducted under Activity 1.1.2 and 2.1.2 on gender aspects of agroforestry restoration and water conservation. This workshop will include 50 select participants, including government officials, policy influencers, champions, leaders in women?s organizations, NGOs, CSOs, and the business community. The outcome will be a validation note that will be utilized for knowledge transfer purposes and for the

potential design of a second-generation MEWLAFOR project. **(Total Project Budget: US$5,839)**.

(117) The activity will make use of now well-established conferencing technology to hold and participate in virtual events in lieu of attending face-to-face events, should the pandemic prevent these forums from physically taking place or if the risk factor is too significant to permit travel.

Component 4: Monitoring and Evaluation

(118) Monitoring and evaluation (M&E) is a tool that provides information on whether results are being achieved as planned, what corrective (adaptive management) actions are needed to ensure delivery of the intended outcomes, and how outputs are making positive development contributions.

(119) Under Component 4, the impact of the project will be tracked and reported as per established GEF and UNIDO guidelines. The project results, corresponding indicators, and midterm and end-of-project targets in the Project Results Framework and Annual Work Plans (AWP) will be monitored annually and evaluated at set intervals during project implementation. UNIDO, as the Implementing Agency, will involve the GEF Operational Focal Point and project stakeholders at all stages of the project M&E activities in order to ensure the use of the evaluation results for further planning and implementation.

(120) Component 4 contains two Outputs:

- ? Output 4.1: Project progress monitoring and reporting
- ? Output 4.2: Midterm review and independent terminal evaluation

Output 4.1: Project Progress Monitoring and Reporting

(121) Under this Output, results-based management will be conducted ?to ensure that the project?s processes, products and services contribute to the desired results (outputs, outcomes and higher-level goals or impact) and use information and evidence on actual results to inform decision making on the design, resourcing and delivery of programs and activities as well as for accountability and reporting? (GEF IEO, 2017; UNDG, 2011). A detailed M&E plan for tracking and reporting on project timebound milestones and accomplishments will be prepared by the PMU (and validated by UNIDO) at the beginning of project execution, and then periodically updated. The Project Result Framework in Annex A provides performance and impact indicators for project implementation, along with their corresponding means of verification. The detailed monitoring plan and Project Results Framework will form the basis on which the project's M&E will be built. If baseline data for some of the project?s results indicators was not yet available during the PPG phase, it will be collected during the first year of project implementation.

(122) Under Activity 4.1.1, a Project Inception Workshop will be organized, which will include discussing reporting, monitoring and evaluation roles, responsibilities and modalities; annual GEF Project Implementation Reports (PIRs) will be completed for each year of project implementation;

an experience note will be prepared and shared with the GEF for replication; and gender disaggregated data and information on project activities will be compiled and synthesized. M&E reporting will provide the basis for Project Steering Committee discussions and will feed into the project?s Midterm Review and Independent Terminal Evaluation. **(Total Project Budget: US$9,392)**.

Activity 4.1.1 - Progress Monitoring and Reporting

(123) A virtual Project Inception Workshop will be held within 60 days of project CEO endorsement, with an aim to:

- ? Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized;
- ? Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies, and conflict resolution mechanisms;
- ? Review the Project Results Framework, risk log, stakeholder engagement plan, gender mainstreaming plan, knowledge management strategy, and environmental and social management plan, and make adjustments/update as necessary;
- ? Discuss reporting, M&E roles and responsibilities, and finalize the M&E budget. Identify national/regional institutes to be involved in project-level M&E. Discuss the role of the GEF OFP and other stakeholders in project-level M&E.
- ? Review financial reporting procedures and budget monitoring and other mandatory requirements, and agree on the arrangements for an annual audit.
- ? Plan and schedule Project Steering Committee meetings and finalize the first-year AWP.
- ? Formally launch the Project.

Other M&E activities deemed necessary to support project-level adaptive management will be agreed on during the Project Inception Workshop and will be detailed in the Inception Report. These activities may include GEF, UNIDO and MOEF guidance regarding adopting remote monitoring approaches and for M&E procedures as a whole during the Covid-19 pandemic. An Inception Workshop Report will be prepared to capture the decisions taken at the Inception Workshop and utilized to prepare the detailed M&E Plan.

(124) The annual GEF Project Implementation Report (PIR) covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation by the PMU. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The quality rating of the previous year?s PIR will be used to inform the preparation of the subsequent PIR.

(125) A GEF Experience Note/GEF Good Practices Brief[6]6 will be prepared, which is a short case study on specific project experiences that may be of interest to other GEF projects in the portfolio to replicate. They can cover a range of topics related to project management, stakeholder involvement, technical issues and demonstration projects. This note will be shared with the GEF Secretariat and GEF Communications Team for appropriate dissemination.

(126) The activity will track, synthesize and report on the sex-disaggregated and gender-sensitive indicators included in the Project Results Framework in Annex A and compile and synthesize the data and information collected from the focus group discussion/surveys on gender aspects conducted under Activity 1.1.2 and Activity 2.1.2. This data will feed into the national workshop on gender aspects of the project under Activity 3.1.4.

Output 4.2: Midterm Review and Independent Terminal Evaluation

(127) Under this Output, the costs for a Midterm Review (MTR) and independent Terminal Evaluation (TE) will be covered. The objective of the MTR (Activity 4.2.1) and the TE (Activity 4.2.2) is to enable MOEF, UNIDO, GEF and other stakeholders to (a) verify prospects for development impact and sustainability of the main objective and specific objectives of the project; (b) to enhance project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations with a view to ongoing and future activities and particularly on a potential second phase of the project; and (c) to draw lessons of wider applicability for the replication of the experience gained from this project at a national and regional level.

Activity 4.2.1 - Midterm Review

(128) A MTR will be undertaken in Y2. The MTR will be used to determine progress being made toward the achievement of outcomes and will identify course correction, if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; it will highlight issues requiring decisions and actions; and it will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project?s term. The MTR will be validated and reflected on by the Project Steering Committee.

(129) The review will be ?independent, impartial and rigorous?. The reviewer(s) hired to undertake this assignment will be independent from organizations that were involved in designing, executing or advising on the project. Equally, the reviewer(s) should not be in a position where it may be possible they could accept future contracts under the project. **(Total Project Budget: US$20,580)**.

Activity 4.2.2 - Independent Terminal Evaluation

(130) A TE will be initiated three months before the final Project Steering Committee meeting, and will build on the results of the MTR. The TE will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It will also provide recommendations for follow-up activities.

(131) The evaluation will be ?independent, impartial and rigorous?. The evaluator(s) hired to undertake this assignment will be independent from organizations that were involved in designing, executing or advising on the project. Equally, the evaluator(s) should not be in a position where it may be possible they could accept contracts under a future phase of the project. **(Total Project Budget: US$25,028)**.

Theory of Change

(132) The Theory of Change in Figure 1 provides a snapshot overview of the project?s outputs, expected shorter term outcomes, expected longer term outcomes, and ultimate goal.

The project is designed to address the barriers set out in Table 4 above (barriers impeding industry engagement in water stewardship activities; barriers faced by resident communities to engage in sustainable land management practices; and institutional capacity barriers). Specifically, the barriers will be addressed by the provision of investment and technical assistance, through a public-private partnership approach, to assist the Government of Indonesia to improve its program in community-based restoration of degraded land ecosystems and the development of environmental service schemes carried out in priority sub-catchment areas of the Brantas Basin in East Java; to strengthen institutions at all levels (community, district/city, provincial and national), enhancing coordination and collaboration across sectors and regions as required for an upscaling of public-private partnerships for environmental stewardship; and to build a better enforcement of the regulatory framework to avoid the loss of protected and conservation forests in Indonesia.

The project outputs will include restoring 387 ha of upstream agroforestry schemes via 251 ha of enrichment schemes (400 trees/ha) and 136 ha of intensive schemes (1,000 trees/ha); restoring 130 ha of bamboo riparian forest (400 stools/ha); establishing 597 absorption wells; launching an educational program in 40 schools and installing 8,000 biopori through a participatory process; and facilitating the active involvement of the staff of the Sidoaryo regional MOEF office in project execution (water stewardship) and in the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests.

IF these outputs are delivered THEN the following short-term outcomes are expected to be realized: Loss of 2,407 ha of protected forest and 19,929 ha of conservation forest are expected to be avoided; up to 18 million t/year of erosion is expected to be avoided; 121 t of N and 35 t of P input into the Brantas are expected to be avoided annually; 7,981,341 m3 of water per year is expected to be retained in the catchment area; Up to 1,210,000 m3 of water per year is expected to be retained in the catchment area; awareness for integrated land and water conservation is expected to be created for at least 24,000 people; and institutional capacities of the MOEF regional office for an upscaling of water stewardship initiatives and for the better enforcement of the regulatory framework geared at avoiding the loss of protected and conservation forests is expected to be enhanced. AND, over the longer-term, land areas with critical significance for water retention, sediment retention and improved livelihoods are expected to be restored; awareness is expected to be created and nature-based infrastructure is expected to be established for land and water conservation, sediment and water retention; and the regulatory framework geared at avoiding the loss of protected and conservation forests in Indonesia is expected to be better enforced.

BY demonstrating an innovative approach to how a proactive multi-stakeholder private sector-catalyzed partnership for water stewardship can be upscaled to achieve transformational changes in the restoration of degraded terrestrial ecosystems, land degradation-induced water scarcity is expected to be mitigated, and environmentally, socially and financially sustainable provision of water to people and businesses is expected to be secured.

MEWLAFOR THEORY OF CHANGE

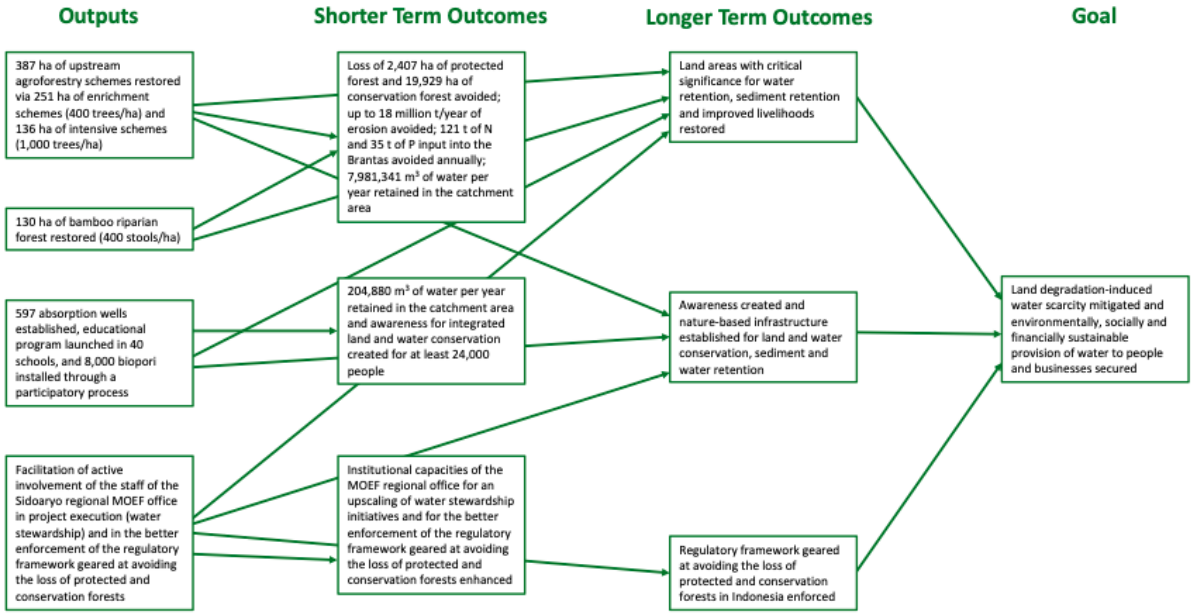


Figure 1

(4) Alignment with GEF focal area and/or Impact Program strategies

(133) *GEF as a Global Partner of the United Nations Decade on Ecosystem Restoration*

The United Nations General Assembly proclaimed 2021-2030 to be the United Nations Decade on Ecosystem Restoration, with the primary vision that the relationship between humans and nature has been restored; where the area of healthy ecosystems is increasing; and where ecosystem loss, fragmentation and degradation has been ended. This period coincides with the remaining delivery window of the UN Sustainable Development Goals and ?the timeline scientists have identified as the last chance to prevent catastrophic climate change? (UN, 2021). The UN Decade on Ecosystem Restoration?s overarching goal is to stop and reverse the destruction and degradation of billions of hectares of ecosystems. The proposal for action to this end includes empowering a global movement; financing restoration on the ground; setting the right incentives; celebrating leadership; shifting behaviours; investing in research; building up capacity; celebrating a culture of restoration; and building up the next generation. The GEF is a Global Partner in the implementation of this initiative.

?There has never been a more urgent need to restore and heal our ecosystems. Restoration stimulates investments and creates jobs (primarily in rural areas), and helps to secure livelihoods of local communities. It is a key nature-based solution to climate change impacts and can help support a green and resilient recovery to the Covid-19 pandemic. The GEF is a proud global partner of this initiative. Today, 115 countries have committed to restore approximately 800 million hectares of land and more than half of the world?s restoration pledges are now tied directly to the UNCCD?s Land Degradation Neutrality Targets. This is very much in line with the GEF?s vision to restore healthy and resilient ecosystems. The GEF plans to continue and expand its support for restoration in our next funding cycle, GEF8, toward 2030.?

Carlos Manuel Rodriguez, GEF CEO and Chairperson (2021)

The MEWLAFOR project directly aligns with the UN Decade on Ecosystem Restoration and the GEF?s role as a financial mechanism of the UNCCD, and could serve as a flagship demonstration project for the GEF (as a Global Partner) to showcase practical examples of the various actions proposed to realize the UN Decade for Ecosystem Restoration vision (described above).

(134) *Land Degradation Focal Area Under GEF-7*

Activity 1.1.1 and Activity 1.2.1, which will restore some 381 ha of forest through the GEF increment and contribute to a state whereby the amount and quality of land resources necessary to support ecosystem function and services remain stable or increase?and its supporting activities: Activity 1.1.2, Activity 1.2.2 and Activity 3.1.1, which will improve the livelihoods and decrease the vulnerability of rural communities and smallholder farmers living in the sub-catchment areas?are fully aligned with the GEF-7 LD focal area strategy to align GEF support to promote the UNCCD?s LDN concept, to invest in global environmental benefits from production landscapes, and to harness private capital and expertise to finance investments in sustainable land management. Specifically, the project is mapped to LD Focal Area Objective LD1-1 to maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM) as well as LD 1-3 to maintain or improve flows of ecosystem services,

including sustaining livelihoods of forest-dependent people through Forest Landscape Restoration (FLR).

The project also aligns with the LD focal area objective to create an enabling environment to support voluntary LDN target implementation. Through capacity building programs for farmers, youth, community members, and the regional MOEF office under Components 1-3, the project will be ?Building capacity at all levels required to restore and maintain functional landscapes? and ?Promoting good governance, especially in view of land tenure and efforts in securing livelihoods of smallholders?. By facilitating knowledge exchanges and twinnings under Activity 1.1.2, Activity 2.1.2 and Activity 3.1.1., the project will carry out ?Lessons learning and knowledge exchange and south-south cooperation within regions?. And by supporting the 1,000 Bamboo Village initiative under Activity 1.2.2., the project will be ?Providing technical assistance required to bring bankable projects to the investment?.

The project will aim to combat land degradation-induced water scarcity in the three sub-catchment areas. The provision of support by the GEF to activities addressing drivers of water insecurity is expressly mentioned in the LD focal area strategy.

(135) *GEF and Private Sector Engagement*

The GEF?s vision statement makes clear that in order to bring transformational change to the global environment the public and private sectors must identify new ways of working together. The project fully aligns with the GEF corporate strategy (as well as the LD focal area strategy) in GEF-7 to identify ?interventions to promote private sector engagement?. Through upscaling the activities of the Aliansi Air and building synergies with Forum DAS, the Alliance for Water Stewardship and the Indonesia Business Council for Sustainable Development (specifically under Activity 2.1.2), the project will ?Convene multi-stakeholder alliances?to develop, harmonize and implement sustainable practices, creating alliances to promote environmental objectives?. And through the demonstration of an innovative approach to how a proactive multi-stakeholder private sector-catalyzed partnership for water stewardship can be upscaled to achieve transformational change in the restoration of degraded terrestrial ecosystems, the project will ?Demonstrate innovative approaches, including validation of a technology, a policy measure or an approach to address environmental degradation that can spur broader adoption.?

The project is building up on private sector pilot activities and will further harness private capital and expertise to finance investments in sustainable land management (under Components 1 and 2). The project, through MOEF and private-sector co-financing, will provide technical assistance for smallholders for the marketing of sustainably-farmed NTFP (Activity 1.1.2) and setting up value-added bamboo product chains (Activity 1.2.2). This also will build on pilot activities that have been successfully implemented with private sector funding. The project will demonstrate how land degradation can be arrested and reversed by involving smallholder farmers and local communities and facilitating a mutually-beneficial engagement with the private sector. The pilot measures already implemented with private sector funding have successfully demonstrated how smallholder producers can be linked to markets, how sustainable supply chains can be introduced, and how stable revenues with agricultural commodities from agroforestry schemes can provide

the incentives for smallholder producers to adopt sustainable management patterns of buffer zones.

(136) *GEF and Gender*

In the designated project area, most women work in the agriculture sector. While women have played an increasingly important role in development in the project area, they are still vastly underrepresented in governance and decision making processes at all levels. The GEF believes that more systematic inclusion of gender aspects in projects can create positive synergies between improved environmental impact and greater gender equality. The potential transformation of gender equality stems not only from the opportunity to engage more people in environmental efforts in terms of absolute numbers, but also through the inclusion of the unique skills, knowledge, and experiences of women in their roles as the primary users and stewards of many natural resources.

In addition to neutral activity programming that is gender responsive, the project structure includes a gender mainstreaming activity package that accounts for just over five percent of the total project budget. Through capacity building, awareness creation and empowerment activities, the project fully aligns with the LD focal area strategy?s goal to include practical gender needs (improving the conditions of women through access to resources, services and opportunities and strategic gender interests (empowering women to take decisions and be better represented in various decision making bodies) in its projects.

(137) *GEF?s Response to Covid-19*

The GEF?s Response to Covid-19 document (2020) notes that ?What we can say with confidence is that, at its core, Covid-19 is a result of the direct collision between natural systems and human systems. The remarkable growth experienced during the last half century has disrupted ecosystems through unplanned urbanization and settlements at rates higher than population growth, through rampant deforestation and through widespread land degradation.? And ?With the understanding that the fundamental root cause of emerging zoonotic diseases resides on the weakening of the services ecosystems have provided for humanity over thousands of years, the only lasting solution to Covid-19 and other such diseases is to promote transformational change to the human systems... so that a balance between natural systems and human systems can be restored within planetary boundaries.?

The transformational change to restore a balance between natural systems and human systems is at the core of the project?s theory of change. The project is a demonstration to support the Government of Indonesia to ?build back better? from the pandemic and rebuild natural areas as the first line of defence against zoonotic disease transfer. Activity 2.1.2, in particular, will focus on facilitating sound investments in water stewardship (through the investment forums) to help the population residing in the Brantas Basin, and beyond, to build back better from Covid-19.

(5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFYF, LDCF, SCCF, and co-financing

(138) Incremental reasoning defines the role for the GEF in the context of the expected agreed global environmental benefits from a proposed project. It is based on an assessment of the value added by involving the GEF.

(139) The SAVi for the MEWLAFOR project is instructive in this regard. It utilizes a causal loop diagram to capture the dynamics of the project area system. By showing the interconnectedness of key socioeconomic and environmental indicators, the SAVi exposes potential impacts of the project and how these impacts unfold through the project area system. At the center of the diagram is the variable representing the area of agricultural land. In Indonesia, expanding agriculture has generated income for the local population but has come at the expense of lost forest land. The negative side effects of this deforestation include soil erosion, loss of biodiversity, and decreased water retention. These impacts have worsened floods and reduced groundwater recharge. Ultimately, these effects reduce land productivity, and, although deforestation cannot continue forever, it becomes necessary to clear more land. These dynamics are represented in Figure 2 below by the arrows pointing from ?forested land,? moving clockwise around the diagram.

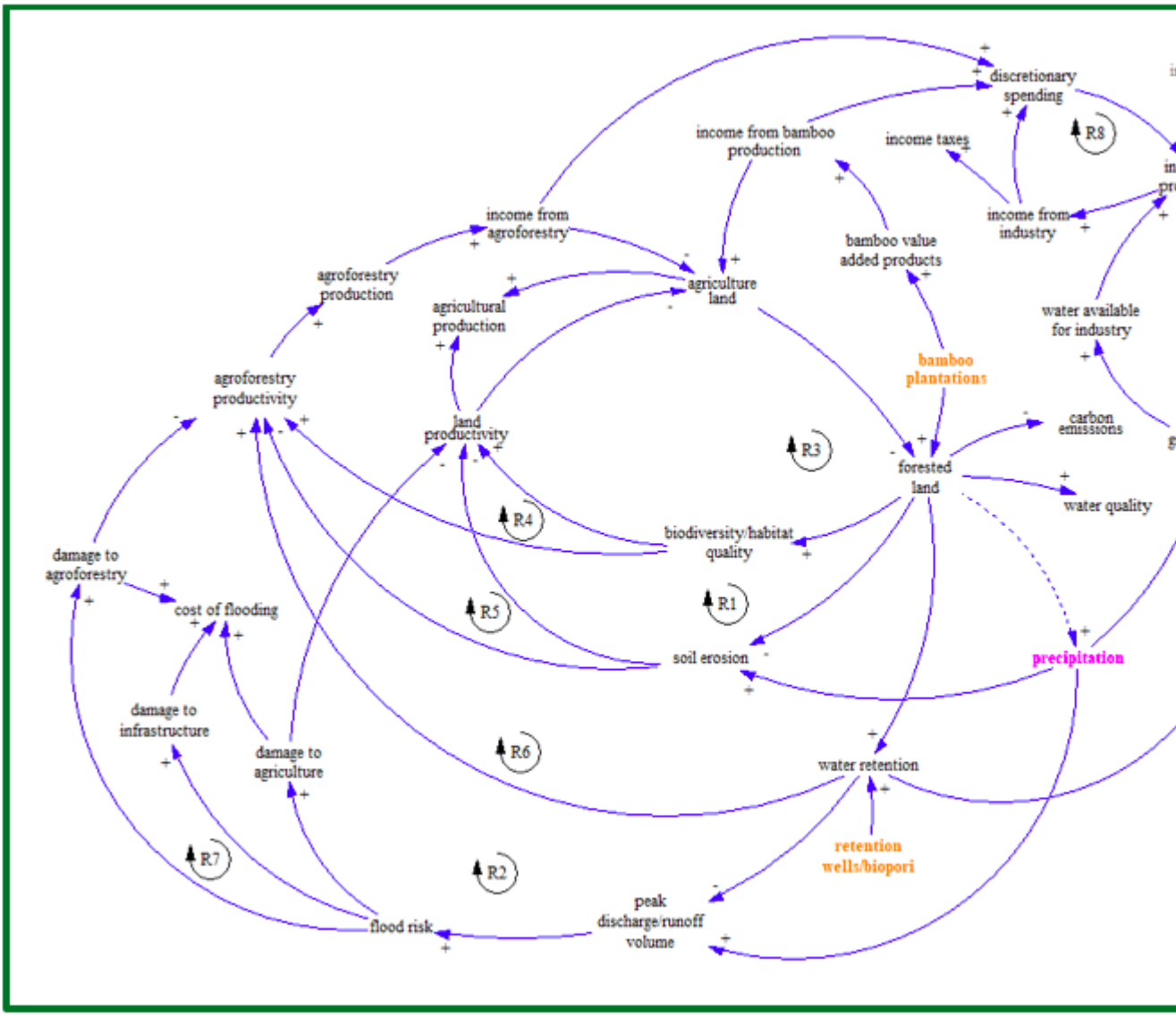


Figure 2: Casual Loop Diagram

Precipitation replenishes water supply, but most comes during the rainy season. Water scarcity is a problem during the dry season and is expected to become more severe in the future. With less groundwater recharge, downstream economic activity slows. These impacts are shown on the righthand side of the diagram. At the other extreme, heavy precipitation is also predicted to worsen with climate change, leading to more flooding and soil erosion. The arrows pointing left from ?precipitation? capture this impact. To emphasize that precipitation is a climate input, the variable is highlighted in pink in Figure 2. Conversely, investing in reforestation to establish bamboo plantations and agroforestry schemes and constructing water retention wells can mitigate many of these problems. These interventions are highlighted in orange. As shown in the diagram, soil erosion and flood risk decline, and biodiversity increases. Enhanced water retention and better land management upstream stimulate economic growth downstream. Reforestation has the added benefits of purifying water and sequestering carbon. Agroforestry and bamboo plantations are also sources of revenue for the local community. The following feedbacks, labelled in Figure 2, help explain the historic pattern of deforestation and demonstrate how interventions could support sustainable land management:

- R1 ? deforestation increases soil erosion, which decreases land productivity. With lower productivity per hectare, more agricultural land is needed, leading to more deforestation.
- R2 ? deforestation reduces water retention, and hence, peak discharge and runoff volume are larger. This increases flood risk. Flooding lowers land productivity, so demand for land increases, and more forest land is cleared.
- R3 ? deforestation leads to lower biodiversity. This decreases the productivity of agricultural land, which creates a need for more land, resulting in further deforestation.
- B1 ? more groundwater increases the water available for industry. With more water, production is higher, which leads to more groundwater extraction and a decrease in groundwater.
- R4 ? reforestation with new agroforestry and bamboo plantations increases biodiversity, leading to higher productivity in agroforestry systems. This raises income, lowering the need for agricultural land and deforestation.
- R5 ? with reforestation, erosion decreases. This makes agroforestry systems more productive and results in more income from agroforestry. This decreases the need for agricultural land, resulting in less deforestation.
- R6 ? more forested land increases soil water retention. There is, thus, more water available for agroforestry. This increases productivity, which lowers the need for agricultural land and reduces deforestation.
- R7 ? forested land increases water retention and reduces runoff and flood risk. Hence, there is less damage to agroforestry systems. This increases productivity and income. So, there is less demand for agricultural land and, therefore, a further decrease in deforestation.
- R8 ? industrial production downstream generates income, a portion of which goes toward discretionary spending. With increased spending, there can be more production.

It is also possible that an increase in forest cover would change the micro-climate, such that humidity and precipitation increase. This relationship would create additional balancing feedback

loops, in which loss of forest decreases precipitation, leading to less soil erosion and flooding. This increases productivity, reducing the need for land, so deforestation slows. Feedback loops R5 ? R8 show how investing in agroforestry schemes and bamboo plantations can reverse the vicious cycles of deforestation and land degradation. As the forest cover grows, the increase in productivity will limit the need for cleared land. Furthermore, R9 demonstrates that improved land and water management can support continued growth of downstream economic activity. Through these interventions, it is possible to create more sustainable sources of income and generate co-benefits.

