

Investing in the Komodo Dragon and other globally threatened species in Flores (IN-FLORES)

Part I: Project Information

GEF ID
10728

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
 CBIT
 NGI

Project Title
Investing in the Komodo Dragon and other globally threatened species in Flores (IN-FLORES)

Countries
Indonesia

Agency(ies)
UNDP

Other Executing Partner(s)
Directorate General, Natural Resources and Ecosystem Conservation-Ministry of Environment and Forestry

Executing Partner Type
Government

GEF Focal Area

Biodiversity

Taxonomy

Biodiversity, Focal Areas, Stakeholders, Capacity, Knowledge and Research, Knowledge Generation, Targeted Research, Learning, Capacity Development, Knowledge Exchange, Innovation, Mainstreaming, Tourism, Species, Threatened Species, Financial and Accounting, Conservation Finance, Protected Areas and Landscapes, Community Based Natural Resource Mngt, Coastal and Marine Protected Areas, Productive Seascapes, Terrestrial Protected Areas, Productive Landscapes, Transform policy and regulatory environments, Influencing models, Convene multi-stakeholder alliances, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Demonstrate innovative approaches, Civil Society, Community Based Organization, Non-Governmental Organization, Communications, Education, Awareness Raising, Public Campaigns, Behavior change, Type of Engagement, Participation, Partnership, Information Dissemination, Consultation, Local Communities, Indigenous Peoples, Private Sector, Capital providers, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, SMEs, Beneficiaries, Climate Change Mitigation, Climate Change, Agriculture, Forestry, and Other Land Use, Land Degradation, Sustainable Land Management, Community-Based Natural Resource Management, Sustainable Livelihoods, Ecosystem Approach

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

72 In Months

Agency Fee(\$)

596,982.00

Submission Date

9/28/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	2,600,000.00	21,000,000.00
BD-2-7	GET	3,684,018.00	27,697,379.00
	Total Project Cost (\$)	6,284,018.00	48,697,379.00

B. Indicative Project description summary

Project Objective

To promote conservation of Komodo dragon and other globally threatened species in Flores through strengthened and integrated management of multiple use landscapes and seascapes

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: Strengthened management and protection of multiple use landscapes/seascapes for Komodo Dragon and other globally significant species in threatened terrestrial and marine habitats in Flores	Technical Assistance	<p>Outcome 1:</p> <p>Effective conservation of the Komodo Dragon and globally threatened terrestrial and marine species within and outside conservation areas as indicated by:</p> <p><i>(i) At least 267,531 hectares (excluding conservation areas) of production forests, convertible forests, protection forests, and inter-connecting habitats within biological clusters under improved management through</i></p> <p><i>Other Effective Area-based Conservation Measures (OECMs)[1]</i></p> <p><i>(ii) Management effectiveness of five protected areas covering 186,533 hectares (marine and terrestrial) improved by 15-20 points from the baseline:</i></p> <p><i>Komodo NP (including marine and terrestrial areas)</i></p> <p><i>Riung NR ---</i></p> <p><i>Wolo Tado NR ---</i></p> <p><i>Riung 17 Island NR ___</i></p>	<p>Output 1.1: functional governance and coordination mechanism strengthened to support dialogue, information flow and decision-making between key stakeholders (within government and non-government sectors), private enterprise and community groups for facilitating integrated landscape and seascape planning and management.</p> <p>Output 1.2: guidelines and planning</p>	GET	2,400,868.00	17,000,000.00

Wae Wuul NR (baseline to be determined at PPG stage)

(iii) At least five new/updated guidelines developed and applied to integrate biodiversity outcomes in specific economic activities and habitat improvement[2]

(iv) Population densities of key species in the target landscapes remain stable or increasing from baseline values in KNP and the two KEE/OECM terrestrial/marine clusters for:

(1) Komodo dragon and its varied phenotypes

(2) Yellow-crested cockatoo

(3) Flores hawk-eagle

(4) Marine species (baseline to be confirmed at PPG stage)

(vi) 300 hectares of degraded Komodo dragon and threatened species habitat rehabilitated following habitat mapping, development of rehabilitation plans and implementation of rehabilitation programs through natural succession and use of native species

(v) At least 5 number of scientific partnership established for baseline and continued monitoring of status of key species that is used for conservation through: (1) assessment of annual changes in species population and distribution; (2)

frameworks developed and approved for integrating conservation outcomes in tourism, grazing, fisheries, agriculture and other production and restoration activities.

Output 1.3: Integrated ecosystem management landscape/seasc ape framework developed for Flores integrating KNP, other conservation areas (CAs), protection and production forests and convertible forests and marine habitats

Output 1.4: baseline and monitoring of Komodo Dragon phenotypic variability and

decision-making on measures for threat management; and (3) reduction in ___% of poaching and other detrimental activities through enhanced community surveillance and monitoring

other key species designed and implemented.

Indicators and targets to be confirmed during the PPG

[1] As measured by: (i) promulgation of decree for establishment of OECMs through under existing Essential Ecosystem Areas (KEEs) guidelines; (ii) formalization of multi-stakeholder management forum for decision-making on OECMs; (iii) Approval of strategy and plan for OECMs; (iv) committed Provincial government financing for OECM plan; (v) Commitment of provincial government for continuation of FMU mechanism for production forests within OECMs; (vi) Strengthened BKSDA and provincial Forest Units with staff and equipment for KEE plan implementation; (vii) Private sector commitment and financing for OECM plan forest restoration and protection; (viii) Village Fund focused on OECM compatible actions; and (ix) monitoring system operational to monitor OECM effectiveness, etc.

[2] This could include guidelines for tourism, grazing, agriculture and other production activities and rehabilitation of habitats, supplementary feeding, fire management, wildlife-human conflict management and community surveillance and monitoring

<p>Component 2: Improved private sector, community engagement and diversified financing for biodiversity conservation and livelihood improvement across the Komodo dragon and threatened species landscape/seascape</p>	<p>Investment</p>	<p>Outcome 2:</p> <p>Alternative new economic models and nature-supportive livelihood activities for financial sustainability of conservation efforts and benefit to surrounding communities building and supporting the lessons from BIOFIN as indicated by:</p> <p><i>(1) At least one key investment action plan for management of Komodo Dragon and its phenotypic variability prepared, implemented and monitored for effectiveness.</i></p> <p><i>(2) At least 5 new biodiversity-friendly economic models developed and pilot tested through community-private sector partnerships</i></p> <p><i>(3) At least 2,500 individuals (at least 25% of the targeted beneficiaries would be from Covid19 affected/ vulnerable populations) directly benefitting from new and improved economic enterprises (with at least 50% women beneficiaries)</i></p> <p><i>(4) At least 15% average increase in income for 75% of participating households based on action plans for improved business models agreed and initiated (baseline figures will be validated during PPG).</i></p> <p><i>(5) 300 hectares of degraded agricultural land rehabilitated</i></p>	<p>Output 2.1: Project-specific implementation plan. developed based on existing Komodo Dragon Strategic Action Plan (SRAK) and implemented with adequate investments in innovative tools, practices and financing to support conservation of the Komodo dragon and its habitat</p> <p>Output 2.2: Assessment of current and planned socio-economic activities (particularly tourism) in the Flores landscape/seascape to assess impacts at large and spatial Komodo dragon and threatened terrestrial and marine species to inform opportunities for</p>	<p>GET</p>	<p>2,828,352.00</p>	<p>21,600,000.00</p>
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(6) At least 25% increase in financing for conservation and community development generated through new financial instruments introduced in the Flores landscape/seascape

new and innovative economic and livelihood models

(7) At least 20 local businesses with improved capacity on ecotourism, integrated conservation and development, etc. improved (measured using UNDP Capacity Development Scorecard with 50-50 gender balance)

Output 2.3:
Innovative approaches pilot tested through partnerships (based on Outputs 2.1 and 2.2 and BIOFIN analysis) for ecotourism and small community enterprises

Indicators and targets to be confirmed during the PPG

Output 2.4:
Community-based biodiversity-friendly livelihood and business enterprise ventures promoted to avoid biodiversity loss and promote sustainable use of natural resources. This Output will specifically ensure that most vulnerable populations affected by

COVID-19 outbreak are targeted.

Output 2.5: Long-term financial sustainability strategies developed and operationalized to sustain integrated Flores landscape/seascape management approaches,

Output 2.6: Capacity development for local community organizations and local business organizations in business development and investment planning, financial planning and management, etc.

Component 3: Knowledge Management, Gender Mainstreaming, and Project	Technical Assistance	Outcome 3: Improved awareness and knowledge amongst stakeholders through development and knowledge sharing platform, and integrated research center on Komodo dragons and their habitat as indicated by:	Output 3.1: Knowledge Management, Communication and Gender Mainstreaming	GET	755,560.00	7,697,379.00
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Monitoring & Evaluation

(1) Level of awareness on KEE and threatened species conservation in the landscape/seascape as indicated by KAP survey (at least 60% of sampled population aware of conservation threats and its impacts from the baseline to be determined during PPG or Y1 using KAP survey (with 50-50 gender balance).

(2) A Komodo Dragon and Key Species conservation online portal developed and functional (includes knowledge generated by the project, monitoring status, priority areas, progress reports, KEE and inclusive Management areas delineated, etc.) and ___number of users of the portal

(3) Good conservation management practices of Komodo codified, adapted and disseminated at the national, regional and global fora.

Indicators and targets to be confirmed during the PPG

strategies developed and implemented

Output 3.2: Increased benefits of research and development of integrated Komodo dragon conservation and other key species innovation through scientific partnerships and development of national and international scientific research and collaboration networks.

Output 3.3: Knowledge Management and effective M & E systems including gender mainstreaming contribute to learning and advance replication and scaling up of gender sensitive biodiversity

management
approaches
elsewhere in the
country

Sub Total (\$)	5,984,780.00	46,297,379.00
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Project Management Cost (PMC)

GET	299,238.00	2,400,000.00
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Sub Total(\$)	299,238.00	2,400,000.00
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Total Project Cost(\$)	6,284,018.00	48,697,379.00
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C. Indicative 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(\$)
Recipient Country Government	Ministry of Environment & Forestry	In-kind	Recurrent expenditures	6,697,379.00
Recipient Country Government	Ministry of Village, Disadvantaged Region, & Transmigration	Grant	Recurrent expenditures	5,000,000.00
Recipient Country Government	Ministry of Tourism and Creative Economy	In-kind	Recurrent expenditures	4,000,000.00
Recipient Country Government	Ministry of Marine and Fishery	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Badan Pengelola Dana Lingkungan Hidup (BPDLH)	Grant	Recurrent expenditures	2,500,000.00
Recipient Country Government	Provincial Government	In-kind	Recurrent expenditures	4,000,000.00
Recipient Country Government	Districts Government	In-kind	Recurrent expenditures	6,000,000.00
Recipient Country Government	BAZNAS	Grant	Recurrent expenditures	1,000,000.00
GEF Agency	UNDP	Grant	Recurrent expenditures	2,500,000.00
Private Sector	BRI	Grant	Investment mobilized	3,000,000.00
Private Sector	BANK NTT	Grant	Investment mobilized	2,500,000.00
Private Sector	Starbucks	Grant	Investment mobilized	1,000,000.00

Private Sector	IKEA	Grant	Investment mobilized	1,000,000.00
Civil Society Organization	World Association of Zoos and Aquariums	Grant	Investment mobilized	2,000,000.00
Private Sector	Coca cola	Grant	Investment mobilized	1,500,000.00
Donor Agency	EU	Grant	Investment mobilized	1,000,000.00
Donor Agency	DFAT	Grant	Investment mobilized	2,000,000.00
Civil Society Organization	Burung Indonesia	In-kind	Recurrent expenditures	1,000,000.00
			Total Project Cost(\$)	48,697,379.00

Describe how any "Investment Mobilized" was identified

Government Agency: the recurrent investment from government is among other budgets allocated for Komodo National Parks, conservation areas under BKSDA, and Forest Management Units for conservation and forest program protection. The National government allocates budget for each village dedicated to village infrastructure development, amounting to USD 80,000 per year. It can match alternative new economic models and environmentally friendly livelihood activities for the financial sustainability of conservation efforts and benefit to surrounding communities' livelihoods. The Labuan Bajo Athrothy Agency and the Ministry of Tourism and Creative Economic allocate budget for advancing tourism in the Komodo National park. The new environmental Trust Fund BPDFLH support provide grant for environmentally program developed at community lever or proposed by the park management body. BAZNAS focuses on program development and channels Islamic fund to poverty alleviation, health, education, economic development including biodiversity conservation programs Private Sector: planned investments from national bank owned company and regional bank owned company for sustainable breeding and ecotourism businesses, which are to be owned and managed by local communities. The loan guarantee mechanism, if determined viable during PPG stage will be supported by co-financing (including potential sources for provision of loan guarantee to be investigated are the BPDFLH Trust Fund operated by Ministry of Finance, BAZNAS, etc.) would be used to entice NTT regional Bank and/or BRI Bank to lend money to CLCs to finance environmentally sustainable business ventures. If the loan guarantee fund is not used or only partially utilized during the project period, the remaining funds will be transferred to BPDFLH for further fund management and reinvestment in Flores. The planned investment will be gathered through various assessments with companies (e.g., Starbucks, IKEA, Coca Cola, World Association of Zoos and Aquariums) who have a strong interest in biodiversity and habitat protection. The specific engagements include but not limited to capacity development and sale and distributions of local community livelihood products, e.g., coffee, cocoa, weavings, community eco-tourism, and breeding. Donor Agency: European Union and DFAT are amongst major donors supporting sustainable economic development in the eastern part of Indonesia. They have been providing grant and technical assistance via their development partners in the project's targeted areas. These three donors' interest will be integrated and reflected in the project development phase later.

D. Indicative 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(\$)	Total(\$)
UNDP	GET	Indonesia	Biodiversity	BD STAR Allocation	6,284,018	596,982	6,881,000.00
Total GEF Resources(\$)					6,284,018.00	596,982.00	6,881,000.00

E. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)

200,000

PPG Agency Fee (\$)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Indonesia	Biodiversity	BD STAR Allocation	200,000	19,000	219,000.00
Total Project Costs(\$)					200,000.00	19,000.00	219,000.00

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
63,997.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
63,997.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Komodo National Park	100243029	National Park	58,068.00						
Riung Nature Reserve		Strict Nature Reserve	416.00						
Wae Wuul		Strict Nature Reserve	1,497.00						
Wolo Tado		Strict Nature Reserve	4,016.00						

Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
123,435.00	0.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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123,435.00	0.00	0.00	0.00
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Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Core Zone-Sawu Marine Protected Areas		Others	900.00						
Komodo National Park	100243029	National Park	115,232.00						
Riung 17 Islands Nature Tourism Park			7,303.00						

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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300.00	0.00	0.00	0.00
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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)
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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)
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300.00			
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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)
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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)
267831.00	0.00	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)

267,531.00

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)
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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)
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300.00

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

Title	Submitted
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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 ₂ e (direct)	9942434	0	0	0
Expected metric tons of CO ₂ 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 ₂ e (direct)	9,942,434			
Expected metric tons of CO ₂ e (indirect)				

Anticipated start year of accounting	2022
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 ₂ e (direct)
Expected metric tons of CO ₂ 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)
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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	1,250			
Male	1,250			
Total	2500	0	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

A total of 332,129 ha (terrestrial only) of the project is planned for the various activities: protected areas degradation management (63,997 ha terrestrial and 123,435 ha marine), degraded land restoration (300 ha), landscape under improved management (267,531 ha), and crop production improved practices (300 ha) through agroforestry systems and the improved management options. However, for the tCO2eq estimate only degraded land restoration (300 ha), landscape under improved management (50,000 ha – based on assumed success rate from 267,531 ha) and crop production improved practices (300 ha) through agroforestry systems and the improved management options were utilized. GHG estimate is made for a 20-year (6 years implementation plus 14 years of capitalization) period.

Part II. Project Justification

1a. Project Description

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

Biodiversity in Indonesia and Flores Island: Country Overview and Context

Globally there are thirty-five biodiversity hotspots, covering only 2.3 percent of the Earth's surface, but supporting more than half of the world's endemic plant species and nearly 43% of endemic bird, mammal, reptile, and amphibian species[1]. Indonesia is considered among one of the world's 17 megadiverse countries and is home to two of the biodiversity hotspots: Sundaland and Wallacea. The Wallacea hotspot has a total land area of 33.8 million hectares[2] and provides livelihoods for around 30 million individuals within regional development programs that results in global economic benefits, however this ongoing growth is also negatively impacting the environment in a variety of ways. For example, both regional population growth and changes in land use patterns has resulted in widespread habitat loss, with further environmental degradation projected as the region continues to experience rapid growth that prioritizes short-term economic gains over long-term sustainability[3]. Moreover, government policies and resource management schemes that have supplanted traditional management systems are introducing new issues stemming from poor monitoring, limited capacity and a lack of political will.

The ongoing growth of the region through government driven policies and inadequate resource management systems has placed approximately 10,000 unique plant species—15% of which are endemic and a further 66 species globally threatened—at risk of extinction[4]. Additionally, Wallacea supports numerous types of complex biodiverse communities with a plethora of endemic fauna species, including over half of all mammal species, 40% of bird species and 65% of known amphibian species being endemic to the region[5]. Therefore, Wallacea represents one of the world's 36 officially recognized biodiversity hotspots[6], yet is also threatened by population growth and the insufficient management of its natural resources[7]. This loss of biodiversity represents a global threat, as it can: reduce ecosystem services and create social issues, such as increased food insecurity; eliminate sources of future biotechnology; reduce livelihood opportunities and increase the risk of a global pandemic through higher rates of infectious disease transmission and emergence[8]. One area in Wallacea that is currently experiencing a severe reduction in biodiversity is the island of Flores in East Nusa Tenggara (NTT).