(140) The MEWLAFOR project will demonstrate an innovative approach to how a proactive multi-stakeholder private sector-catalyzed partnership for water stewardship (the Aliansi Air), which has already brought together governments, companies, NGOs and other key stakeholders, can be upscaled to achieve transformational changes in the restoration of degraded terrestrial ecosystems as required to mitigate land degradation and land degradation-induced water scarcity. This will secure the environmentally, socially and economically sustainable provision of water to people and businesses in the three sub-catchment areas of the Brantas Basin. As such, the project will be a significant and replicable step forward in direct cooperation with the private sector for reverting the ever-worsening environmental situation in East Java and elsewhere in Indonesia.

(141) The increment will build upon a solid baseline of activities funded by public and private sector entities active in the project area in the fields of integrated management of land and water resources; sustainable land and forest management, and erosion control/sediment management:

Component 1

- ? GEF incremental funds for activities under Component 1 will support the upscaling of the afforestation activities already undertaken by YLH Seloliman for the restoration of upstream water retention forests. Under the cooperation between PT Multi Bintang and the Aliansi Air for the implementation of PT Multi Bintang?s water stewardship project, Nabung Banyu (?saving water?), YLH Seloliman has successfully restored 10 ha of upstream forests and supported the local communities in marketing NTFPs.
- ? The creation of a bamboo village under Activity 1.2.2 follows the *1,000 Bamboo Villages* model, which was presented at the Paris COP21 in 2015 by MOEF and Bamboo Lestari to help deliver on the country?s contributions to global climate change mitigation. Through strategic outreach and communications, the activity will provide visibility to the *1,000 Bamboo Villages* initiative and catalyze the momentum MOEF and Bambu Lestari need to forge a path toward the critical mass of villages the program requires to establish the enabling environment to reach the 1,000 bamboo villages goal across Indonesia over the next decade.
- ? With financial support catalyzed by the Aliansi Air from PT Pria, the (former) local CSO Komunitas Bambu Petung restored riparian bamboo forests on 3 ha and trained local communities in the sustainable use of the bamboo forests for value-added processes.
- ? The activities under Component 1 build up on the co-financing in the form of grants and in-kind by the Public Works & Spatial Planning agency and the Agriculture agency of the Mojokerto Regency, by YLH Seloliman, by the private sector (PT Multi Bintang and Heineken), as well as interventions on ecosystem restoration, land and

water management and flood control for the Sadar River funded by Indonesia?s Ministry of Public Works and Housing.

Component 2

? GEF incremental funds for activities under Component 2 will upscale activities already conducted to construct absorption wells. In addition to the 1,200 wells already established by The Coca-Cola Company under its water balancing activities, the project will build an additional 597 absorption wells.

? The activities catalyzed by the Aliansi Air, with funding from PT Pria, PT Coca Cola Amatil and PT Multi Bintang, to create awareness and demonstrate techniques for land and water conservation, will be scaled up. One program installed 2,500 biopori at five schools in the basin to increase the infiltration of rainwater and percolation of runoff into the ground to reduce erosion, enhance water retention, and replenish groundwater. The increment will install an additional 8,000 biopori at 40 schools in the basin.

? The activities on water stewardship will build up on co-financing in the form of grants and in-kind by the Education, Health and Environmental Agencies of the Mojokerto Regency and by the private sector (PT Radar Mojokerto, PT Pria, PT Coca-Cola Amatil and PT Multi Bintang).

? The increment will fund activities that will work to support the expansion of the Alliance for Water Stewardship?s (Indonesia) and the Indonesia Business Council for Sustainable Development?s reach in their efforts throughout the country to build water stewardship expertise of major water users by helping them understand their water use and impacts, achieve responsible consumption and production, and work collaboratively and transparently for sustainable water management within a catchment context.

Component 3

? The GEF increment will allow for the systematic integration and the training of MOEF?s regional office in Sidoaryo to enhance its institutional capacities to become fully involved in the water stewardship activities in the catchment areas and to upscale this water stewardship initiative to other tributaries to the Brantas as well as to other catchment areas. This will be catalytic for the further upscaling of public-private partnerships in the domain of environmental stewardship as required for transformational change.

(142) It is generally recognized amongst stakeholders close to the project?s development that only with the proposed GEF incremental funding can the upscaling of the water stewardship activities already undertaken under the public-private partnership coordinated and facilitated by the Aliansi Air?as required to effectively address land degradation and to mitigate land degradation-induced water scarcity in the three sub-catchment areas?be possible.

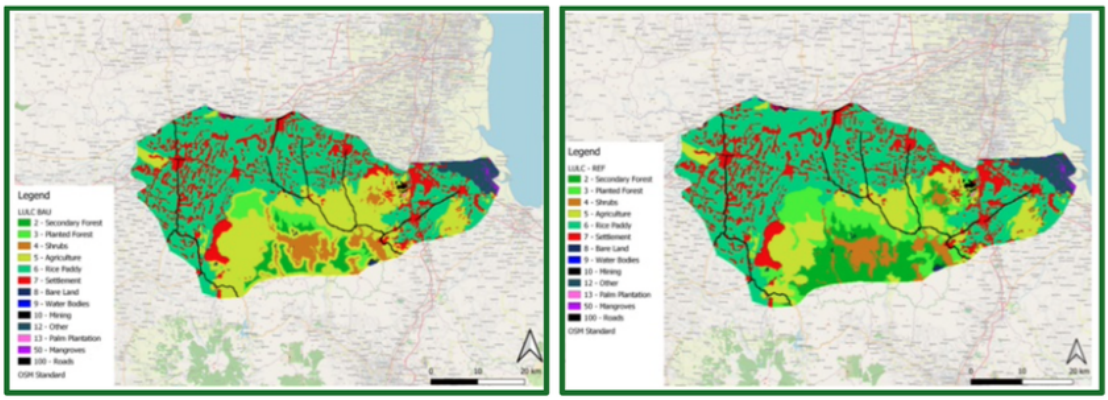
(143) This support will not only create an enabling environment for an upscaling of regionally-agreed water stewardship activities for land and water restoration. It will also send an important signal from the GEF to stimulate further private sector engagement to halt and revert land degradation and increase water and environmental security in other parts of Indonesia and globally. If stakeholders agree on a common vision to overcome land

degradation and water scarcity issues, once they have established a multi-stakeholder platform and once the stakeholders actively contribute to mitigate land degradation and water security through collaborative measures, the GEF can become a strong partner for the provision of incremental funding for an upscaling of the land degradation and water stress reduction activities as it is required for the transformational change to move toward LDN, as well as for effective integrated land and water stress mitigation.

(6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

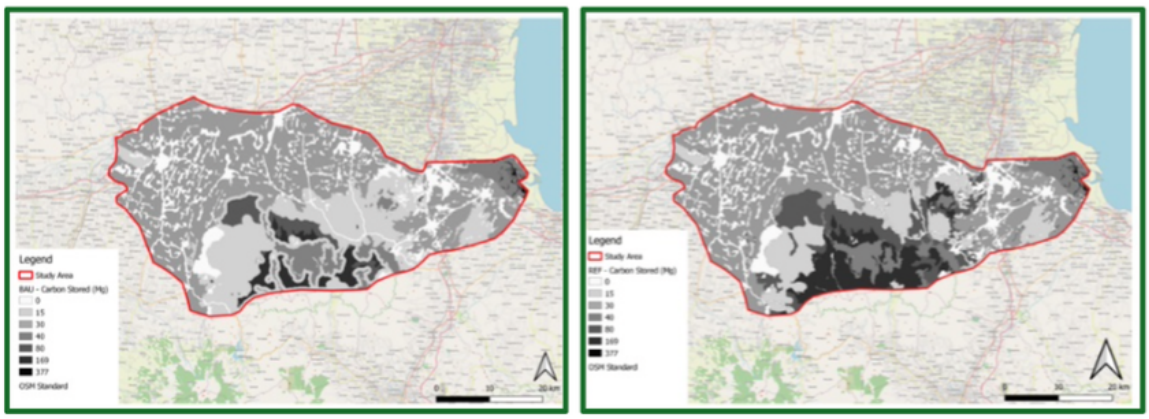
(144) The global environmental benefits under the project include (1) improved provision of agro-ecosystem and forest ecosystem goods and services; (2) mitigated/avoided greenhouse gas emissions and increased carbon sequestration in production landscapes; (3) water conservation and sustainable use of biodiversity in productive landscapes; and (4) reductions in nutrient pollution and siltation of international waters.

(145) The SAVi quantifies the ecosystem services and economic impacts of the planned reforestation and water absorption wells. The Integrated Valuation of Ecosystem Services and Trade-offs (InVEST) model was used to quantify changes in ecosystem services if the degraded land is reforested. The analysis used a land cover map from 2018 developed by MOEF. The indicators quantified are carbon storage, water retention, sediment retention, and nutrient delivery (nitrogen and phosphorous). Each indicator was simulated under two land cover scenarios: (1) A business-as-usual (BAU) scenario, in which 22,336 ha of forest are lost relative to the 2018 map; and (2) A reforestation (REF) scenario, after which 3,697 ha are reforested.



Map 14: Land Cover
Left: The BAU scenario if deforestation continues | Right: The REF scenario with improved land management

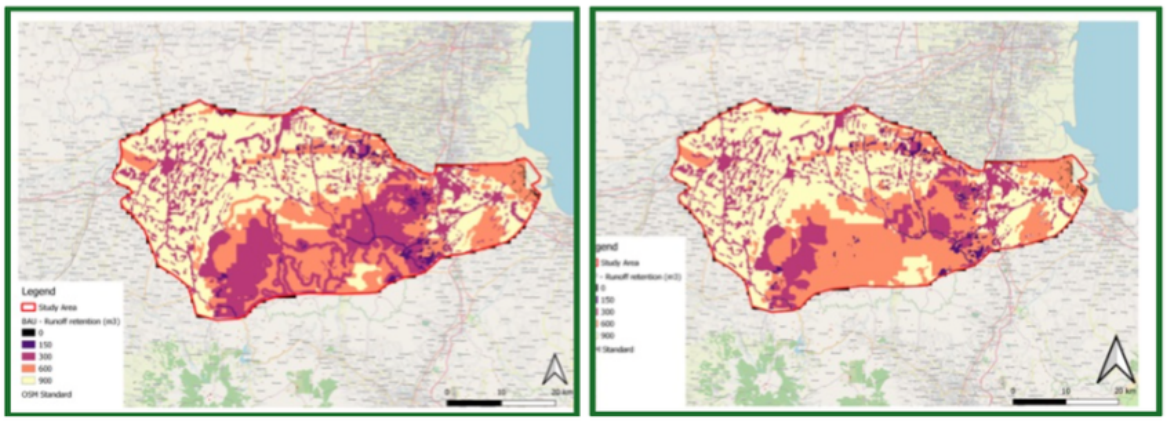
Carbon Storage



Map 15: Carbon Storage
Left: The BAU scenario | Right: The REF scenario

Map 15 shows the increase in carbon storage in the REF scenario compared to the BAU scenario. Under the BAU, total carbon stored is 6,091,730.52 mt. Under the REF, total carbon stored is 8,735,192.53 mt. Compared to BAU, the project is expected to store an additional 2.64 million mt. In other words, reforestation activities, as well as halting the loss of forest, will likely result in a difference of 43.39% in carbon stored between the two scenarios. Conversion to tons (t) of CO_2 is done by multiplying by 44/12. This multiplier corresponds to the ratio between the mass of carbon and the mass of CO_2. **The project is expected to avoid 9.69 million mt of CO_2 emissions**.

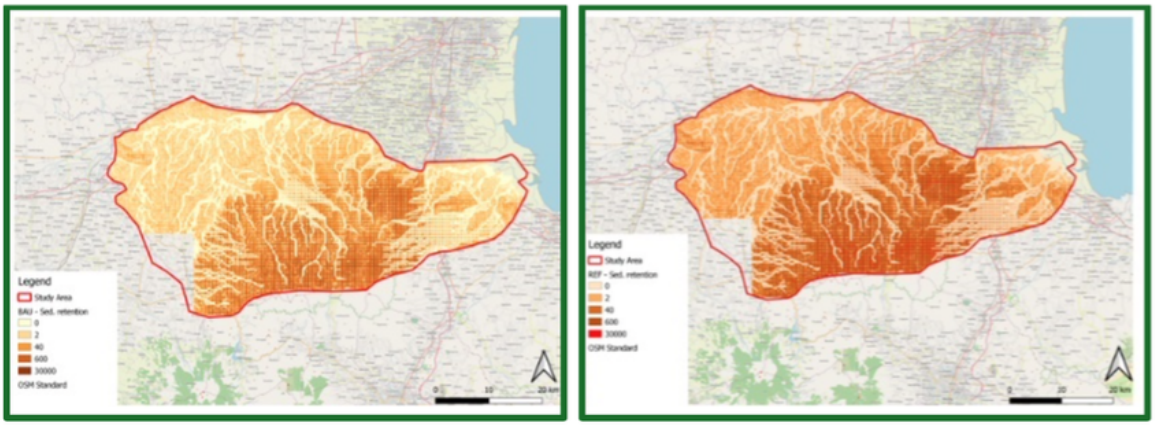
Water Retention



Map 16: Water Retention
Left: The BAU scenario | Right: The REF scenario

Map 16 shows the increase in water retention in the REF scenario compared to the BAU scenario (for a 231 mm rainfall event). In the BAU scenario, total water retention is 129,849,733.21 m^3. In the REF scenario, total water retention is 137,831,074.66 m^3. The difference between the BAU and the REF scenarios is -7,981,341.45 m^3. In other words, the volume of total water retention in the REF scenario is 6.15% higher than the BAU scenario. **The project is expected to retain 7.98 million m^3 more water annually than the BAU scenario in a 231 mm rainfall event.**

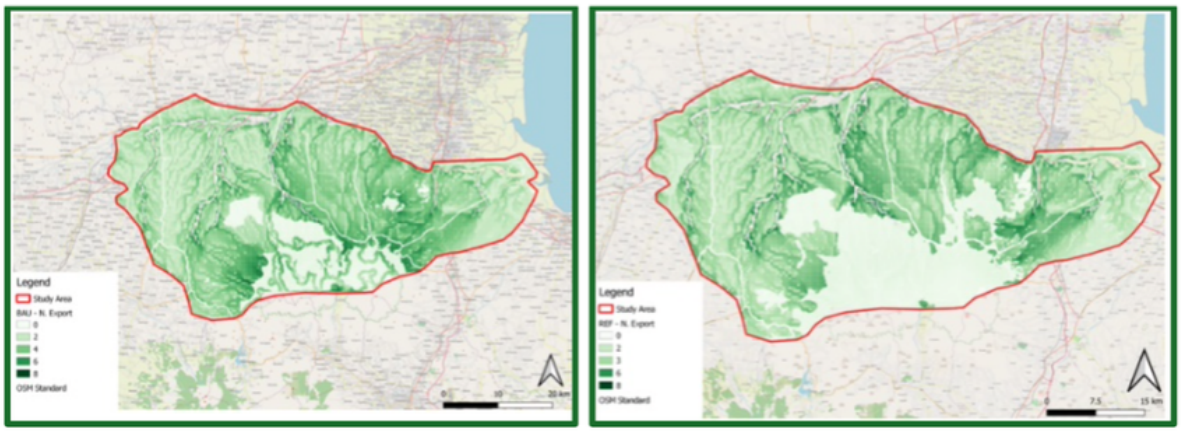
Sediment Retention



Map 17: Sediment Retention
Left: The BAU scenario | Right: The REF scenario

Map 17 shows the increase in sediment retention in the REF scenario compared to the BAU scenario. Sediment retention under BAU amounts to 81,335,596.32 t. Sediment retention under REF amounts to 99,523,742.33 t. The difference between the BAU and the REF is -18,188,146.01 t. In other words, there is 22.36% more sediment retained in the REF scenario than in the BAU scenario. **The project is expected to retain an additional 18.2 million tons of sediment annually compared to the BAU scenario**.

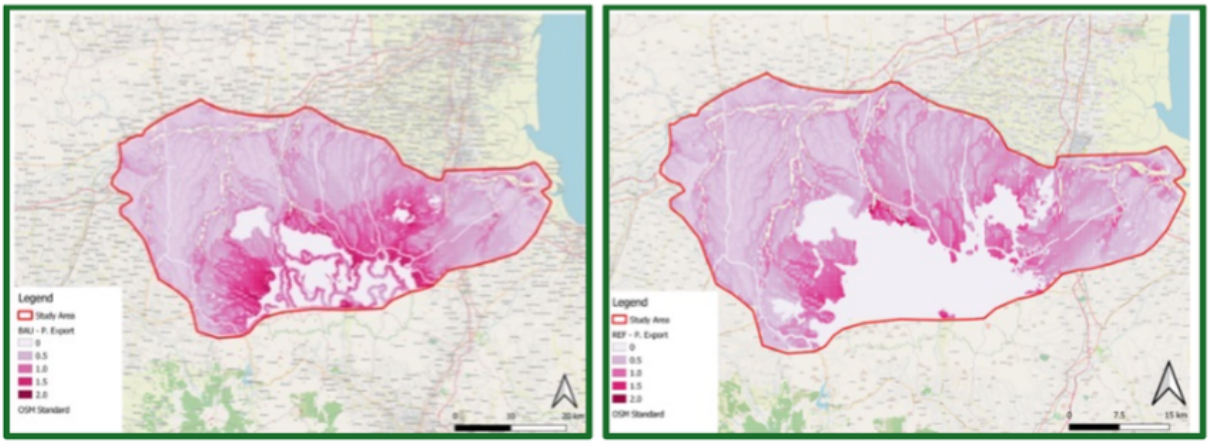
Nutrient Delivery (Nitrogen)



Map 18: Nutrient Delivery (Nitrogen)
Left: The BAU scenario | Right: The REF scenario

Map 18 shows the total nitrogen export (kg) for each scenario. Fewer kg of nitrogen are exported in the REF scenario (455,707.63 kg) than in the BAU scenario (577,081.33 kg). This is a difference of 121,373.71 kg. In other words, there is 21.03% less nitrogen exported in the REF scenario than in the BAU scenario. **The project is expected to reduce nitrogen export by 121 t annually**.

Nutrient Delivery (Phosphorous)



Map 19: Nutrient Delivery (Phosphorous)
Left: The BAU scenario | Right: The REF scenario

Map 19 shows the total phosphorous export (kg) for each scenario. Fewer kg of phosphorous are exported in the REF scenario (78,582.52 kg) than in the BAU scenario (113,689.82 kg). This is a difference of 35,107.31 kg. In other words, there is 30.88% less phosphorous exported in the REF scenario than in the BAU scenario. **The project is expected to reduce phosphorous export by 35.1 t annually.**

Table 11: Summary of Global Environmental Benefits (SAVi) (annually)			
Indicator	**BAU Scenario**	**REF Scenario**	**Change**
Carbon Storage	6,091,730.52 mt	8,735,192.53 mt	-2,643,462.00 mt
Water Retention	129,849,733.21 m3	137,831,074.66 m3	-7,981,341.45 m3
Sediment Retention	81,335,596.32 t	99,523,742.33	-18,188,146.01 t
Nutrient Delivery (Nitrogen Export)	577,081.33 kg	455,707.63 kg	121,373.71 kg
Nutrient Delivery (Phosphorous Export)	113,689.82 kg	78,582.52 kg	35,107.31 kg

(146) By putting 3,697 ha of landscapes in forest buffer zones under improved management practices (through the agroforestry schemes, riparian bamboo forest planting and the area put under improved management through co-financing activities), the loss of 2,407 ha of protected forests and 19,929 ha of conservation forests is expected to be avoided (see explanation under GEF Core Indicators section above). Furthermore, the loss of 18 million tons per year of fertile soil is expected to be avoided and an estimated 7,981,341 m3 per year will be retained and infiltrated in the sub-catchment areas (equivalent to 3,193 Olympic-sized swimming pools). This will effectively avoid the loss of forest areas, revert land degradation and reduce land-degradation-induced water scarcity in the catchment areas as it is required for the provision of life supporting ecosystem services. Furthermore, by promoting nature-based infrastructure solutions for land restoration and the retention and slow release of precipitation erosion, flood risk during the rainy season will be reduced and environmental flows in surface water bodies during the dry season will be enhanced. The land will retain its productive capacities and the water retained can be used for a wide array of socioeconomic-relevant activities, ranging from drinking water supply for resident communities by the local PDAMs, to irrigation, to uses for industrial purposes.

(7) Innovativeness, sustainability and potential for scaling up

(147) *Innovativeness*

The project will demonstrate an innovative approach to how the private sector can take a proactive stance in catalyzing and engaging with government, communities and other stakeholders in activities to avoid the loss of forests, reverse land degradation and land degradation-induced water scarcity, and to how such a private sector-driven initiative can be coordinated and integrated with government-led activities to maximize impact. The project will also demonstrate how an industry-catalyzed initiative can result in the establishment of a multi-stakeholder alliance, in which partners from government, private sector, academia and CSOs/NGOs actively cooperate to implement jointly-identified priority measures.

By supporting the upscaling of the activities already undertaken by the various stakeholders that have formed the Aliansi Air, the GEF can send out a valuable message to further catalyze comparable environmental stewardship initiatives in Indonesia and on the global level. If stakeholders agree on a common vision to overcome identified environmental issues; establish a multi-stakeholder platform; and actively contribute to mitigate the environmental issues through collaborative efforts, the GEF can become a partner for the provision of incremental funding for an upscaling of the environmental stewardship initiative as required for transformational change.

The project is innovative insofar as these processes were catalyzed by a single private sector entity that was willing to bear the transaction costs, and to engage with a UN entity as a neutral broker, in working with stakeholders from government, civil society academia and other private sector entities to promote and advance environmental stewardship initiatives.

(148) *Sustainability*

The project activities are designed to ensure a strong sense of stakeholder ownership, with local government, local communities, and local CSOs and NGOs assuming responsibility for project execution; the MOEF serving as the Project Executing Entity; and an actively involved private sector with very strong engagement in sustainability issues.

The priority program of measures identified by the stakeholders at the October 2016 workshop was developed through a participatory bottom-up planning process (Systematic Team Integration Process). UNIDO, as the moderator, facilitated this process as a neutral broker by providing moderation. No subject matter inputs were provided by any other party but the stakeholders themselves. The priority program of measures reflects the joint knowhow and experiences of all stakeholders together. Not only was the program of measures developed by the stakeholders, it is jointly owned by them and the stakeholders have since taken joint responsibility and action for its implementation.

The Aliansi Air industry members are aware of the business risk water scarcity constitutes to them and to the communities living in the neighbourhoods of their production sites. They have realized that becoming a more effective water user themselves is no longer sufficient. They are fully aware of the water scarcity situation in the sub-catchment areas and that consequently their active engagement as water stewards in conservation activities beyond their factory gates is required to guarantee the sustainability of their operations. They are also aware that there is no single entity or

stakeholder that can be blamed for the prevailing land degradation-induced water scarcity challenges, and that land degradation-induced water scarcity is the cumulative result of demographic development and of the sum of the socioeconomic activities in the sub-catchment areas.

The pilot agroforestry restoration activities, combined with outreach activities to support the marketing of NTFPs already supported by PT Multi Bintang, demonstrate that communities can derive higher financial returns from engaging in sustainable agroforestry practices than from encroaching on additional forest areas for short-term benefits.

To ensure the environmentally, economically and socially sustainable supply of water to people and businesses in the Brantas Basin, stakeholders have a very strong personal interest in supporting the Aliansi Air to drive the basin?s water stewardship agenda.

(149) *Potential for Scaling Up*

Within the Brankal, Sadar and Porong Sub-Catchment Areas

With the incremental funding provided by GEF, with the engagement of the Directorate of Planning and Evaluation for Watershed Management in the MOEF and the strengthening of the institutional capacities of the MOEF?s regional office in Sidoaryo, a considerable upscaling of the activities already catalyzed by the Aliansi Air can be achieved. This will enhance visibility and credibility and create additional momentum and impetus to attract additional stakeholders and partners to join and support the Aliansi Air?s efforts and to become actively engaged in water stewardship activities. Of particular relevance for this are the more than 800 industries operating in the catchment areas, with which the Aliansi Air is already interacting.

Project activities that will specifically work to scale up the project within the three sub-catchment areas include Activity 1.2.2, 2.1.2, 3.1.1, 3.1.2, and 3.1.3.

Within the Brantas Basin

Demonstrating that collaborative efforts to overcome land degradation and land degradation-induced water scarcity can result in an effective reduction of water scarcity in the river will encourage an upscaling of the water stewardship activities from the initial three sub-catchment areas to other tributaries to the Brantas River. The active engagement of the MOEF regional office in Sidoaryo as the Project Executing Entity will be a factor that will positively contribute to an upscaling of the water stewardship activities within the Brantas Basin. Project efforts will be made to reach out to the Delft University of Technology. The university received funding from the Government of the Netherlands in 2020 to carry out activities in the Brantas Basin related to private-public partnerships to improve water quality governance.

Project activities that will specifically work to scale up the project within the Brantas Basin include Activity 1.1.2, 2.1.2, 3.1.1, 3.1.3, and 3.1.4.

Within Indonesia

In the Lumajang District, which sits in the immediate neighborhood to the project area, the MOEF will implement the Integrated Forest Based Sustainable Area Management project.

Coordinating with this project presents an excellent opportunity for cross-fertilization and upscaling, as one of the components of the Lumajang project also aims to restore land and protect water bodies.

There are many more river basins in Indonesia that suffer from the same root causes of land-degradation induced water scarcity, including the Cisadane and Ciliwung River Basins, which are of critical importance for the water supply and flood security of the Greater Jakarta Metropolitan Area. Increased demand for forest resources and arable land has caused massive deforestation and forest degradation in the upper reaches of these basins. Water quality in the rivers is seriously impeded by pollution from domestic and non-domestic waste as it passes through a number of residential and industrial areas. Similar to the October 2016 workshop that led to the formation of the Aliansi Air, a workshop was organized for Cisadane Basin stakeholders in September 2016. However, Cisadane stakeholders have yet to formally establish a multi-stakeholder alliance. Demonstrating to the Cisadane stakeholders that, once they have formally established a multi-stakeholder alliance that is actively engaged in coordinating and catalyzing water stewardship activities, incremental funding for an upscaling of those activities can be mobilized will positively contribute to environmental and socioeconomic benefits in the Cisadane Basin.

As the project evolves, opportunities in the other priority watersheds targeted by the government to retain their carrying capacity will be identified. This will be done in close cooperation with the MOEF, the Alliance for Water Stewardship (Indonesia), the Indonesia Business Council for Sustainable Development (which includes PT Multi Bintang and PT Coca-Cola Bottling Indonesia as members), and the Water Resilience Coalition (a CEO-led initiative committed to reducing water stress by 2050).