Flores is home to several endangered and critically endangered species, some of which are regionally endemic, such as: Flores hawk-eagle (*Nisaetus floris*), yellow-crested cockatoo (*Cacatua sulphurea*), largetooth sawfish (*Pristis pristis*), Tenggara hill myna (*Gracula venerata*), and Schmutz's worm snake (*Indotyphlops schmutzi*)[9]. On top of these endangered species, Flores supports a small extant population of Komodo dragon (*Varanus komodoensis*). Furthermore, some of these species are specifically endemic to the island of Flores, making conservation efforts on the island critical for the survival of

several endangered bird and mammalian species, including in addition, the Flores crow (*Corvus florensis*), Flores hanging parrot (*Loriculus pusillus*), Flores monarch (*Monarchasacerdotum*) and Flores scops-owl (*Otus alfredi*), Flores shrew (*Suncus mertensi*), Hainald's Flores Island rat (*Rattus hainaldi*), and Paula's long-nosed rat (*Paulamys naso*)[10]. These species are highly vulnerable to the pressures of: habitat degradation, landscape changes, overexploitation, climate change, illegal hunting, and other harmful human activities. The marine area around Flores, and the KNP, in particular includes one of the richest marine environments including coral reefs, mangroves, seagrass beds, seamounts, and semi-enclosed bays. These habitats harbor more than 1,000 species of fish, some 260 species of reef-building coral, and 70 species of sponges, dugong, sharks, manta rays, and at least 14 species of whales, dolphins, and sea turtles. Strong daily tidal flows combine with nutrient rich upwelling from the depths of the Indian Ocean to create ideal conditions for thousands of species of coral and tropical fish to flourish.

The rich diversity of shallow coral reefs, cold water upwelling, coastal deep-sea systems, major current systems, and wetlands offer promise and challenges alike to conservation efforts. Mixing of tropical-temperate, deep-shallow, and Indian Ocean-Pacific communities in the this region permits a rare diversity of habitats supporting high species richness and endemism of coral reef fishes, *stomatopods* and corals. The strong connectivity between coastal to oceanic ecosystems supports at least 18 species of cetaceans in exceptional relative abundance. Other extremely important coastal habitats include the Wilayah Beach in Komodo National Park, which hosts 23 species of beach and mangrove trees, more than 500 species of fish, 77 species of bird, 32 mammal species, and 25 reptiles and the Maumere Bay in Flores that hosts 14 species of bird (including 4 seabirds), two marine mammals, and one marine reptile, In addition to these unique species, the Lesser Sundas ecoregion, in which Flores is located may be a reservoir of Indian Ocean fauna, and hence may prove very important in capturing that biogeographic element. At least 12 red-listed species (*Balaenoptera acutorostrata*, *B. musculus*, *Dugong dugon*, *Chelonia mydas*, *Eretmochelys imbricate*, *Varanus komodoensis*, *Bos javanicus*, *Hystrix brachyura*, *Felis bengalensis*, *Eretmochelys imbricate*, *Crocodylus porosus*) are thought to inhabit the Lesser Sundas region.

[1] Conservation International. Biodiversity Hotspots. <https://www.conservation.org/priorities/biodiversity-hotspots>

[2] Critical Ecosystem Partnership Fund (2014). Wallacea Biodiversity Hotspot. https://www.cepf.net/sites/default/files/resources/Donor%20Council/EcosystemProfile_Wallacea_DonorCouncil.pdf

[3] Ibid

[4] Critical Ecosystem Partnership Fund (2014). Wallacea Biodiversity Hotspot. https://www.cepf.net/sites/default/files/resources/Donor%20Council/EcosystemProfile_Wallacea_DonorCouncil.pdf

[5] Conservation International. Biodiversity Hotspots. <https://www.conservation.org/priorities/biodiversity-hotspots>

[6] Conservation International. Biodiversity Hotspots. <https://www.conservation.org/priorities/biodiversity-hotspots>

[7] Critical Ecosystem Partnership Fund (2014). Wallacea Biodiversity Hotspot

[8] WHO (2015). <https://www.who.int/news-room/fact-sheets/detail/biodiversity-and-health>

[9] IUCN (2019), Red List of Threatened Species

[10] Ibid

The Komodo dragon is a globally threatened species classified as Vulnerable (VU) by the International Union for the Conservation of Nature (IUCN), which is endemic to Flores in NTT and can be found in Komodo National Park (KNP) as well as two areas on the Flores mainland, one on the western peninsula (e.g. Wae Wuul) and the other on the north coast (e.g. Longos Island and Riung)[1]. Despite its small range on the island of Flores, an improvement in management schemes tailored towards the protection of the Komodo dragon is needed to ensure the species is not downgraded from its current VU status, signifying its fall closer to extinction.[2] In 2016, the government designated the Komodo Dragon as one of 25 species in the country to be protected, including from illegal wildlife trade.

The latest population monitoring conducted by the Komodo National Park Authority using camera traps and the site occupancy method estimates that the number of Komodo dragons in 2018 was 2897 ± 421 (95% Confidence Interval Komodo dragon population estimate between 2178-3856). Whereas outside the national park, the density of Komodo dragons in several locations on Flores ranges from 0.47 to 1.67 komodo/km² and the estimated Komodo dragon population on Flores island is considered to be 60% lower than in Komodo National Park[3]. During 2003-2012, the Komodo National Park Authority, the Zoological Society of San Diego and the Komodo Survival Program used the CMR (Capture Mark Recapture) method and estimated the Komodo dragon population in the Komodo National Park in the range of 2448. Based on the latest survey, it is known that 90% of the Komodo dragon populations outside the KNP, namely on the island of Flores, are outside conservation areas (Nature Reserves, and Eco-Tourism Parks managed by NTT Natural Resources Conservation Center (BBKSDA) and almost half the komodo range area is outside the protected forest area managed by the local government, threatening the existence of the Komodo dragons on the island of Flores (BBKSDA-Komodo Survival Program).

On the other hand, the facts show that the awareness of the public and stakeholders are still very minimal in relation to the existence of Komodo dragons on the island of Flores. For example, in Pota and Riung, the community considers Komodo as a pest because it preys on the residents' livestock and encounter between Komodo dragons and humans often results in the Komodo dragon being injured and even killed. Continuous dissemination and awareness raising of the community has helped in reducing the killing of the Komodo dragons. If captured, they will be handed over to the BKSDA for release to the wild.

The natural habitat of Komodo dragons such as savanna and open deciduous forests can be found on the Torong Peninsula in Padang, where the area is a Baar tribal area that has a strong local wisdom. The Komodo dragon is umbrella species that indicates the quality of the environment. Threats to terrestrial biodiversity include the increasing pressure on forest cover and water resources as the local human population has increased 800% over the past 60 years. In addition, the Timor deer population, the preferred prey source for the endangered Komodo dragon, is still being poached. Destructive fishing practices such as dynamite, cyanide, and compressor fishing severely threaten marine resources by destroying both the habitat (coral reefs) and the resource itself (fish and invertebrate stocks). The present situation in the marine section of KNP is characterized by reduced but continuing destructive fishing practices primarily by immigrant fishers, and high pressure on demersal stocks like lobsters, shellfish, groupers and napoleon wrasse. Pollution inputs, ranging from raw sewage to chemicals, are increasing and may pose a major threat in the future.

Despite its declining and threatened population, the Komodo dragon home range spread across Flores Island not only in the conservation areas but also outside in production forest and communal land. This increases the pressure on this species and its habitat, affecting the survival of other protected animals in the Flores landscape and waters, such as the Flores hawk-eagle and the Yellow crested cockatoo. Habitat degradation cannot be avoided because of the need for land for economic activities. In addition, the availability of data on distribution of Komodo dragon outside the protected areas has constrained effective measures for conservation of the species. Komodo dragons are also found in several conservation facilities abroad. These institutions have expertise in Komodo dragon breeding and conservation, research and monitoring that can contribute to species conservation efforts in Flores.

To ensure the sustainability of the Komodo dragon species in the community area and to provide an understanding that conservation can benefit the community, innovative economic activities are needed. Captive breeding of animals is currently mostly done by the private sector, but there are still opportunities for community groups to carry out and manage these activities. Support for capacity building is important to ensure the efforts of these community groups can be economically viable. Conservation of ex-situ yellow-crested cockatoo through captivity, for example, is an economic opportunity for people in the midst of declining animal population conditions. Some challenges related to captive breeding of yellow-crested cockatoo include diversity of brood stock to produce healthy chicks. The birds produced in captivity can then be released to increase population in nature. Captive breeding activities can be combined with ecotourism-based education, awareness raising and tourism. Similarly, there also an opportunity to breed Timor deer. Timor deer (*Rusa timorensis*) has high economic value that can be developed and utilized to meet the needs and improve the livelihood of the community. The economic value does not only come from the sale of commodities and by-products such as meat, velvet, testes, viscera and skin but there is also intrinsic potential as captive animals due the uniqueness of the body shape and its interesting behavior. This potential can be developed as part of environmental services that have high value as recreational/tourism objects.

If these challenges are not addressed, the complete loss of the Komodo dragon, and other threatened populations on Flores would likely have deleterious effects on the island's wildlife, as apex predators, such as the Komodo dragon and Flores eagle-hawk, have been shown to have positive regulatory effects on biodiversity, including the management of invasive species populations[4]. Therefore, one salient method for ensuring the island of Flores can maintain its unique biodiversity while concurrently protecting Customary Local Communities (CLCs) in Flores, which depend on wild and protected flora and fauna as a source of income and food, is to protect the Komodo dragon, and its habitat.

Root Causes of Developmental Issues

Komodo dragon and other threatened species habitats are negatively impacted by development and unsustainable forestry, tourism, fisheries and other activities in Flores and is threatened by infrastructure development, expanding human settlements and unsustainable resource use practices (illegal timber felling, fire wood collection, fires and encroachment) that cause Komodo and threatened species habitat loss and ecosystems degradation. Loss of biodiversity and wildlife due to these activities threatened the food supply. Increased community settlement is one of the impacts of habitat degradation and second is the threat of increased human-Komodo dragon conflicts. The hunt for Komodo prey and the presence of foreign species competing against Komodo wild food source is a challenge that has led to dwindling biodiversity.

The challenge for marine species is destructive fisheries practices, unsustainable tourism practices, waste and trash disposal, etc. Destructive fishing practices such as dynamite fishing, cyanide fishing, coral removal, and over exploitation of sea cucumber threaten the marine environment and damage coral reefs and associated species. Whales are also hunted as part of traditional hunting practices in Lembata Island, although local communities only use traditional fishing gear and only certain species and sizes are hunted. Unsustainable tourism practices, such as boat anchoring and coral trampling, shoreline destruction and construction of tourism facilities in fragile coastal areas are additional threats. Coastal communities also depend for their livelihoods on extractive resource use. The main type of fishery in Komodo is the *bagan* (net lift platform) fishery for small pelagics, which takes place in coastal waters off the reef. This type of fishery is not likely to have serious, direct impact on fragile reef communities. However, local people supplement income from the *bagan* fishery by exploiting reef resources, and some fishers exclusively depend on this type of fishery.

The Flores Islands in the Province of East Nusa Tenggara (NTT) is among the outermost islands with levels of development quality that are far behind areas on large islands such as Java and Sumatra. In the NTT Province's Medium-Term Development Plan (RPJMD), development indicators such as the human development index and income inequality are in an alarming condition (RPJMD, 2018). With limited development options, exploiting resources for development without the balance of the environment and wildlife is often inevitable. Deforestation have threatened wild ecosystems in Flores which would actually be counterproductive to the growth of tourism, where the majority of tourism in Flores is based on nature such as landscape, wildlife, marine ecosystems and so on.

The low development index and the high income inequality need to be resolved together with the problem of resource and landscape management in Flores to ensure the continuity of community welfare and the preservation of ecosystems including conservation of Komodo dragon and other key species. The three root causes of these problems are as follows:

a) Rapidly Growing Human Population: The total land area of Flores Island, NTT, is 13,112 km² (Central Statistic Bureau-BPS, 2019), 6,705 km² of which are forested (BPS, 2019). However, land use changes in NTT are rapidly occurring due to forest loss and land degradation, which are closely linked to agricultural expansion, excessive grazing of livestock, use of chemical fertilizers, and highly destructive techniques for clearing land (e.g. 'slash and burn'). From 2011-2015 alone, a total of 542 km² of forested land was converted to other uses in 3 districts; Manggarai Barat, East Manggarai and Ngada. In 2019, NTT had a population of over 5 million and an annual population growth rate of 1.67% (BPS, 2019). While agricultural productivity is increasing to support the ongoing growth of the local population, with 800,980 tons produced in 2018, the peoples of NTT are still exposed to food security issues (e.g. food shortages). Therefore, a growing human population and the need to increase agricultural practices to remedy food security issues is putting direct pressure on local wildlife through the removal of habitat, affecting many vulnerable and endangered endemic species, including the Komodo dragon.

b) Limited Economic Opportunities: Flores is one of the least developed economies in Indonesia and is primarily based on subsistence agriculture, fisheries and seaweed production[5]. Most farmers grow rice for food self-sufficiency purposes as well as corn, cassava, sweet potatoes, and peanuts. Cash crops are also grown on small holding plantations, such as coconut, cocoa, cashew, candlenut, and coffee. Alongside agriculture, fisheries make up a large portion of the local economy, with tourism steadily growing as an alternative livelihood strategy to traditional forms of income generation[6]. Due to limited livelihood opportunities, unemployment rate in 2018 was around 3.01% (BPS, 2019), it is common for residents of Flores to migrate to other areas of Indonesia or nearby

countries, such as Singapore and Malaysia, as they seek to find sources of income outside of the limited opportunities available on the island of Flores. However, for those that choose to stay, the limited economic opportunities available and persistent food security issues have led to hunting in designated wildlife areas and trading of species in the global illegal wildlife trade as a means to supplement their personal and financial needs.

c) Rapidly Expanding Tourism Sector: One of the factors driving deforestation of habitats on Flores is the dramatic growth of tourism sector (pre-Covid19) on the island without proper environmentally sustainability measures. Flores is now designated as one of the country's top ten tourist destinations, as part of the government's drive to attract more international tourists and diversify tourism away from Bali as well as promote economic diversification in Flores. Yet, at the same time, it is putting pressure on the island's fragile natural resource base with tourist arrivals in 2019 reaching 500,000, which is almost double compared to 2017. As a result, land conflicts have increased as investors buy property, especially along coastal areas. Increasing tourism in this region will also directly affect the physiology of the Komodo dragon. Human disturbance has been found to influence the Komodo dragon's heart rate, stress hormone levels and energy expenditure, which can negatively impact the Komodo dragon's population by impairing reproductive success and individual survival rates[7]. Hence, the rapid expansion of tourism in the area is not only leading to habitat loss but also to negative health impacts on Komodo dragon physiology.

d) Changing Climate: While, there are limited information of climate change aspects in Flores, the projections for Indonesian islands is that temperatures will rise by 0.2-0.3⁰C per decade and annual precipitation can increase for up to 12% across the majority of the Indonesian islands by 2100, including changes in seasonality of precipitation. As a consequence, high droughts risks, uncertain water availability and hence uncertain ability to produce agricultural goods, economic instability, and drastically more undernourished people, hindering progress against poverty and food insecurity. Delayed wet season (monsoon) and a temperature increase beyond 2.5°C is projected to substantially drop rice yields and incur a loss in farm-level net revenue of 9 to 25%. As a result, biodiversity will be a risk, including significant declines in fish larvae abundance and large-scale changes in fish habitat, such as skipjack tuna, coral bleaching leading to widespread loss of coral reefs and biodiversity, including the fish that many Indonesians rely on for food and livelihoods. Sea-level rise, increased extreme weather events, warming temperatures, and changes in ocean circulation and salinity patterns will impact Indonesia's marine turtle populations. More frequent forest fires having significant impacts on wildlife habitat and biodiversity and translating into serious economic and domestic and trans-boundary pollution consequences. In terms of human health, more frequent and severe heat waves, floods, extreme weather events, and prolonged droughts could lead to increased injury, illness, and death, while increased vector-borne infections (e.g., malaria and dengue), an expansion of water-borne diseases, such as diarrhea, an increase in infectious diseases, poor nutrition due to food production disruption, ill-health due to social dislocation and migration, and increased respiratory effects from worsening air pollution and burning. Warming ocean temperatures, sea-level rise, and increased storms will impact coastal systems by increasing coral bleaching events, changes in fish availability, inundation of coast lines and mangroves, and exacerbating risks to human health affecting millions of people. The impacts of climate change can have an severe impact on the Flores biodiversity, food productivity and health of the local population.

[1] Ariefiandy, A., Purwandana D., Natali, C., Imansyah, M. J., Surahman, M., Jessop, T. S. & Ciofi, C. (2015) Conservation of Komodo dragons *Varanus komodoensis* in the Wae Wuul nature reserve, Flores, Indonesia: a multidisciplinary approach. *International Zoo Yearbook*, 49

[2] Ibid

[3] Ciofi, C and de Boer, M. (2004). Distribution and Conservation of the Komodo Monitor

4] Hollings, T, et al (2016). Disease-induced decline of an apex predator drives invasive dominated states and threatens biodiversity, Ecology

[5] Flores Destination Management Organization, 2019

[6] ibid

[7] Ardiantiono et al (2018). **Effects of human activities on Komodo dragons in Komodo National Park**, *Biodiversity and Conservation* volume 27

Barriers to long-term conservation of the Komodo dragon and other threatened species

The following barriers are impeding to achievement of an inclusive conservation Komodo dragon and other globally threatened species goals.

Barrier 1: Lack of proper management of the Komodo dragon and other globally threatened species terrestrial and marine species outside of the conservation areas

The Komodo dragon populations in Flores show significant genetic diversity indicating that there are barriers that help to preserve their genetic diversity. Three specific genetic conservation populations have been identified in the country, in (i) Komodo National Park Area, (ii) the North Flores area (Mbaruajawa, Riung Nature Reserve, and Ontoloe Island) and (iii) in Sambi Rampas District and its surroundings (including Riung and Seventeen Island Nature Reserve, and Wolo Tadho Nature Reserve). The Komodo dragon populations are monophyletic (one breed) residing on Komodo Island and North Flores that is currently geographically separated from other populations. However, while efforts at conservation of the Komodo dragon has been largely focused in Komodo national park, there is a lack of an intensive and holistic approach to conserve the full genetic diversity of the Komodo dragon, both within and outside conservation areas, particularly in mainland Flores. Without such an effort, the genetic variability and adaptability of the Komodo dragon will likely be less understood. Limited exploratory research in assessing genetic variability will likely preclude identification and adaptation of appropriate and specific management actions to prevent the extinction of the smaller and distinct populations of the Komodo dragon. Limited resources for monitoring of genetic, demographic and health parameters of the distinct populations in order to better understand factors that contribute to population decline and management efforts that can contribute to improving its health and population viability is needed.