Project activities that will specifically work to scale up the project within Indonesia include Activity 1.2.2, 2.1.2, 3.1.1, 3.1.3, and 3.1.4.

On the Global Level

MOEF and UNIDO will present the experiences, lessons learned and results achieved under the project to revert land degradation and promote environmental stewardship in global forums such as the UNCCC COP, the UNCCD COP, Stockholm World Water Week, the World Water Forum and the GEF IW:LEARN Biennial International Waters Conference. This participation is designed to catalyze the engagement of other private sector entities in comparable environmental stewardship approaches.

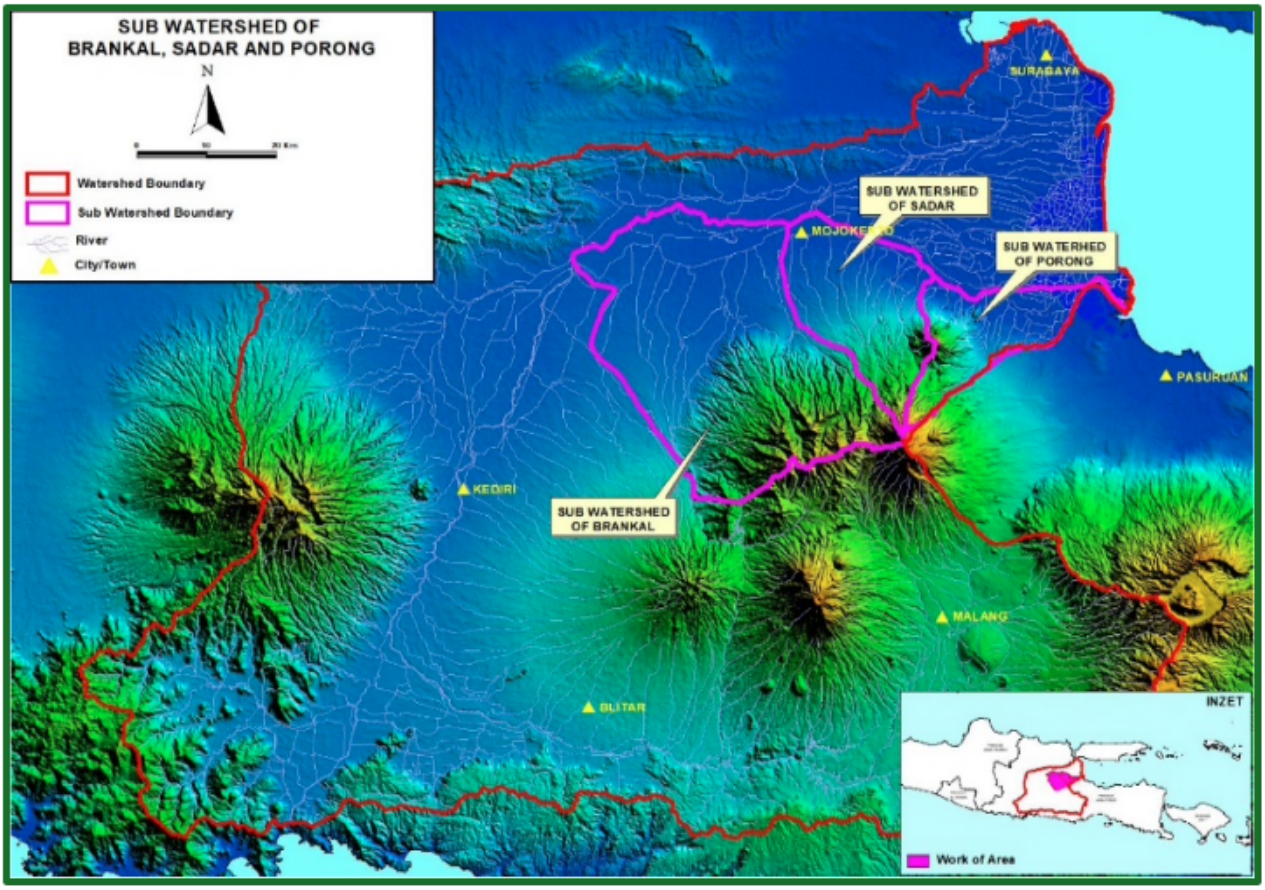
For this scaling up on the global level, UNIDO, as the Project Implementing Agency, can bring in its contacts with industries that have taken a leading role in the implementation of water stewardship approaches?such as Heineken, Nestl?, The Coca-Cola Company and Henkel, so that the necessary strong impetus from the private sector can be mobilized.

Project activities that will specifically work to scale up the project on the global level include Activity 3.1.1, 3.1.3, and 3.1.4.

[1] Perusahaan Daerah Air Minum (Indonesian regional water utility company)
[2] Depending on annual rainfall, it is estimated that water retention would increase by 68 - 91 m3 per year due to the agroforestry and bamboo plantation
[3] Obtaining co-financing to build the factory is not certain. However, with Bambu Lestari and the Aliansi Air working together to coordinate the process to secure financing, the prospect to achieve this outcome is rated as ?possible? to ?good?.
[4] See Annex M Section 1.2.2.2 ?Water Infiltration?. The SAVi concludes that installing absorption wells and biopori in the project area would decrease water runoff volume by 0.38%, which is a percentage similar to the share of land covered by wells and holes in the study area. Compared to the BAU scenario, the water runoff would decrease by 37.03%. In other words, in the scenario where wells and holes are installed, 19,700 m3 of water are missing from the direct runoff volume compared to the BAU scenario. It is possible that at least part of this water can infiltrate into the soil, recharging groundwater. Assuming that each week 20% of 19,700 m3 of water reach groundwater, the annual recharge in the study area utilized would amount to 204,880 m3. This is a preliminary analysis and more studies are required to confirm results.
[5] *Learning Station* concept: See https://www.thegef.org/sites/default/files/publications/WB_AoKE_LearningStations_English.pdf
[6] GEF Good Practices Brief example: https://www.thegef.org/publications/good-practice-brief-fostering-sustainability-and-resilience-food-security-niger

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



Map 20: The Overall Project Area (Brankal, Sadar and Porong Sub-Catchment Areas)

(150) *Project Field Survey*

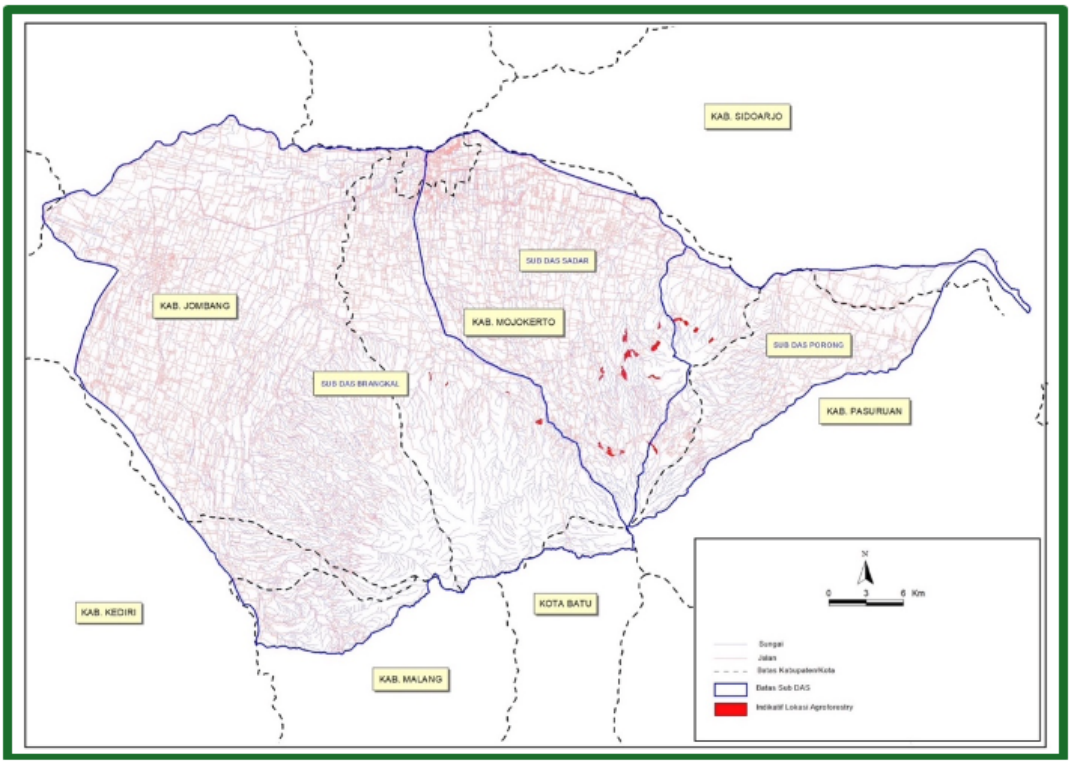
A five-day field survey conducted during the PPG phase (June 2021) confirmed the indicative project locations (see Annex N). The seven-person survey team included representatives from the Directorate of PEPDAS and the Secretariat General of PDASRH of the MOEF; UPT Watershed Management and Protection Forest (BPDASHL) Brantas Sampean; and District Field Officers from within Mojokerto Regency. The survey team utilized the field survey criteria and scoring system in Table 12 to determine the indicative locations for the agroforestry and bamboo forest restoration activities and the construction of absorption wells and biopori under the project. Each location surveyed was scored out of three against each of the seven candidate criteria, and then those scores were weighted out of 100 and ranked based on score. The locations with the top scores were included as indicative project locations.

Table 12: Field Survey Criteria and Scoring System

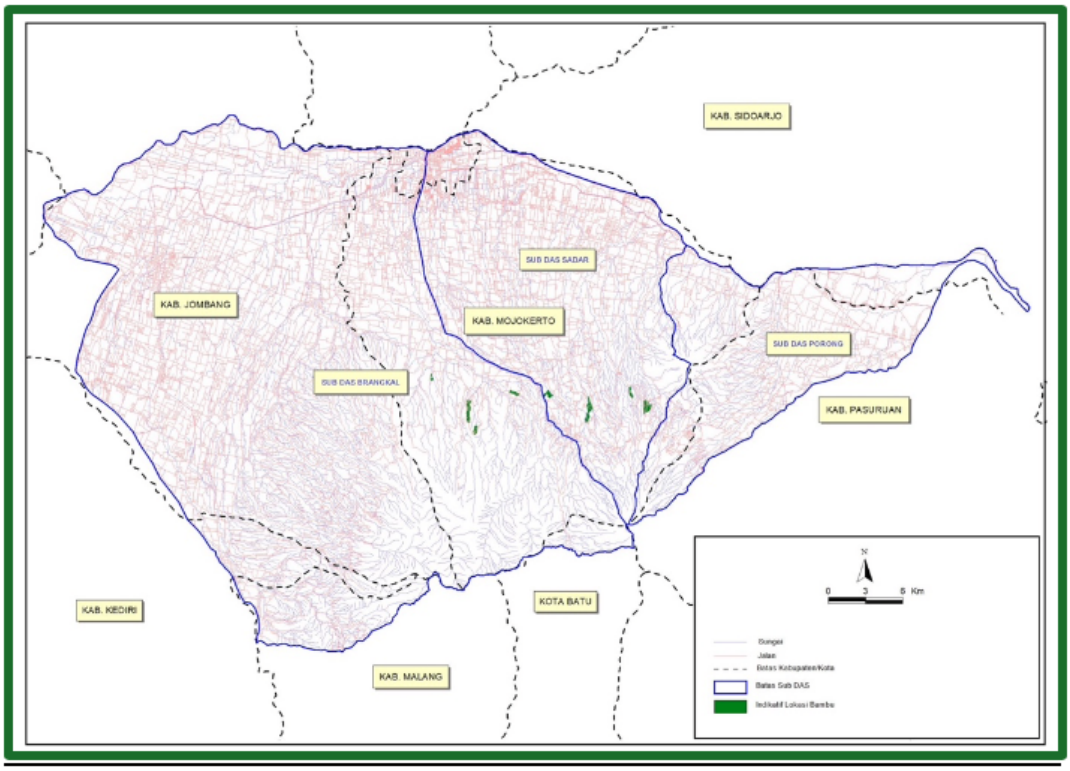
No	Location Candidate Criteria	Parameter	Score
1	Main issue (main problem) at the target location (Weight 20)	Critical land, high erosion, sediment, flood, drought, land conflict, waste	3
		Erosion/sediment, flood and drought	2
		Land conflicts, waste	1
2	Accessibility to the target location from the Regency	The distance from the Regency Capital is less than 20 km	3

	Capital (Weight 10)	Distance from the Regency Capital 20 to 40 km	2
		The distance from the district capital is more than 40 km	1
3	The level of community dependence on income from agricultural land (Weight 15)	Community income is more than 70% of agricultural products	3
		Community income 30% to 70% of agricultura products	2
		Community income 30% from agricultural products	1
4	Group Institutional Readiness at the target location (Weight 10)	Middle-level group institutions	3
		Youth group institutions	2
		Novice-level group institutions/no institutions	1
5	Support for national strategic projects in target locations (Weight 15)	Ready to participate and support funding	3
		Accept and support funding	2
		Not conspicuous but less supportive	1
6	Support from the local community around the target location (Weight 15)	Ready to participate and support funding	3
		Accept and support funding	2
		Not conspicuous but less supportive	1
7	Support the Government Regency / district / village (Weight 15)	Ready to participate and support funding	3
		Accept and support funding	2
		Not conspicuous but less supportive	1

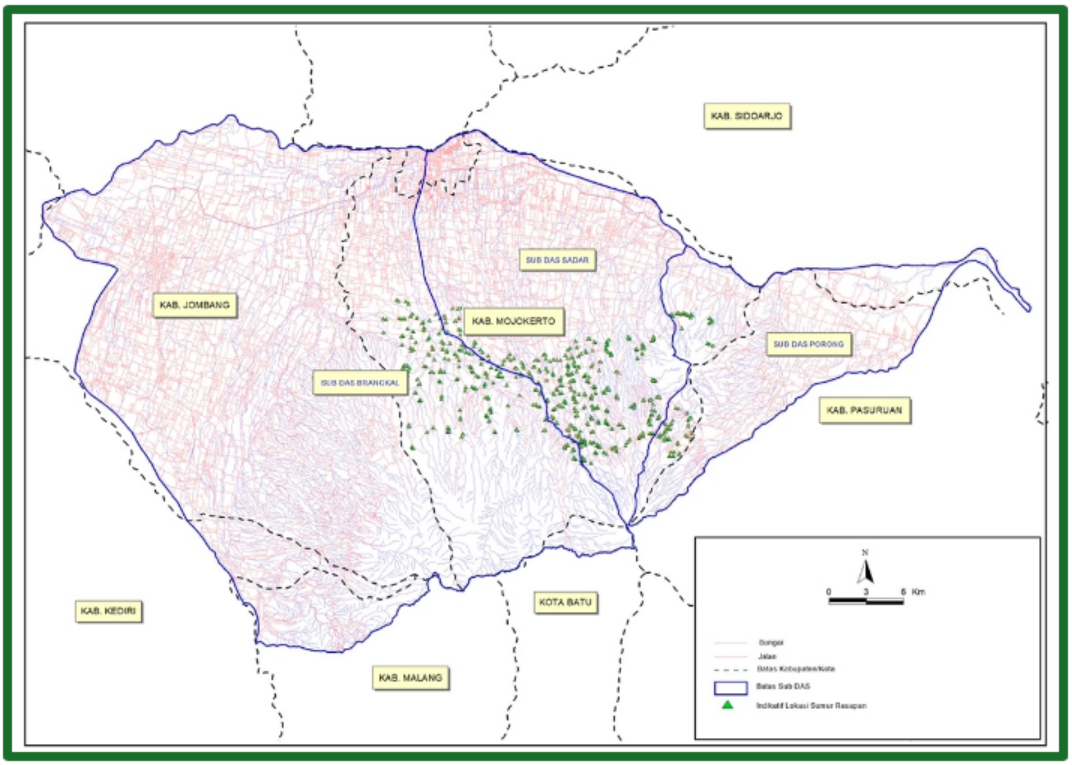
(151) Geo-referenced maps of the project interventions are included below. Additional maps and tables providing information on specific districts and ha and units is provided above. Specific coordinates are available in the project field survey report in Annex N.



Map 21: Indicative Locations of Agroforestry Schemes in the Project Area



Map 22: Indicative Locations of Bamboo Plantation in the Project Area



Map 23: Indicative Locations of Absorption Well Construction in the Project Area

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

N/A

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

(152) The history of the stakeholder engagement (bottom-up planning) process that directly led to this project is documented above and detailed in Annex H.

(153) The project?s Stakeholder Engagement Plan is found in Annex K. The Stakeholder Engagement Plan includes (1) a list of which stakeholders will be affected, directly or indirectly, by the outcomes of the project implementation; those stakeholders that participate in the project directly or indirectly; and those stakeholders who are able to influence and decide the outcomes and the manner of the project implementation or make decisions based on the outputs of the project; (2) identified stakeholder roles in project execution; (3) a key stakeholders expectations and concerns analysis; (4) stakeholder engagement methods; (5) methods of communicating to stakeholders; and (6) stakeholder engagement reporting. An Environmental and Social Management Plan, conducted during the PPG phase (Annex L), was used to inform the Stakeholder Engagement Plan.

(154) The PIF and Request for Project Endorsement/Approval documents were prepared through a consultative process in which stakeholders from government at central and Regency level, private sector entities and NGOs and CSOs were engaged. Both the MOEF and the Mojokerto Regency fully support this project and have endorsed it. Furthermore, intensive consultations were held with the Aliansi Air and its members as well as with local NGOs and CSOs that are already actively engaged in the implementation of various water stewardship activities and that are foreseen to be entrusted with project execution. See Annex C for a select list of stakeholders consulted during the PPG phase. The consultative process with the Mojokerto Regency, led by the MOEF during the PPG phase, is documented in Annex N.

(155) A snapshot of stakeholder involvement in the project (by Component) is presented in Table 13.

Table 13: Stakeholder Involvement in the Project (by Component)				
Stakeholder	**Component 1**	**Component 2**	**Component 3**	**Component 4**
MOEF	**X**	**X**	**X**	**X**
Aliansi Air	**X**	**X**	**X**	
Yayasan Bamboo Lestari	**X**	**X**		
Yayasan Lingkungan Hidup Seloliman	**X**	**X**		
Forum DAS	**X**	**X**	**X**	
PT Multi Bintang	**X**	**X**		
Bappeda (Regional Development Planning Agency) Mojokerto Regency	**X**	**X**	**X**	
Education Office of Mojokerto Regency		**X**		
Agriculture Office of Mojokerto Regency	**X**			
Environmental Office of Mojokerto Regency	**X**			
Health Office of Mojokerto Regency		**X**		
Department of Public Housing, Residential Areas and Transportation, Mojokerto Regency		**X**		
Community Farmers Groups (population living in settlements in the project area)	**X**	**X**		
Women Farmers	**X**	**X**		
Youth attending school		**X**		
Local media		**X**	**X**	
Academia		**X**	**X**	
Local governments in other catchment areas (within priority basins in Indonesia)		**X**	**X**	
Local communities and socially excluded groups in other catchment areas (within priority basins in Indonesia)		**X**	**X**	

Select what role civil society will play in the project:

__ Consulted Only

X Member of Advisory Body

X Contractor

__ Co-Financier
X Member of Project Steering Committee or Equivalent Decision-Making Body
__ Executor or Co-Executor
__ Other (Please Explain)

Contractor
Up to 50 different Community Farmers Groups will enter into an arrangement through the government?s Swakelola (?self-manage?) modality to execute the planting of agroforestry schemes and riparian bamboo forest. One hundred and fifty (150) community members will enter into a Swakelola arrangement to construct the 597 absorption wells. Forty (40) schools in the project area will enter into a Swakelola arrangement to install the 8,000 biopori. Bambu Lestari, an NGO working in the project region, will enter into a Swakelola arrangement to carry out the bamboo value-added chain capacity building activity. YLH Seloliman, an NGO working in the project region, will enter into a Swakelola arrangement to carry out the capacity building activity for marketing NTFPs.

Member of Advisory Body
Selected civil society organizations, including women?s organizations in the project region, will be invited to join the coordination committee for the two investment forums under Activity 2.1.2.

Member of Project Steering Committee or Equivalent Decision-Making Body
Selected civil society organizations, including women?s organizations in the project region, may be invited to join the Project Steering Committee. Bamboo Lestari and YLH Seloliman may serve in an advisory capacity to the Project Steering Committee. The composition of the Project Steering Committee will be determined between project approval and the Project Inception Workshop.
Please provide the Stakeholder Engagement Plan or equivalent assessment.

Annex K

Stakeholder Engagement Plan

This Stakeholder Engagement Plan (SEP) draws on the Gender Analysis and Mainstreaming Strategy (Annex J) and the Environmental and Social Management Plan (Annex L) for the project, as well as a consultation process during the PPG (see Annex C) and PIF phases with the various named stakeholders.

The Project Management Unit (PMU) will hold responsibility for implementation of this SEP.

Note: The execution of all activities will strictly adhere to the Government of Indonesia, UNIDO and GEF policies and procedures pertaining to the Covid-19 pandemic to ensure the safety of all stakeholders and project personnel and consultants.

Definitions

Consultation: Consultation involves information exchanges among the government, the Project Implementing Agency, the Project Executing Agency, and other stakeholders. Although decision

making authority rests with government, the Project Implementing Agency and the Project Execution Agency, periodic consultations throughout the project cycle help managers make informed choices about project activities. More importantly, consultation provides opportunities for communities and local groups to contribute to project design, implementation and evaluation.

Public Involvement: Public involvement consists of three related and often overlapping processes: information dissemination, consultation and stakeholder participation. Stakeholders are the individuals, groups or institutions that have an interest or "stake" in the outcome of a GEF-financed project, or are potentially affected by it. Stakeholders include the recipient country government; Project Executing Agency; Project Implementing Agency; groups contracted to carry out project activities and/or consulted at various stages of the project; project beneficiaries; groups of people who may be affected by project activities; and other groups in civil society that may have an interest in the project.

Stakeholder participation: Where stakeholders collaboratively engage in the identification of project concepts and objectives, selection of sites, design and implementation of activities, and monitoring and evaluation of project outcomes. Developing strategies for incorporating stakeholder participation throughout the project cycle is particularly necessary in projects that have impacts on the incomes and livelihoods of local groups, especially disadvantaged populations in and around project sites.

GEF Guidelines

All GEF-funded projects are required to meet best international practice, and requirements for stakeholder engagement and public consultations, as specified in the GEF Policy on Public Involvement in GEF Projects. The GEF explains that project stakeholder engagement activities should be robust, and enough disclosure on information should be made to promote better awareness and understanding of strategies, policies and operations. This SEP demonstrates how the project will adhere to the GEF stakeholder engagement guidelines throughout the project implementation cycle.

The SEP identifies people or communities that are or could be affected by the project, as well as other interested parties; sets measures to ensure that such stakeholders will be appropriately engaged on environmental and social issues that could potentially affect them, through a process of information disclosure and meaningful consultation; and includes procedures for the project to maintain a constructive relationship with stakeholders on an ongoing basis through meaningful engagement during project implementation.

Legal Requirements for Public Consultation and Citizen Engagement in Indonesia

All project consultation and citizen engagement activities will adhere to the following Government of Indonesia laws and regulations relating to community participation and information disclosure.

Community Participation	Law No. 32 of 2009	Environmental Protection and Management	MOEF
	Law No. 41 of 1999	Forestry	MOEF
	Government Regulation No. 44 of 2004	Forestry Planning	MOEF
	Government l Regulation No. 3 of 2008	Forest Arrangement and Preparation of Forest Management Plan, and Forest Utilization	MOEF
Information Disclosure	Law No. 14 of 2008	Public Information Disclosure	Government of Indonesia/ Secretary of State
	Regulation of the Minister of Forestry No. P.7/Menhut-II/2011	Public Information Services in the Ministry of Forestry	Government of Indonesia/ Secretary of State

Identification of Stakeholders

To ensure inclusive participation, the following stakeholders have been identified for consultation on an ongoing basis. The list includes the identified social groups and persons that are associated with the project in different ways at all stages:

- ? Stakeholders to be affected directly or indirectly by the outcomes of project implementation;
- ? Stakeholders that participate in the project directly or indirectly; and
- ? Stakeholders who are able to influence and decide the outcomes and the manner of project implementation or make decisions based on the outputs of the project.

Stakeholders to be affected, directly or indirectly, by the outcomes of the Project implementation	Stakeholders that participate in the project directly or indirectly	Stakeholders who are able to influence and decide the outcomes and the manner of the Project implementation or make decisions based on the outputs of the project

? Women farmers in the project area ? Youth attending school in the project area (and their families) ? Other socially excluded groups in the project area ? The general population living in settlements in the project area ? Community Farmers Groups ? Private sector (including Aliansi Air members) ? Local academia ? Local Civil Society Organizations ? Local Non-Governmental Organizations ? Local media ? MOEF (and national government) ? Mojokerto Regency Government ? Local governments in other catchment areas (within priority basins in Indonesia) ? Local communities and socially excluded groups in other catchment areas (within priority basins in Indonesia)	? Community Farmers Groups ? Women farmers in the project area ? Youth attending school in the project area (and their families) ? MOEF ? Aliansi Air ? PT Multi Bintang ? Bambu Lestari ? YLH Seloliman ? Bappeda (Regional Development Planning Agency) Mojokerto Regency ? Education Office of Mojokerto Regency ? Agriculture Office of Mojokerto Regency ? Environmental Office of Mojokerto Regency ? Health Office of Mojokerto Regency ? Department of Public Housing, Residential Areas and Transportation, Mojokerto Regency ? Forum DAS ? UNIDO ? GEF Secretariat	? MOEF ? Mojokerto Regency Government ? Aliansi Air ? Community Farmers Groups that have entered into Swakelola ? Forum DAS ? Bambu Lestari ? YLH Seloliman ? UNIDO ? Policy influencers ? PMU ? GEF Secretariat

Stakeholder Mapping and Roles in Project Implementation

Stakeholder Mapping

The following table maps the identified stakeholders to where they will be engaged/directly involved across the project components.