Populations in nature have evolved and adapted to natural conditions that are very different from populations that are currently in ex-situ conditions (in zoological gardens and safari parks). As this precludes the possibility of reintroductions to the wild (to supplement dwindling populations outside of conservation areas) due to inability of ex-situ populations to be able to compete as well as disease factors, it exemplifies the need for a coordinated and intensive approach to management of the current wild populations that are found outside conservation areas. This is compounded by the fact that stakeholders (government, private and community) are guided by their respective priorities and individual needs that often result in resource use conflicts due to the absence of a commonly agreed conservation planning and management framework for all stakeholders to agree and follow. Various agencies that are

involved with forest and natural resources management need to work together to reconcile their approach to “conservation and protection of species and ecosystems”. Policies and programs in the broader landscape, particularly those that support agricultural expansion, intensity grazing, use of chemical fertilizers, tourism development and infrastructure expansion require review to determine their impacts on the Komodo dragon population and their habitats. Unplanned clearing of natural vegetation in the landscapes surrounding conservation areas, as well as uncontrolled fires, can contribute to greenhouse gas emission and diminish local resilience to the effects of climate change. All this is compounded by the inadequacy of a long-term spatial planning framework at the provincial levels that considers sustainable conservation objectives and specific safeguards– thus, creating an environment where there is competition for “locking” of important lands for other specific purposes without regard for their potential long-term impacts on Komodo dragon, other threatened species, ecosystem services, movement of threatened species, sustainable tourism, environmentally-friendly agriculture and community livelihoods. Further many of the identified threats arise from the lack of (or weak and ineffective) compliance monitoring and enforcement of plans, policies, strategies, laws and other measures. Provincial governments and their entities have a very crucial role in landscape level actions because of mandates to reflect the above concerns in land use and local investment planning and programs, however, current policy guidance for spatial planning at the landscape level tend to be unclear and fragmented that can act as disincentive for local conservation action. Related to the above barrier is also the limited capacity of government and other stakeholders to work across a mosaic of land uses to exact any meaningful changes in long-term biodiversity conservation with social benefits that would bring a range of stakeholders with diverse knowledge (including traditional knowledge) and cultural experiences for protection of the complex landscape of Flores.

Therefore, to strengthen management for globally threatened species in a wider landscape/seascape, interventions will be necessary at multiple and overlapping scales, requiring coordination among a diverse network of individuals and organizations to integrate local-scale conservation activities with broad-scale goals as well as integration of innovative and novel environmentally-friendly and sustainable solutions to generate economic opportunities, safeguard biodiversity and appease cultural traditions. Conservation non-governmental organizations and research institutions efforts that incentivize socially and environmentally responsible investments to help reduce poverty, protect biodiversity and address climate vulnerability are still relatively new, requiring enhanced capacity and skills and novel financial solution strategies to achieve positive outcomes.

Barrier 2: Absence of comprehensive alternative economic models and environmentally-friendly livelihood activities for sustaining conservation efforts and benefiting surrounding communities

With proposals to enhance visitation to protected areas (likely to happen post Covid19), including Komodo National Park there is likely to be impact on wildlife. Currently, there is little effort to assess the impacts of tourism on the Komodo dragon (and possibly on associated terrestrial and marine species), particularly on the individual and population level attributes of the Komodo dragon, given that there is known phenotypic and demographic responses to variation in human activities across the Komodo dragon range, that have not be fully studied. The potential negative consequence of altered behavior due to human activity is nevertheless believed to influence demographic processes through intraspecific competition or predation. Consequently, the absence of properly managed ecotourism, in particular if visitation increases in the future can preclude opportunities for generating long-term conservation benefits for Komodo dragon, while concurrently providing additional economic resources for conservation management and improving incomes for local communities. Efforts are needed to ensure that expansion of ecotourism activities are carefully planned to limit negative impacts on animal populations and their habitats as well as reducing human-wildlife conflict.

While, effective alternative economic models can generate funding from conservation and improving community livelihoods, there will still remain uncertainty of national, regional and local governments being able to solicit adequate funds to successfully manage the Komodo populations outside the Komodo National Park in mainland Flores. Currently the number of personnel within BKSDA in East Nusa Tenggara is eleven for six conservation areas covering 52,417 hectares in mainland Flores. While, there are around 74 existing financial solutions to increase funding (BIOFIN) these have not been explored, so opportunities exists to explore a mix of funding sources (including the Village Fund) to pilot local ecotourism and environmentally-friendly income generation efforts. While, there have been piece meal efforts to promote economic activities based on ecology in the past, a regional integrated landscape (and seascape) planning approach that integrates the multiple uses within the Komodo habitat (related to KEE) is required to develop a sustainable approach to income generation (community ecotourism activities, breeding of Timor deer, growing of traditional crops and medicinal and aromatic plants with niche market and other economic access, small holder agriculture and plantation models, etc.) and conservation. The absence of a comprehensive alternative economic model prevents the selection of the best options for reducing human influence on the Komodo dragon and its habitat, including the development of an regional or integrated landscape/seascape management planning approach for operation of existing, and location of new tourism and infrastructure facilities, livelihood development locations and activities to limit impacts on the Komodo dragon (and other key species) impacts.

In terms of the marine environment, alternative and sustainable economic models are need to promote community enterprises in support of small scale sustainable mariculture, seaweed culture and pelagic fisheries, value chains and post-harvest fisheries operations and community ecotourism to enable a shift from destructive fishing practices that threatened the marine environment.

Other innovative financing options for conservation and community improvement that have not been adequately pursued so far include loan guarantees for biologically-friendly economic activities, fiscal transfers through regional incentives, as well as negotiation of easing of regulations that preclude regional and local governments (currently financing for conservation is directly provided by the Central Government) from contributing directly to conservation efforts. On the other hand, the market approach to conservation activities is still underdeveloped. For example the entry fee to a national park or nature reserve does not reflect the value of scarcity of the resources in it and the entry tickets are very cheap (as low as USD 1/person) hence the funds collected are not able to cover operations and conservation activities. A combination of market approaches and financial instruments are needed, such as through a guarantee mechanism, whereby banks distribute loans to micro, small and medium enterprises (MSME) actors around conservation areas for environmentally-friendly activities which are supported by a guarantee mechanism to ensure access to finance for MSMEs that are non-bankable. The lack of economic growth around the area that support environmentally sustainable activities is a barrier to diverting destructive activities into productive activities that in turn could raise awareness to support conservation.

Barrier 3: Limited knowledge and awareness of Komodo dragon and other globally important species and their important roles in the local population's long-term economic and social wellbeing

Local communities that live side by side with Komodo dragons and other vulnerable species have valuable traditional knowledge based on the wisdom of the community whereby humans, animals and other living creatures have lived together without disturbing each other. However, there is an opportunity to integrate and use scientific and traditional knowledge to effectively manage the landscape/seascape and its attendant species through improved documentation and dissemination for its wider application. Local governments also require sufficient incentives and encouragement for environmental stewardship and improved sex-disaggregated data and appreciation for gender issues that would make it easier to plan and evaluate for gender-based improvements. In addition, the lack of adequate awareness among tour operators and tourists on appropriate behavior is another constraint that needs to be addressed.

While knowledge of Komodo dragons and the vulnerable species, particularly generated through research in ex-situ facilities (and to some extent in-situ), this knowledge is very useful and has not been consolidated and integrated with existing knowledge management systems at the Ministry of Environment and Forestry, and fisheries agencies and made readily available for local decision making. On the other hand, the information collected by personnel of conservation areas and traditional knowledge held by local communities, that might be of high commercial value are not effectively and scientifically managed, not codified and protected by law and hence vulnerable to being stolen and recognized unilaterally for commercialization purposes.

The direct threats affecting the survival of the Komodo dragon and other endangered species in Flores and their relationships with a range of indirect factors (root causes) are illustrated in **Figure 1**, with entry points for project intervention strategies indicated. The relationship between the barriers and the project intervention logic is further illustrated in the theory of change diagram in **Figure 2**.

2) The baseline scenario and any associated baseline projects

Indonesia's strong commitment to maintaining biodiversity is indicated among others through the ratification of global biodiversity frameworks such as the CBD Convention (Law No.5 / 1990), the Cartagena Protocol (Law No.21 of 2004), and the Nagoya Protocol (Law No.11 of 2013). These regulations become the legal umbrella for biodiversity management and operationalized through Indonesia Biodiversity Strategic Plan (IBSAP) to achieve Aichi target and aligning biodiversity priorities in mid-term development plan (2020-2024). One of them, the recommendation to maintain the forest cover for wildlife habitats around 43.2 million hectares.

The Ministry of Environment and Forestry and its partners have identified a variety of terrestrial and marine areas that are essential for ensuring the conservation of globally threatened species in Flores Island. The government has designated the importance of the Komodo Dragon by including it in a list of 25 priority species for the country. With this framework, Komodo conservation is strengthened through Komodo Strategic Conservation Plan that has been established recently. The continued deforestation and degradation of these critical terrestrial and marine areas could lead to a variety of negative impacts, including complete loss of forest and marine dependent biodiversity, disruption to ecological services, an increase in GHG emissions, and unsustainable economic growth patterns. To avert a future in which these negative impacts are incurred, there have already been several positive steps taken by the public and private sectors. The intent is to further strengthen the on-going efforts at Komodo dragon conservation through improved collaboration among the different stakeholders, improving planning and budgetary allocations.

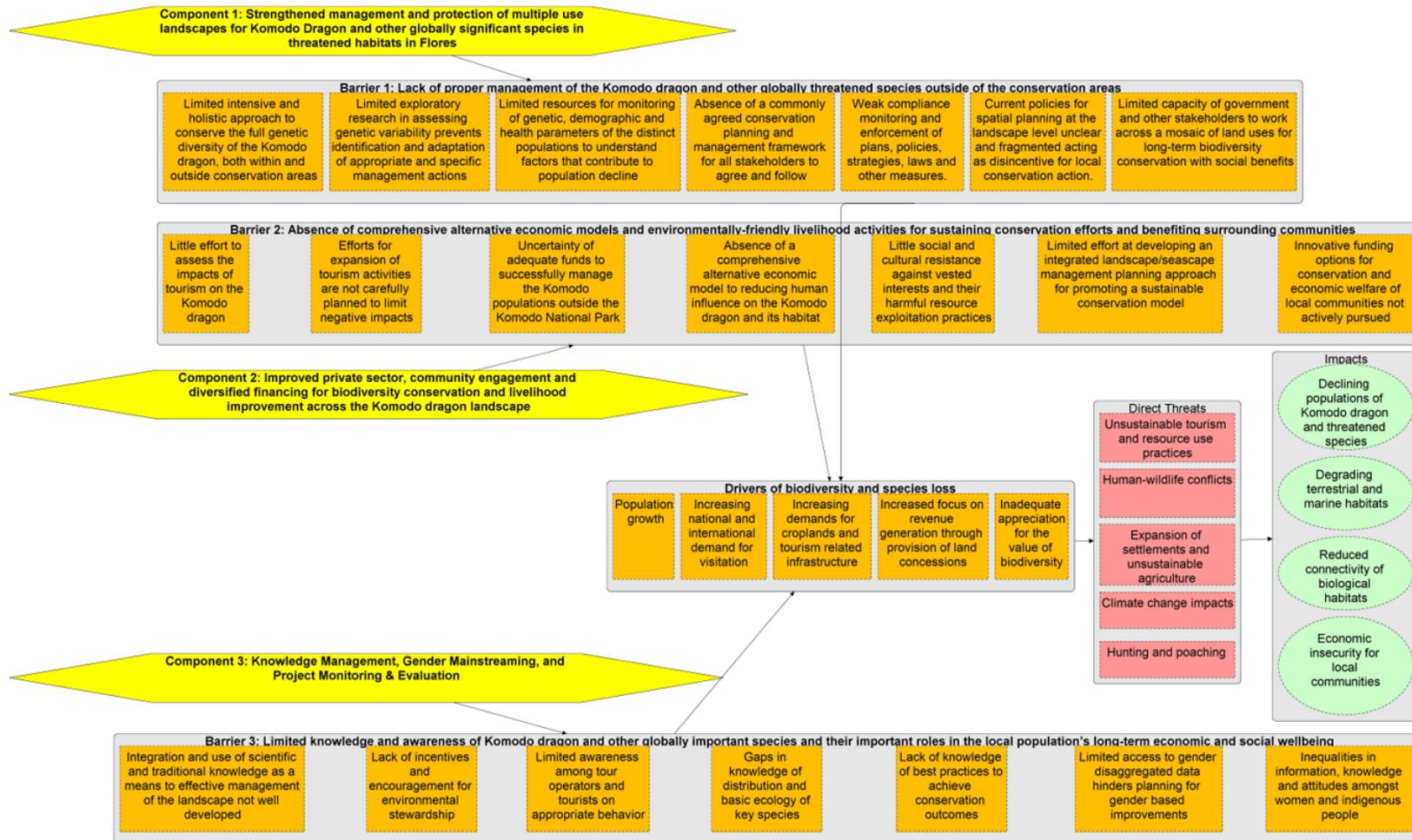
- Komodo Survival Program (KSP): Since 2004, the KSP has supported the Komodo National Park and NTT BKSDA to conduct a Komodo dragon population survey mainly on Flores Island. Existence data and estimated numbers are important results for the conservation of Komodo dragon species. KSP also conducts capacity building activities for local communities of Komodo dragons. This program is supported by a number of overseas Zoological Gardens and Conservation Organizations, including the Association of Zoos and Aquariums, European Association of Zoos and Aquaria (EAZA), Ocean Park Conservation Foundation Hong Kong (OPCF Hong Kong), and Chester Zoo.
- Burung Indonesia: Burung Indonesia's Mbeliling Program is currently focused on a project working towards, the Sustainable and Integrated Management of Mbeliling Forest that is working with and building the conservation and sustainable livelihood capacity of Conservation Development Group (CDGs) members in 27 villages surrounding the forest area with funding support from DANIDA. Burung Indonesia supports NTT's BKSDA to survey bird populations including the Flores hawk-eagle and the Yellow crested cockatoo on Flores Island.
- PT. Putri Naga Komodo: This company was a support unit for the Komodo Collaborative Management Initiative (KCMI), a shared management framework to maximize the involvement of key stakeholders in Komodo National Park, including the Park authority, the central and local government, tourism service providers and the local communities. In 2003, the government handed over the management of the Komodo National Park to PT Putri Naga Komodo (PNK) that is a combination of two companies namely PT Jayatasha Putrindo Utama and The Nature Conservancy (TNC). After operating for a long time, PT PNK was 'disbanded' without any clear evaluation. There are several problems after the dissolution of PT PNK, among others, related to the conservation funds scandal with the government and privatization of public areas.
- SWISS Contact: Since 1972, Swiss contact aimed to contribute to improved standards of living and income disparities in Indonesia with focus on less developed areas. Two projects in Flores NTT, the Local Economic Development LED-NTT and the eco-tourism project WISATA are implemented under this strategy. In a first phase of WISATA, Swiss contact was assigned by SECO to implement the program in one destination in Flores to strengthen the DMO and supporting the tourism sector in the destination as a whole. With the second phase, the program was expanded to three additional and quite different destinations Toraja, Wakatobi and Tanjung Puting. The overall outcome of the WISATA program is very positive since a) the destinations benefited from the project and b) new and innovative approaches and tools have been developed and tested, which are ready to be absorbed by the Ministry and local Government programs.
- INDECON: Indecon works to develop ecotourism or sustainable tourism destinations, as well as community- based tourism. Indecon was involved in CREATED project based on the previous initiatives of EU-funded INFEST (Innovative Indigenous Flores Ecotourism for Sustainable Trade) project. It was implemented in 2016-2019 to strengthen INFEST key achievements in improving capacity of local tourism stakeholders and developing tourism villages in Flores. The project had established in more than 12 community-based production groups, which ensures the production of these new-creative products. The group members are local farmers, teachers, or individual woman, who are currently benefitting from additional income. A farmer family in Mbeliling area with single earner would earn €55 /month. When one family member works once a week at banana chips production, he/she would earn an additional income in average €15-20/month. The partners to this programs are the Asian Ecotourism Network, tourism for Tomorrow, Wonderful Indonesia, Green travel Market, Indonesian Ecotour Alliance.
- PILI: PILI is a non-governmental organization whose programs and activities are oriented towards nature and environment conservation. Its institutional network focuses on the collection and exchange of information on biodiversity and natural resource protection and environmental issues. Since 2009, PILI has supported the publication of "Nature Conservation" in collaboration with PIKA (Department of Forestry Information Center for Nature Conservation). In

collaboration with CIFOR and WWF, PILI developed the REDD Indonesia (REDD-I) site to raise awareness about the mechanism of implementing REDD. Information and knowledge are spread through various events such as learning workshops (in collaboration with CIFOR), Exhibitions, Seminars, Training, Workshops, Field Surveys and Visits.

- Flores hawk-Eagle Conservation Strategy and Action Plan plays as a reference in building a shared understanding and agreement between the stakeholders from central to local level to raise the effort of conserving Flores hawk-Eagle for the period 2019 to 2028.
- Recent launch of a Komodo Dragon Conservation Strategy and Action Plan aimed at integrating all Komodo dragon research and conservation activities and contributing to increasing the population of Komodo in the wild. The document is an integral part of the Minister of Environment and Forestry Regulation. It is adopted into the work plans of the technical unit within the scope of the MOEF and local governments governing the habitat of the Komodo dragon.
- An Essential Ecosystem Area in the Rote's Wetland Area for turtle habitat have already been officially in NTT, which extends conservation protections outside of the formal PA system and two EEAs (Pota and Longos Islands and Mbeliling) are on-going process

The Governor of East Nusa Tenggara has just signed a Governor Decree on establishment a collaborative management forum for KEE in Flores (GD No.267/KEP/HK/2020) to ensure that areas outside protected areas that are of high biodiversity importance are managed as Essential Ecosystem Areas (or KEEs) and that permits the (i) development of an action plan for KEE management in Flores covering West Manggarai, Manggara and Ngada districts; (ii) to provide input to support KEE management; (iii) engage in partnerships and cooperation with relevant stakeholders; (iv) monitor and evaluate KEE management; and (v) conduct regular consultations for implementation, monitoring and evaluation of KEE management. The management forum provides a mechanism for stakeholder coordination and knowledge management.