Stakeholder	Component 1	Component 2	Component 3	Component 4
MOEF	**X**	**X**	**X**	**X**
Aliansi Air	**X**	**X**	**X**	
Yayasan Bamboo Lestari	**X**	**X**		
Yayasan Lingkungan Hidup Seloliman	**X**	**X**		
Forum DAS	**X**	**X**	**X**	
PT Multi Bintang	**X**	**X**		
Bappeda (Regional Development Planning Agency) Mojokerto Regency	**X**	**X**	**X**	

Education Office of Mojokerto Regency		X		
Agriculture Office of Mojokerto Regency	X			
Environmental Office of Mojokerto Regency	X			
Health Office of Mojokerto Regency		X		
Department of Public Housing, Residential Areas and Transportation, Mojokerto Regency		X		
Community Farmers Groups (population living in settlements in the project area)	X	X		
Women Farmers	X	X		
Youth attending school		X		
Local media		X	X	
Academia		X	X	
Local governments in other catchment areas (within priority basins in Indonesia)		X	X	
Local communities and socially excluded groups in other catchment areas (within priority basins in Indonesia)		X	X	

Select Stakeholder Roles in Project Implementation

Stakeholder	Envisaged Role
United Nations Industrial Development Organization (UNIDO)	UNIDO, as a GEF Agency, is responsible for the implementation of the project, which entails oversight of project execution to ensure that the project is carried out in accordance with agreed standards and requirements.
Ministry of Environment and Forestry (Directorate of Planning and Evaluation for Watershed Management) (MOEF)	In consultation with the GEF OFP, MOEF will become the Project Executing Entity and will be contracted by UNIDO to execute the project. MOEF will also be one of the most important partners for the dissemination of results and the mobilization of additional funds for the further upscaling of the project activities.
Mojokerto Regency government	The Mojokerto Regency government will ensure the coordination of the project activities with the local government-implemented activities in the domains of land/forest management, water management and water conservation. The Mojokerto Regency is a major co-financier to this project and will assure that its activities in these domains will be fully aligned with, synergetic and mutually supportive with the project activities.
Bappeda (Regional Development Planning Agency) Mojokerto Regency	Synergizing the project with local planning, especially those plans related to watershed protection and management

Education Office of Mojokerto Regency	The Education Office will participate in the determination and implementation of the activities of making absorption wells and biopori
Agriculture Office of Mojokerto Regency	The Agriculture Office will participate in the determination and implementation of the activities of agroforestry and bamboo
Environmental Office of Mojokerto Regency	The Environmental Office will participate in the determination and implementation of the activities of agroforestry and bamboo
Health Office of Mojokerto Regency	The Health Office will participate in the determination and implementation of the activities of making absorption wells and biopori
Department of Public Housing, Residential Areas and Transportation, Mojokerto Regency	The Department of Housing, Residential Areas and Transportation will participate in the determination and implementation of the activities of making absorption wells and biopori
Community Farmers Groups (population living in settlements in the project area)	Community Farmers Groups living in the project area will be involved in the execution of Activity 1.1.1, 1.2.1 and 2.1.1 via the Swakelola (self-manage) modality. The communities will be active participants in Activity 1.1.2., 1.2.2., 2.1.2., 2.2.1., and 3.1.2. Youth living and attending school in the project area will be active participants in Activity 2.1.2 and 2.2.1. Women farmers living in the project area will be active participants in Activity 1.1.1., 1.1.2., 1.2.1., 1.2.2., 2.1.1., and 2.1.2.
Aliansi Air	The CSO Aliansi Air is a multi-stakeholder alliance for the sustainable use and conservation of water resources in the Brankal, Sadar and Porong catchment areas. It will be a critical partner to mobilize further and complementary support from industries and government, and it will play a coordinating role in the implementation of all activities under Components 1 and 2.
PT Multi Bintang	The Heineken Operating Company will continue its engagement as a water steward with the Aliansi Air. Under its water stewardship program ?Nabung Banyu? PT Multi Bintang will co-finance the establishment of 136 ha of intensive agroforestry schemes (1,000 trees/ha). PT Multi Bintang will serve in a project coordinating capacity under the Aliansi Air.
PT Pria, PT Ajinomoto, PT Sopanusa, PT Sosro, PT Coca Cola Amatil	As members of the Aliansi Air, these entities will continue to support complementary activities, such as pollution abatement, awareness creation, water supply, conservation and forest restoration. And they will serve in a project coordinating capacity under the Aliansi Air.
Forum DAS	A total of 115 Watershed Management Coordination Forums (DAS Forums) have been formed throughout Indonesia. These forums provide coordination, consultation and communication to support good management of watershed ecosystems. Forum DAS will work in synergy with the Aliansi Air to coordinate activities, in particular Activity 1.2.2 and 2.1.2.
Yayasan Lingkungan Hidup Seloliman	As an NGO with a long-standing track record in community-based forest restoration and the establishment of absorption wells in the project area, YLH Seloliman will be entrusted with the execution of grassroot activities and community engagement via the Swakelola modality (Activity 1.1.2) and through technical assistance (Activity 1.1.1, 2.1.1, 2.1.2 and 2.2.1).

Yayasan Bamboo Lestari	As an NGO with a long-standing track record in community-based forest restoration and activities promoting bamboo value-added products, Bamboo Lestari will be entrusted with the execution of grassroot activities and community engagement via the Swakelola modality (Activity 1.2.2) and technical assistance under 2.1.2.

Stakeholder Concerns Analysis

The project will aim to collect and analyze stakeholder expectations and concerns as well as to taking appropriate responsive measures throughout the project life cycle to ensure that there is healthy support for the project. The project has identified the following initial interests and concerns of the key stakeholder groups. And provides project execution recommendations to alleviate concerns accordingly.

Key stakeholders Expectations and Concern Analysis

Stakeholder	Key Expectations	Key Concerns	Project Execution Recommendation
MOEF	Project execution leads to increased global environmental benefits for Indonesia	Project delay. Lack of interest among partners to participate in project implementation	MOEF, as Executing Entity, to provide adequate technical support to the project
Mojokerto Regency Government	Project execution leads to increased global environmental benefits for the Mojokerto Regency	Project delay. Lack of interest among partners to participate in project implementation	Mojokerto Regency Government, as major co-financier and coordinator of the project, to provide adequate technical support to the project
Community Farmers (including Women Farmers)	Improve capacity in agroforestry/bamboo afforestation and build sustained/alternative livelihoods through marketing NTFP and value-added products	Lack of interest in project activities	Involve early on through structured consultations and other participatory processes to instill sense of activity ownership
Vulnerable Groups (including Women Farmers, Youth and persons with disabilities)	To be identified/ analyzed and given more opportunity to interact with project and air concerns	Negative impacts on lifestyle brought about by project. Not being given chance to participate in the project	Ensure clear communication with these groups. Project impacts on marginalized groups, if any, are identified and addressed early
UNIDO	To secure orderly project implementation and replication of results	Project delay. Lack of replication of good results in future projects	Establish capable PMU staff and a solid project implementation monitoring system

Private Sector	Utilize investment opportunities offered by the project	Obstacles in establishing adequate linkages with project that might result in investment opportunities	Actively engage the private sector to take a leading role in the coordination of various activities for project upscaling
NGOs and CSOs	Improvements in the quality of the environment in the region. Using data collected for development project planning and analyzing impacts of their initiatives	Transparency of the decision-making and communication processes. Transparency in data reporting	Ensure there is free access for information about the project to various groups upon request.
Academic Institutions	Participate in technical activities, such as workshops, training courses, forums and research	Budgetary constraints	Secure co-financing
Policy influencers	Create synergy with the project?s activities	Lack of interest in project activities	Leverage partnerships and project?s existing relationships with influencers
PMU Staff	Project implementation as planned. Retention of employment	Project failure / closure. Job security and transparency of recruitment policy	Continue with consultations and dialogue. Communicate the labor policy early in the process. Establish incentives
GEF Secretariat	Project to assist meeting the objectives of the Land Degradation focal area	MEWLAFOR products, experiences and lessons learned are not taken up by projects in Land Degradation portfolio and beyond	Land Degradation and other GEF focal area projects assisted to uptake MEWLAFOR products, experiences and lessons learned

Stakeholder Engagement Approaches

The process of stakeholder engagement under the MEWLAFOR project shall be guided by the following principles:

? Stakeholder engagement begins as early as possible in the project implementation;

? Engagement actions are targeted to the audience, taking into account the different access and communications needs of various groups and individuals, especially those who are vulnerable or disadvantaged;

? There will be sufficient emphasis on the local level (local communities, traditional leaders etc.) and for local civil society organizations;

? Engagement will be carried out on a continuous basis, throughout the project cycle and as environmental and social risks and impacts may arise;

? Consultations are based on the prior disclosure and dissemination of relevant, objective, meaningful and easily accessible information in a timeframe that enables consultations with stakeholders in a culturally appropriate format;

? Consultations will be carried out in a non-discriminatory and gender-responsive manner, free of external manipulation, interference, coercion, discrimination and intimidation;

? Stakeholder feedback will be encouraged and responded to. Stakeholder feedback will be a fundamental method of informing project execution and of identifying potentially affected people which would then need to be engaged in order to assess risks and develop mitigation measures.

A formalized **communications plan** will be prepared in the first year 60 days of project implementation, and updated when necessary, to ensure that relevant information is disseminated in a timely manner and feedback from all relevant stakeholders is gathered and used in project execution.

A **project socialization campaign** will take place within the first 60 days of project implementation. This event will raise awareness about the project. The modality for this event depends on pandemic restrictions.

Women will be engaged directly in the project through planting agroforestry schemes and riparian bamboo forests; through capacity building to market NTFPs and develop value-added chains for bamboo products; through investment forums to empower women in water stewardship efforts; and to install absorption well green infrastructure. The involvement of women will be secured, in part, through specific participation targets, as specified in the gender analysis report and the project?s Results Framework.

Means of Engagement

Stakeholder	Means of Engagement	Responsibility and Rules
Stakeholders to be affected, directly or indirectly, by the outcomes of the project implementation	Project website; social media; brochures and other printed materials; face-to-face trainings and dialogue events; interviews; emails	Communication done by PMU

Project partners directly involved in project implementation	Direct meetings; official letters; emails; exchange of minutes, memos, other correspondence; project website; social media; brochures and other printed materials	Communication done by PMU; in accordance with the rules for internal communication; in accordance with administrative procedure requirements
Stakeholders who are able to influence and decide the outcomes and the manner of the project implementation or make decisions based on the outputs of the project	Direct meetings; emails; exchange of minutes, memos, other correspondence; reviews and evaluations	Communication done by PMU. In accordance with the rules for internal communication; in accordance with administrative procedure requirements

Monitoring and Reporting

Making Information Available

The project will endeavor to make information available to the public to allow stakeholders to get to know and understand both the environmental and social risks and impacts associated with the project, as well as opportunities provided by the project. This will enable stakeholders to utilize project data and information to make informed decisions in areas related to land degradation and land degradation-induced water scarcity.

On an ongoing basis, the project will conduct a routine disclosure and consultation on the project?s environmental and socio-economic performance, including grievances and other new emerging issues on the project. The disclosures will be carried out through project briefs, or annual reporting through brochures or website uploads. While providing this disclosure, the project will also include:

? An update on project achievements
? An overview of the stakeholder engagement process and how affected parties can participate and provide feedback through meetings or other avenues; and
? Project impacts on development and how the government is using the project to enhance the livelihoods of the communities while also taking measures to combat land degradation and land degradation-induced water scarcity.

Monitoring

Monitoring stakeholder engagement will be done using the following indicators:

Outcome Indicator	End of Project Target	Means of Verification
Indicator 3 (GEF Core Indicator #11) Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	278,600 (125,370 female 153,230 male)	Review project progress reports to PSC; review PIR

Outcome Indicator	End of Project Target	Means of Verification
Indicator 11 Number of community farmers with enhanced capacity to plant and maintain agroforestry schemes (disaggregated by sex)	150 community farmers with enhanced capacity to plant and maintain agroforestry schemes	Review project progress reports to PSC; review PIR; review training materials
Indicator 12 Number of community farmers with enhanced capacity to market Non-Timber Forrest Products (NTFPs) (disaggregated by sex)	75 community farmers with enhanced capacity to market NTFPs	Review Field school report; review training materials; review exit surveys
Indicator 13 Number of women community farmers with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	25 women (as part of the established KWT women?s farmer group) with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	Review capacity building program report; review training materials; review exit surveys
Indicator 15 Number of community farmers with enhanced capacity to plant and maintain riparian bamboo forests (disaggregated by sex)	150 community farmers (from 25 villages) with enhanced capacity to plant and maintain riparian bamboo forests	Review project progress reports to PSC; review PIR; review training materials
Indicator 16 Number of community farmers with enhanced capacity to build sustainable value-added chains for bamboo products (disaggregated by sex)	50 community farmers with enhanced capacity to build sustainable value-added chains for bamboo products	Review field school report; review training materials; review exit surveys
Indicator 18 Number of people with increased awareness for integrated land and water conservation	24,000 people with increased awareness for integrated land and water conservation	Review project progress reports to PSC; review PIR; review teacher surveys
Indicator 20 Number of people with enhanced capacity to construct and maintain absorption wells (disaggregated by sex)	150 people with enhanced capacity to construct and maintain absorption wells	Review project progress reports to PSC; review PIR; review training materials
Indicator 21 Number of people with enhanced capacity in water stewardship good practices (disaggregated by sex)	210 people with enhanced capacity in water stewardship good practices	Review field school report; review field school exit surveys; review training materials
Indicator 22 Number of new water stewardship activities/partnerships established in the sub-catchments of the Brantas river and beyond	5 new water stewardship activities/partnerships established in the sub-catchments of the Brantas river and beyond	Review Investment Forum reports; review Forum exit surveys; Review project progress reports to PSC; review PIR
Indicator 23 Number of twinning exchanges for water stewardship knowledge transfer	6 twinning exchanges for water stewardship knowledge transfer	Review twinning reports; Review project progress reports to PSC; review PIR

Outcome Indicator	End of Project Target	Means of Verification
Indicator 24 Number of women involved in community decision making and in nature-based infrastructure development and education activities	50 women involved in community decision making and in nature-based infrastructure development and education activities	Review Women?s Investment Forum report; Review project progress reports to PSC; review PIR
Indicator 25 Number of people with increased awareness of the importance of women in water stewardship activities	2,000 people with increased awareness of the importance of women in water stewardship activities	Review project progress reports to PSC; review PIR
Indicator 27 Number of school children with heightened awareness and understanding of the environmental issues in the Brantas Basin (disaggregated by sex)	4,000 school children with heightened awareness and understanding of the environmental issues in the Brantas Basin	Review project progress reports to PSC; review PIR; review teacher surveys
Indicator 28 Number of MOEF (and other government) officials with strengthened capacity to better enforce the regulatory framework geared at avoiding the loss of protected and conservation forests enhanced	25 MOEF (and other government) officials with strengthened capacity to better enforce the regulatory framework geared at avoiding the loss of protected and conservation forests enhanced	Review workshop report; review training materials
Indicator 29 Number of stakeholders reached through project communication products and media campaigns	5,000 stakeholders reached through project communication products and media campaigns	Review social media channel subscribers and unique visits; review number of individual products disseminated
Indicator 30 Number of MOEF (and other government) officials with strengthened capacity to upscale project activities	6 MOEF (and other government) officials with strengthened capacity to upscale project activities	Review project progress reports to PSC; review PIR
Indicator 31 Number of MOEF (and other government) officials sensitized in gender aspects of water stewardship/ forestry law enforcement (disaggregated by sex)	25 MOEF (and other government) officials sensitized in gender aspects of water stewardship/ forestry law enforcement	Review project progress reports to PSC; review PIR
Indicator 32 Number of participants at international and national events with increased awareness and understanding of the MEWLAFOR project	200 participants at international and national events with increased awareness and understanding of the MEWLAFOR project	Review project progress reports to PSC; review PIR; review global and national event summary reports
Indicator 33 Number of people with increased awareness and understanding of project-generated knowledge and lessons learned in gender mainstreaming (disaggregated by sex)	50 people with increased awareness and understanding of project-generated knowledge and lessons learned in gender mainstreaming	Review national gender workshop report; review workshop exit survey

Outcome Indicator	End of Project Target	Means of Verification
Indicator 39 Number of women and men benefiting from direct interactions with the business community through project interventions	125 women and 125 men benefitting from direct interactions with the business community through project interventions	Review activity exit surveys; investment forum, industry roundtable and matchmaking program reports; project progress reports to PSC
Indicator 40 Percentage of women and men who consider themselves better off (e.g. livelihood, income, environment) now than before the project intervention	75% of women and 75% of men consider themselves better off now than before the project intervention	Review activity exit surveys; project progress reports to PSC
Indicator 41 Percentage of budget allocation directed to gender mainstreaming-related activities (Target 5%). Disaggregated from neutral activities	5% of total budget directed to gender mainstreaming activities	Review budget; review project progress reports to PSC

The project has a dedicated activity, Activity 4.1.1, to monitoring and evaluating project execution. The above indicators will be reported on annually in the GEF Project Implementation Report (PIR). Data collection, including from surveys and consultations, will be reviewed on an ongoing basis by the PMU. Project adaptive management will be utilized to course correct the project if necessary, and the project will be proactive to address, in a timely fashion, any project execution processes that may infringe on environmental and social aspects in the project area.

This SEP will be reviewed and expanded upon during the Project Inception Workshop, which will be held within the first three months of project implementation.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

(156) In the designated project area, most women work in the agriculture sector. While women have played an increasingly important role in development in the project area, they are still vastly underrepresented in governance and decision making processes at all levels. The gender inequality in access to resources, education and information is most severe among the poor in rural areas. As extension activities are coordinated by agriculture cooperatives and farmers groups, whose members are mostly male heads of households, extension activities and training for women are seldom implemented, although women are engaged in agricultural works. Compared with women in urban areas, the standard of living (such as to safe water and electricity) of women in rural areas is low, and women in rural areas have less access to education and health services, and fewer participate in economic activities and decision making institutions.

(157) To overcome this situation, the project activities at the grassroot level will work toward improving women?s participation in paid employment and women?s access to productive resources. Women will be empowered politically and economically, which includes being adequately represented at all levels of decision making. Equal access to and full participation in power structures and involvement in all development efforts as essential for gender equality and sustainable development will be promoted.

(158) During the PPG phase, a gender analysis was conducted by a national gender expert to effectively mainstream gender into the design and formulation of the project to build positive synergies between improved environmental impact and greater gender equality. The analysis looked at systemic factors contributing to gender equality in the project area. Specifically, the study identified and analyzed: (a) actors and their roles that influence gender and power relations within households, livelihood activities, and communities in the target areas; (b) social and cultural factors, beliefs, local wisdom, divisions of labour, stereotypes, and policies that have direct and indirect effects on the position of women and influence gender and power relations within household, workplace and community; (c) women?s knowledge, values, motivations, priorities and concerns, and the drivers of change in terms of gender relations and equality; (d) the challenges and gaps in gender and power relations policy implementation; (e) barriers and challenges to assessing and incorporating gender dimensions in natural resources management; and (f) actionable recommendations for gender equality and women?s empowerment in the project area. The full project gender analysis and proposed gender mainstreaming strategy report is included as **Annex J**.

(159) The project will implement the following gender action plan (Table 14) to translate the findings of the gender analysis into project implementation. Activities are targeted at both the institutional level and the community level. In accordance with gender analysis recommendations,

to reflect project priority and commitment to gender equality, the project budget allocation for gender-specific activities is 5.41% of the overall project budget (US$96,019) (target 5%).

Table 14: Gender Mainstreaming Plan and Budget

Gender Mainstreaming Activity	Timeframe	Output Target	Responsible Party	GEF Budget
Water Stewardship Investment Forum (Women?s Forum) (Under Activity 2.1.2)	Y3	1 forum	MOEF/PMU	$43,706
Water Stewardship Twinning Program (Women?s Program) (Under Activity 2.1.2)	Y2 and Y3	2-3 twinnings	MOEF/PMU	$8,233
Gender Survey agroforestry and NTFP (Under Activity 1.1.2)	Y1	1 Survey	MOEF/PMU (Gender expert)	$4,117
Gender Survey Water Stewardship (Under Activity 2.1.2)	Y2	1 survey	MOEF/PMU (Gender expert)	$4,117
National Workshop on Gender and Social Inclusion (Under Activity 3.1.4)	Y3	1 national workshop	MOEF/PMU (Gender expert)	$5,839
Setting up KWT (Women?s Farmers Group) (Under Activity 1.1.2)	Y1	1 KWT established	MOEF/PMU (YLH Seloliman)	$5,000
KWT Capacity Building Program (Under Activity 1.1.2)	Y2	1 Capacity Building Program	MOEF/PMU (YLH Seloliman)	$7,000
World Land Degradation Day / World Water Day events- Gender and Social Inclusion in Water Stewardship (Under Activity 2.1.2)	Y3	1 World Land Degradation Day / World Water Day event (Gender Equality-themed)	MOEF/PMU	$5,070
Industry Roundtable Featuring (?Temu Niaga? event) (Under Activity 1.1.2)	Y3	1 industry roundtable	MOEF/PMU (YLH Seloliman)	$10,000
Gender Monitoring and Lessons Learned (Under Activity 4.1.1)	Y1-Y3	Track and compile sex-disaggregated project data and information	MOEF / PMU	$2,937

Gender sensitization training in MOEF Sidoaryo regional office (Under Activity 3.1.1)	Y1	2 gender sensitization trainings completed by 100% of staff of MOEF Regional Office and PMU	MOEF / PMU	$0
Recruit female project staff and consultants to manage and execute project.		4 women hired as project staff or as consultants to deliver project activities		PMU budget and absorbed by above budget lines
			Total	**US$96,019**

(160) Monitoring and reporting of gender-sensitive targets and indicators, both qualitative and quantitative, are key to the efficacy of gender mainstreaming activities. Sex disaggregated and gender-sensitive indicators are included in the Project Results Framework in Annex A. Monitoring against these indicators will help the project to identify good practices and lessons learned that promote gender equality and to incorporate remedial action that will redress any gender inequalities that arise from and during project implementation. The following 17 sex-disaggregated and gender-sensitive indicators will be tracked and reported on by a hired gender expert under Activity 4.1.1 (Table 15).

Table 15: Sex-Disaggregated and Gender-Sensitive Indicators

Indicator	End of Project Target	Means of Verification
Indicator 3 (GEF Core Indicator #11) Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	278,600 (125,370 female 153,230 male)	Review project progress reports to PSC; review PIR
Indicator 11 Number of community farmers with enhanced capacity to plant and maintain agroforestry schemes (disaggregated by sex)	150 community farmers with enhanced capacity to plant and maintain agroforestry schemes	Review project progress reports to PSC; review PIR; review training materials
Indicator 12 Number of community farmers with enhanced capacity to market Non-Timber Forrest Products (NTFPs) (disaggregated by sex)	75 community farmers with enhanced capacity to market NTFPs	Review Field school report; review training materials; review exit surveys

Indicator 13 Number of women community farmers with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	25 women (as part of the established KWT women?s farmer group) with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	Review capacity building program report; review training materials; review exit surveys
Indicator 15 Number of community farmers with enhanced capacity to plant and maintain riparian bamboo forests (disaggregated by sex)	150 community farmers (from 25 villages) with enhanced capacity to plant and maintain riparian bamboo forests	Review project progress reports to PSC; review PIR; review training materials
Indicator 16 Number of community farmers with enhanced capacity to build sustainable value-added chains for bamboo products (disaggregated by sex)	50 community farmers with enhanced capacity to build sustainable value-added chains for bamboo products	Review field school report; review training materials; review exit surveys
Indicator 20 Number of people with enhanced capacity to construct and maintain absorption wells (disaggregated by sex)	150 people with enhanced capacity to construct and maintain absorption wells	Review project progress reports to PSC; review PIR; review training materials
Indicator 21 Number of people with enhanced capacity in water stewardship good practices (disaggregated by sex)	210 people with enhanced capacity in water stewardship good practices	Review field school report; review field school exit surveys; review training materials
Indicator 24 Number of women involved in community decision making and in nature-based infrastructure development and education activities	50 women involved in community decision making and in nature-based infrastructure development and education activities	Review Women?s Investment Forum report; Review project progress reports to PSC; review PIR

Indicator 27 Number of school children with heightened awareness and understanding of the environmental issues in the Brantas Basin (disaggregated by sex)	4,000 school children with heightened awareness and understanding of the environmental issues in the Brantas Basin	Review project progress reports to PSC; review PIR; review teacher surveys
Indicator 31 Number of MOEF (and other government) officials sensitized in gender aspects of water stewardship/ forestry law enforcement (disaggregated by sex)	25 MOEF (and other government) officials sensitized in gender aspects of water stewardship/ forestry law enforcement	Review project progress reports to PSC; review PIR
Indicator 33 Number of people with increased awareness and understanding of project-generated knowledge and lessons learned in gender mainstreaming (disaggregated by sex)	50 people with increased awareness and understanding of project-generated knowledge and lessons learned in gender mainstreaming	Review national gender workshop report; review workshop exit survey
Indicator 34 Number of women hired as project staff or as consultants to deliver project activities	4 women hired as project staff or as consultants to deliver project activities	Review contracts signed; review project progress reports to PSC
Indicator 38 Number of women and men participating in and directly benefitting from project-organized workshops and training opportunities	2826 men (and boys) and 1884 women (and girls) participating in and directly benefitting from the project-organized workshops and training opportunities (4710 people total)	Review project progress reports to PSC; activity exit surveys

Indicator 39 Number of women and men benefiting from direct interactions with the business community through project interventions (disaggregated by sex)	125 women and 125 men benefitting from direct interactions with the business community through project interventions	Review activity exit surveys; investment forum, industry roundtable and matchmaking program reports; project progress reports to PSC
Indicator 40 Percentage of women and men who consider themselves better off (e.g. livelihood, income, environment) now than before the project intervention (disaggregated by sex)	75% of women and 75% of men consider themselves better off now than before the project intervention	Review activity exit surveys; project progress reports to PSC
Indicator 41 Percentage of budget allocation directed to gender mainstreaming-related activities (Target 5%). Disaggregated from neutral activities	5% of total budget directed to gender mainstreaming activities	Review budget; review project progress reports to PSC

These indicators will be revisited and confirmed at the project Inception Workshop.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

(161) The intervention model chosen by the project to engage the private sector and encourage investment is ?*convening multi-stakeholder alliances*?. The history of private sector engagement that led to this project is documented in Annex H and above.

In February 2015, UNIDO signed a memorandum of understanding with Heineken International B.V?as a globally operating beverage industry corporation that has

committed, through its Sustainability Strategy, ?Brewing a Better World,? to inclusive growth; protecting water resources; reducing CO2 emissions; source sustainability; and advocating for responsible consumption, communities, and the health and safety of its people?to cooperate in three areas: water stewardship, renewable energy and energy efficiency, and local sourcing of input materials. Under the water stewardship component, the partnership focuses on the development of public private partnerships (PPPs) for water stewardship programs in water-stressed catchment areas. The purpose of these PPPs is to engage with stakeholders and to mobilize resources for collaborative action to overcome cumulative stress on finite water resources in selected catchment areas. Joint activities have/are concentrating on breweries in Egypt, Ethiopia, Mexico, Nigeria and Indonesia. These initiatives complement Heineken?s commitment to reduce water consumption in its breweries located in these regions.