Figure 1: Threats, root causes and barriers to the long-term solution and GEF strategies to address them



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

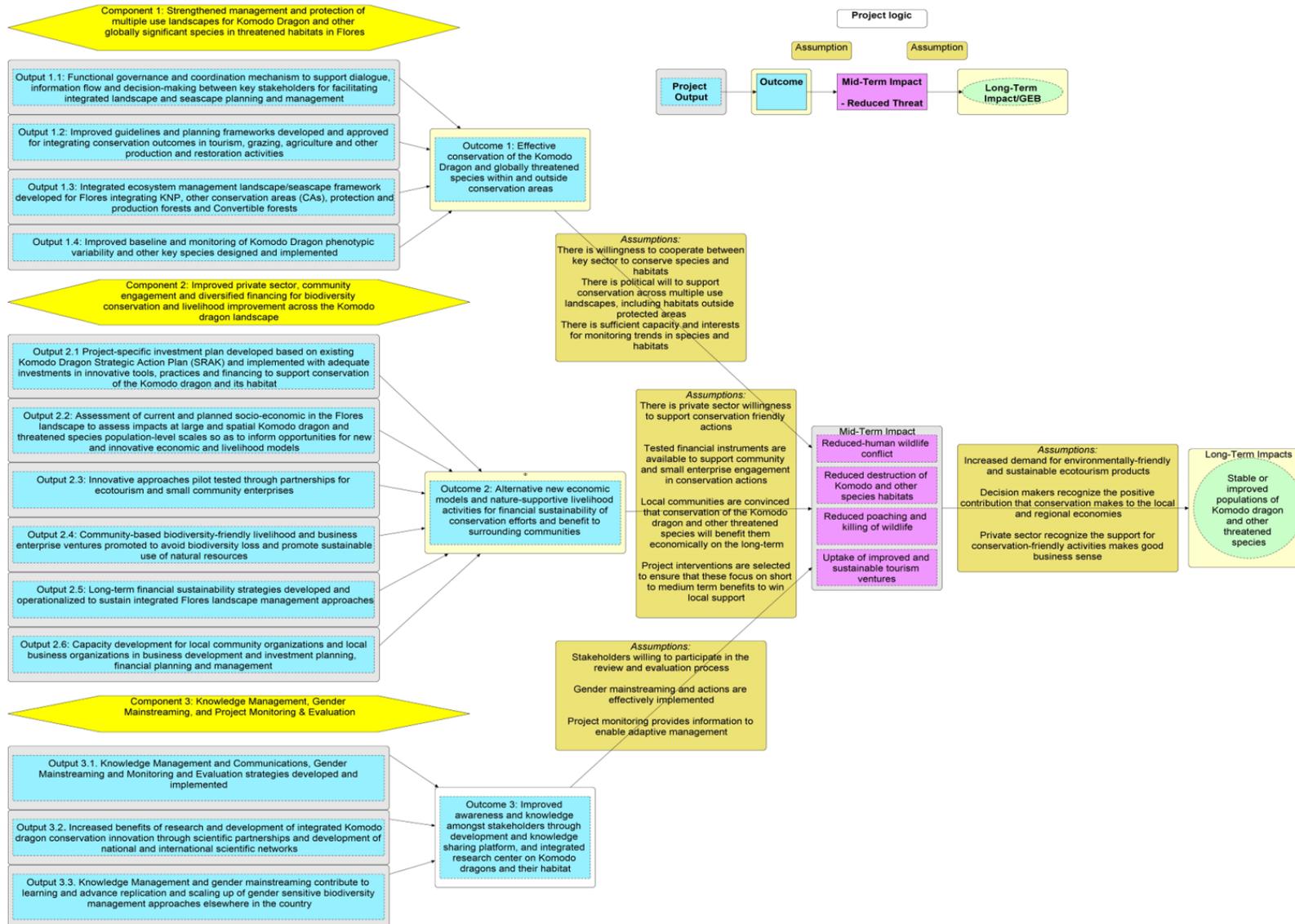
To address the above-mentioned challenges and barriers, the proposed project aims to integrate the mainstreaming of biodiversity into multiple use landscapes, including protected areas, conservation areas, production and protection forests and community lands through active community participation in species management, sustainable economic activities and livelihood development. In particular, this builds on the policy of the Environment and Forestry

Ministry

to encourage regional governments to ensure non protected areas that have good forest cover and high biodiversity values are managed as essential ecosystem areas (KEE). This is further enhanced by the recent Governor's Decree issued by the Governor of East Nusa Tenggara to facilitate establishment of a multi-sectoral management forum to enable integrated landscape planning in Flores. The support from the business community will be a key factor to deliver the KEE approach involving private sector and improved community livelihoods. The project will also aim at establishing sustainable conservation financing mechanisms to ensure long-term support for conservation of the Komodo dragon (considered the flagship species for the Flores landscape) and other threatened species and their habitats. This will be achieved through a set of targeted outputs that will support biological, socio-economic and financial interventions aimed at integrated management of the larger Flores landscapes.

The long-term approach is to harness community support and innovative financing and economic opportunities, in support of conservation through: (i) demonstration of new alternative economic models involving tourism, agriculture, fisheries and private sector, building on BIOFIN findings to pilot innovative biodiversity financing that are environmentally friendly; (ii) promote a range of alternative livelihood activities for local communities to reduce or deflect unsustainable resource use activities that degrade Komodo dragon and other species populations and habitats, with a specific emphasis on small and medium scale ecotourism enterprises that benefit local communities; (iii) promote an integrated landscape/seascape approach that enhances connectivity of the currently fragmented habitat, in particular through improved practices within production forests, convertible forest and community owned lands, marine and coastal habitats; and (iv) support a comprehensive monitoring effort to better understand the distribution and population dynamics of the varied populations of the Komodo dragon and other threatened species to provide improved options for the management and conservation of the genetic variability of the species.

Figure 2: Theory of Change



The above theory of change explains as follows: if strengthened and integrated management of multiple-use landscapes are in place, species management, bio-economy, and sustainable community livelihood are beneficial, and tested financing instruments are institutionalized, promoting conservation of Komodo dragon and other globally threatened species in Flores will be realized. To achieve the proposed objective, three inter-linked project components are envisaged, namely: The project components are:

Component 1: Strengthened management and protection of multiple use landscapes for Komodo dragon and other globally significant species in threatened habitats in Flores

This component will enhance species management for the island of Flores through protecting forests and other critical habitats to preserve the Komodo dragon and other threatened species within the broader multi-use landscapes, including protected areas and areas outside it through engagement of diverse stakeholders that are currently under different management regimes. While, the project will support investment to strengthen management effectiveness within existing protected areas, it will concurrently also support the KEE/OECM approach for lands outside formal PA system—by addressing the main issues of deforestation and land degradation throughout Flores. A comprehensive study of the Komodo dragon population will be undertaken to better understand the genetic variability of the Komodo dragon population to identify appropriate management approaches to protect these distinctive populations.

Output 1.1 will specifically focus on strengthening a functional governance and coordination mechanism to support dialogue, information flow and decision-making between key stakeholders (within government and non-government sectors), private enterprise and community groups to facilitate integrated landscape and seascape planning and management. Guidelines and protocols will be developed for its operation to facilitate convergence of planning, human resources and financial resources for multiple use land/seascapes to support mainstreaming of biodiversity into development planning to institutionalize. This will be achieved through strengthening capacity of the recently approved collaborative management forum for KEE (landscape) in Flores (created by a Governor Decree) to undertake the following mandated responsibilities: (i) development of a mandated action plan for KEE management in Flores covering West Manggarai, Manggara and Ngada districts; (ii) provide input to support KEE management; (iii) engage in partnerships and cooperation with relevant stakeholders for KEE activities; (iv) monitor and evaluate KEE management; and (v) conduct regular consultations for implementation, monitoring and evaluation of KEE management.

During the first year of the project, the coordination platform will advise and support the drafting and adoption of standard operating protocols, tools and guidelines to facilitate the mainstreaming of biodiversity into local planning and programs. The key agencies that might be part of the coordination mechanism include Directorate General KSDAE (MOEF), BKSDA, Ministry of Tourism and Creative Economy, Ministry of Agriculture, Natural Resources Conservation Bureau, Komodo National Park, Provincial Environment and Forestry Departments, local governments, Indigenous Peoples Representative, CSOs and private sectors. While the coordination platform will bring together multiple stakeholders to address drivers of biodiversity loss and define collective solutions to improve conservation outcomes, one of its priority efforts would be to support the implementation of the project-specific investment plan for the conservation of the Komodo Dragon population and other key threatened species that will be developed under Output 2.1, although in the long-term it will more broadly support the integrated management of the Flores landscape/seascape.

Output 1.2 will support the preparation of guidelines and planning protocols for integration of conservation outcomes in key economic sectors in support of implementation of the project-specific investment plan. The project will hire national consultants to develop these guidelines and planning tools for biodiversity and species conservation integration in tourism, grazing, agriculture and other production sectors as well as protocols and silvicultural practices

for restoration of degraded Komodo dragon habitat, fire management and reduction of human-wildlife conflicts. Additionally, this Output will facilitate the design of community surveillance and monitoring of threats to Komodo dragon and other key threatened species. The intent is to mainstream these planning approaches in provincial planning system through the KEE process discussed in Output 1.3.

As a significant part of the Komodo dragon and other threatened species habitats are found outside currently designated conservation areas, including in protection and production forests and community-managed lands, the management of such habitats are critical for the conservation of Indonesia's threatened species. While, providing critical investment support for conservation activities within the conservation areas, the project will apply the Essential Ecosystem Area (KEE or *Kawasan Ekosistem Esensial*), which is a recognized OECM approach for ensuring the conservation of ecologically important ecosystems located outside conservation areas. The OECM approach in Indonesia is considered an appropriate approach to manage habitats (outside PAs) that are important for key threatened species and ecosystems.

Under Output 1.3, the project will help facilitate its piloting in key project landscapes to integrate conservation areas, migratory corridors, production and protection forests and other land use categories that are critical for conservation of key species within landscapes. Law number 23 of 2014 relating to local government allows provincial government to manage important ecosystem and buffer zone of conservation areas and hence the application of the KEE concept at the provincial level will help facilitate the integration of conservation-friendly measures in provincial, district and private sector planning systems at a landscape level. Establishing an KEE collaborative Management Forum as stipulated by guidelines would ensure that representatives of villages and community groups, private sector representative of key provincial and district governments will be involved in decision-making on planning and management of these areas. The KEE Management Forum will be responsible for defining, facilitating agreement and monitoring conservation actions at the ground level. Incentive measures will be developed to support district governments to allocate areas within production forests (Forest Management Units or FMUs) for conservation, earmarking provincial funding for KEE conservation activities, and promoting incentives to private sector in support of biodiversity-friendly practices in their operations. The intent is that through the KEE process, there will be official recognition of the KEE area and proposals for internal zoning highlighting biodiversity priorities, new and additional protection areas or set-asides for non-extractive use to improve connectivity and biodiversity conservation (wildlife corridor), multiple use zones for sustainable natural resource use. Mapping will help identify and prioritize: (i) biologically sensitive areas for conservation of biodiversity, in particular for the Komodo dragon and other endangered, threatened and endemic species and their habitats and their dispersal and/or connectivity corridors, vulnerable interface areas (with human settlements and tourism) and other important ecological sites, including rehabilitation of degraded habitats in critical locations (the latter with co-financing support); (ii) areas for sustainable community natural resources management and use, including sustainable harvesting and extraction, community based conservation and forest management, watershed conservation and climate risk management; (iii) degraded areas for community forest restoration and fire management; (iv) areas for sustainable agricultural development, livelihood improvement and tourism infrastructure and recreation activities; and (v) areas and approaches for management of Komodo dragon-human conflict in terms of livestock loss. Under this Output, technical support and investment will be provided to promote the implementation of the KEE approach, including conservation and habitat restoration, etc.

Output 1.4 will specifically support improved baseline and monitoring of Komodo dragon distribution, population dynamics and genetic variations, as well as trends in other key species populations and habitat so as to improve information for conservation management and reduction of threats. In particular, monitoring will be carried out to examine the genetic and demographic parameters of Komodo, with the aim of understanding the environmental and other

factors contributing the genetic variation of the population and reasons for population decline. This information will be used to address the skills and knowledge gaps of field officers and train local community groups to monitor the existence of the Komodo dragon and provide an internet-based reporting system that is easy to apply at village level. Periodic monitoring will support intensive management of Komodo outside the conservation areas, in particular to promote management responses to ensure the survival of the Komodo dragon population in the wild.

Component 2: Improved private sector, community engagement and diversified financing for biodiversity conservation and livelihood improvement across the Komodo dragon landscape

Building on the findings of BIOFIN analysis[1], there are a number of innovative financial instruments that can be piloted to test their viability in Flores. As part of this process, the GEF project will attempt to mobilize the private sector (particularly in the tourism and other potential economic sector) as potential sources of financing and the engagement of community groups as agents for environmental change. In this regard, the project will actively try to address the numerous barriers to expand private sector engagement in conservation, in particular to identify appropriate entry points to engage the private sector through facilitating training and capacity building and provision of technical support to recognize the business benefits of good environmental stewardship and identification a suite of potential financial instruments to support small-scale economic activity. This outcome will support the active engagement of the private sector in supporting economic models that encourage species conservation practices, partnering with local communities in support community based ecotourism and related livelihood improvement efforts and engaging in patrolling to reduce poaching. It will also support the promotion of incentive/reward systems to encourage private sector business participation in reducing their ecological footprints and improved private sector financing for conservation actions within the landscapes/seascapes. In addition, this outcome will support the promotion of community biodiversity-friendly livelihood and business enterprises to avoid biodiversity loss and lead to natural resources use sustainability as well as supporting innovative captive breeding practices to reduce hunting practices, to ensure that the Komodo dragons wild food source (Timor deer) is not depleted. The assessment of livelihood practices will emphasize on mapping Covid19 hotspots and assessment of the social and economic impacts on vulnerable populations to identify specific investments to respond to, and ensure income recovery for these populations as well as improving awareness of risks of zoonotic diseases. In terms of captive breeding (if determined viable during PPG stage will be financed by non-GEF sources), these activities will be restricted to few individuals (after completion of due diligence) with signed memorandum of understanding that defines strict rules for captive breeding management, consumption and sale, that would be closely monitored and regular and transparent reporting. The project will also provide technical support and extension to promote sustainable mariculture and seaweed culturing as an alternative to destructive fisheries practices.

Output 2.1 will specifically focus on review of existing Komodo Dragon Strategic Action Plan (SRAK) through an extensive consultative process including PA staff, forest staff, research institutes, private sector, local NGOs and community representatives to develop a project-specific implementation plan for priority activities with GEF and co-financing support. The implementation plan will seek to promote the application of innovative tools, practices and financing in particular to conserve the variability of the Komodo dragon population and other key threatened species, a collaborative research plan for determining baseline information and continuous monitoring and a monitoring plan to monitor the effectiveness of species conservation efforts promoted through the project to enable adaptive management. Additionally, the project will look at opportunities to develop action plans for other terrestrial and marine species during the PPG phase.

Under Output 2.2, as part of the effort to identify new and innovative economic activities (including eco-tourism and community small-scale green enterprises), the project will recruit national consultants to undertake an evaluation of impact of current and proposed tourism development practices on large and spatial Komodo dragon and other key threatened terrestrial and marine species populations so as to inform suitable opportunities for new and innovative environmentally-friendly or less damaging economic activities. It will also seek to evaluate the opportunities for incorporation of biodiversity protection into traditional lands owned by Customary Local Communities (CLCs). Such as assessment of opportunities on CLC owned lands for conservation can enrich the KEE planning process envisaged under Output 1.3. Under this Output, the project will support the development of few promising model(s) for conservation-friendly ecotourism and small business enterprises, recognizing some of the financial instruments available, but still not fully tested related to supporting ecotourism or other viable economically suitable ventures. The model(s) will be based on detailed economic feasibility assessments to develop a few business models for ecotourism village and/or community-based enterprises matching with the village fund (the latter is a government financed program available for all villages for local economic activity and small village business development). Alternative ecotourism or related business models would be premised on being compatible with the goals of biodiversity conservation and sustainable land and marine resources development and would likely include additional revenue streams from nature-based tourism, environmentally-friendly fisheries and livelihood diversifications, optimum land and marine utilization, and other similar business models. The need for additional investments will be tested by a number of promising financial instruments that have been evaluated by BIOFIN for piloting under the project. These can be one or more of the following, depending on the assessment of their feasibility, including in particularly the BIOFIN identified prioritized financial solutions for biodiversity, such as green-financing initiatives of Islamic funds for biodiversity and environment (including zakat, waqf, sadaqa and infaq), ecological fiscal transfers (EFT), green sukuk, Corporate Social Responsibility (CSR), crowdfunding and optimization of village funds[2].

The new customary community models are designed, first, to assess the willingness of CLCs to incorporate biodiversity protection into their traditional terrestrial and marine areas as well as their views of working alongside other stakeholders (e.g. central and provincial government agencies, NGOs, etc.) in partnership agreements situated within a wider landscape/seascape approach to conservation that requires ongoing and consistent cooperation. Component 2 will enhance conservation partnerships by CLC training and capacity building in the entrepreneurship and biodiversity sectors, in addition to building a variety of biodiversity funding mechanisms that are relevant to the context of Komodo and other key species conservation such as guarantee loans, Corporate Social Responsibility and optimization of village funds. The loan guarantee would be used to entice NTT regional Bank and/or BRI Bank to lend money to Customary Local Communities (CLCs) to finance environmentally sustainable business ventures. If the borrower defaults on the loan, high-risk ventures will return 50% of the loan to the bank, followed by 40% for medium risk loans, and 30% for low risk loans. The main types of businesses to be financed under this loan scheme that would be investigated during the PPG stage could include selective breeding programs, ecotourism-based operations and changes to uses on their customary lands and marine areas. If it is found viable, then the PPG team will look at non-GEF resources to manage the risk, including potential sources of loan guarantee, such as the BPDH Trust Fund operated by Ministry of Finance, BAZNAS, etc. Specific safeguard measures will be introduced to manage the risk associated with IWT.

Under Output 2.3, the project will pilot test such innovative ideas (proposed under Output 2.2 and guidelines developed under Output 1.2) through partnerships using a range of financial instruments, (as discussed under Output 2.2) including guarantee loans to improve financial stability through partnerships with commercial banks through a novel financing mechanism of a loan guarantee (to be likely covered by the government) for certain environmentally sustainable business practices as part of the Bank's corporate social responsibility. The loan would be used to entice regional banks to lend money to CLCs to finance environmentally sustainable business ventures. Mechanisms will be put in place to ensure that risks in terms of such loans will be managed through

appropriate disincentives. The four main types of businesses that could be financed under this loan scheme could be selective breeding programs, ecotourism-based operations and changes to uses on their customary lands and marine-based practices. The breeding (and culturing) of such species can remove the need to illegally hunt, provides a source of income via the sale of meat and hides and through ecotourism promotion opportunities and increases the regional Timor deer population, which is the main prey species of the Komodo dragon. By initiating a breeding program on the island of Flores, a new livelihood opportunity is made available to CLCs, and pressure stemming from the illegal sale of the regionally endemic and critically endangered species will be reduced. Such breeding efforts will be complemented by strict monitoring protocols for export in particular, for any CITES Appendix II species, including a permitting system accompanied by strict quotas. If this operation is found suitable, financing will be solicited from non-GEF sources management of financial risks through loan guarantee, such as through BPDH Trust Fund operated by Ministry of Finance, BAZNAS, or funded through the village fund, etc. Specific safeguard measures will be put in place to manage the risk associated with IWT. This activity will be financed by non-GEF resources.

Output 2.4 is aimed at supporting community-based biodiversity-friendly livelihood and business enterprises and financial instruments (particularly those tested in Output 2.2 and 2.3) promoted to avoid biodiversity loss and promote sustainable use through a number of means, such as rehabilitation of degraded agricultural lands, improved tourism and fisheries-related opportunities and preparation of a database of biodiversity-friendly enterprises that might be promising in Flores. This database will be constantly updated as new and innovative value chain opportunities become available. To ensure that biological and other risks in terms of selected value chains are managed, an assessment will be undertaken for each proposed enterprise, including the value chain feasibility assessment, supply and demand, availability of raw materials and the feasibility of the intermediary processes, marketing and linkages with service providers. Capacity building and skills development for a selected number of small-scale community enterprises (around 20) and micro-grants will support this effort. The feasibility of these enterprises, the interest of the community, capacity needs and service providers will be assessed during the PPG stage and a number of suitable value chains will be identified and developed. In addition, this output will support measures to reduce livestock losses from Komodo dragon through innovative measures such as barriers and fencing, corrals, etc.; as well as enhancement of community capacity and support for prevention of illegal wildlife trade through incentives mechanisms introduced for their economic improvement as well as establishing linkages with on-going best practices emanating from the UNDP/GEF national project on IWT.

The intent of this Output is to introduce sustainable low impact livelihood activities that support species and habitat conservation. This might include activities such as ecotourism (with agreed practices to reduce impacts), organic farming, mariculture and seaweed culture, cottage industry, etc. (this will be further investigated at PPG stage). Alternative models will be based on assessment of their economic feasibility and demand, ensure that these are environmentally and socially sound, and be supported by reciprocal commitments from beneficiaries to conservation that includes agreement to curtail unsustainable activities that will be monitored by the community groups to ensure compliance. Further the project will facilitate community access to a number of financial support programs that are available, all of which are aimed at supporting environmentally friendly activities. In addition to the monitoring by Project staff, the livelihood initiatives will also be monitored by the grant financing from the financial institutions. Criteria for ensuring the environmental viability of livelihood activities are described in the next paragraph.

Based on results from other similar programs, the design of the livelihood and community enterprise activities will be developed to ensure a balance between conservation and livelihood improvement. This would particularly entail that inclusion of the following design features: (i) criteria for determining the eligibility of livelihood and enterprise investments that takes into consideration technical feasibility, social acceptability, environmentally sustainability, equitable benefit

distribution, gender equity, and institutional and financial feasibility; (ii) there is a clear and transparent linkage between improving conservation (or reducing threat) and/or sustainable resource use and the proposed livelihood and/or enterprise investments; (iii) identification of measurable actions that beneficiaries agree to, that supports conservation (and/or threat reduction) and sustainable use of natural resources; (iv) training and capacity development to support the livelihood and enterprise investments and create awareness of linkages between conservation impact and livelihoods; (v) participatory consultative framework that ensures that the livelihood and/or enterprise activities are selected and owned by local communities; (vi) monitoring framework that supports participatory monitoring of livelihood (and enterprise) impacts, community commitments to conservation (and/or threat reduction) and on-the-ground conservation impacts; and (vii) reciprocal community agreement on maintenance of livelihood and enterprise assets created and agreement to refrain from unsustainable activities.

Efforts will be made to undertake an assessment to determine communities that have been affected by COVID-19 pandemic to determine hotspots for the disease and develop alternative livelihood practices to identify specific livelihood investments to help these communities to build economic capital as a means to cope with their losses. At least 25% of beneficiaries will be those whose livelihood has been significantly impacted by COVID-19. The green funding sources identified in Output 2.2 can serve as effective financial instruments to support vulnerable communities to develop alternative sources of income or small business options to help them cope with the economic hardships brought about by the pandemic. The risk analysis at the PPG stage will fully incorporate the GEF's informal guidance note on the considerations to respond to COVID-19 crisis and the mitigation of future pandemics.

As long-term sustainable financing for conservation is critical for supporting the Flores biodiversity, Output 2.5 will help assess potential funding opportunities and results based on piloting innovative financial mechanisms of Output 2.3 and 2.4 to prepare a long-term financial sustainability strategy and action plan for operationalization in the Flores landscapes. A team of consultants will be assigned to (i) analyze potential financial instruments for promotion of conservation and biodiversity-friendly enterprises; (ii) promotion of tested products and services that are proven to be economically viable; (iii) identification of promising financial instruments; etc.

Output 2.6 is aimed at strengthening capacity of the recently approved collaborative management forum for landscape/seascape (KEE) of Flores to undertake the responsibilities as defined in Output 1.1. Training will also be provided to community organizations and small business groups in business development and investment planning, financial planning and management, participatory monitoring of conservation impacts and other relevant topics to obtain the best benefits from Komodo Species conservation business opportunities.

[1] Biodiversity Finance Plan (BFP): The Biodiversity Finance Initiative, BIOFIN Indonesia (UNDP, 2019)

[2] *Zakat*: supported by obligatory contribution by wealthy Muslims that is available for the economically insecure communities; *Waqf*: charitable trust created by legal actions of donors to transfer physical assets or cash to benefit the general public; *Sadaqa*: Voluntary charity for small infrastructure, water supply, crops and small local business; *Infaq*: type of charity in Islam that is given without any expectation of reward or return; *Green Sukuk*: leveraged private finance for green sustainable projects; ETI: fiscal transfers for environmental and ecological initiatives through revenue-sharing arrangements between various levels of government; Crowdfunding: It allows individuals to contribute directly to, and invest in biodiversity-related activities.

Component 3: Knowledge Management, Gender mainstreaming and project monitoring and Evaluation

Under this Component, GEF funds will support under Output 3.1 Knowledge Management, Communications and Gender Mainstreaming strategies. In order to increase the level of awareness on KEE and threatened species conservation following an initial assessment of level of awareness through a KAP survey, the project will design communication plans, support knowledge exchange through the development of a Komodo platform and Komodo knowledge center.

Under Output 3.2, efforts are aimed at increasing benefits of research and development for promotion of preservation of the Komodo dragon and threatened species through scientific partnerships with national and international networks, including international zoological gardens where Komodo dragon breeding is taking place. A Komodo dragon and key species conservation online portal will be developed to provide information on species monitoring status, priority areas, KEE progress and plans, and inclusive management approaches applied. This online platform will include simplified, standardized and dedicated information management system with standardized information collection parameters and cross-agency and cross-sector efforts to collect and digitally catalog existing information to support replication.

Project best practices and lessons learned will be identified, documented and disseminated under Output 3.3 that will contribute to learning and facilitate replication and scaling up in other parts of the country in terms of KEE practices. This would be achieved through: (i) documentation and dissemination of best practices; (ii) preparation of policy guidance notes to address current gaps; (iii) technical reports, publications and other knowledge management products; (iv) national and sub-national workshops to facilitate dissemination and promote replication; (v) preparation of replication and scaling up strategy and (vi) preparation of an Implementers Manual and Lessons Learned Guide to support replication. The project will also establish an effective M&E system that adheres to GEF requirements, enables effective evaluation of project progress and impact, and that is inclusive of the needs of women and opportunities to strengthen gender mainstreaming through project activities. Monitoring and evaluation plans will be developed to assess project impacts.

4) Alignment with GEF focal area;

The project is closely aligned with the GEF-7 programming directions for biodiversity, namely BD 1-1: (a) by mainstreaming biodiversity in a priority sectors. The project will focus on mainstreaming biodiversity and ecosystem services in economic development activities, particularly in tourism, but secondarily in agriculture, land management, grazing and other community-based economic and development activities at a landscape level (in particular in two large landscapes of Komodo dragon and other threatened species habitat) through the Essential Ecosystem Area (KEE) approach that has been approved by the Government of Indonesia. Such an approach brings multiple stakeholders and multi-sectors together to define an integrated planning exercise for effective conservation and sustainable natural resource uses within the landscapes, in particular in production areas (production forests, protection forests, convertible forests and other land uses) outside protected areas. Such an integrated landscape approach, will facilitate the establishment of community-private partnerships for economic business development opportunities, thus, unlocking non-public sources of financing for biodiversity conservations. The outcome of the project would be to: (i) mainstream biodiversity conservation into the management of terrestrial and marine habitats in Flores, outside of protected areas through improved incentives mechanisms that encourage private sector and community investment and participation in conservation; and (ii) reduce

direct loss of critical biodiversity through more sustainable economic and environmentally-friendly practices. Without the GEF project, it is likely that there will be loss of biodiversity and ecosystem services in the Flores landscape (in particular outside protected areas that provide critical habitat from the Komodo dragon and other threatened species) and negate the promotion of an integrated multi-sectoral approach that could facilitate mainstreaming ecological needs of these key species.

In terms of BD 2-7, the project will also address the direct drivers to protect habitats and species (e.g. human settlement development activities, human Komodo conflicts, and rapid tourism expansion) and improve financial sustainability (through guaranteed loan program), effective management, and ecosystem coverage of recognized key biodiversity areas. This would be achieved through the promotion of spatial planning of large landscapes based on ecological criteria to ensure that threats to critical habitats of key species are managed through appropriate zoning practices that are agreed with the stakeholders, as well as reduction of threats to human-Komodo conflicts. Appropriate economic investments in improving community livelihoods and small-scale community enterprise development will be expected to facilitate reduction of encroachment into Komodo habitat. In terms of tourism, the intent (post Covid19) is to identify appropriate ecologically friendly tourism promotion approaches to maximize experiences, including identification of niche tourism products and enhancing community-based ecotourism opportunities.

The key contribution areas to GEF-7 Programming Directions are as follows:

Table 1: Links with GEF Programming Direction

GEF-7 Programming Directions	Contributions of this project to the Programming Directions
BD 1-1: Mainstream biodiversity across sectors as well as landscapes and seascapes.	<p>Output 1.1: Project-specific investment plan developed based on existing Komodo Dragon Strategic Action Plan (SRAK)</p> <p>Output 1.2: Improved guidelines and planning frameworks developed and approved for integrating conservation outcomes in tourism, grazing, agriculture and other production activities</p> <p>Output 1.3 Integrated ecosystem management landscape framework developed for Flores integrating KNP, conservation areas (CAs), protection and production forests and Convertible forests</p>
BD 2-7: Address direct drivers to protect habitats and species	<p>Output 2.2: Innovative approaches through partnerships between community, government and private sector</p> <p>Output 2.3 Community-based biodiversity-friendly livelihood and business enterprise/ entrepreneurship ventures promoted to avoid biodiversity loss and promote sustainable use of natural resources</p> <p>Output 3.1 Knowledge Management and Communications, Gender Mainstreaming and Monitoring and Evaluation strategies to enhance awareness on protection of species and habitats</p> <p>Output 3.2 Increased benefits of research and development of integrated Komodo dragon's preservation innovation through scientific partnerships</p> <p>Output 3.3 Knowledge Management and gender mainstreaming contribute to learning and advance replication and scaling up</p>

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

Komodo dragon is the "icon" of global species and tourism in Flores, especially in the four districts targeted by the project, which includes: West Manggarai, Manggarai, East Manggarai and Ngada. The Flores hawk-eagle, yellow-crested cockatoo, coastal areas, coral reefs, fish species and beautiful natural landscape/seascapes will receive the immediate impact of the healthy Komodo dragon and other threatened species habitats. All of them are world heritage

assets that not only need to be protected for the benefit of the global community but can also be utilized for the welfare of the local communities. An investment of USD 7,665,000 from GEF will have a co-financing of USD 48,697,379 for 6 years. The GEF investment is needed to protect the Komodo dragon and other threatened species population on Komodo Island National Park and Flores Mainland by:

1. Addressing the declining Komodo dragon food source due to poaching, agriculture expansion and tourism.
2. Expanding protections for Komodo dragon and other threatened species habitat that is not yet under a conservation-based management system, such as a PA or forest and marine area.
3. Increasing the effectiveness of Komodo Species and other threatened species management.

An innovative approach that involves the community and private sector remains the key to attaining positive environmental management outcomes on Flores. Therefore, this investment will focus on providing environmentally-friendly economic activities to communities to manage the biodiversity. Additional investments will help implement two strategies as well as action plans for key species on Flores Island, namely the Komodo dragon and other global important species e.g., Flores hawk-eagle, Yellow-crested cockatoo and marine others. These strategies and action plans will ensure knowledge of species inhabiting Flores such as the Komodo dragon—which inhabits zoos around the world—will bring ecological and social benefits to their place of origin.

Overall, the GEF funds will lever almost \$8.9 for each \$1 spent; with the total cost per ha affected of \$120 (based on total project costs) or \$13.5 (based on the GEF grant alone); and the cost /tCO_{2e} is a very low \$5.5 (considering total project costs including GEF and co-financing) and \$0.62/tCO_{2e} based on the GEF grant alone, especially considering that much of the amount is from avoided forest loss. The actual amount dedicated to any activity are of course confounded by the various expenditures for each component of the study and their actual contribution to the per ha cost.

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

Baseline situation	Alternative practices to be facilitated by project	Global Benefits ^{*1}
<ul style="list-style-type: none"> · Habitat destruction due to the need for land for economic activity, data acquisition, distribution and utilization have not been consolidated into one knowledge and the benefits of conservation areas as an engine of growth and income for local communities have not been evenly distributed. If it continues, the extinction of the Komodo dragon and other globally threatened species, especially 	<ul style="list-style-type: none"> · Overall protection of Komodo species both within Conservation Areas and outside Conservation Areas indicated by Komodo population monitoring data and area managed under KEE landscape approach · A long-term funding mechanism for Komodo species is developed through an innovative financing solution i.e. guaranteed bank loan system 	<ul style="list-style-type: none"> · Improved status of at least 3 globally threatened species, including Komodo dragons, Flores hawk-eagle, Yellow-crested cockatoo and other terrestrial and marine vulnerable species (to be confirmed at PPG stage) · At least 267,531 hectares (excluding conservation areas) of production forests, convertible forests, protection for ests and inter-connecting habitats withi

on mainland Flores, cannot be avoided.

- Lack of breakthroughs for self-reliant funding for Komodo conservation management, the amount is still limited, and the livelihood of the surrounding communities to support the sustainability of Komodo conservation management is not optimal. If it continues, more intensive and massive efforts to manage and protect Komodo species and other important global species within the Komodo dragon habitat will be hampered.

- Knowledge of Komodo dragons, and other important biodiversity on Flores Island are scattered, located in many institutions both domestically and abroad and are not yet optimal in protecting the traditional knowledge of the community and the benefits of utilizing biodiversity originating from Flores for conservation areas, habitat area and for the local communities. If it continues, the opportunity to benefit from Komodo Dragons and protect the knowledge of Komodo dragons and other important biodiversity in Komodo habitat will be constrained.

m and breeding system

- Facilitating, developing and strengthening partnerships for conservation between community, government and other key stakeholders in and around Komodo habitat.

- Capacity development for local community and local business organizations and integration of diverse knowledge systems are developed.

- Increase research and development of integrated Komodo dragon conservation through scientific partnerships, among others through the development of national and international scientific research and collaboration networks.

- Increase stakeholder awareness to conserve Komodo dragon, including through education activities and knowledge exchange through the Komodo platform and Komodo knowledge center

n biological clusters under improved management through Other Effective Area-based Conservation Measures (OECMs)

- Improved management effectiveness of five terrestrial and marine protected areas covering 186,533 hectares (63,997 hectares terrestrial PAs and 123,435 hectares marine PAs) covering Komodo National Park (including marine and terrestrial areas); Riung Nature Reserve, Wolo Tado Nature Reserve, Riung 17 Island Nature Park and Wae Wuul Nature Reserve

- At least 300 hectares of degraded Komodo dragon and threatened species habitat restored to improve habitat for Komodo dragon and key threatened species

- At least 300 hectares of degraded agricultural land rehabilitated to reduce pressure on natural habitats

- At least 25 % increase in financing for conservation and community development generated through new financial instruments introduced for enhancing conservation outcomes in the Flores landscape

- 9,942,434 tCO₂eq benefits

- Improved awareness on KEE and threatened species conservation in the landscape

- Sustainable fund mechanism for

		<p style="text-align: center;">Sustainable funding mechanism for conservation efforts in Flores established.</p> <ul style="list-style-type: none"> · Knowledge management systems created that allow for a global network of stakeholders (e.g. zoos) with links to Flores to directly contribute to the conservation of biodiversity and habitat of NTT through innovative financing mechanisms as well as the sharing of knowledge.
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7) Innovation, sustainability and potential for scaling up.