The Brantas Basin in East Java, Indonesia, is one of the select catchment areas. In order to ensure that all stakeholders in the basin area share a common vision of the root causes of land degradation and of the resulting cumulative water stress, as well as the necessary collaborative mitigation measures, the 30 most relevant stakeholders from government (Central, Province, Kabupaten, Kota), the private sector and civil society were invited by the Ministry of Environment and Forestry (MOEF), PT Multi Bintang (the Heineken operating company in Indonesia) and UNIDO to a three-day stakeholder engagement workshop. The participants were presented with one single question: ?What is necessary to successfully guarantee the socially, environmentally and economically sustainable supply of water to people and businesses [in the Brantas Basin: Cumpleng Catchment Area: Brankal, Sadar and Porong Sub-Catchment Areas]?? The stakeholders identified 12 priority measures, key conclusions and detailed implementation recommendations in a participatory bottom-up planning process.

The restoration of forests and the establishment of a collaborative multi-stakeholder platform for the restoration of critical ecosystem services were identified as priority measures to overcome land-degradation-induced water scarcity in the three sub-catchment areas. In the closing session of this workshop, the stakeholders representing major industries in the catchment areas committed to support the establishment of a multi-stakeholder alliance for water stewardship.

With financial support provided by these industries, a second stakeholder meeting, in November 2016 in Seloliman, was organized. In this meeting, the stakeholders from government, the private sector, academia and civil society agreed to establish the Aliansi Air (Water Alliance) as a multi-stakeholder alliance for water stewardship for the Brankal, Sadar and Porong sub-catchments. This decision was formalized in a notary decree in March 2017 and the Aliansi Air and its statutes were officially recognized by the minister of justice and human rights in April 2017.

Catalyzed by industries with a serious engagement in sustainability issues, the Aliansi Air has an objective to discuss, consult, coordinate and communicate with all stakeholders involved in water management in the watershed areas surrounding the Mojokerto Regency in East Java Province (which is part of the Surabaya metropolitan area). The Aliansi Air has been successful in establishing cooperative relationships and promoting

transformational changes with state institutions, the private sector, academia and civil society pertaining to sustainable use and conservation of water resources in the sub-catchment areas (locally referred to collectively as the Cumpleng Catchment Area). A particular focus of the Aliansi Air is to engage a steadily growing number of the 800-plus private sector entities and industries operating in the catchment area in water stewardship activities and to strengthen cooperation between the private sector, government and other stakeholders.

Activities already implemented under the coordination of the Aliansi Air, with support by private sector entities, is outlined under the baseline section above.

(162) The Aliansi Air will provide coordination support to each of the project?s activities under Component 1, Component 2 and Component 3. The business community will be engaged through the following activities:
(1) Participating in the NTFP industry roundtable ?Temu Niaga? under Activity 1.1.2., to interact with community farmers and the KWT members to potentially spark business partnerships and to offer mentorship to help the communities bring their NTFPs to market.
(2) Participating in the ?matchmaking program? with community farmers under Activity 1.2.2., where the business community will take meetings with the bamboo villagers to potentially invest in the forest to factory value-added chain for the project?s bamboo village.
(3) Participating in the water stewardship investment forums (including the gender-themed forum) under Activity 2.1.2., which will centre on enhancing dialogue among basin stakeholders to stimulate water stewardship investment to help build a resilient social and economic recovery to the Covid-19 pandemic through new and ongoing programs. Select private sector entities will be invited to support the coordination of the investment forum implementation. Participation from the Alliance for Water Stewardship and the Indonesia Business Council for Sustainable Development will be sought.
(4) Participating in the learning exchange ?twinning? pilot program under Activity 2.1.2, which will see identified stakeholders in the three sub-catchment areas and identified stakeholders elsewhere (in priority basins throughout Indonesia) doing exemplary work in water stewardship (and vice versa) paired up for experience sharing, best practices transfer and upscaling.
(5) Participating in the World Land Degradation Day / World Water Day events under Activity 2.1.2 and supporting awareness creation measures that promote good water conservation practices in the sub-catchment areas; and
(6) Engaging to provide co-finance to construct a bamboo village factory under Activity 1.2.2., so the project?s bamboo village farmers can acquire a forest-based industrial processing facility to turn their bamboo harvests into value-added products at the earliest stages of the value chain.

(163) Opportunities to expand private sector engagement throughout Indonesia in the other 14 basins the government has labeled as ?priority? will be actively identified as the project evolves.

(164) In the PPG phase, UNIDO prepared a detailed case study on the long history of this project and the complex process that finally led to the development of CEO document (see Annex H). The case study elaborates on the necessary preconditions and the challenges to match the goals of

highly-committed private sector entities with those of the GEF and partner governments. This case study can be made available to the entire GEF partnership as part of the GEF Secretariat?s knowledge management and private sector engagement strategy. The case study will also be disseminated through industry roundtables, such as the CEO Water Mandate and the Beverage Industries Environmental Roundtable.

(165) During the PPG phase, a comparative analysis of Heineken?s sustainability strategy (?Brewing a Better World?) and The Coca-Cola Company?s (Refresh the World. Make a Difference?) and Anheuser-Busch InBev?s (AB InBev) (Bringing People Together for a Better World?) equivalent strategies was conducted to help understand how the strategies are supporting or will support the achievement of the UN Sustainable Development Goals (SDGs) and how they relate to the GEF focal area strategies and GEF Core Indicators. The objective of this comparison is to understand whether there is clear alignment between the high-profile beverage sector and GEF programming on key metrics related to climate change protection and the conservation of natural resources; and where there are strategic entry points for collaboration under the GEF?s private sector engagement strategy.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

(166) *GEF STAP Guidelines for Land Degradation Neutrality*

GEF STAP?s guidance report on guidelines for LDN, which was presented at the UNCCD COP in 2019, states that ?Achievement of the LDN goal of maintaining land resources must not come at the expense of adverse social and ecosystem impacts? (GEF STAP, 2020). The report sets out minimum safeguards for projects that support countries with their LDN targets. These are:

? Land governance: ensure that the access to land and the livelihoods of vulnerable people are protected and that free, prior and informed consent is obtained, and just compensation provided, where land access is infringed;

? Gender: ensure that stakeholder engagement processes are gender-sensitive and that impact on women is considered in devising LDN interventions; and

? Ecosystem protection: effective land-use planning and implementation instruments are in place to enable ?like for like? counterbalancing of gains and losses. And that LDN interventions do not threaten Red List species or high conservation value ecosystems and do not facilitate the introduction or spread of invasive species.

The PEE will ensure effective measures are in place to meet this minimum safeguard guidance.

(167) *Covid-19 and Project Implementation*

The Covid-19 pandemic is the most important risk to successful project implementation. It poses a significant challenge because of its unknown temporal trajectory. Until a vaccine is made available to a large portion of the Indonesian population, and variants of concern cease to persist, the periodic reinstatement of containment measures must be expected. This situation may cause disruption in the

orderly implementation of the project and will require very strict implementation of adaptive management principles.

The execution of all activities will strictly adhere to the Government of Indonesia, UNIDO and GEF policies and procedures pertaining to the Covid-19 pandemic to ensure the safety of all beneficiaries and project personnel and consultants.

The strategies and mechanisms of project design allow for the project to be flexible and adaptable to the evolution of the pandemic situation throughout the country. The project is designed to leverage partnerships with organizations mainly located in Indonesia, which will reduce the dependency on international travel. In part, the project outputs can be delivered remotely via online tools, and some of the project activities can be reasonably delayed until restrictions are reduced and later fast-tracked for implementation. With the institutional setup proposed for this project, with the involvement of MOEF as the Project Executing Entity and the execution of grassroot activities by the communities themselves and through NGOs that are already active in the project area, the impact of future containment measures can be mitigated.

Some of the mitigating measures the project may use to combat the pandemic risk include:

? Meetings, field schools and workshops may take place in outdoor spaces, with social distancing and hygiene measures applied;
? Meetings, field schools and workshops may be organized in smaller groups with a larger number of events, such that all stakeholders are engaged and that the same total number of beneficiaries are reached;
? Agroforestry and bamboo planting, while already implemented outdoors, may be organized through smaller teams and in a shift schedule to limit interactions;
? In the field, project staff and executing partners shall communicate all health protocols followed and site safety rules to be adhered to in advance of plantation/construction execution;
? Protective equipment will be provided to all executing partners and beneficiaries and full access to sanitation points will be ensured;
? Physical meetings may be replaced by virtual meetings. This is especially the case for participation in global events to upscale activities and for coordination and administrative meetings;
? Capacity building, networking, outreach activities and technical trainings may be conducted via video, online training modules, webinars and podcasts, where applicable and according to beneficiary access to information technology;
? The stakeholder communication strategy will be adapted to include alternative methods of communication and outreach when travel/social contact is not permitted; and
? Monitoring and evaluation activities and approaches deemed necessary to support project-level adaptive management will be agreed upon during the Project Inception Workshop and will be detailed in the Project Inception Workshop Report.

Covid-19 also provides an opportunity to showcase the benefits of the proposed nature-based solutions, which will restore the ecological functionality and the provisioning and regulating ecosystem services of forests. These measures will not only mitigate land degradation-induced water scarcity but will also increase the resilience of ecological and socioeconomic systems to potential future pandemics. The main contribution of this project to a green recovery will be to promote

sustainable land uses that limit deforestation; to secure water supply for people and businesses using water-forest-land use nexus thinking; and to promote sustainable business practices that are bio-based. Under Activity 2.1.2, the investment forums will focus on ways to build back better from Covid-19 through investments and partnerships in water stewardship.

(168) Risk management is a structured, methodical approach to identifying and managing risks for the achievement of project objectives. The risk management plan enables stakeholders to identify in advance and then manage risks by specifying and monitoring mitigation actions throughout project implementation. Project risks and mitigation measures that have been identified and analyzed during the PIF and PPG phases have been incorporated into the design of the project. The risk matrix set out in Table 16 is organized in four parts: (A) Covid-19 Risks; (B) Environmental and Social Risks; (C) Political and Institutional Risks; and (D) Special Implementation Risks.

Table 16: Risk Matrix

Risk	Rating	Mitigation
A. External Risks		
Covid-19 crisis may affect the modalities of activity implementation	H	Adaptive management practices (see explanation above).
B. Environmental and Social Risks		
Indonesia is ranked in the top-third of countries in terms of climate risk, with high exposure to all types of flooding, and extreme heat. The intensity of these hazards is expected to grow as the climate changes. Climate change is also likely to have impacts on water availability, disaster risk management, urban development, particularly in the coastal zones, and health and nutrition, with implications for poverty and inequality. There is high variation in the potential impacts of climate change at the regional and local levels. Without well planned adaptation and disaster risk reduction efforts at these levels, the poorest and most marginalized communities are likely to experience significant loss and damage as a result of climate change impacts. (source: World Bank Climate Risk Country Profile: Indonesia, 2021).	M	For the agroforestry schemes, indigenous tree species with a high wind, drought and temperature tolerance will be chosen. In the siting of the agroforestry areas, particular focus will be placed on avoiding sites that are prone to landslides. For the bamboo afforestation, wind, drought and temperature-resistant varieties will be chosen. In the siting of the bamboo afforestation areas, particular focus will be placed on avoiding flood and riverbank erosion-prone sites. In the siting of the absorption wells, particular focus will be placed on avoiding sites that are prone to landslides and the deposition of surface runoff with high sediment loading.
Low understanding and sensitivity on gender perspectives of project implementers and key stakeholders further increases the gender gap that occurs at the project site	M	Develop clear guidance on gender integration actions. Facilitate training and capacity building for project executing partners and key stakeholders on gender equality matters.
Women?s decision making and involvement in the project is limited. Implementation policies do not support women?s needs and priorities	M	Strengthen women empowerment and gender equality through the establishment of organizations that can help women realize their aspirations in soil and water conservation and retention management?such as the establishment of a KWT.

The project will disseminate information to and build capacity of the community as project beneficiaries. Data indicates women's access to education, both formal and informal/vocational, is lower than men's, and there is a risk that women farmers will be left behind in changing/adapting more sustainable land and water management. On the other hand women also have traditional knowledge related to water and forest conservation and management. Leaving women behind in project implementation will risk losing the opportunity to realize new knowledge, skills and technologies by adapting from traditional knowledge.	M	Ensure women?s groups are consulted during project implementation and their information and knowledge will be taken into account. Develop and disseminate experiences and lessons learned on gender aspects of the project.
In agriculture and agroforestry, women prefer crops that are oriented toward meeting household needs (food and energy), while men are more market-oriented. With changes in landscape conditions (land and water degradation) and climate change, there is a risk men will claim more fertile/safe land from possible disasters (landslides/floods) to plant market-oriented crops; which leaves women with more vulnerable/less fertile land for growing crops oriented towards meeting household needs	M	Identify the types of plants prioritized by women, and ensure that these plants are included in the agroforestry scheme restoration. Conduct participatory mapping (women and men actively involved) to determine land use and management to be developed for agriculture and agroforestry
Release of domestic pollutants into the ground/waste dumping during plantation and construction	L	Provide training on use of harmful/hazardous materials; adopt policies for dealing with disposal of materials; control and minimize chemical use; ensure locations of absorption wells are not close to pollution sources.
Dust, noise and air pollution	M	Traffic, air and noise pollution increases kept to a minimum through load covers, onsite wet suppression, vehicle and route planning, and daytime work schedules. Establish work buffers where possible.
Biodiversity losses	L	Avoid sensitive ecological areas and buffer zones of special ecological importance. Seek environmental expert opinions and assessments.
Accidental falls into absorption wells	L	Ensure technicians apply correct skills regarding construction and management. Post clear signs indicating absorption well present. Fence off absorption wells to keep livestock safe.
Road construction, buildings and other infrastructure increase soil erosion	M	Good technical planning, including following government procedures to prevent erosion in road construction.
C. Political and Institutional Risks		

Governments at all levels and key stakeholder groups lack commitment in continuing their support to the water stewardship activities catalyzed by the Aliansi Air	L	The project is a result of an intensive stakeholder engagement process and key stakeholders have already demonstrated their commitment. The risk of stakeholder fatigue can be most effectively mitigated by keeping them informed on project plans and moving as quickly as possible to project implementation.
Government entities might not support project implementation	L	Counterparts from government in different levels have been consulted during the PPG phase and have expressed their support for the project. MOEF, as the line ministry has expressed its support. Engaging MOEF as the Project Executing Entity and actively engaging the MOEF regional office in Sidoaryo in project execution will mitigate this risk. MOEF provided strategic guidance to the development of this CEO document and holds a sense of ownership over project design.
D. Special Implementation Risks		
Bamboo village processing factory financing cannot be secured during the project period	L	The activity has been designed to achieve its intended objective even without the value-add of a village factory. The process to secure factory financing is an end in itself, as it will help increase the visibility of the 1,000 Bamboo Village initiative.

Indigenous people or indigenous territories were not identified in the project intervention area.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

(169) *Overall Institutional Arrangement*

Figure 3 presents the institutional arrangement for project implementation.

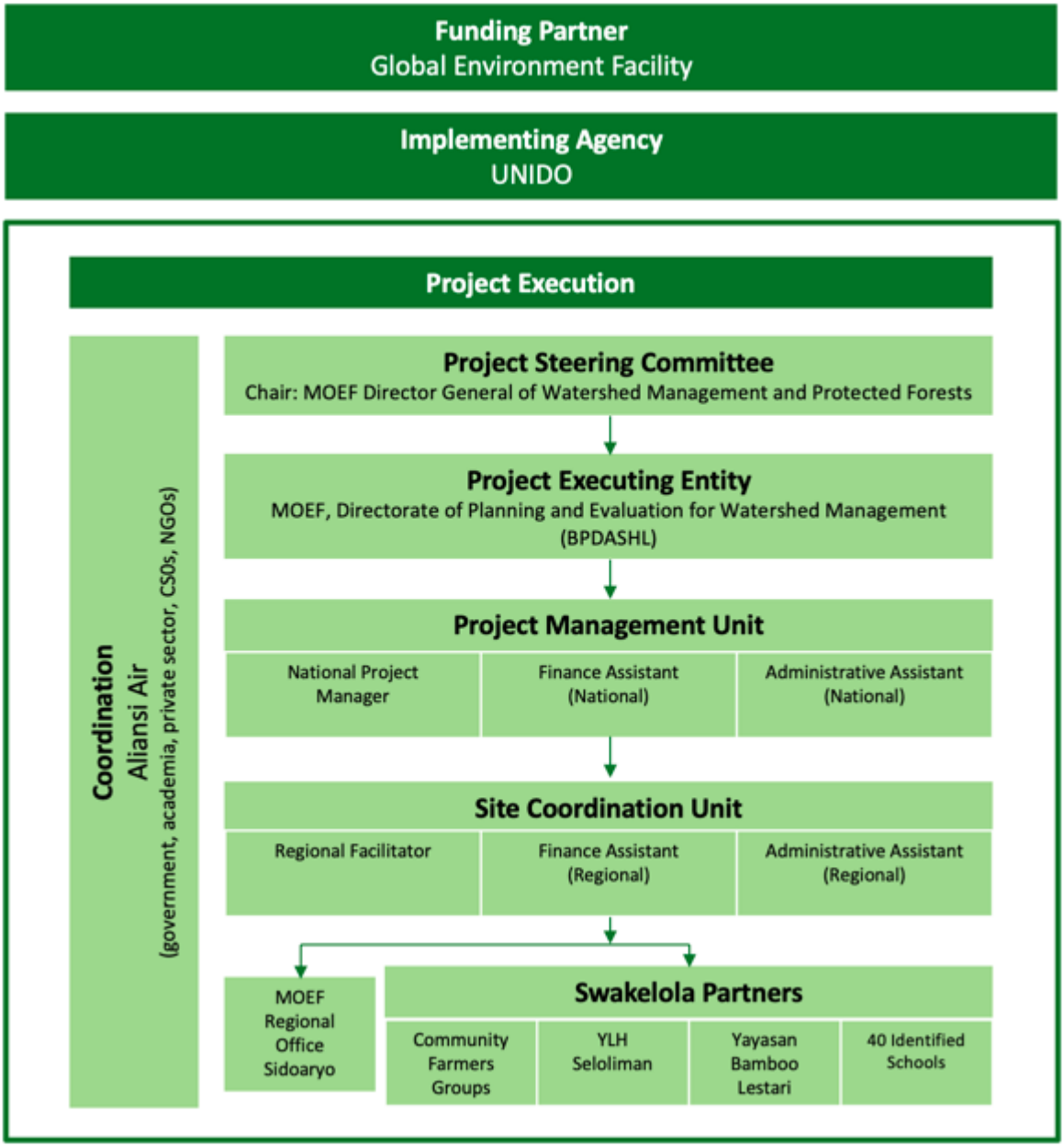


Figure 3: Project Institutional Arrangement

(170) **Project Implementing Agency**

UNIDO will be the GEF Implementing Agency of the project. UNIDO will play a close coordination and liaison role with the Project Executing Entity (PEE) and the GEF Secretariat. As part of the project management activities, UNIDO will recruit independent experts to conduct a project Midterm Review and a project Independent Terminal Evaluation.

(171) **Project Steering Committee**

To ensure proper oversight and government and institutional ownership of the project, a Project Steering Committee (PSC) will be established under the Chairmanship of the MOEF Director General of the Directorate of Watershed Management and Protected Forest. To avoid conflicts of interest, the MOEF?s Directorate of Planning and Evaluation for Watershed Management will become the PEE and MOEF?s Directorate of Watershed Management and

Protected Forest will chair the PSC. The GEF Operational Focal Point (OFP), UNIDO and representatives from institutions involved in the different project components will be members of the PSC. The PSC will meet twice per year and seven times over the project implementation period to endorse the project strategy, confirm annual work plans, review project execution progress, and provide advisory inputs for smooth execution of the project. Any changes/amendments proposed to the project and/or to the work plans and budgets by the PSC will be conducted in accordance with the approved CEO document, the GEF policy, and UNIDO rules and regulations. PSC minutes of meetings will be signed by UNIDO and the PSC Chairperson. The PMU forms the secretariat of and reports to the PSC on the progress of the project.

(172) **Project Execution Entity**

The Ministry of Environment and Forestry (MOEF) (Directorate of Planning and Evaluation for Watershed Management) will serve as the PEE. The PEE has been HACT assessed and proved to show a low risk. The Balai Pengelolaan Daerah Aliran Sungai Dan Hutan Lindung Barito (BPDASHL) Brantas Sampean is a technical field unit of MOEF and will execute the activities.[1] MOEF will also be the line Ministry and lead government coordinating entity for the project. Following the assessment and approval of the MOEF (Directorate of Planning and Evaluation for Watershed Management) as the PEE at CEO approval of the project, collaboration between UNIDO and MOEF (Directorate of Planning and Evaluation for Watershed Management) will be based on the Project Execution Agreement (the ?Agreement?). The Agreement defines the respective responsibilities of the PEE, including but not limited to activities, deliverables, financials, personnel, procurement, asset management, and reporting schedules and formats. UNIDO will enter into a contractual arrangement with the PEE and the PEE will then enter into contractual arrangements with the entities that will execute activities at the grassroot level.

The PEE will be responsible for the following activities: (1) project planning, coordination, management, monitoring and reporting (including preparation of the annual PIR); (2) procurement of goods and services, including human resources; and (3) financial management, including overseeing financial expenditures against project budgets, as indicated in the CEO document and/or revised by the Project Management Unit (PMU) and approved by the PSC. The PEE will also be responsible to designate internally, or recruit directly, project management personnel for a PMU (and Site Coordination Unit (SCU)) to execute the project?s activities. The PEE shall provide all related information to the evaluation experts for the Midterm Review and Independent Terminal Evaluation. The PEE will ensure that all activities, including procurement services, are carried out in strict compliance with UNIDO?s respective rules and procedures, including the ESSPP.

(173) **Project Management Unit and Site Coordination Unit**

The PMU will be responsible for the day-to-day management of project execution. The PMU will coordinate all project activities being carried out by project national experts and partners. The PMU and will be responsible for (1) directing and managing the project; (2) meeting the project?s stated outcomes and projected outputs in a timely manner; (3) making effective and efficient use of the financial resources allocated in accordance with the CEO document and agreed project work plans; and (4) monitoring the overall performance of the project against the indicators and targets set out in the Project Results Framework and the annual work plans.

The PMU will be, where required, guided by the decisions of the PSC for the execution of the project.

The SCU is a regional work unit that will assist the PMU in coordinating the implementation of the various activities taking place on the ground. The PMU will be headquartered at MOEF?s offices in Jakarta. A SCU will be headquartered in the MOEF Regional Office in Sidoaryo, East Java. The SCU will report to the PMU.

Table 17 describes the responsibilities of each of the six PMU and SCU positions. This structure, the six positions, and their associated responsibilities were determined by MOEF. Each position will be recruited by the PEE. At least three of the staff positions will be filled by women.

Table 17: PMU and SCU Positions and Responsibilities

Position	Responsibilities
Project Management Unit (PMU)	
National Project Manager	(1) Prepare an activity plan for the project, with supervision from MOEF and UNIDO; (2) Carry out daily project execution activities in accordance with the set work plan; (3) Facilitate and coordinate the execution of activities through development partners; (4) Monitor and supervise the execution of activities; (5) Facilitate efforts to ensure good project implementation performance, carried out through field inspections, periodic monitoring/field visits, and project performance evaluations; (6) Facilitate the provision of data and information in the context of the Midterm Review; (7) Prepare Project Implementation Reports, project assurance reports, quarterly monitoring reports and annual reports; (8) Identify potential project problems and control risks and changes, resolve issues and challenges, prevent deviations and propose appropriate adaptive management strategies; (9) Develop and review standard operating procedures; (10) Initiate and maintain good communication with the PSC and relevant stakeholders; (11) Administer project activities and finances in accordance with applicable regulations; (12) Collect data and information on project progress on a regular basis; (13) Provide full support in the form of providing data and information during the terminal evaluation to the independent terminal evaluator and to any auditor.
Finance Assistant (National)	(1) Prepare work advance requests and manage petty cash/activity advances; (2) Prepare financial report materials with reference to UNIDO accounting systems; (3) Take responsibility for the accuracy and suitability of financial data; (4) Monitor the availability of funds for the implementation of activities in accordance with the approved work plans; (5) Verify financial reports and supporting documents for each expenditure; (6) Administer files for all project activities, including Note to File notes, official travel, personnel, consultants and third parties both electronic and hard copy; (7) Prepare and consolidate/coordinate travel plans; (8) Prepare and consolidate plans for the procurement of materials needed for project execution; (9) Monitor purchases made by the project with reference to UNIDO and MOEF regulations; (10) Organize and provide logistical needs in training activities, workshops and other project activities; (11) Consolidate and prepare financial reports from the SCU and the PMU; (12) Prepare budget revision materials; (13) Prepare and ensure the availability and completeness of data, information and documentation related to any audit.

Administrative Assistant (National)	(1) Archive project documents and personnel files; (2) Monitor contracts for project personnel and consultants; (3) Prepare and consolidate activity plans, travel plans and material procurement plans needed for activity execution; (4) Archive reports on official trips, minutes of meetings, Note to File notes, and other documents for audit purposes; (5) Prepare all data information related to an audit; (6) Manage and prepare supplies of daily necessities; (7) Organize and provide logistics for office needs, including training activities and workshops; (8) Record attendance of project personnel; (9) Manage correspondence and shipping related to office activities; (10) Pay bills for operational costs; (11) Manage and update inventory list and report it quarterly; (12) Take responsibility for the operation of the project office, including the management of office equipment, cleanliness and security.
Site Coordination Unit (SCU)	
Position	**Responsibilities**
Regional Facilitator	(1) Act on the project?s behalf at the project sites; (2) Coordinate and manage the day-to-day planning, implementation and monitoring of the project at the project sites/regional level; (3) Ensure that relevant government agencies, private sector and communities at the local, district and provincial levels understand the project?s presence and objectives; (4) Ensure stakeholders understand the role of each institution/organization in the successful achievement of the project activities; (5) Collaborate and consult with relevant government agencies at local, district and provincial levels to effectively coordinate the project?s activities in the field; (6) Collaborate with national and regional experts in the preparation, implementation and monitoring of project activities at the project site and regional level, including supporting the development of work plans and budgets; (7) Prepare reports on project activities, administration and finances in monthly, quarterly and annual reports; (8) Ensure that the reports made are in accordance with applicable regulations or in accordance with the mandate given; (9) Ensure that the process of implementing activities (procurement/purchasing processes) is carried out in accordance with applicable regulations; (10) Provide data and information during an audit to an auditor.
Finance Assistant (Regional)	(1) Assist the Regional Facilitator in financial management of the project at the regional level; (2) Perform financial preparations for project activities, such as workshops, seminars, meetings and trainings; (3) Prepare fee request documents; (4) Ensure that the use of accounting systems, including financial reporting, is in accordance with applicable regulations; (5) Prepare balance sheets and maintain documents in complete reconciliation files; (6) Prepare project financial reports; (6) Prepare requests for cash advances and petty cash; (7) Maintain responsibility for the accuracy and suitability of financial data; (8) Monitor the availability of funds for the execution of activities in accordance with approved work plans; (9) Prepare supporting documents for each expenditure; (10) Administer files for all project activities; (11) Monitor the procurement of all purchases made by the project; (12) Prepare and ensure completeness of data and information for audit purposes.
Administrative Assistant (Regional)	1) Archive project documents and personnel files; (2) Monitor contracts for project personnel and consultants; (3) Prepare and consolidate activity plans, travel plans and material procurement plans needed for activity execution; (4) Archive reports on official trips, minutes of meetings, Note to File notes, and other documents for audit purposes; (5) Prepare all data information related to an audit; (6) Manage and prepare supplies of daily necessities; (7) Organize and provide logistics for office needs, including training activities and workshops; (8) Record attendance of project personnel; (9) Manage correspondence and shipping related to office activities; (10) Pay bills for operational costs; (11) Manage and update inventory list and report it quarterly; (12) Take responsibility for the operation of the project office, including the management of office equipment, cleanliness and security.