Innovation: This Project is innovative in a number of ways. First, it will strengthen management for globally threatened species and their habitat using a landscape approach promoted through a new category of conservation mechanism called Essential Ecosystem Area (KEE) that aims to conserve forests that are located outside protected areas (national Parks, wildlife reserves and game ranching parks). KEEs will be applied to production and protection forests and non-state APL. Provincial and district administrations have the right to identify and designate KEEs on APL lands. Given the multitude of threats to natural systems in the 21st century, such as the ongoing degradation of ecosystems, increased competition for land and resources, and negative impacts of climate change, there is growing consensus multifunctional landscapes can address the cross-sector linkages between agriculture, nature conservation and economic development is required for sustainable development. This multi-stakeholder planning approach to landscape conservation has many benefits in that it promotes an integrated management system in itself, comprised of various natural, cultural and socio-economic components, and in turn, it is part of the bigger national, regional, thematic, and global networks of biological landscapes and enables the zoning of the landscape to take into consideration biological (conservation of HCVPs, connectivity of habitats, and ecological factors) and socio-economic needs (land use planning, multiple use areas, production areas, etc.). It also helps promote a conservation-based economy with value addition and economic benefits to local people from environmentally-friendly niche products. Second, it is also innovative in that it would link forest and habitat restoration as part of an integrated approach to improve biodiversity outcomes in HCVPs outside protected areas. Third, it can serve as a useful pilot to test sustainable financing mechanisms at the local or community level through approach incentive mechanisms that involves tourism generated revenues, private-community partnerships, etc. Fifth, it will work with local communities to evaluate the opportunities for incorporation of biodiversity protection into traditional lands owned by Customary Law Communities (CLCs).

This will provide one of the initial efforts to include private, local, CLC managed, or non-statutory PAs with the KEE landscape where protection levels can effectively be increased for biodiversity conservation or resource management and integrated into broader governance systems at the landscape scale that is supported by spatial planning. Innovative finance mechanisms to be assessed during the project can help improve the wellbeing of the surrounding

community, provide opportunities for CLCs to incorporate biodiversity protection into their traditional lands and conservation partnership efforts beyond conventional financing schemes relying on the public funds.

Sustainability: The project aims to achieve sustainability of project activities and impacts through many ways. First, institutional sustainability will be achieved through training and capacity building to support the landscape planning approach, largely through a learning-by-doing process. Various provincial institutions such as Provincial BKSDA, provincial government forestry, land, tourism and other sector agencies, etc.), local government, customary communities, civil society organizations and local community groups, tour agencies and service providers and protected area staff will cooperate with private sector entities to bring about an integrated OECM approach and consequently benefit from improved cooperation and sharing of responsibilities. Partnerships and alliances will be promoted for conservation and sustainable economic activities that will be expected to continue beyond the project. The multi-stakeholder KEE Management Forum, which will be decision-making body in relation to the landscape that is mandated through the KEE rules, will provide long-term institutional sustainability. This multi-stakeholder platform will oversight to community and private sector stakeholders as the project seeks to implement conservation actions that require high levels of environmental stewardship to achieve positive results.

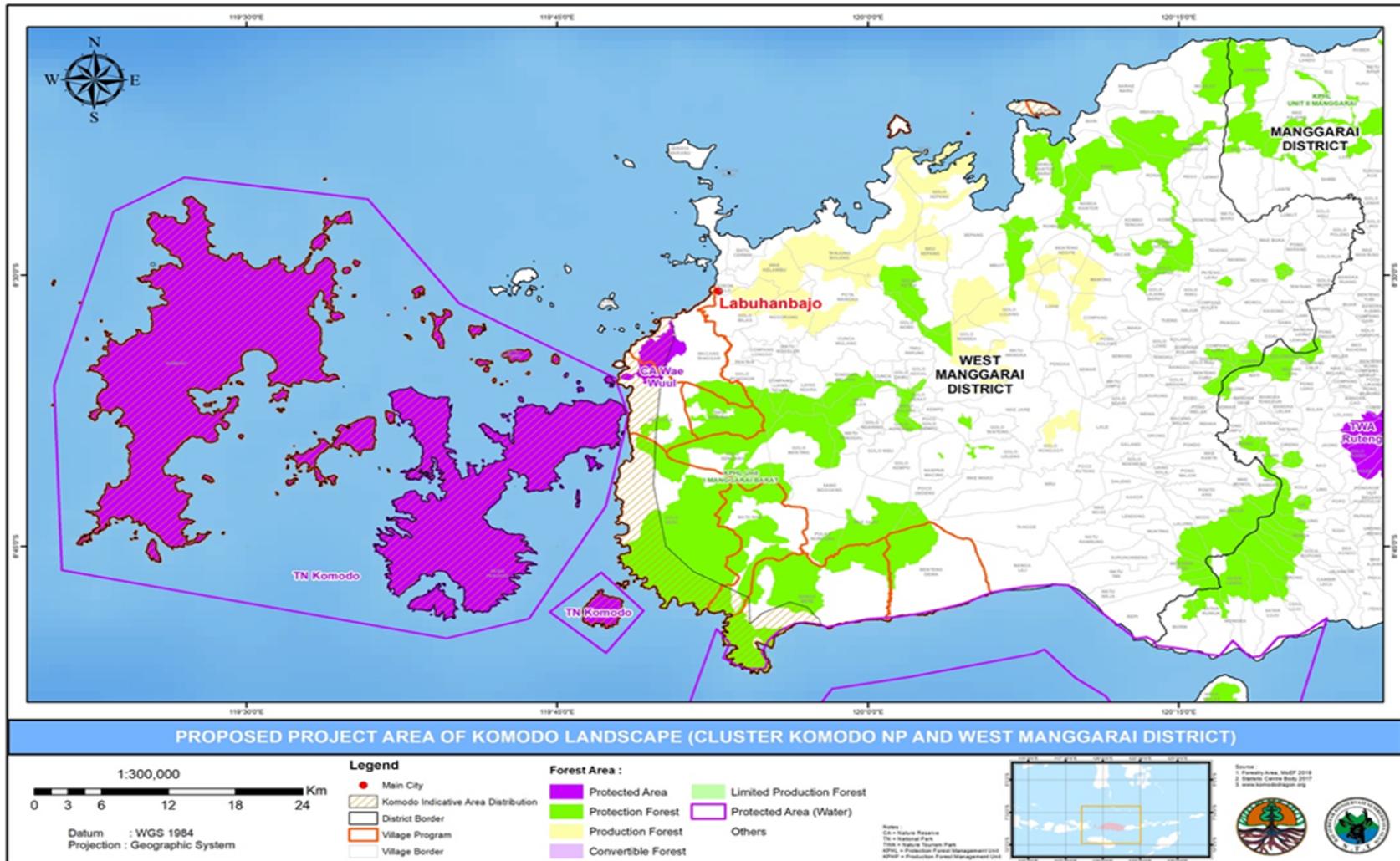
Financial sustainability will be promoted through technical and financial support and enhancing institutional capacity at the village or site level for managing village forests and natural resources and initiation of community-based alternative livelihood strategies that are constructed to sustainably provide benefits over the long-term. Additionally, these alternative livelihood projects are positioned to leverage support from private sector stakeholders, such as: banks, wholesalers, impact investment groups, or tourism agencies. The project will also demonstrate the benefits of conservation friendly new private sector business models (particularly for tourism) that recognize the full range of environmental ecosystem services provided by OECM managed landscapes and their attendant ecosystems. The project will also support community livelihood and value chains that can provide a good model for promoting long-term community support for conservation, while enjoying the economic benefits of conservation-friendly enterprises. The project will also support development of market linkages for sustainable forest and agriculture products and services, ecotourism and local handicrafts and establishment of “brand” labels will ensure financial sustainability of local livelihoods that can provide economic benefits. As tourism is an important economic activity, the project will work through government (Ministry of Tourism)-private sector engagement to promote small and medium ecotourism enterprises and services with emphasis on local communities, through training, skills development, technical assistance, establishing market linkages, identifying capital support, and business development planning.

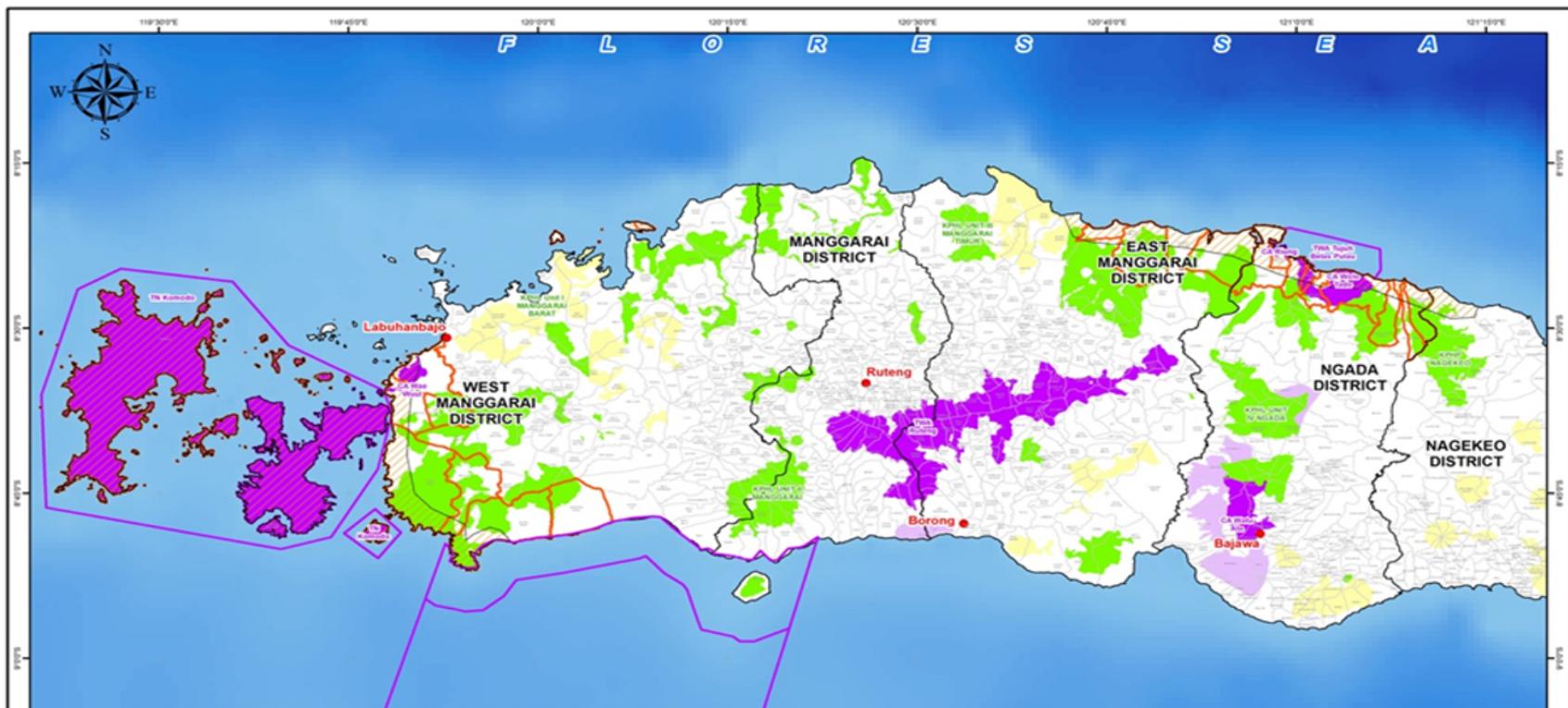
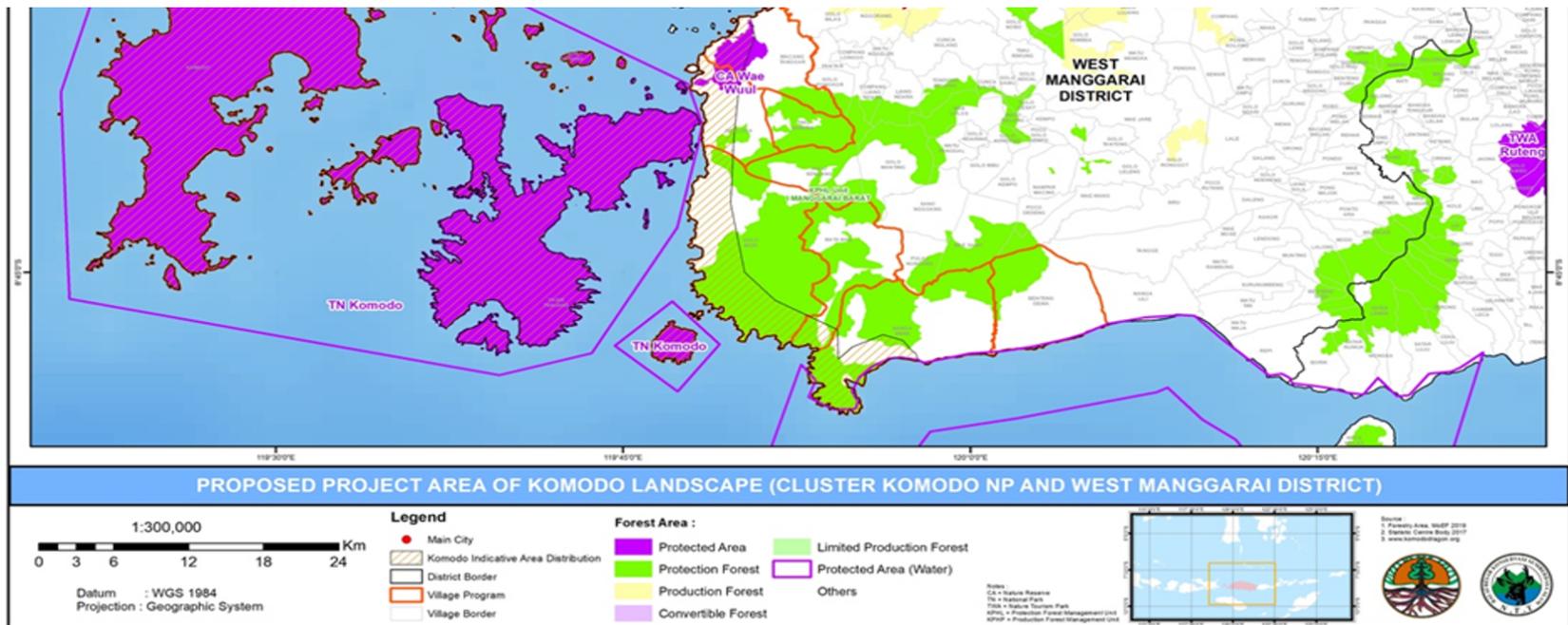
Social sustainability will be promoted through strengthening of multi-stakeholder participation through the KEE Management Forum, so that decisions are made collectively based on the KEE framework established by its rules. Community groups and their institutions, including IPs to facilitate their active participation in the KEE decision-making process, as well as improving capacity for local community groups to participate and benefit from income generation activities, including community ecotourism ventures. In terms of IPs, processes for ensuring Free, prior, informed and consent will be employed. In terms of environmental sustainability, this will be promoted through the improved management of conservation areas, the conservation of HCVPs and marine areas outside the PA network through an integrated planning approach. Further, efforts to ensure more environmentally-friendly tourism operations will involve private sector entities.

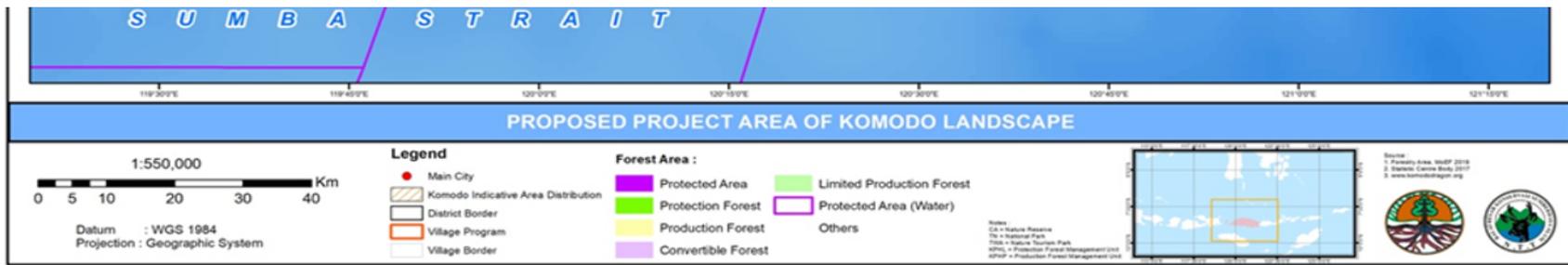
Potential for scaling up: The new evidence-based and on-the-ground conservation measures of the project will work through the institutional structure and national and local program/policies of the Director General of Natural Resources and Ecosystem Conservation (KSDAE), which is responsible for biodiversity conservation in Indonesia. This means it has great potential for scaling-up as well as broader adoption across Indonesia, be it by the MoEF, other related ministries and government entities, or additional concerned parties. The development and application of biodiversity-friendly guidelines in forestry, tourism, agriculture and other-related economic activities can help promote new models that can be applied in other locations as well. by the private sector. The project will also create several outputs that facilitate scaling-up or replication of the project through dissemination of key findings or lessons-learned workshops. The replication and scaling up strategy to be developed (Output 3.3) will assess sustainable financial and institutional arrangements for scaling up and develop a best practice manual to help promote uptake of the KEE approach in other parts of the country.