The Aliansi Air, as a multi-stakeholder alliance for the sustainable use and conservation of water resources in the sub-catchment areas will become engaged as a critical partner to mobilize further and complimentary support from industries and government. The Aliansi Air will provide coordination support to each of the project's activities under Component 1, Component 2 and Component 3. See further details under the Private Sector Engagement section above.

(175) **MOEF Regional Office in Sidoaryo**

The institutional capacities of the MOEF regional office in Sidoaryo will be strengthened so that it can become actively involved in executing the project, disseminating results and upscaling activities.

(176) **Swakelola Partners**

The PEE will enter into contractual arrangements with activity executing partners under the Government of Indonesia?s *Swakelola* (?self-management?) modality under Presidential Decree No. 16 of 2018 concerning the procurement of goods and services. The Swakelola modality is used as an avenue to encourage and increase community and CSO participation; improve effectivity and efficiency; optimize resources and improve in-house capacity; and/or when the service is not available in the commercial market. In Swakelola arrangements, the government budget holder may design and plan activities, but execution can be done by its own employees, employees from other government offices, and communities or CSOs. There are four types of Swakelola. This project will utilize *Type 2 - Implemented by Other Government Agencies, Type 3 - Implemented by Community Organizations* and *Type 4 - Community-Based Management* in the execution of six activities (see Table 18). Under the Swakelola modality, once the Swakelola provider is identified a memorandum of understanding (MoU) that defines the roles and responsibilities for activity execution is entered into between the government budget holder and the Swakelola provider. Swakelola signing meetings between the PEE and the Swakelola provider(s) will take place before activity execution begins. These meetings will clarify the MoU terms and conditions and activity execution and delivery procedures.

Table 18: Swakelola Management for Execution of Activities

Activity	Swakelola Type	Executed By
1.1.1	Type 4: Community-Based Management	Community Farmers Groups
1.1.2	Type 3 - Implemented by Community Organizations	YLH Seloliman
1.2.1	Type 4: Community-Based Management	Community Farmers Groups
1.2.2	Type 3 - Implemented by Community Organizations	Yayasan Bambu Lestari
2.1.1	Type 4: Community-Based Management	Community Farmers Groups
2.2.1	Type 2 - Implemented by Other Government Agencies	40 identified schools

Twenty-five (25) Community Farmers Groups residing in the seven districts of the project area will be responsible, via Swakelola, for executing the agroforestry planting under Activity 1.1.1. Another 25 Community Farmers Groups/and potentially some Community Farmers Groups executing Activity 1.1.1 will be responsible, via Swakelola, for executing the bamboo riparian forest planting under Activity 1.2.1. Communities residing in the seven districts of the project area will also be responsible, via Swakelola, for executing the construction of the absorption wells under Activity 2.1.1.

As an NGO with a longstanding track record in community-based forest restoration and the establishment of absorption wells in the project area, YLH Seloliman will be entrusted with the

execution of grassroot activities and community engagement for the provision of technical assistance for the marketing of sustainable NTFP via Swakelola (Activity 1.1.2), and will provide support to community farmer groups for the establishment of agroforestry schemes and construction of absorption wells. YLH Seloliman will also co-finance the project.

With a longstanding track record in community-based bamboo afforestation and the establishment of bamboo-based value chains, Bambu Lestari will be entrusted with the execution of grassroot activities and community engagement for the provision of technical assistance for the sustainable use of bamboo for value-added products via Swakelola (Activity 1.2.2). Bambu Lestari will also provide support for the restoration of riparian bamboo forests. Bambu Lestari will also co-finance the project.

Forty (40) identified schools in the project area (through the Education Office Mojokerto Local Government) will be entrusted with the execution of grassroot activities and community engagement via Swakelola for the biopori installation and awareness creation under Activity 2.2.1.

(177) *Transfer of Assets*

Full or partial ownership of equipment/assets purchased under the project may be transferred to national counterparts and/or project beneficiaries during the project implementation as deemed appropriate by the government counterpart in consultation with the UNIDO Project Manager.

(178) *Legal Clause*

The Government of the Republic of Indonesia agrees to apply to the present project , mutatis mutandis, the provisions of the Revised Standard Technical Assistance Agreement concluded between the United Nations and the Specialized Agencies and the Government on October 29, 1954 and as amended on November 17, 1966.

(179) *Coordination with Other Projects*

Given the project and the recently MOEF launched Integrated Sustainable Forest Based Area Management project for the Lumajang District will both promote agroforestry schemes for the restoration of degraded land areas and to protect water bodies, the project PMU will explore the opportunities for mutual support, cross-fertilization, exchange of experiences, and the creation of synergies.

The project is also highly synergetic to a number of ongoing and soon to be launched GEF-funded projects. Upon establishment, the PMU will seek the active cooperation with these projects to further explore possibilities for mutual learning and cross-fertilization:

? Of particular importance will be the UNDP-implemented GEF FSP ?Capacity Development for Implementing Rio Conventions Through Enhancing Incentive Mechanisms for Sustainable Watershed/Land Management (GEF ID: 5848). Sustainability of the MEWLAFOR project will highly benefit from the policies, legal and regulatory instruments as well as the economic instruments that will be developed. The development of the awareness creation and community engagement materials for the MEWLAFOR project will be informed by and benefit from the improved educational curricula and youth civic engagement materials UNDP will develop through a consultative process.

? Under Component 4 of the ADB-implemented GEF FSP ?Citarum Watershed Management and Biodiversity Conservation? (GEF ID: 3279) forest protection measures resulting in no further reduction in existing forest area and improved catchments will be

implemented in Indonesia. An active exchange on this topic, as well as on the MEWLAFOR experiences in engaging the private sector in environmental stewardship activities, will be mutually beneficial, and in particular, beneficial for the component of the Citarum project under which systems for water allocation among competing uses and users will be established and protected.

? The PMU will also seek active cooperation and the exchange of experience on the engagement and partnership with private sector and local communities with the IFAD-implemented GEF FSP ?Integrated Management of Peatland Landscapes in Indonesia? (IMPLI)(GEF ID: 9239). Of particular importance for the upscaling of the MEWLAFOR project will also be the experiences gained by IMPLI with regard to scaling up best practice through knowledge management and market options.

? The PMU will seek advice and support from the recently-approved fifth phase of the UNDP/UNEP-implemented GEF FSP International Waters: Learning Exchange and Resources Network (IW:LEARN) (GEF ID: 10374). IW:LEARN has extensive experience in knowledge management training workshops, and twinning programs. IW:LEARN could assist the MEWLAFOR project with finding a second or third generation GEF project match to learn best practices and lessons learned in scaling up demonstration projects for transformative change and advice on how to structure the project twinning program under Activity 2.1.2.

? The PMU will explore the possibilities of cooperating with the recently approved GEF FSP ?Strengthening of Social Forestry in Indonesia (GEF ID: 9600). Of particular importance will be the aspect to build the institutional capacities of the MOEF?s regional office in Sidoaryo for the incorporation of social forestry considerations into the RPJMD (Rencana Pembangunan Jangka Menengah Daerah - the Indonesian Regional Long-Term Development Plan) and the development of community land use plans under consultative processes.

? Under the UNIDO-implemented GEF project ?Using Systemic Approaches and Simulation to Scale Nature-Based Infrastructure for Climate Adaptation (GEF ID: 10632), a financial and an economic cost benefit analysis of the proposed nature-based infrastructure solutions was carried out and the results are reflected throughout this document. The financial cost benefit analysis demonstrates the financial superiority of nature-based infrastructure over conventional gray infrastructure that might result in the same environmental benefits. The economic valuation determines the additional monetary value on the positive externalities provided by nature-based infrastructure solutions. Together, these analyses will be used to demonstrate to government, private sector entities, newly emerged private sector funds, IFIs and donors supporting large-scale projects (such as the Green Climate Fund), the comparative advantages and economic cost effectiveness of nature-based infrastructure for the transformational change process required to effectively mitigate land degradation and adapt to climate change at the local, regional and global level.

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[1] **BPDASHL - Brantas Sampean,** located at Surabaya, is one of the 36 technical units in Indonesia under the administration of the Directorate General of Watersheds Management and Protected Forests (Ditjen PDASHL) with the technical reporting to the Directorate of Planning and Evaluation for Watershed Management (PEPDAS) to execute its programs and activities in the field.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

(180) The project is designed to assist the Government of Indonesia to improve its program in community-based restoration of degraded land ecosystems by involving the private sector through public-private partnerships and the development of environmental service schemes carried out in priority sub-catchment areas of the Brantas Basin in East Java.

(181) With 13.7 million ha of national territory classified as critical land, the problem of land degradation is still a major problem to be resolved by the Government of Indonesia. This is reflected in the RPJMN (Rencana Pembangunan Jangka Menengah Nasional) (National Medium-Term Development Plan) 2020-2024, which has retained the restoration of degraded lands as one of the main performance indicators.

(182) The project is also consistent with the MOEF?s RPJMN 2020-2024, which is implemented by the Directorate General of Watershed and Forest Protection. Its main targets are: (1) increasing the forest covered areas for water and climate security; (2) reducing the area of critical land; and (3) improving the welfare of resident communities.

(183) Based on the 2015-2019 RPJMN, the Brantas watershed is one of the 15 watersheds that have been identified as a priority intervention area. Based on its classification as regulated in national government regulation PP 37/2012 on Watershed Management, the Brantas watershed is classified as one of the watersheds referred to as a ?critical watershed? that need to be restored to regain their carrying capacity.

(184) The project?s objective to halt land degradation and improve water security and enhance land and water conservation along the source to sea continuum is fully aligned with the Indonesia National Action Program (NAP) under the UNCCD (2002), which states that afforestation and reforestation activities are one of the three program areas of Chapter 12 of the Agenda 21 relevant to Indonesia. The NAP also stresses the importance to engage all partners, including politicians, government institutions, community-based organizations, local communities, NGOs, professional organizations, academic communities, private groups and associations. In the LDN Centered NAP SWOT Analysis, thirteen Thematic Programmes and Projects are mentioned, including Improvement of Water Conservation. Indonesia?s LDN national strategy, which is outlined in the government?s first LDN report submission to the UNCCD (2015), includes project-consistent actions, such as (1) ?Developing a partnership with local institutions and community and non-government organizations for effective implementation of land degradation control?; (2) ?Establishing priorities and development of action plans through active involvement in the decision-making by local communities in the implementation, monitoring and evaluation?; (3) ?Full participation of representative communities should be engaged in all level activities (planning, implementation, monitoring, and evaluation)?; and (4) ?Raising awareness about good quality environment and sustainable agriculture development?.

(185) The project aligns with the actions under the Joint Statement prepared on the margins of the UN High Level Meeting on Water, convened by the President of the UN General Assembly in March 2021, related to the implementation of the water-related Goals and Targets of the 2030 Agenda. The Government of Indonesia is a signatory to this Joint Statement. The Joint Statement includes ?Multi-Stakeholder and multi-disciplinary approaches are critical to achieve integrated water resources management, which does not only involve the different levels of government, but also includes civil society, academia, local communities, women and girls, youth and the private sector.?

(186) To stimulate more partnership with civil society is also one of the three key recommendations to support the implementation of the legal and institutional framework for IWRM in Indonesia provided by Law 7/2004 on water resources and related government regulations.

(187) To project is consistent with the Government of Indonesia?s Roadmap to achieving the UN SDGs (Ministry of National Development Planning/National Development Planning Agency), which was adopted by the government under Presidential Regulation No. 59/2017 on Implementation of the Sustainable Development Goals in Indonesia. For *SDG 15 - Life on Land*, the Roadmap states: ?Preventing a higher rate of forest degradation is essential to ensure the survival of our civilization in the future. Increasing local participation in forest management and incorporating private and public participation in conservation programs could be a more effective protection for Indonesia?s forests cover.? Roadmap policy directions include: ?strengthening institutional community in forest management? and ?improve the law enforcement against illegal use of forest areas?.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

(188) The project will develop strategic messaging around the project?s development issues, activities and events through a targeted communications strategy, with the goal to effectively transfer project knowledge and lay the groundwork to take the project to scale. This will be done through a series of strategic communication products (under Activity 3.1.3).

? A simple visual identity package, comprising a logo and branding guidelines, will be developed to ensure the project?s activities, products and events are recognizable as a cohesive unit; to promote stakeholder association and ownership; and to provide a project identity that resonates with stakeholders and the wider development community for strategic marketing, awareness creation and outreach purposes;

? A project website will be designed and upkept to serve as a digital brochure for the project and to easily and accessibly communicate project information, products, tools, resources, events and logistics. The website will also help the project manage knowledge and information transfer during the pandemic;

? A social media presence for the project (including on the Twitter, Facebook, Instagram, LinkedIn and YouTube platforms) will be instituted to expand project visibility, provide timely project information and updates, communicate early results, and increase project connections with stakeholders. Traditional media will also be utilized, including radio and

newspapers, to reach a wide audience. The project will engage the members of the Aliansi Air to support project knowledge management through dissemination of the strategic communications package on their own social media channels and peer networks;

? A series of result stories using the Told with Exposure software, or similar solution, to communicate good practices and experiences and lessons learned under the project and to demonstrate how this pilot project can be taken to scale. Specific attention in these result stories will be given to gender mainstreaming aspects of the project. These stories will be disseminated via the project website, social media channels, and at various outreach and global events;

? A short animated film will be produced, showcasing the project?s activities, success stories, and the difference the project can make if taken to scale. These film will be disseminated via the project website, social media channels, and at various outreach and global events;

? A traveling exhibition booth will be designed (rollups, posters, promotions) to be utilized to achieve the outreach and knowledge transfer activity objectives under the project; and

? A GEF Experience Note/GEF Good Practices Brief will be produced to assist the GEF with knowledge transfer of those experiences and lessons learned under the project that may be beneficial in the design and implementation/execution of similar future projects.

To accord proper acknowledgement to the GEF for providing grant funding, and to the project implementing and executing partners, the GEF logo, the project logo, the MOEF logo and the UNIDO logo will appear together on all project knowledge products and strategic communications.

(189) UNIDO, as the Project Implementing Agency, and MOEF, as the Project Executing Entity, will participate, as relevant and appropriate, in scientific, policy-based and/or other networks and events, and report on the results achieved and lessons learned from this innovative project in order to facilitate replication and upscaling of water stewardship activities. Results from the project will be widely disseminated within and beyond the project intervention zone through existing information sharing networks and fora. An explanation of these activities is found under the activity description for Activity 3.1.4. The Brantas Day outreach events under Activity 2.1.2 (see activity description above) will serve as important knowledge transfer events to a wider set of local-level stakeholders. A national workshop will be organized to disseminate, review, discuss and validate sex disaggregated data, information and lessons learned from the community focus group discussions/surveys on gender aspects of agroforestry restoration and water conservation (see activity description above).

(190) The budgeted knowledge management plan, including timebound milestones, deliverables and responsible party, is presented in Table 19.

Table 19: Knowledge Management Plan and Budget

Knowledge Management Activity	Timeframe	Output Target	Responsible Party	GEF Budget
Project Website	Developed and launched in Y1	1 Website	MOEF and PMU	US$2,000
Visual Identity Package	Developed in Y1	1 logo and branding	MOEF and PMU	US$1,500

Social Media Presence	Consistent across all 3 years of implementation	Launch and upkeep of 4 social media accounts	MOEF and PMU	US$5,256
Result Stories	Developed in Y3	3 to 4 result stories	MOEF and PMU	US$8,000
Animated Film	Developed in Y3	1 Film	MOEF and PMU	US$8,000
Exhibition Booth Materials	Developed in Y2 and updated in Y3	1 set of exhibition booth materials	MOEF and PMU	US$1,499
Knowledge Transfer at Global and National Conferences (Participation of project representatives and exhibition booth display)	Carried out in Y3	2 global conferences and 1 national conference (project participation)	MOEF and PMU	US$6,979
Side event at global conference for knowledge transfer and building partnerships for scaling up	Carried out in Y3	1 side event at global conference	MOEF and PMU	US$8,182
National gender mainstreaming workshop for knowledge transfer and scaling up	Carried out in Y3	1 national workshop	MOEF and PMU	US$5,839
			Total	**US$47,255**

(191) In the PPG phase, UNIDO prepared a detailed case study on the long history of this project and the complex process that finally led to the development of CEO document (see Annex H). The case study elaborates on the necessary preconditions and the challenges to match the goals of highly-committed private sector entities with those of the GEF and partner governments. This case study can be made available to the entire GEF partnership as part of the GEF Secretariat?s knowledge management and private sector engagement strategy. The case study will also be disseminated through industry roundtables, such as the CEO Water Mandate and the Beverage Industries Environmental Roundtable.

(192) To supplement this case study, a comparative analysis of Heineken?s sustainability strategy (?Brewing a Better World?) and The Coca-Cola Company?s (Refresh the World. Make a Difference?) and Anheuser-Busch InBev?s (AB InBev) (Bringing People Together for a Better World?) equivalent strategies was conducted during the PPG phase to help understand how the strategies are supporting or will support the achievement of the UN Sustainable Development Goals (SDGs) and how they relate to the GEF focal area strategies and GEF Core Indicators (see Annex I). The objective of this comparison is to understand whether there is clear alignment between the high-profile beverage sector and GEF programming on key metrics related to climate change protection and the conservation of natural resources; and where there are strategic entry points for collaboration under the GEF?s private sector engagement strategy.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

(193) Monitoring and evaluation (M&E) under the project will be conducted in accordance with established UNIDO and GEF procedures and guidelines. The objective of the project?s M&E process is to ensure successful and quality implementation by (1) tracking and reviewing project activity execution and actual accomplishments; (2) providing visibility into progress as the project proceeds so that the execution team can take early corrective action if performance deviates significantly from original plans; and (3) adjusting and updating project strategy and implementation plans to reflect possible changes on the ground, results achieved and corrective actions taken. The project?s M&E activities will be carried out under Component 4. Specific details of the M&E activities are presented in the descriptions of Activity 4.1.1, Activity 4.2.1 and Activity 4.2.2 above.

(194) The Project Results Framework (see Annex A) provides performance and impact indicators for project execution along with corresponding means of verification. Actual progress will be reported against the annual workplan approved by the PSC. If there are significant deviations between the forecasted workplan and actual execution, corrective measures will need to be taken. M&E activities will enable assessment of social, economic and environmental impacts. The data will be sex-disaggregated and gender-sensitive (see description under Activity 4.1.1 above). In the case that all necessary baseline data has not been collected during the PPG phase, it will be collected and documented by the relevant project partners within the first year of project implementation. As the PEE, MOEF will assure the regular monitoring of project progress as part of the PMU activities.

(195) Within three months of project launch, the MOEF will organize a Project Inception Workshop (see description under Activity 4.1.1 above), which will also constitute the first meeting of the PSC. One of the objectives of the Project Inception Workshop will be to determine the precise roles, support services and complementary responsibilities for project M&E, and to agree on any other M&E activities deemed necessary to support project-level adaptive management. The Project Inception Workshop report, prepared within 30 days of the Project Inception Workshop will document all decisions taken during the workshop, including decisions on M&E processes, and it will serve as a governing document for the project?s M&E.

(196) Seven PSC meetings will be conducted throughout the project implementation period (inception, 6 months, 12 months, 18 months, 24 months, 30 months and 36 months) and will be organized by MOEF. Between the PSC meetings, MOEF and UNIDO will keep regular contact through bi-monthly calls, in which progress in project execution will be assessed and reviewed, and adaptive measures agreed upon, if required. The MOEF will prepare an annual PIR to monitor progress made since project start, and in particular, for the reporting period (July 1 - June 30). A summary of the report will be shared with the PSC. In PSC meetings and through the PIRs, UNIDO will formally report to the GEF Secretariat the inputs provided by MOEF on progress in project execution, challenges encountered, and correction measures taken.

(197) As the Project Implementing Agency, UNIDO will facilitate a Midterm Review (MTR) and an Independent Terminal Evaluation (TE) of the project. The MTR will be used to determine progress being made toward the achievement of outcomes and will identify course correction, if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; it will highlight issues requiring decisions and actions; and it will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project?s term. The MTR will be validated and reflected on by the PSC. A TE will

take place three months before the final Project Steering Committee meeting, and will build on the results of the MTR. The TE will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It will also provide recommendations for follow-up activities. A Project Completion Report, drafted at project end, will be prepared by MOEF. The final report package, which will include the Project Completion Report, terminal PIR, and the TE and corresponding management response, will be discussed during the final PSC (end-of-project review meeting) to discuss lessons learned and opportunities for scaling up.

(198) The monitoring and reporting plan for gender aspects of the project is included under *3. Gender Equality and Women?s Empowerment* above.

(199) The budgeted M&E plan, including timebound milestones, deliverables and responsible party, is presented in Table 20.

Table 20: Monitoring and Evaluation Plan and Budget

M&E Activity	Timeframe	Output Target	Responsible Party	GEF Budget
Inception Workshop (virtual due to pandemic restrictions)	Within 90 days of project launch	1 Inception Workshop	MOEF and PMU	US$9,392
Inception Report	Within 30 days of Inception Workshop	1 Inception Report	MOEF and PMU	
Project Steering Committee Meetings	Every six months	7 PSC Meetings	PSC	
Tracking, Compiling and Synthesizing sex-disaggregated data and focus group discussion/survey data	Every six months	Validation Note (as output of national gender workshop)	MOEF and PMU (gender expert)	
Experience Note/ Good Practice Brief	Carried out in Y3	1 Experience Note/Good Practice Brief	MOEF and PMU	
GEF Project Implementation Report (PIR)	Annually	3 PIRs	MOEF	
Independent Mid-term Review (MTR)	Started at 18 months into project implementation	1 MTR	External review, submission to UNIIDO	US$20,580
Independent Terminal Evaluation (TE)	Started 6 months prior to expected project completion date	1 TE	External evaluator, submission to UNIIDO	US$25,028
Project Completion Report	Within 90 days of expected project completion date	1 Project Completion Report	MOEF	Absorbed by PMU costs
			Total	**US$55,000**

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

(200) The project is expected to result in a wide range of socioeconomic benefits as well as global environmental benefits. MOEF has determined that in total, 278,600 people (153,230 make and 125,370 female) are expected to benefit from the project. By promoting nature-based infrastructure solutions, the land will retain its productive capacities and the water retained can be used for a wide range of socioeconomic-relevant activities, from drinking water supply for resident communities by the local PDAMs (Perusahan d?Aerah Air Minum; Regional Drinking Water Supply Companies), to irrigation, to use for industrial purposes.

(201) The SAVi assessment includes an integrated cost-benefit analysis (CBA) that estimates the direct and indirect benefits and direct costs of improved management of 26,033 ha and installing the absorption wells under this project (see Annex M). The study area considered to assess impacts is the three sub-catchment areas, covering 179,142 ha. This area intersects seven regencies and two municipalities. The model combines the results of the SAVI?s spatially explicit analysis with data from the Indonesia National Statistics Office, the East Java Statistics Office and MOEF. Additional data gaps were filled using numbers from international literature. Net benefits for the project are calculated assuming a 20-year lifetime and also consider how the net benefits would change if the lifetime were extended to 30 years. The results of the integrated CBA is presented in Table 21. The CBA considers project performance under two climate change scenarios: (1) Representative Concentration Pathway (RCP) 4.5, which assumes emissions peak in 2040, and RCP 8.5, which assumes continued high reliance on fossil fuel-based energy.

Table 21: Integrated Cost Benefit Analysis

Numbers in italics depend on climate scenario. Net benefits are equal to avoided costs plus added benefits minus investment costs. Net benefits are positive and increase with greater climate variability. All values are in 2020 million USD.	20-year lifetime (2021-2040)		30-year lifetime (2021-2050)	
	RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
Added Benefits				
Value of bamboo exports	0.21	0.21	0.35	0.35
Value of agroforestry benefits	2.12	2.12	3.35	3.35
Tree planting wages	0.52	0.52	0.52	0.52
Carbon storage benefit	31.99	31.99	31.99	31.99
TOTAL ADDED BENEFITS	**34.84**	**34.84**	**36.21**	**36.21**
Avoided Costs				
Avoided flood damages to households	*24.00*	*24.53*	*486.79*	*77.96*
Avoided flood damages to agriculture	*12.06*	*14.00*	*193.73*	*36.90*
Avoided erosion damages to agriculture	*17.85*	*42.64*	*41.65*	*52.56*
Avoided nitrogen pollution	17.10	17.10	25.65	25.65
Avoided phosphorus pollution	8.08	8.08	12.12	12.12
TOTAL AVOIDED COSTS	**79.09**	**106.34**	**759.93**	**205.18**
Investment & Maintenance Costs				
Improved land management investment cost	8.94	8.94	8.94	8.94

Absorption wells and biopori investment cost	0.56	0.56	0.56	0.56
Annual maintenance costs	0.10	0.10	0.14	0.14
TOTAL COSTS	**9.60**	**9.60**	**9.64**	**9.64**
NET BENEFITS	**104.34**	**131.59**	**786.50**	**231.75**
BENEFIT TO COST RATIO	**11.87**	**14.71**	**82.56**	**25.03**

(202) The assessment also calculates the net present value (NPV) and internal rate of return (IRR) of the project, for which the avoided costs and added benefits are accounted as revenue streams of the project. Upon extending the integrated cost-benefit analysis to account for inflation as well as the time value of money, the SAVi finds the following societal net present values (S-NPV) and sustainable internal rate of returns (S-IRR) under the different climate scenarios and lifetime scenarios (Table 22).