1b. Project Map and Coordinates

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







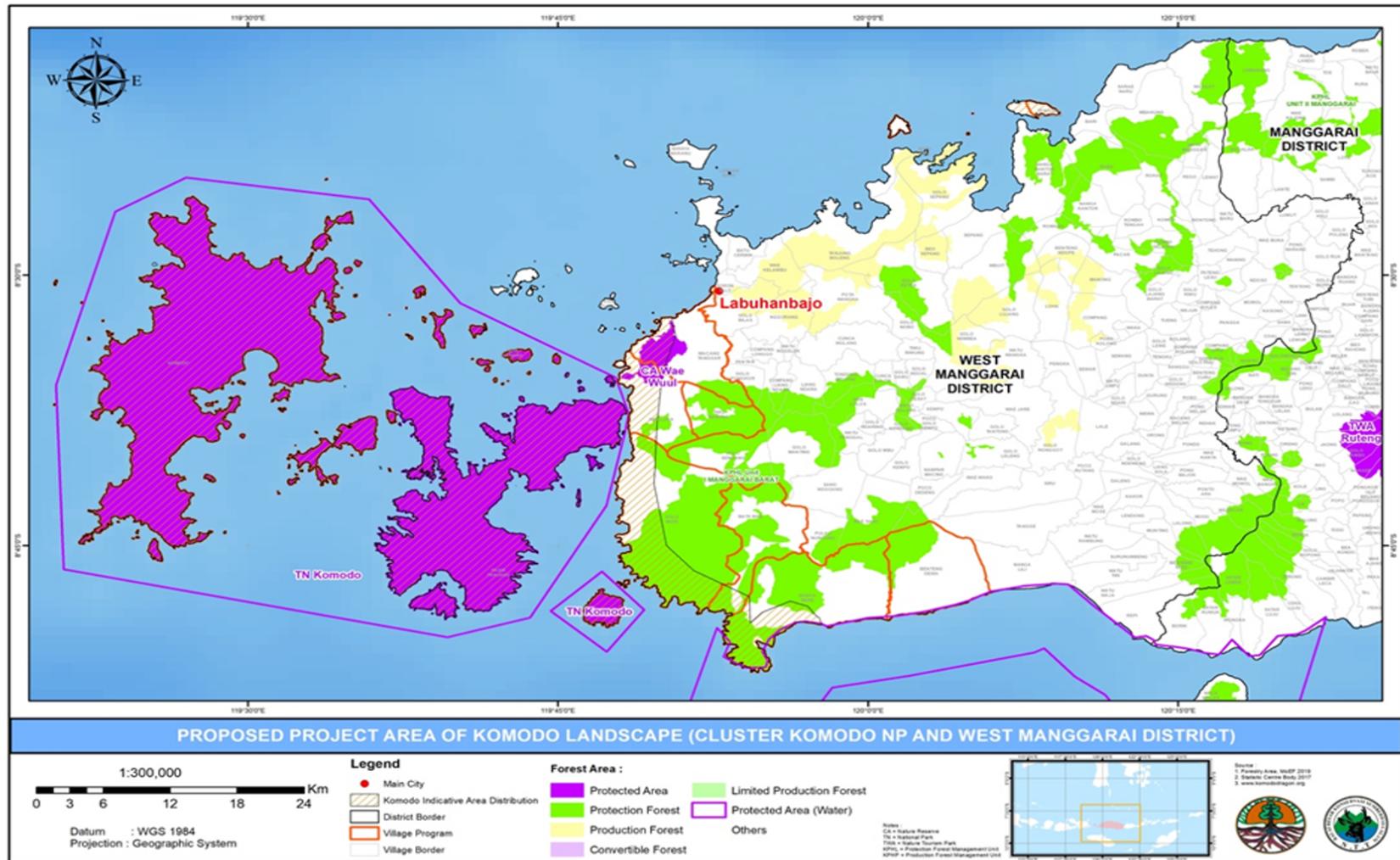
The objective of this project is to demonstrate the importance of protecting the Komodo dragon, and other globally threatened species in Flores, Indonesia, through strengthening the management of multiple use landscapes, particularly inside and outside of protected areas, species management, and an inclusive and sustainable financing for conservation and improved economic opportunities for local communities that generates social and economic benefits for the region. The project target locations encompass PAs, forest areas (protection forests, production forests and convertible forests that have important values for the conservation of the Komodo dragon, the Flores Hawk-eagle, Yellow-crested Cockatoo and other endangered species) and other production areas. Studies conducted by the Directorate General for Conservation of Natural Resources and Ecosystem (KSDAE) and the Komodo Survival Program over the past four years show that 90 percent of Komodo dragons on Flores Island are not in conservation areas but instead are in production and protected forest areas and community areas. In other words, of the population of 900 Komodo dragons that were initially identified in Flores, 90 percent of the population is found outside of PAs. Therefore, in addition, to the emphasis on conservation efforts within the Komodo National Park, the project will also focus on species management in two target landscapes on Flores that will include conservation areas and significant habitats within production and protection forests that lie outside the PA network.

The target locations were specifically chosen to support the conservation of Komodo dragon populations and other threatened species within and outside of the PAs, so as to encompass as much as possible of the habitat of the Komodo dragon, particularly to include those areas outside the PAs where threats are significant. The Komodo dragon on Flores is threatened by deer hunting by local communities, which is the food prey of the Komodo dragon. Therefore, the project strategy will also target communities that live within and outside Flores Island. In identifying the locations of the target landscape clusters, the following criteria were applied.

- Conservation Areas that are key habitat of Komodo dragons and other threatened species (e.g. the presence of Flores Hawk-eagle, Yellow-crested Cockatoo, etc.), particularly where the PA management effectiveness of is limited.
- Forests (production and protection forests, outside conservation areas) that are key habitat for Komodo dragon, Flores Hawk-eagle, Yellow-crested Cockatoo and other threatened species.
- Community habitations that have strong influence on the habitats and populations of Komodo dragons and other threatened species.

West Flores Landscape

The West Flores Landscape covers key Komodo dragon populations, including the famed Komodo National Park as well as critical production and protection forest and other conservation areas in the western part of Flores Island. The West Flores landscape consists of the following sub-clusters:



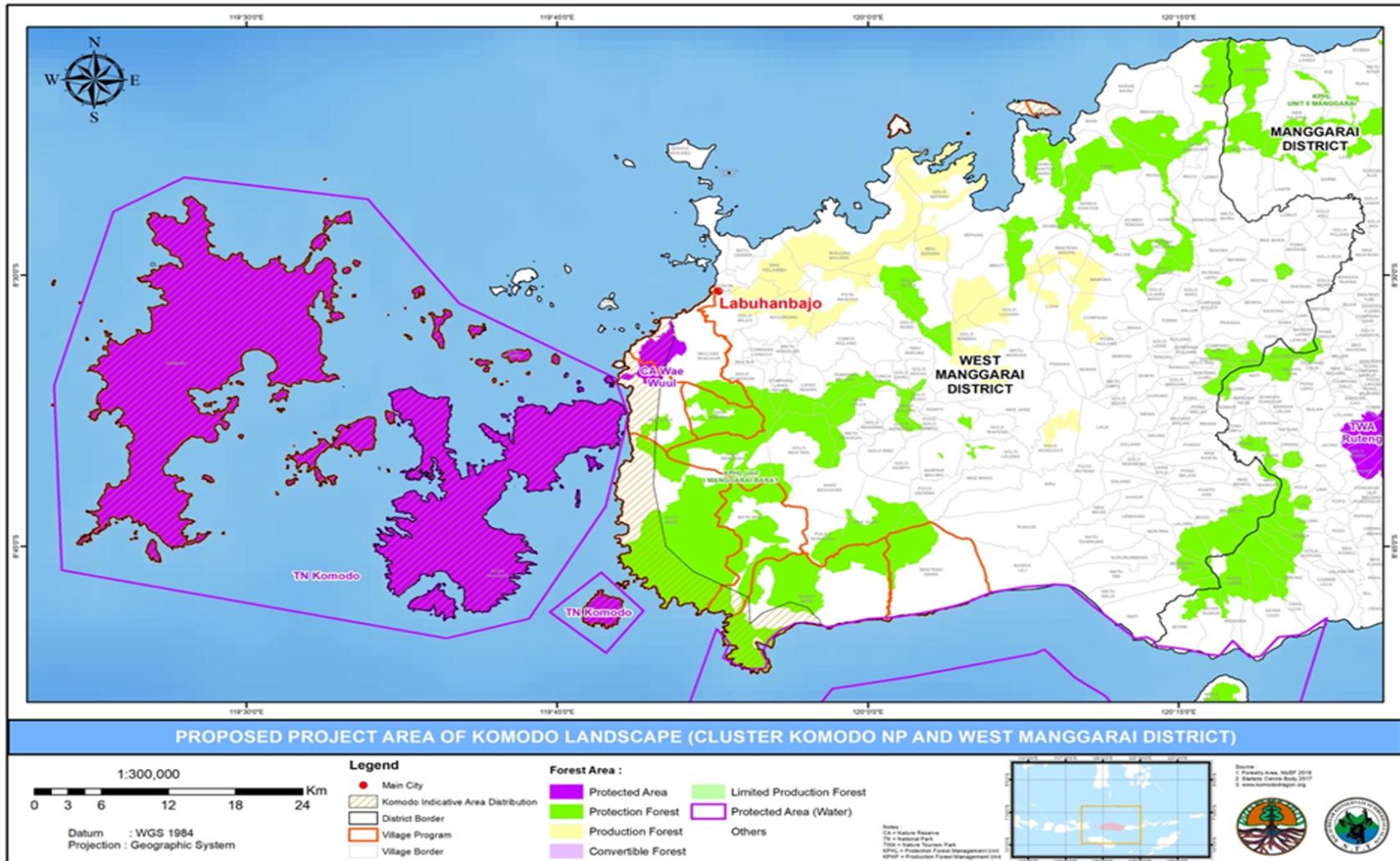
- (a) Komodo National Park, with an emphasis on Komodo Island and Rinca Island, which covers a targeted intervention terrestrial area of 58,068 hectares. The intervention will target habitat of Komodo dragon and other threatened species, such as the Yellow-crested Cockatoo and food prey species of the Komodo dragon;
- (b) Marine area of Komodo national park covering 115,232 hectares that is one of the richest marine environments including coral reefs, mangroves, seagrass beds, seamounts and semi-enclosed bays that harbor many species of fish, corals, sponges and other species;
- (c) Mbeliling and Tanjung Kerita Mese Protected Forests with a targeted intervention area of 9,098 hectares and 13,796 hectares of community owned lands. The key species in the community' territory are Komodo dragon, and other threatened species, including the Flores Hawk-eagle and Yellow-crested Cockatoo;
- (d) Nggorang Bowesle and Longos Island are both situated in community areas. The key species in the area are the Komodo dragon and other threatened species, including the yellow-crested cockatoo; and

West Manggarai, Manggarai and East Manggarai Forest Management Units. Key species in the area are the Komodo dragon, and other threatened species, including the Flores Hawk-eagle and the yellow-crested cockatoo

The project approach at this landscape is to enhance management effectiveness of the Komodo national park, so as to maintain a viable and stable population of the Komodo dragon and associated species as well as improve its food sources through reduction of poaching. It will also support conservation efforts through the landscape (KEE approach) outside the KNP to integrate sustainable species efforts in areas outside PAs. Another approach is to increase the capacity of the Natural Resources Conservation Center (BKSDA) to better manage Komodo species that will be integrated with planned wildlife corridors in protected forest areas or community areas. The form of integration can be through spatial mechanisms, such as the designation of KEE's and community-managed PAs, depending on the context of the village. As well, the project will aid community groups so they can gain added value from important protected habitats and species, which will lead to higher rates of environmental stewardship and a reduction in habitat degradation and biodiversity loss.

The North Flores Landscape

Target locations in the North Flores landscape are: Riung Nature Reserve, Wolo Tado Nature Reserve, 17 Island Reserve Park, Cape of Torang Padang and Pota Island. Based on the observations of the Komodo Survival Program and the East Nusa Tenggara BKSDA, Komodo dragons are often found outside of conservation areas and protection forests. Therefore, the selected locations were chosen to include, not only the conservation areas and protection forests, but community lands as well. It is felt that the protection of Komodo dragon in this landscape is necessary to conserve this unique phenotypic population of the Komodo dragon, as they are genetically distinct from Komodo dragons residing on Komodo Island and Rinca Island. Also, these target locations provide habitat for several globally threatened and internationally protected terrestrial and marine flora and fauna species, such as the yellow crested cockatoo and whale shark.



The estimated size of the intervention area is 76,355 hectares broken down into five distinct sub-locations:

- Riung Nature Reserve and Wolotado Nature Reserve with a total area of 4,433 hectares which is a critical habitat for the Komodo dragon
- 17 Island Ecotourism Park with an area of 7,303 hectares that harbors a good population of Komodo dragon.

- c) Tanjung Torang Padang: This area is located outside PAs and is habitat for the Komodo dragon. The exact boundaries of the area for inclusion in the North Flores landscape will be identified at the PPG stage in consultation with the local communities;
- d) Pota with a total intervention area of 700 hectares. The key species is the Komodo dragon; and
- e) Ngada, Nagekeo, Ende Forest Management Units. The key species at this location is Komodo Daragon and other threatened species such as the yellow-crested cockatoo and the Flores hawk-eagle.

The project approach in the North Flores landscape is to continue tracking the population of Komodo dragons to obtain a more accurate understanding of current population distribution, genetic makeup and population dynamics so as to protect these populations, as well as establish breeding programs for the Timor deer and yellow-crested cockatoo so as to establish alternative livelihood opportunities for the local communities. There is also the additional cultural significance of reducing hunting of the Komodo dragon's primary food source (Timor deer) in the landscape, particularly on community lands. The breeding programs will be developed in tandem with the formation of terrestrial and marine ecotourism businesses with high economic returns to local communities. Additionally, but importantly, the project will facilitate the creation of Essential Ecosystem Area (KEE)[1], which also falls within the internationally recognized Other Effective Area-based Conservation Measures (OECM)[2] to promote an integrated multi-stakeholder approach to conservation of habitats outside protected areas through partnerships with local communities to enable the conservation of species found to reside outside of formal conservation systems.

[1] No. 5/1990 on Conservation of Natural Resources, Biodiversity and Ecosystems (Law No. 5/1990), and draft Ministerial regulation on Guidelines on Protection of Essential Ecosystem Areas. MOEF applies OECM to KEEs, with KEEs being defined as important ecosystem value areas outside PAs that ecologically supports survival through biodiversity conservation efforts for community welfare and quality of life.

[2] Refer OECM Guidelines adopted at CBD CoP 14 November 2018

2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

Stakeholders	Role in Project Preparation
Implementing Partner - The Directorate for Biodiversity Conservation	The Directorate for Biodiversity Conservation (KKH) under The Directorate-General for Natural Resources and Ecosystem Conservation of the Ministry of Environment and Forestry (KSDAE-MoEF) is the implementing partner due to its mandate. The KKH takes the lead in the project preparation, provides strategic direction, facilitates and coordinates with key stakeholders at the national and sub-national level in soliciting feedback, and makes sure government priorities integrate into the PIF. KKH facilitated six times stakeholder discussions both inter directorate in the KSDAE, MOEF, and broader stakeholders during the project preparation.
Responsible Parties	
Directorate of Essential Ecosystem Management (BPEE)	Formulation of policies and implementing policies, policy coordination and synchronization and preparation of norms, standards, procedures and criteria in the field of patterning and perpetuation of essential ecosystem areas/OECM/KEE, provision of technical guidance, evaluation and supervising of the implementation essential ecosystems areas, and areas of high conservation value. Will serve as one of the key responsible parties to provide policy and technical guidance and coordination for patterning and perpetuating of Essential ecosystem areas (KEE) which is important for some project site in Bengkulu and Aceh province, as most of the forest complex with elephant habitat is outside conservation areas, therefore this essential ecosystem scheme is needed in these regions.

Ministry of Tourism and Creative Economy	Ministry of Tourism and Creative Economy to support promotion of sustainable medium to small enterprises with emphasis on local communities through provision of training, provision of information on tourism enterprises, tourism policy development, limited infrastructure, marketing and access to credit. It would also work with private sector tourism industry to introduce and promote certification of small ecotourism enterprises and encourage local participation. It would also work with the private sector to promote partnership with local communities and small scale local enterprises through provision of capital and equity, market facilities, technical support and improve chances of local employability.
Natural Resources Conservation Bureau	Natural Resources Conservation Bureau (Balai Konservasi Sumber Daya Alam) East Nusa Tenggara-BKSDA NTT provides instrumental support to share identified challenges, barriers, and solutions regarding Komodo Dragon outside National Park. BKSDA NTT also shared best practices working with local communities for protecting endangered species, draft action plan for Komodo Dragon, and KEE/OECM development for Komodo Dragon habitat protection. BKSDA NTT facilitated a broader stakeholder meeting by inviting relevant actors in Flores island and NTT province during the project preparation.
Ministry of Social Affairs, DG of Social Empowerment, Directorate of Empowerment of Customary Community in Remote Area	<p>Governing state affairs in the area of social rehabilitation, social security, social empowerment, social protection, and handling the poor, while ensuring inclusivity in support to the President</p> <p>Ensuring synergism of project activities with national priorities and current activities of this directorate, particularly in the targeted sites</p> <p>Sharing lessons and experiences in empowering customary communities as relevant with the project context</p>
Ministry of Agriculture (Director General of Land and Water)	The Directorate of Area Expansion under Director General of Land and Water supports agricultural development and grazing management and will provide technical support and extension for (a) agricultural improvements, (b) natural pasture development, (c) restoration of permanent pasture lands, (d) establishing artificial pasture (temporary), and (e) irrigated pasture development.
Komodo Dragon National Park	Komodo Dragon National Park provides instrumental support to share identified challenges, barriers, and solutions regarding Komodo Dragon in the National Park, particularly main threats on the Komodo Dragon prey. Komodo Dragon National Park also shared best practices for protecting the habitat of the Komodo Dragon species, mainly on eco-tourism. Two formal consultative meetings were held with Komodo National Park during the project preparation.