Table 22: The NPV and IRR of the Project

Lifetime of project	**20-year lifetime (2021-2040)**		**30-year lifetime (2021-2050)**	
Climate Scenario	**RCP 4.5**	**RCP 8.5**	**RCP 4.5**	**RCP 8.5**
S-NPV	63,539	71,551	208,593	92,259
S-IRR	62.8%	74.8%	62.9%	74.8%
S-NPV (excluding carbon benefit)	41,850	49,861	186,903	70,569
S-IRR (excluding carbon benefit)	56.5%	69.5%	56.6%	69.5%
NPV (excluding carbon benefit and avoided costs)	-8,330	-8,330	-8,136	-8,136
IRR (excluding carbon benefit and avoided costs)	-11.0%	-11.0%	-4.8%	-4.8%

(203) Based on the results in the two tables above, the SAVi concludes that the MEWLAFOR project, in the Indonesian context, has positive benefits that far exceed the costs when externalities are considered:

- ? The project is economically viable for investors and generates net benefits for society when considering both material economic impacts (with an IRR of 22.5%), as well as material impacts and externalities (with an IRR above 62%).
- ? The value of the project increases when climate variability is greater because there are more avoided costs. Reforestation and avoided deforestation mitigate flooding and erosion damages. Hence, when the potential for these damages is larger, the avoided costs (i.e., benefits) of the project increase. This highlights that nature contributes to climate resilience and increased adaptive capacity.
- ? The project has positive net benefits for the three sub-catchment areas. For the 20-year lifetime, net benefits are expected to be between US$104.34 million and US$131.59 million (undiscounted and uninflated).
- ? Although not included in the CBA, the SAVi also estimated the downstream impacts of widespread forest restoration and the absorption wells. It found that improved land management on a large scale could increase groundwater recharge by up to 6.1% per year. Absorption wells will further increase groundwater availability and could mitigate one third of downstream flood damage.

(204) Although the societal value is large, the project underscores the need for broad coordination among stakeholders to replicate and scale similar projects. The MEWLAFOR project is a demonstration of the benefits that can be reaped when this coordination is achieved across

sectors and geographies and stakeholders are able to restore degraded land and improve water management.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

During the PPG phase, an Environmental and Social Management Plan (ESMP) was developed and is presented as Annex L.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex L_Environmental_and_Social_Management_Plan	CEO Endorsement ESS	
ESS Screening	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

For a better resolution of the document, please refer to Annex A: Project Results Framework.

RESULT	OUTCOME INDICATOR	BASELINE	END OF PROJECT TARGET	MEANS OF VERIFICATION
Project Objective To demonstrate an innovative approach to how a proactive multi-stakeholder private sector-catalyzed partnership for water stewardship can be upscaled to achieve transformational changes in the restoration of degraded terrestrial ecosystems.	**Indicator 1 (GEF Core Indicator #4)** Area of landscapes under improved practices (excluding protected areas) (Hectares)(ha)	0	26,033 ha	Review project progress reports to PSC; review PIR
	Indicator 2 (GEF Core Indicator #6) Greenhouse gas emissions mitigated (metric tons of CO_2) (mt)	0	9.6 million mt of CO_2	Review project progress reports to PSC; review PIR
	Indicator 3 (GEF Core Indicator #11) Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	0	278,600 (125,370 female 153,230 male)	Review project progress reports to PSC; review PIR
Project Component 1: Land restoration for water retention, sediment retention and improved livelihoods				
Outcome 1 Loss of 2,407 ha of protected forest and 19,929 ha of conservation forest avoided; up to 18 million t/year of erosion avoided; 121 t of N and 35 t of P input into the Brantas avoided annually; 7,981,341 m^3 of water per year retained in the catchment area	**Indicator 4** ha of protected forest loss avoided	0	2,407 ha of protected forest loss avoided	Review project progress reports to PSC; review PIR
	Indicator 5 ha of conservation forest avoided	0	19,929 ha of conservation forest avoided	Review project progress reports to PSC; review PIR
	Indicator 6 t/year of erosion avoided	0	18 million t/year of erosion avoided	Review project progress reports to PSC; review PIR
	Indicator 7 t of N input into the Brantas avoided annually	0	121 t of N input into the Brantas avoided annually	Review project progress reports to PSC; review PIR
	Indicator 8 t of P input into the Brantas avoided annually	0	35 t of P input into the Brantas avoided annually	Review project progress reports to PSC; review PIR
	Indicator 9 m^3 of water per year retained in the catchment area	0	7,981,341 m^3 of water per year retained in the catchment area	Review project progress reports to PSC; review PIR
Output 1.1 Restoration of upstream agroforestry systems to revert land degradation, enhance water retention and groundwater replenishment and cater for alternative livelihoods.	**Indicator 10** ha of upstream agroforestry schemes restored	0	387 ha of upstream agroforestry schemes restored	Review project progress reports to PSC; review PIR
	Indicator 11 Number of community farmers with enhanced capacity to plant and maintain agroforestry schemes (disaggregated by sex)	0	150 community farmers with enhanced capacity to plant and maintain agroforestry schemes	Review project progress reports to PSC; review PIR; review training materials
	Indicator 12 Number of community farmers with enhanced capacity to market Non-Timber Forrest Products (NTFPs) (disaggregated by sex)	0	75 community farmers with enhanced capacity to market NTFPs	Review Field school report; review training materials; review exit surveys

RESULT	OUTCOME INDICATOR	BASELINE	END OF PROJECT TARGET	MEANS OF VERIFICATION
	Indicator 13 Number of women community farmers with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	0	25 women (as part of the established KWT women's farmer group) with enhanced capacity to plant and maintain agroforestry schemes and market NTFPs	Review capacity building program report; review training materials; review exit surveys
Output 1.1 Activities	1. 251 ha (GEF increment) of agroforestry schemes planted and maintained | 136 ha (PT Multi Bintang/Aliansi Air) of agroforestry schemes planted and maintained 2. 1 one-day group training to build capacity in agroforestry planting and maintenance techniques (150 farmers participating) 3. 1 market analysis of NTFP in the Brantas Basin 4. 1 traveling field school to build capacity in NTFP marketing (75 farmers participating) 5. 1 community focus group discussion/survey on gender aspects of community forest restoration and marketing NTFP 6. 1 KWT women's farmer group established and supported (25 women members) 7. 1 tailored and intensive capacity building program for members of established KWT in marketing NTFP 8. 1 NTFP industry roundtable ("Temu Niaga") organized			
Output 1.2 Restoration of riparian bamboo forests for sediment retention, water infiltration and pollution absorption and sustainable use of bamboo for value-added products.	**Indicator 14** ha of riparian bamboo forest (400 stools/ha) restored	0	130 ha of riparian bamboo forest (400 stools/ha) restored	Review project progress reports to PSC; review PIR
	Indicator 15 Number of community farmers with enhanced capacity to plant and maintain riparian bamboo forests (disaggregated by sex)	0	150 community farmers (from 25 villages) with enhanced capacity to plant and maintain riparian bamboo forests	Review project progress reports to PSC; review PIR; review training materials
	Indicator 16 Number of community farmers with enhanced capacity to build sustainable value-added chains for bamboo products (disaggregated by sex)	0	50 community farmers with enhanced capacity to build sustainable value-added chains for bamboo products	Review field school report; review training materials; review exit surveys
Output 1.2 Activities	1. 130 ha of riparian bamboo forests planted and maintained 2. 1 one-day group training to build capacity in bamboo planting and maintenance techniques (150 farmers participating) 3. 1 industry mapping study and market analysis for value-added bamboo products 4. 1 intensive field school in building value-added chains for bamboo products (50 farmers participating) 5. 6. National strategy for the 1,000 Bamboo Villages initiative and campaign to procure a village factory for value-added bamboo product processing 6. "Matchmaking" program helping to pair bamboo village farmers with entities in local business community			
Project Component 2: Nature-based infrastructure and awareness creation for land and water conservation, sediment and water retention				

RESULT	OUTCOME INDICATOR	BASELINE	END OF PROJECT TARGET	MEANS OF VERIFICATION
Outcome 2 Up to 1,210,000 m^3 of water per year retained in the catchment area and awareness for integrated land and water conservation created for at least 24,000 people	**Indicator 17** m^3 of water per year retained in the catchment area	0	Up to 1,210,000 m^3 of water per year retained in the catchment area	Review project progress reports to PSC; review PIR
	Indicator 18 Number of people with increased awareness for integrated land and water conservation	0	24,000 people with increased awareness for integrated land and water conservation	Review project progress reports to PSC; review PIR; review teacher surveys
Output 2.1 Construction of 597 absorption wells (2x2x2m) and awareness creation for enhanced water retention in the catchment areas	**Indicator 19** Number of absorption wells constructed	0	597 absorption wells constructed	Review project progress reports to PSC; review PIR
	Indicator 20 Number of people with enhanced capacity to construct and maintain absorption wells (disaggregated by sex)	0	150 people with enhanced capacity to construct and maintain absorption wells	Review project progress reports to PSC; review PIR; review training materials
	Indicator 21 Number of people with enhanced capacity in water stewardship good practices (disaggregated by sex)	0	210 people with enhanced capacity in water stewardship good practices	Review field school report; review field school exit surveys; review training materials
	Indicator 22 Number of new water stewardship activities/partnerships established in the sub-catchments of the Brantas river and beyond	0	5 new water stewardship activities/partnerships established in the sub-catchments of the Brantas river and beyond	Review Investment Forum reports; review Forum exit surveys; Review project progress reports to PSC; review PIR
	Indicator 23 Number of twinning exchanges for water stewardship knowledge transfer	0	6 twinning exchanges for water stewardship knowledge transfer	Review twinning reports; Review project progress reports to PSC; review PIR
	Indicator 24 Number of women involved in community decision making and in nature-based infrastructure development and education activities	0	50 women involved in community decision making and in nature-based infrastructure development and education activities	Review Women's Investment Forum report; Review project progress reports to PSC; review PIR
	Indicator 25 Number of people with increased awareness of the importance of women in water stewardship activities	0	2,000 people with increased awareness of the importance of women in water stewardship activities	Review project progress reports to PSC; review PIR
Output 1.2 Activities	1. 597 absorption wells constructed and maintained			

The portal doesn't seem to be able to save the rest of the document. Please refer to the uploaded Annex A.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

For a better resolution of the document refer to Annex B Responses to Project reviews.

GEF Secretariat Response	PPG Response
"Overall there is excellent representation of the private sector and their roles identified. The multi-stakeholder approach identified in this PIF is supported the GEF's private sector engagement strategy and is consistent with the vision for private sector engagement. One aspect to consider and document is the metrics that will be used to assess the "Brewing a Better World" from the private sector perspective. What metrics are they seeking and how well do they align with those of the GEF. Also if these metrics are Heineken's then it would be interesting to compare to AB InBev, Coca Cola and to see whether there can be alignment on key metrics for business related to water for this sector. This level of detail may be included in the PPG." "During the PPG phase a short comparative analysis of the HEINEKEN "Brewing a better World" sustainability strategy and the equivalent strategies of Coca Cola and AB InBev will be carried out. This analysis will assess how the sustainability strategies of these 3 globally operating corporations will support the achievement of the SDGs, how they relate to the GEF Focal Area Strategies and how the metrics of these sustainability strategies do relate to the GEF Core Indicators."	The comparative analysis was conducted during the PPG phase and is found in Annex I.
"The involvement of Heineken could be a valuable case study (with cross-reference to the project's knowledge management approach). GEF is interested in making such a case study later available to the entire partnership as part of our knowledge management and private sector engagement strategy." "During the PPG phase UNIDO will prepare a case study on the long history of this project and the complex process that finally led to the development of the project document. It will also elaborate on the necessary preconditions and the challenges to match the goals of highly committed private sector entities with those of the GEF and partner governments. The purpose will be two to allow other industries to benefit from the lessons learned and to make it available through GEF SEC to the entire partnership as part of GEF SEC's knowledge management and private sector engagement strategy. The case study will also be disseminated through industry round tables as e.g. the Beverage Industries Environmental Round Table and the CEO Water Mandate."	A detailed history of the project was prepared during the PPG Phase and is found in Annex H.
"Opportunities throughout Indonesia in the other 14 priority catchments targeted by the government could be further identified as the project evolves. Linkage with the Indonesian division of the Water Stewardship Alliance could also engage further private sector actors and linkage to these other catchments."	The CEO document includes the Alliance for Water Stewardship, the Indonesia Business Council for Sustainable Development, and Delft University as potential members of a coordination committee under the national DAS forum (under Activity 2.1.2) to oversee the organization and implementation of two investment forums on water stewardship. Dialogue with these organizations, to discuss potential linkages, will take place in September and October 2021.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

The below information is also presented in Annex C: Status of Utilization of PPG.

PPG Grant Approved at PIF: 50,000			
Project Preparation Activities Implemented	**GEFTF/LDCF/SCCF Amou**		
	Budgeted Amount	**Amount Spent to Date**	**An Co**
Prepare Gender Analysis and Gender Mainstreaming Strategy	6,500	5,038	
Prepare Environmental and Social Management Plan	9,000	5,305	
Project Field Survey		4,091	
Draft CEO Endorsement Document	25,000	29,784	
Stakeholder Validation Workshop	9,500		
Total	$50,000	44,218	

Status: 26/08/2021

The stakeholder validation workshop is still outstanding. In line with Covid-19 preventive measures, national travel is not permitted at the time of this submission. If the ban is lifted in September 2021, the stakeholder validation workshop will be conducted as a hybrid event, with participation by partners from the project region. Alternatively, a fully-virtual event with stakeholders that can be reached will be organized, and the hybrid event, with participation by partners from the project region, will be organized as soon as restrictions are lifted.

Sustainable Asset Valuation of Forest Restoration in the Brantas Basin, Indonesia

The objective of the UNIDO-implemented and IISD-executed GEF project ?Using Systemic Approaches and Simulation to Scale Nature-Based Infrastructure for Climate Adaptation? (GEF ID 10632) is to enhance adaptation to climate change by establishing the business case, building capacities, and enabling increased investment in nature-based infrastructure. To this end, a financial and economic cost-benefit analysis of nature-based infrastructure solutions and a comparison with grey infrastructure solutions resulting in the same biophysical value (improvement on ecosystems services provided) is supported.

The MEWLAFOR project was chosen as one of the first six projects accepted for support under the ?Using Systemic Approaches and Simulation to Scale Nature-Based Infrastructure for Climate Adaptation? project. As part of this process, a detailed calculation of the biophysical value expected to result from the MEWLAFOR project was conducted and a financial and economic cost-benefit analysis of the proposed nature-based infrastructure solutions was carried out (see Annex M). The results are reflected throughout the MEWLAFOR GEF-7 Request for Project Endorsement/Approval document.

The economic valuation determines the additional monetary value on the positive externalities provided by nature-based infrastructure solutions. The MEWLAFOR project has large societal benefits. The valuation reveals that the carbon storage benefit alone covers the cost of planting trees, installing water retention wells and maintaining these investments for at least 30 years. The project also avoids large costs due to flooding, erosion and nutrient runoff, which are more than

three times larger than the value of carbon storage. These avoided costs are larger when climate variability is greater. Together, these analyses will be used to demonstrate to government, private sector entities, newly-emerged private sector funds, IFIs and donors supporting large-scale projects (such as the Green Climate Fund), the comparative advantages and economic cost effectiveness of nature-based infrastructure for the transformational change process required to effectively mitigate land degradation and adapt to climate change at the local, regional and global level.

Stakeholder Engagement Process During PPG Phase

The stakeholder engagement process to build the GEF-7 Request for Project Endorsement/Approval document involved a hybrid of virtual and face-to-face meetings with stakeholders. Due to the Covid- 19 pandemic, international UNIDO staff and the lead consultant could not travel to Jakarta to meet with MOEF, the Aliansi Air, local NGOs and CSOs and the Mojokerto Regency government, among other stakeholders, to prepare the project. The UNIDO team stationed in Jakarta was able to meet with MOEF face-to-face on a few occasions.

Between May and August 2021, the PPG Team and MOEF met virtually and in person on 13 formal occasions, for 34 hours of virtual discussions on project preparation.

To further support project preparation, the PPG Team and MOEF consulted the following stakeholders between May and August 2021 (not an exhaustive list):

- Director General of Water Resources, Ministry of Public Works and Public Housing
- Head of the Department of Agriculture, Mojokerto Regency, East Java Province
- Head of the Bureau of Foreign Cooperation Secretariat General KLHK
- Head of the Education Office of Mojokerto Regency, East Java Province
- Head of the Environmental Service of Mojokerto Regency, East Java Province
- Head of the Mojokerto Regency Health Office, East Java Province
- Head of the Department of Public Housing, Settlement Areas and Public Housing
- Mojokerto Regency, East Java Province
- Head of Department of Public Works and Spatial Planning K East Java Province
- Head of BPDASHL Brantas Sampean
- Head of the Brantas Sampean Watershed Forum
- Chairman of the Aliansi, Mojokerto Regency, East Java Province
- Sustainability and Partnership Lead, PT Multi Bintang

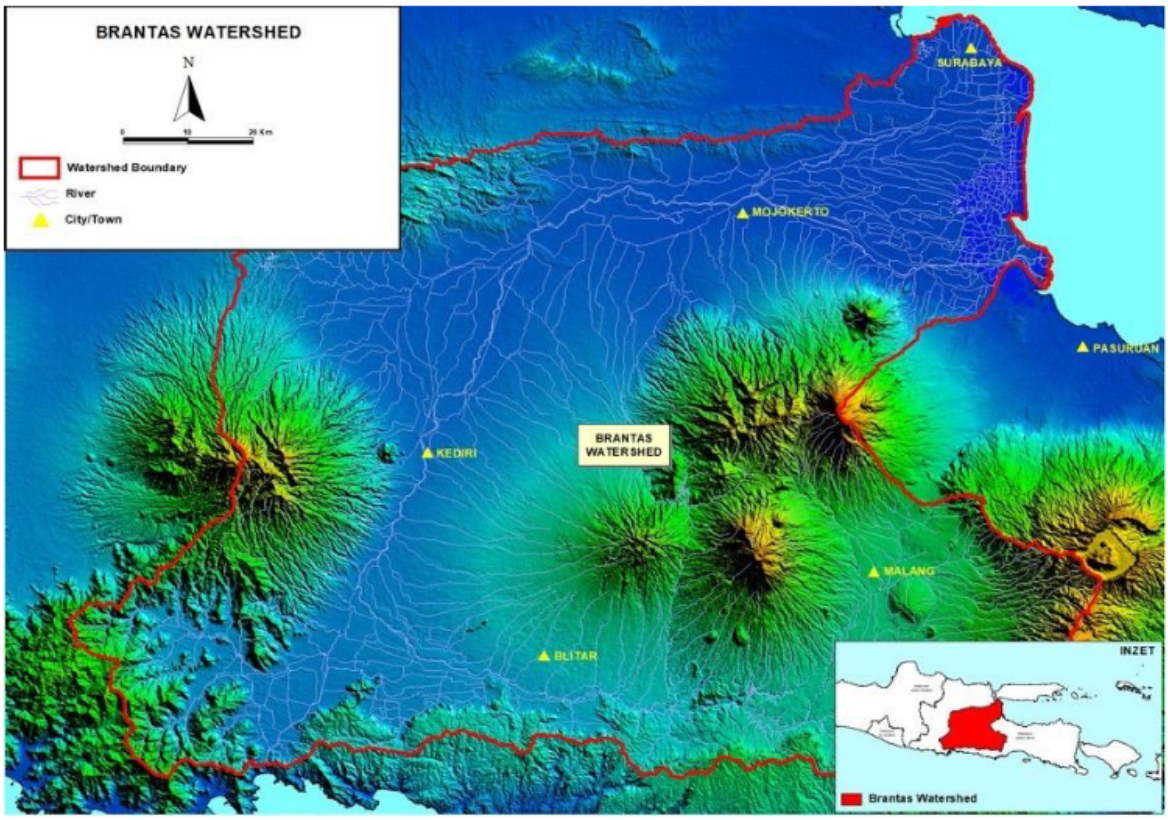
- Director, Bambu Lestari
- Director, YLH Seloliman
- Head of Legal and Technical Cooperation Division, Secretariat General of PDASRH
- Head of Sub-Directorate for Patterning of the PEPDAS Directorate
- Head of Institutional Sub-Directorate of PEPDAS Directorate
- Head of Sub-Directorate for Watershed Management Control, Directorate of PEPDAS
- Head of Sub-Directorate for Evaluation of the PEPDAS Directorate
- Head of Sub-Division of Technical Cooperation, Secretariat General of PDASRH
- Head of Information System Directorate of PEPDAS
- Head of Institutional Identification of PEPDAS Directorate
- Head of Watershed Restored by Directorate of PEPDAS
- Head of Administration Division of PEPDAS Directorate

MOEF met in-person with representatives from the Mojokerto Regency local government during the five-day project field survey in June 2021. Please see Annex N for more information.

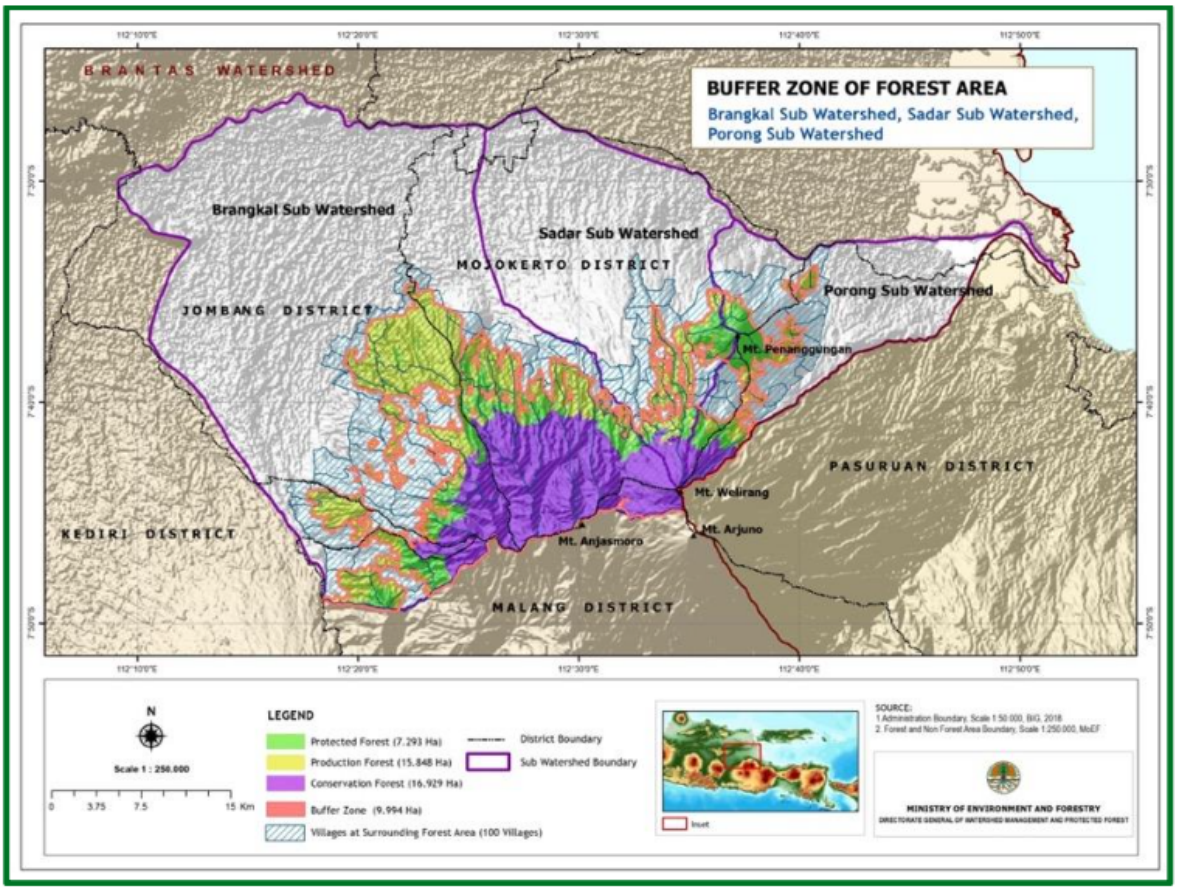
ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

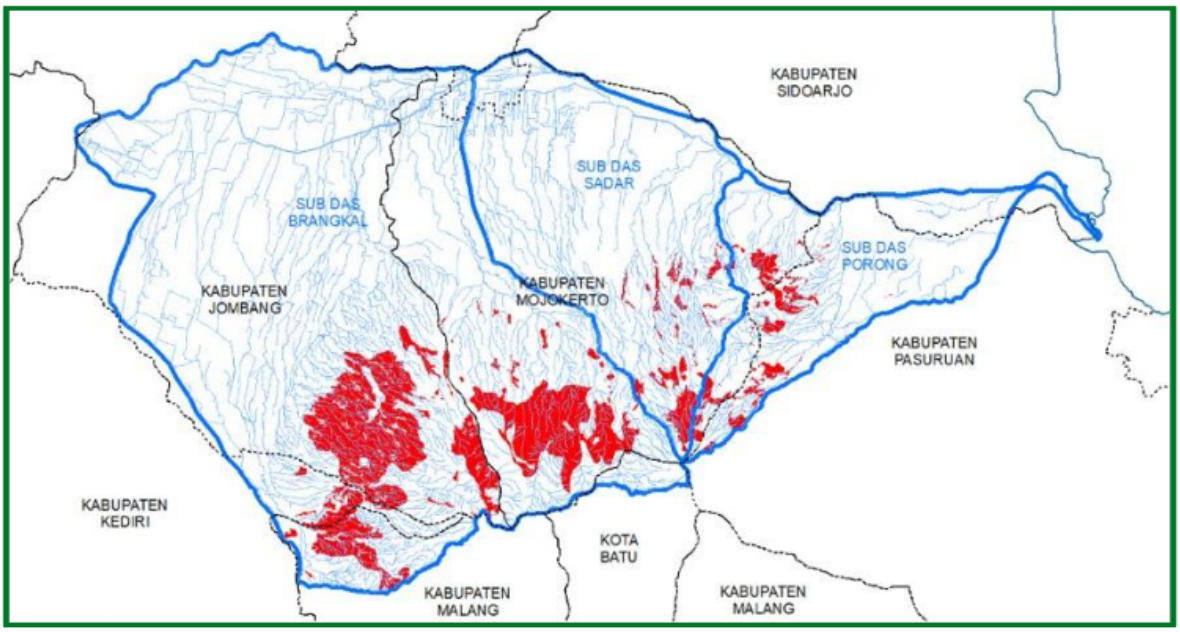
Please also refer to Annex E: Project Maps and Coordinates.



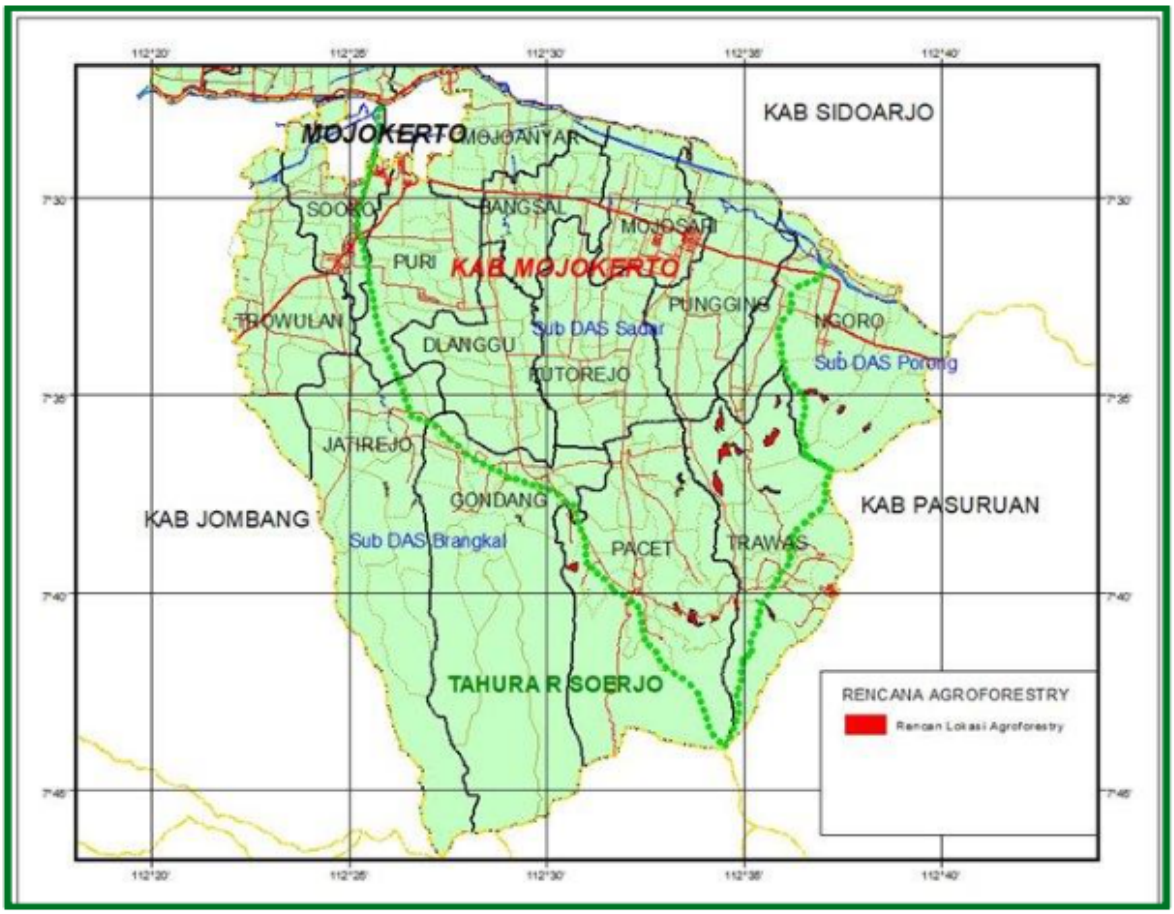
Map 1: Brantas River Basin



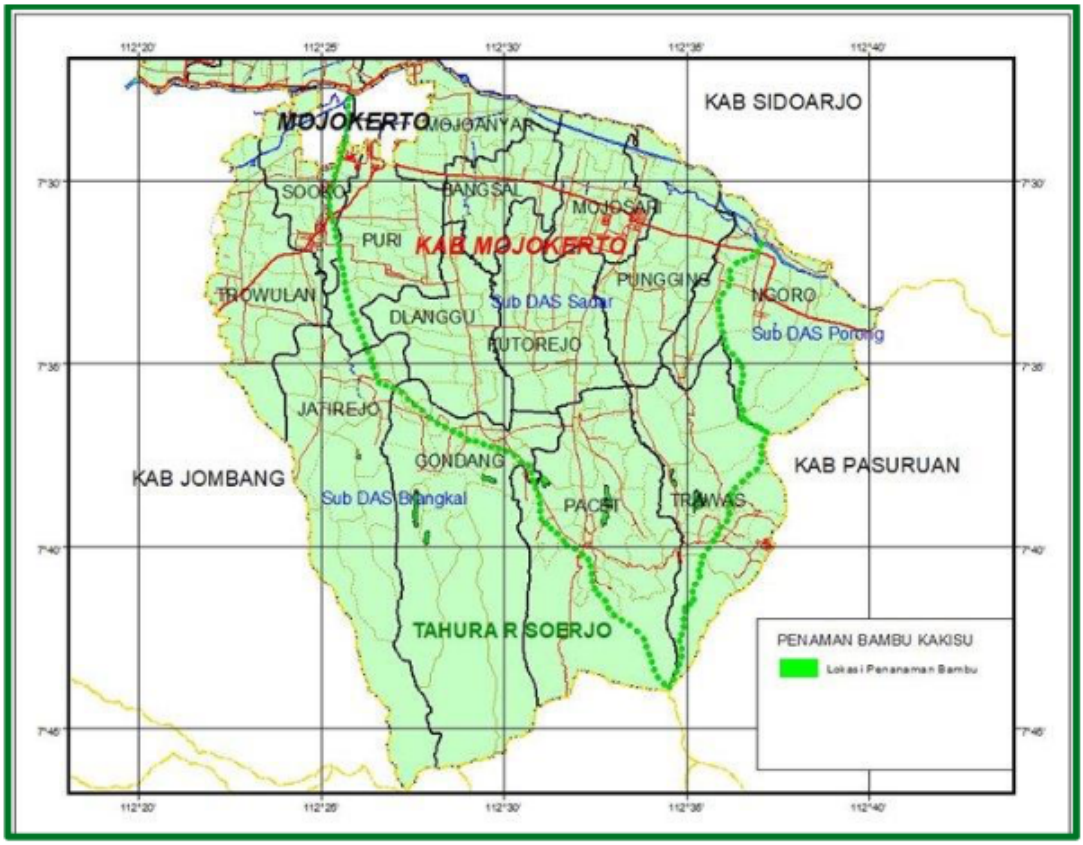
Map 2: Buffer Zone of Forest Area in the Brankal, Sadar and Porong Sub-Catchments of the Brantas



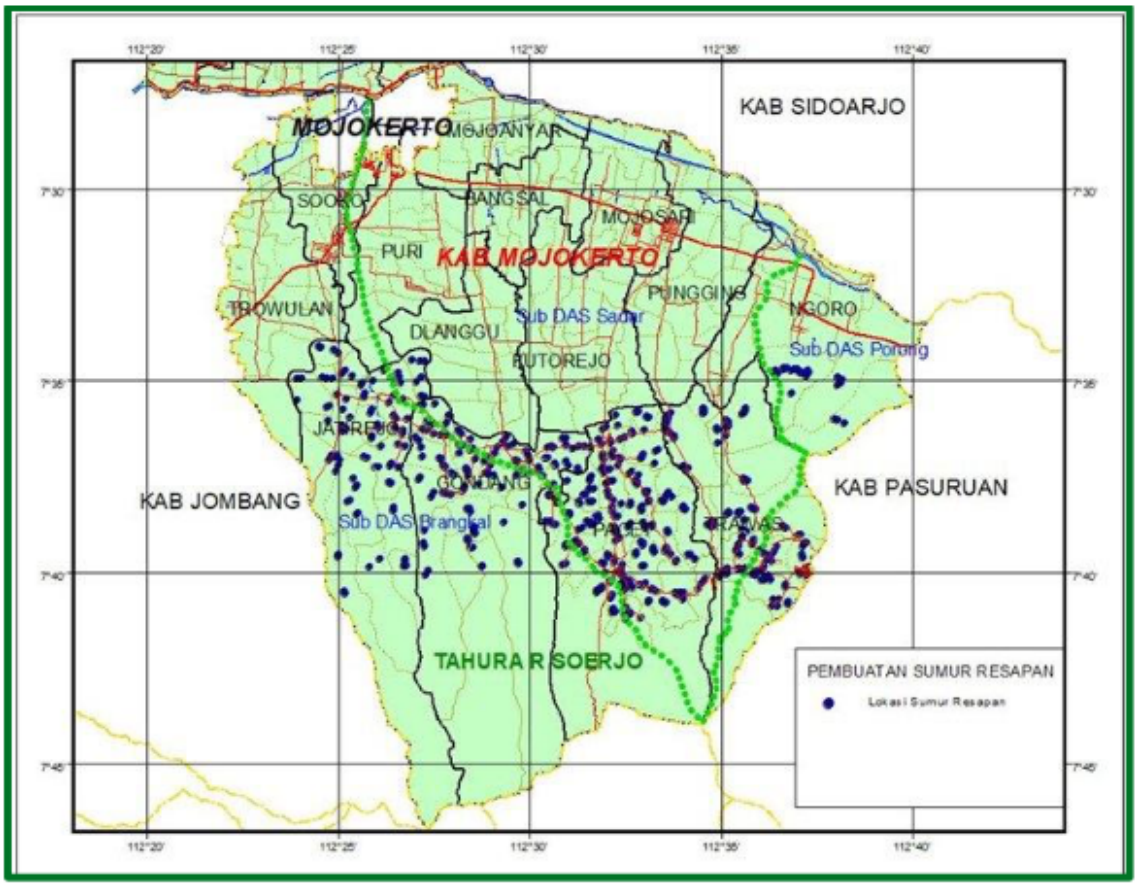
Map 2: 2020 Critical Land Area in the Brankal, Sadar and Porong Sub-Catchments of the Brantas River Basin (source: MOEF, 2021)



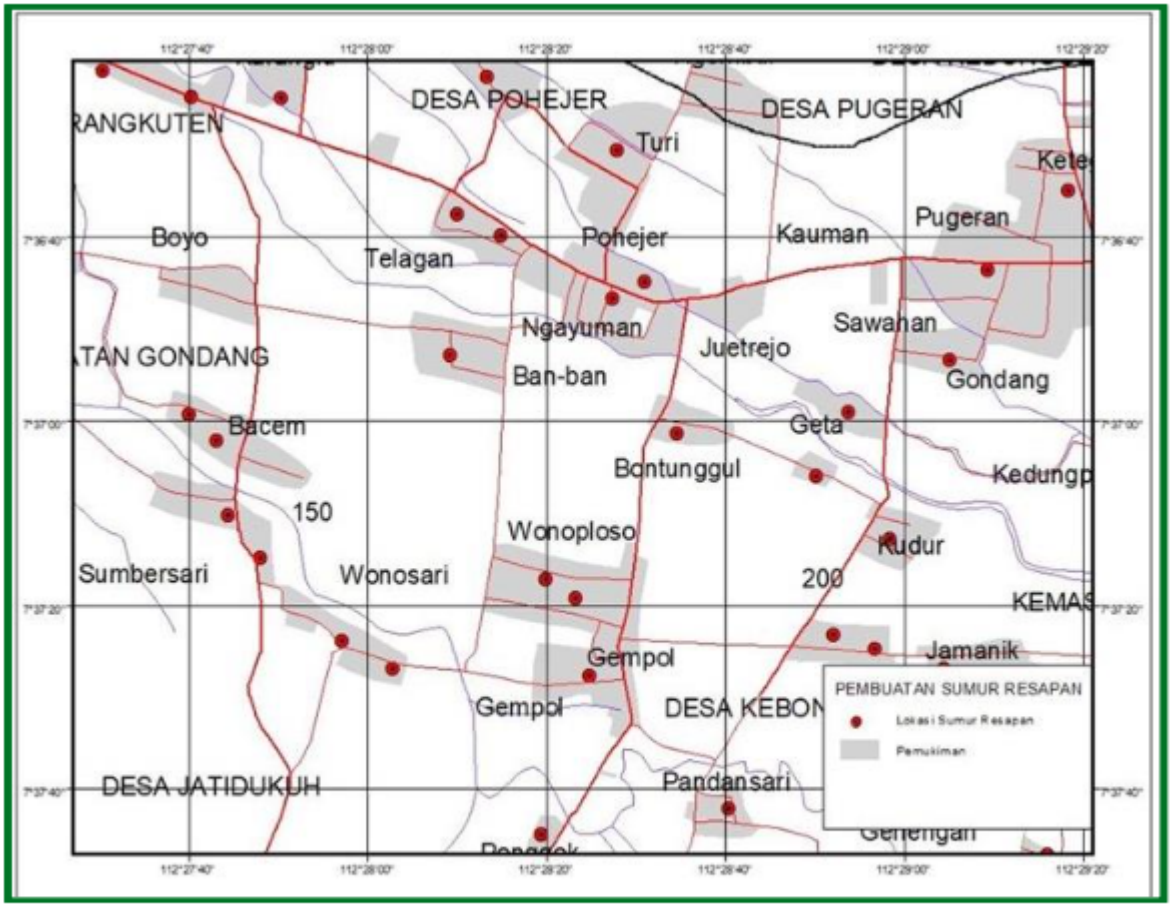
Map 3: Indicative Locations of Agroforestry Schemes in the Project Area
(For GEF Incremental Funding - 251 ha Agroforestry Schemes)



Map 4: Indicative Locations of Bamboo Riparian Forest Plantation in the Project Area
(For GEF Incremental Funding - 130 ha Bamboo Riparian Forest Plantation)



Map 5: Indicative Locations of Absorption Wells in the Project Area
(For GEF Incremental Funding - 597 Absorption Wells)



Map 6: Indicative Locations of Biopori in the Project Area
(For GEF Incremental Funding - 8,000 Biopori in 40 Schools)

ANNEX E: Project Budget Table

Please attach a project budget table.

The project budget is also presented in the file "10757_MEWLAFOR Budget"

Total Budget

Outputs/Activities/Deliverables	YEAR 1		YEAR 2		YEAR 3		Total (Years 1-3)	
	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
C1 - Land Restoration for Water Retention, Sediment Retention and Imroved Liveihoods								
Output 1.1: Restoration of Upstream Agroforestry Systems to Revert Land Degradation, Enhance Water Retention and Groundwater Replenishment and Cater for Alternative Livelihoods								
Activity 1.1.1 – Planting Agroforestry Schemes (Pattern Plant) (251 ha)								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ 120,711	1,726,165,000	$ 30,015	429,210,000	$ 25,276	361,440,000	$ 176,001	2,516,815,000
Equipment (Materials)	$ 137,104	1,960,594,000	$ 33,576	480,143,000	$ 24,028	*343,599,000*	$ 194,709	2,784,336,000
Project Travel	$ 7,552	108,000,000	$ 5,874	84,000,000	$ 5,874	84,000,000	$ 19,301	276,000,000
Misellaneous	$ 1,538	22,000,000	$ 140	2,000,000	$ 140	2,000,000	$ 1,818	26,000,000
Sub-Total 1.1.1	**$ 266,906**	**3,816,759,000**	**$ 69,605**	**995,353,000**	**$ 55,317**	**791,039,000**	**$ 391,829**	**5,603,151,000**
Activity 1.1.2 – Marketing Non-Timber Forest Products								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ 5,035	72,000,000	$ 17,000	243,100,000	$ 10,000	143,000,000	$ 32,035	458,100,000
Experts	$ 10,410	148,870,000	$ -		$ -		$ 10,410	148,870,000
Project Travel	$ 2,350	33,600,000	$ 671	9,600,000	$ 671	9,600,000	$ 3,692	52,800,000
Misellaneous	$ 140	2,000,000	$ 1,538	22,000,000	$ 140	2,000,000	$ 1,818	26,000,000
Sub-Total 1.1.2	**$ 17,935**	**256,470,000**	**$ 19,210**	**274,700,000**	**$ 10,811**	**154,600,000**	**$ 47,956**	**685,770,000**
Total Output 1.1	**$ 284,841**	**4,073,229,000**	**$ 88,815**	**1,270,053,000**	**$ 66,129**	**945,639,000**	**$ 439,785**	**6,288,921,000**
Output 1.2: Restoration of Riparian Bamboo Forests for Sediment Retention, Water Infiltration and Pollution Absorption and Sustainable Use of Bamboo for Value Added Product								
Activity 1.2.1 – Planting Bamboo Forests (Kakisu) (130 ha)								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ 90,161	1,289,300,000	$ 22,091	315,900,000	$ 18,000	257,400,000	$ 130,252	1,852,600,000
Equipment (Materials)	$ 170,509	2,438,275,000	$ 36,750	525,525,000	$ 24,250	346,775,000	$ 231,509	3,310,575,000
Project Travel	$ 8,056	115,200,000	$ 6,378	91,200,000	$ 6,210	88,800,000	$ 20,643	295,200,000
Misellaneous	$ 1,538	22,000,000	$ 140	2,000,000	$ 140	2,000,000	$ 1,818	26,000,000
Sub-Total 1.2.1	**$ 270,264**	**3,864,775,000**	**$ 65,358**	**934,625,000**	**$ 48,600**	**694,975,000**	**$ 384,222**	**5,494,375,000**
Activity 1.2.2 – Building Sustainable Value-Added Chains for Bamboo								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ 6,853	98,000,000	$ 20,070	287,000,000	$ 5,857	83,755,000	$ 32,780	458,755,000
Experts	$ 14,685	210,000,000	$ -		$ -		$ 14,685	210,000,000
Project Travel	$ 2,350	33,600,000	$ 671	9,600,000	$ 671	9,600,000	$ 3,692	52,800,000
Misellaneous	$ 1,538	22,000,000	$ 140	2,000,000	$ 140	2,000,000	$ 1,818	26,000,000
Sub-Total 1.2.2	**$ 25,427**	**363,600,000**	**$ 20,881**	**298,600,000**	**$ 6,668**	**95,355,000**	**$ 52,976**	**757,555,000**
Total Output 1.2	**$ 295,691**	**4,228,375,000**	**$ 86,240**	**1,233,225,000**	**$ 55,268**	**790,330,000**	**$ 437,198**	**6,251,930,000**
Total C1	**$ 580,532**	**8,301,604,000**	**$ 175,054**	**2,503,278,000**	**$ 121,396**	**1,735,969,000**	**$ 876,983**	**12,540,851,000**
C2 - Nature-Based Infrastructure and Awareness Creation for Land and Water Conservation, Sediment and Water Retention								
Output 2.1: Construction of 597 Absorption Wells (2x2x2m) and Awareness Creation for Enhanced Water Retention in the Catchment Area								
Activity 2.1.1 – Constructing Absorption Wells (597 Units)								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ -		$ 275,730	3,942,937,552	$ -		$ 275,730	3,942,937,552
Project Travel	$ -		$ 8,056	115,200,000	$ -		$ 8,056	115,200,000
Misellaneous	$ -		$ 1,538	22,000,000	$ -		$ 1,538	22,000,000
Sub-Total 2.1.1	**$ -**	**-**	**$ 285,324**	**4,080,137,552**	**$ -**	**-**	**$ 285,324**	**4,080,137,552**
Activity 2.1.2 – Promoting Water Stewardship Across the Brantas Basin and Beyond								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ -		$ 57,009	815,235,000	$ 57,009	815,235,000	$ 114,019	1,630,470,000
Experts	$ 29,302	419,020,000	$ -		$ -		$ 29,302	419,020,000
Project Travel	$ 21,166	302,677,000	$ 8,056	115,200,000	$ 8,056	115,200,000	$ 37,278	533,077,000
Miscellaneous	$ 140	2,000,000	$ 11,397	162,980,000	$ 140	2,000,000	$ 11,677	156,980,000
Sub-Total 2.1.2	**$ 50,608**	**723,697,000**	**$ 76,463**	**1,093,415,000**	**$ 65,205**	**932,435,000**	**$ 192,276**	**2,749,547,000**
Total Output 2.1	**$ 50,608**	**723,697,000**	**$ 361,787**	**5,173,552,552**	**$ 65,205**	**932,435,000**	**$ 477,600**	**6,829,684,552**
Output 2.2: Establishment of 8,000 Biopori and Awareness Creation for Water Conservation in 40 Schools								
Activity 2.2.1 – Demonstrating Practical Water Conservation Measures								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ -		$ 64,378	920,600,000	$ -		$ 64,378	920,600,000
Project Travel	$ -		$ 14,814	211,839,000	$ -		$ 14,814	211,839,000
Miscellaneous	$ -		$ 1,538	22,000,000	$ -		$ 1,538	22,000,000
Sub-Total 2.2.1	**$ -**	**-**	**$ 80,730**	**1,154,439,000**	**$ -**	**-**	**$ 80,730**	**1,154,439,000**
Total Output 2.2	**$ -**	**-**	**$ 80,730**	**1,154,439,000**	**$ -**	**-**	**$ 80,730**	**1,154,439,000**
Total C2	**$ 50,608**	**723,697,000**	**$ 442,517**	**6,327,991,552**	**$ 65,205**	**932,435,000**	**$ 558,330**	**7,984,123,552**
C3 - Strengthening the Enabling Environment to Promte Community-Based Land Restoration								
Output 3.1 : Facilitation of Active Involvement of the Staff of the Sidoaryo Regional MOEF Office in Project Execution and in the Better Enforcement of the Regulatory Framework Geared at Avoiding the Loss of Protected and Conservation Forests								
Activity 3.1.1 – Building Capacity in Regulatory Enforcement and Project Upscaling								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)

Investments/Contracts	$ -		$ -	-	$ 7,500	107,250,000	$ 7,500	107,250,000
Project Travel	$ -		$ 28,000	400,400,000	$ -		$ 28,000	400,400,000
Miscellaneous	$ -		$ 2,350	33,600,000	$ 2,350	33,600,000	$ 4,699	57,200,000
Sub-Total 3.1.1	**$ -**	**-**	**$ 30,350**	**434,000,000**	**$ 9,850**	**140,850,000**	**$ 40,199**	**574,850,000**
Activity 3.1.2 – Planning Water Conservation Measures for the Brantas Basin								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Experts	$ 7,033	100,574,500	$ 7,033	100,574,500	$ 7,033	100,574,500	$ 21,100	301,723,500
Misellaneous	$ 2,350	33,600,000	$ 2,350	33,600,000	$ 2,350	33,600,000	$ 7,049	100,800,000
Sub-Total 3.1.2	**$ 9,383**	**134,174,500**	**$ 9,383**	**134,174,500**	**$ 9,383**	**134,174,500**	**$ 28,148**	**402,523,500**
Activity 3.1.3 – Developing Strategic Communications for Upscaling and Knowledge Transfer								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Experts	$ 5,252	75,100,000	$ 3,250	46,480,000	$ 17,752	253,850,000	$ 26,254	375,430,000
Miscellaneous	$ 2,350	33,600,000	$ 2,350	33,600,000	$ 2,350	33,600,000	$ 7,049	100,800,000
Sub-Total 3.1.3	**$ 7,601**	**108,700,000**	**$ 5,600**	**80,080,000**	**$ 20,101**	**287,450,000**	**$ 33,303**	**476,230,000**
Activity 3.1.4 – Transferring Knowledge at Global and National Events for Upscaling								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Investments/Contracts	$ -		$ -		$ 14,021	200,500,000	$ 14,021	200,500,000
Project Travel	$ -		$ -		$ 6,979	99,800,000	$ 6,979	99,800,000
Miscellaneous	$ -		$ -		$ 2,350	33,600,000	$ 2,350	33,600,000
Sub-Total 3.1.4	**$ -**	**-**	**$ -**	**-**	**$ 23,350**	**333,900,000**	**$ 23,350**	**333,900,000**
Total Output 3.1	**$ 16,984**	**242,874,500**	**$ 45,332**	**648,254,500**	**$ 62,684**	**896,374,500**	**$ 125,000**	**1,787,503,500**
Total C3	**$ 16,984**	**242,874,500**	**$ 45,332**	**648,254,500**	**$ 62,684**	**896,374,500**	**$ 125,000**	**1,787,503,500**
C4 - Monitoring and Evaluation								
Output 4.1: Project Progress Monitoring and Reporting								
Activity 4.1.1 – Progress Monitoring and Reporting								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Miscellaneous	$ 3,131	44,767,000	$ 3,131	44,767,000	$ 3,131	44,767,000	$ 9,392	134,301,000
Sub-Total 4.1.1	**$ 3,131**	**44,767,000**	**$ 3,131**	**44,767,000**	**$ 3,131**	**44,767,000**	**$ 9,392**	**134,301,000**
Total Output 4.1	**$ 3,131**	**44,767,000**	**$ 3,131**	**44,767,000**	**$ 3,131**	**44,767,000**	**$ 9,392**	**134,301,000**
Output 4.2: Midterm Review and Independent Terminal Evaluation								
Activity 4.2.1 – Midterm Review								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Experts	$ -		$ 20,580	294,300,000	$ -		$ 20,580	294,300,000
Sub-Total 4.2.1	**$ -**	**-**	**$ 20,580**	**294,300,000**	**$ -**	**-**	**$ 20,580**	**294,300,000**
Activity 4.2.2 – Independent Terminal Evaluation								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Experts	$ -		$ -		$ 25,028	357,900,000	$ 25,028	357,900,000
Sub-Total 4.2.2	**$ -**	**-**	**$ -**	**-**	**$ 25,028**	**357,900,000**	**$ 25,028**	**357,900,000**
Total Output 4.2	**$ -**	**-**	**$ 20,580**	**294,300,000**	**$ 25,028**	**357,900,000**	**$ 45,608**	**652,200,000**
Total C4	**$ 3,130.56**	**44,767,000**	**$ 23,711**	**339,067,000**	**$ 28,159**	**402,667,000**	**$ 55,000**	**786,501,000**
PMU - Project Management Unit								
Input Type	US$	(IDR)	US$	(IDR)	US$	(IDR)	US$	(IDR)
Equipment (Materials)	$ 16,153	230,983,000	$ -		$ -		$ 16,153	230,983,000
National Project Manager	$ 20,175	288,507,000	$ 25,175	360,001,000	$ 25,175	360,001,000	$ 70,525	1,008,509,000
National Finance Officer	$ 4,035	57,705,000	$ 5,035	72,001,000	$ 5,035	72,001,000	$ 14,105	201,707,000
National Administrative Officer	$ 2,357	33,708,000	$ 3,357	48,005,000	$ 3,357	48,005,000	$ 9,071	129,718,000
Regional Facilitator	$ 6,990	99,955,000	$ 10,490	150,005,000	$ 10,490	150,005,000	$ 27,970	399,965,000
Regional Finance Officer	$ 3,535	50,550,000	$ 5,035	72,000,000	$ 5,035	72,000,000	$ 13,605	194,550,000
Regional Administrative Officer	$ 1,857	26,555,000	$ 3,357	48,005,000	$ 3,357	48,005,000	$ 8,571	122,565,000
Sub-Total PMU	**$ 55,102**	**787,963,000**	**$ 52,449**	**750,017,000**	**$ 52,449**	**750,017,000**	**$ 160,000**	**2,287,997,000**
Total PMU	**$ 55,102**	**787,963,000**	**$ 52,449**	**750,017,000**	**$ 52,449**	**750,017,000**	**$ 160,000**	**2,287,997,000**
Total PMU	**$ 55,102.31**	**787,963,000**	**$ 52,449**	**750,017,000**	**$ 52,449**	**750,017,000**	**$ 160,000**	**2,287,997,000**
Grand Total	**$ 706,357.03**	**10,100,905,500**	**$ 739,063.50**	**10,568,608,052**	**$ 329,892.48**	**4,717,462,500**	**$ 1,775,313**	**25,386,976,052**

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

Not applicable.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by

the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

Not applicable.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

Not applicable.