	Komodo National Park during the project preparation.
East Nusa Tenggara Forest Department	East Nusa Tenggara Forest Dept. provides essential support to give inputs on the critical issues of Komodo Dragon Species management outside conservation areas that fall under forest management units. It includes KEE/OECM initiative for protecting the Komodo Dragon habitat corridor and how to align with the Provincial government development program. Two formal consultative meetings were held with East Nusa Tenggara Forest Dept., during the project preparation. The Forest Department will also support habitat restoration activities, mainstreaming of biodiversity and habitat consideration into FMUs and Production Forests
West Manggarai, East Manggarai, and Ngada District Development Plan Agency and NTT Provincial Development Plan Agency	West Manggarai, East Manggarai, and Ngada District Development Plan Agency and NTT Provincial Development Plan Agency provide substantial inputs on the importance of protecting Komodo Dragon habitat and other threatened species and how to align with local community livelihood. They highlighted synergy with the proposed solutions in the concept proposal. One formal consultative meeting for each district and province were held during the project preparation. They will be partners in promotion of conservation outcomes in FMUs and Plantation Forests so as to facilitate conservation of key threatened species
Local Authorities for Agriculture and Animal Husbandry Affairs	<p>Formulation of regional policies in the fields of food, horticulture, animal husbandry, plantation and agricultural extension; Coordinating and controlling the implementation of official tasks</p> <p>Provide support to the project, particularly in activities related to community empowerment and alternative livelihood, possibly through improved and diversified agricultural practices and product development</p>
Local Authority for Industrial and Trade, Cooperatives and Small-Medium Enterprises, and Tourism Affairs	<p>Preparation of the work plan in the area of industrial and trade, development of cooperatives and small-medium enterprises, and tourism affairs for the respective province and formulation of technical policy of government affairs in the area of industrial and trade, development of cooperatives and small-medium enterprises, and tourism affairs;</p> <p>Under the project, provide support in activities related to community empowerment and alternative livelihood, possibly through capacity building related to diversification and marketing of community-based products, access to funding, and tourism affairs – while ensuring synergism of project activities with regional priorities and interest</p>
Academic and Research	They undertake research and other advocacy activities in the landscapes, including in particular on phenotypic variations of komodo dragon populations and other

Institutions	r conservation development related issues
Local Communities	
Local communities / local resource users (agriculturists, fire wood and minor forest product collection, ecotourism, etc.)	<p>Forum Peduli Kawasan Mbeliling (FPKM) at village provided perspective in dealing with Komodo Dragon and other threatened species, and how local communities must be engaged and benefit from species habitat protection. The Forum also shared best practices regarding the local community business enterprises, which is beneficial for the concept of proposal development. One formal consultative meeting was held and followed up by field visits to targeted villages during the project preparation. Local communities will be key partners and beneficiaries under the project, representing the OECM/KEE Management Forum in decision making on zoning and mainstreaming within the landscape, participate in sustainable productive agriculture, ecotourism, value addition and small rural enterprises, protection and monitoring of Komodo dragon and other threatened species.</p>
Indigenous Peoples	<p>Indigenous people representatives from Flores shared their valuable feedbacks and concerns on the Komodo Dragon and OECM related issues. They highlighted the importance of engaging IP leaders, religious leaders and government leaders. One formal consultative meeting was held and followed up by field visits to targeted indigenous people during the project preparation.</p> <p>IP communities will be supported in the preparation of essential ecosystem areas that are consistent with the natural heritage framework. Together with IP communities, local communities will be the Project's target in terms of incentives, information and extension campaigns, and promotion of sustainable agriculture and biodiversity-friendly livelihood practices. The Project will also enter into partnerships with organized communities to influence their farm planning and management practices to ensure consistency</p>
Village Authority	<p>The village head has decision-making power, to lead the governance of the village as a self-governed community; appoint and terminate the appointment of village officials; take charge of village finance and related assets; issue village-level regulations; coordinate village-level development through a participatory approach; represent the village in court in any legal matters. Village heads also play an informal role in mediating village-level disputes and settling them outside courts.</p> <p>Coordinating and collaborating with project team and project partners in securing the interest of community to be actively involved in action to protect wildlife and</p>

	nabitat in harmony with their traditional wisdom. Lead the development of community agreement on conservation and issue a village regulation on that. Monitor and oversee the implementation of the community conservation agreement
Women and youth	They are generally a neglected group in the management structures and decision making at the community level. However, they have a lot of potentials to contribute to changing practices and attitudes particularly from those that lead to excessive utilization of natural resources and efforts will be made to involve them in key decision making bodies, in planning exercise and benefit sharing.
Fishers	These are households that are directly involved in fishing activities in the marine areas, seaweed and other mariculture activities, etc. They will directly benefit from the project in access sustainable fishing programs, livelihood programs and small value addition enterprises
Civil Society Organizations	
Birdlife Indonesia	Birdlife Indonesia supports conservation action in PA management and ecosystem restoration, policy advocacy, research and monitoring, information management, conservation awareness etc. In Flores it promotes bird conservation activity, developing sustainable farming and forestry practices, grassland improvement, etc.
Komodo Dragon Survival Program	Responsible for data management on biology, ecology and conservation status of Komodo dragon, scientific monitoring and management, involvement of local communities in wildlife protection and monitoring through awareness and sustainable development projects
PILI Foundation	PILI is a non-governmental organization whose programs and activities are oriented towards nature and environment conservation. Its institutional network focuses on the collection and exchange of information on biodiversity and natural resource protection and environmental issues and can support activities under the project
Private Sector	
Bank Rakyat Indonesia (BRI)	Two consultative meetings were held with the Bank Rakyat Indonesia (BRI). The Bank has the broadest small and medium enterprise portfolio with vast grassroots infrastructure. The BRI welcomed and wanted to synergy for access to finance of biodiversity-related enterprises such as eco-tourism, breeding, etc.
East Nusa Tenggara Regional Bank	Two consultative meetings were held with the East Nusa Tenggara Regional Bank. The Bank welcomed and wanted synergy for access to finance for community eco-tourism, breeding, etc. The Bank had previous experience working with UNDP

	for climate adaptation projects supported by GEF in East Nusa Tenggara province.
Environmental Fund Management Agency (BPD LH)	KKH held a consultative meeting with BPD LH, a dedicated autonomous Public Agency managing climate, environment, and biodiversity funds coming from the state budget and international donors. In addition to the primary capital raised from the state budget and interested donors, BPD LH can raise other sources of revenue from grants, investments and fees from the provision of their services in accordance to existing laws. These revenues, categorized as non-tax state revenue, can be disbursed without first depositing into the state treasury . Because of this flexibility, BPD LH is intended to be self-sustaining and is expected to be a potential source of grant financing for supporting conservation and livelihood programs within the project sites.
BAZNAS	BAZNAS refers to the Fatwa No. 1 of 2015 issued by the Indonesia Ulema Council that allows the mobilization of Islamic charities, alms, and donations to support clean water, environment and sanitation programs for vulnerable communities and can provide finance for environmental related activities.
Tourism Operators, Hoteliers and Tour Agents	
ASITA (Association of The Indonesian Tours and Travel Agencies)	ASITA was established in 1971, aims to enhance the image of Indonesian tourism and the role of its members as the main players in national tourism that are globally competitive. ASITA itself has 31 Regional Councils (DPD) throughout Indonesia. ASITA will be a strategic partner to enhance tourism ecosystem in Flores through its widely network at national as well as the international level.
HPI (the Indonesian tour guide association)	HPI was formally established in 1988 as a professional organization. HPI functions as a forum to facilitate communication and collaboration among tour guides, the government and other tourism associations in the framework of developing Indonesian tourism. HPI has 34 branches across Indonesia and in East Nusa Tenggara, there are 439 tour guides as members. HPI plays a role to promote local tourism and facilitate development of new tourism business models.
PHRI (Indonesian Hotel and Restaurant Association)	PHRI constitutes entrepreneurs, business owners engaged in the provision of tourism/hotel accommodation services, food and beverage / restaurant services as well as tourism educational institutions. PHRI and its network can be engaged during preparation and implementation particularly on sustainable tourism related activities.
Garuda Indonesia	Garuda Indonesia is the leading airline established as a state-owned company. The Garuda Indonesia group operates 202 aircraft fleets in total including Garuda Indonesia

	esia as the main brand currently operates 144 aircraft, while Citilink operates 58 aircraft. Garuda is serving East Nusa Tenggara areas including Kupang and Labuan Bajo as the main hub to Komodo Islands.
Lion air	PT Lion Mentari Airlines, operating as Lion Air, is an Indonesian low-cost airline and the country's largest privately-run airline, and the second largest low-cost airline in Southeast Asia (after AirAsia). The airline operates domestic as well as international routes, which is able to connect and support sustainable tourism development in Flores.
Traveloka	Traveloka is an Indonesian unicorn company that provides airline ticketing and hotel booking services online expanding rapidly into Southeast Asia and Australia. With the expanding demand on lifestyle product and services, Traveloka can be engaged to support development of sustainable tourism in Flores.
Mass Media Organization	
Mass media organizations, including national and provincial television and radio networks, private communication agencies, printed media, and online media.	Mass media has the responsibility for the dissemination of information and awareness on state policies, strategies and plans to the general public at the national and regional level through mainstream channels of television, radio and print to reach local communities.

The stakeholder consultations were conducted during the project identification phase to identify key issues, barriers and innovative approaches to address the ongoing challenges as well as to guarantee there is no overlap with other efforts aimed at overcoming the identified challenges. Also, consultation meetings helped identify good practices and measures to transform these practices into transformative changes that increase the threatened species populations of Flores (e.g., Komodo dragon, Yellow Cockatoo, and Flores hawk-eagle). Consultations involved various stakeholders that have been engaged with since 2018, both in Flores and Jakarta. Stakeholders involved in consultations so far include: a conservation and development group formed across villages in the Mbeliling landscape for conservation of biodiversity, land and water; Komodo Dragon Survival Program; two village governments; three district governments (West Manggarai, Ngada, and East Manggarai); Komodo National Park; Regional Conservation and Natural Resource Management Office in Flores and Kupang; and the National Owned Bank Company (BRI) and Regional Owned Bank Company (Bank East Nusa Tenggara). The consultations were conducted with experts from Bogor Agriculture University and the Ministry of Environment and Forestry.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

In Indonesia, women's role in public domain is still limited, both in politics and economy, including participation in natural resources management. Although women's participation and leadership are increasingly recognized, formal qualitative and quantitative evidence are still limited, such as in biodiversity management and conservation. Even though percentage of women's active participation in public sphere has increased over the years, there have not been significant changes that could explore women's full potential in many areas. The discrepancy stems from the fact that most women have lower education, skills, and professional competencies than men. It also comes from the existing unequal access, opportunities, benefit and control of women as compared to men.

Overall, the social structure in Flores adheres to a patrilineal kinship model, whereby the distribution of inheritance is gender-related, e.g. land is inherited by men. In Manggarai, most individuals are farmers, but the division of labor between men and women there is marked difference between men and women in relation to agricultural activities, which is the main source of income for local peoples. For instance, men generally act as the decision makers in crop selection as well as take responsibility for irrigation duties and protection of lands, while women oversee the planting and maintenance of crops. On the other hand, child care, household work (e.g. cooking) and other domestic tasks is almost solely considered to be the woman's domain, though to some degree men are involved in activities that require physical strength. Sources of income between the genders can vary greatly if one spouse in a household is working in a sector outside of agriculture, such as trading or as a government employee. In regard to seeking employment outside of the agricultural sector, males' greater access to education means they general fair better in attaining employment outside of agriculture compared to their female counterparts. For household financial needs, women usually access micro financing schemes at the village level to get a loan, as women are considered to have a better understanding on how household needs are to be fulfilled.

In terms of forest communities, women are more inclined to depend on forest resources and agriculture for food security, and they are often responsible for collecting potable water. Impacts from environmental perturbations and climate change, chiefly natural disasters, affect women's livelihoods, income and future employment, and therefore, endangering their health, decreasing their quality of life, increasing their time burden and challenging their ability to provide adequate food for themselves and their families. Most women that depend on agriculture are engaged in subsistence farming, which often suffers from low productivity and has high vulnerability to climate change-related natural disasters, such as droughts and floods. Traditionally, Indonesia's indigenous forest women have had the role of managing seeds that support food security of their communities, where their overall contribution to maintaining flora biodiversity is substantial. These women are also the bearers of traditional knowledge of skills associated with their livelihoods. These skills, among others, include shifting cultivation/rotational agriculture and the collecting of non-timber forest products. Unfortunately, however, indigenous forest women face many obstacles such as poverty and discrimination based on gender and ethnicity, which inhibit their ability to fully participate in community development. When it comes to role of gender in conservation, women are more concerned with biodiversity conservation, particularly plant biodiversity. Men, on the other hand, are more concerned with soil and land conservation. Forest conversion, for various reasons not just agricultural, has had deleterious impacts on local communities, especially for women, who are dependent on forest resources for subsistence. The loss of forest through conversion, has also affected the availability of clean water and has, in turn, resulted in water scarcity for smallholder farmers. As a result, this negative outcome directly undermines human

health and food security. Furthermore, indigenous women are even more negatively impacted because they have to take greater efforts, as part of their primary responsibilities, to collect forest products such as firewood, fodder, food items and other non-timber products. This is also harder for land-poor or landless households that exclusively rely on forest resources for their subsistence.

In terms of the marine sector, such as in Komodo National park, 97% of the small population that live in three villages within the park, depend on fishing as their main source of food and income, while a few supplement this with garden crops and collection of woodland products. While men largely go out to fish, the women are involved with harvesting mussels, lingula and oysters on the seashore. Women also work throughout the value-chain, from harvesting mussels, to washing them and taking them to market. They are also involved in post harvest activities of the boat-based fishery practiced primarily by men who use traps to catch crabs. They also dry fish and shrimp. However, while men and women alike are being negatively impacted from decreased productivity, climate change impacts and other events and even excluded from the places they fish and collect mussels, women especially are bearing the burden of a wide range of other consequences. This is seen in terms of the productive role of women (activities generating an income, job opportunities, paid employment), as well as relative to their role in social reproduction (which can be divided into two categories: domestic and care work to reproduce people/workers and ensuring the reproduction of the social system these people/workers live in). In terms of financial impacts of low productivity and harvest, generally these are shouldered by the women who are responsible for management of the finances of the family. The decline in incomes among fisher families has meant an increase in debts. Traditionally, women are seen as responsible for household accounting, so, the stress of making ends meet in these difficult circumstances falls primarily on women's shoulders.

The project will further assess and address gender inequalities and identify opportunities for supporting gender mainstreaming through direct involvement of women in the KEE management forum, and in economic activities related to agriculture, fisheries, tourism and other small-scale community enterprises. During the PPG stage, a gender specialist will be recruited to undertake a full gender analysis, including identification of appropriate means to enhance the participation of women in decision-making and promotion of economic development activities, and reduce impact to women from sector related activities. A gender action plan for the project will be completed during the PPG stage to address any negative impacts on rural women (including IPs) and identify specific project investments for improved benefit sharing, labor division, access to resources, access to technology and skills development, along with approaches to mainstream a gender focus across project activities. Additionally, the project will include special investments based on women's requirements, including specifically tailored training programs to enhance their role in decision-making. Gender disaggregated targets and indicators will be included in the project results framework agreement. The gender assessment and mainstreaming action plan will specifically address the following:

- § Identify and recognize the areas in which women play a key role in existing management systems and providing opportunities for women to further develop their existing roles.
- § Conduct meaningful consultations with women to ensure that women's perspectives help form the design of the project;
- § Ensure that there is equal representation of women in local forest and fisheries management associations and agencies, collaborative and partnership working groups, which will implement local, community-based activities.
- § Identify targeted training and technical assistance to women in local communities, ensuring that there is increased women participating in project-related training activities, in particular in livelihood programs

§ Identify activities that will involve land-based resources, targeted training and information will be provided to women so that they understand land ownership and tenure rights.

§ Identify opportunities for improving empowerment of women in forest, fisheries and other sectors to increase women's participation in managing such resources and services in their local communities and villages.

§ Identify business and trade ventures that could be run by women or have a majority women participants, in particular in agriculture, fisheries and ecotourism related small enterprise activities.

§ Design targeted awareness-raising actions for women, related to land rights, tenure, opportunities, etc.

As part of the PPG preparation, identify income generation activities targeted to women.

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; and/or Yes

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Conservation measures implemented through this project aim to ensure sustainability of project activities and associated impacts with the aid of the private sector. First, there will be a great deal of capacity building that will contribute to stakeholders' capability to sustain activities and positive social-ecological impacts. For example, enhancing institutional capacity at the village or site level for managing village forest and natural resources or initiating alternative community-based sustainable livelihood strategies. With the improved capacity at the local community level, new opportunities will emerge for leveraging support from the private sector. The private sector will be encouraged to collaborate and/or community ecotourism ventures and small-scale community enterprises as well as engage in a more environmentally-friendly tourism operations that are sustainable and helps conserve species and habitats. Banks will be approached to provide seed capital for community based economic development initiatives, such as ecotourism and agroforestry. As well, the project will develop a multi-stakeholder forum that will involve the government, communities and the private sector, ensuring conservation outcomes are being achieved through good governance, sound design and planning, and effective management schemes.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The initial risk assessment has identified the main risks and suitable management strategies to mitigate said risk factors, which are set out in the table below. These will be validated during Project Preparation Phase. If required, the risk management strategies will be elaborated upon. Furthermore, additional assessments will be undertaken to identify additional sources of risk.

Risk	Level	Management Strategy
Multilayer government, national, provincial, and local governments have different roles and authority on the Protected Areas system and outside Protected Areas, particularly on OECM and EAAs approval and management and thus ensuring coordination and support among the government institutions might be difficult	M	During PPG stage, provincial and local governments will engage for full proposal development using existing conservation coordination forums established in the area.
Low support from financial institutions to cooperate in provision of financing for biodiversity-related activities because of perceived low return on investments	M	During PPG stage the viability of financial instruments would be investigated to assess economic viability, including use of guarantee loans to encourage participation of banks in lending to local community businesses.
The limited experience and lack of practical methods for public-private partnerships in natural resources management	M	During the PPG stage, consultations would be held between government, private sector partners and local communities leading to co-design of the project with all parties at the table. Project design will ensure that project activities are phased in a way that allows the project to gain from the capacity building and experience sharing.
Development interventions in terms of community livelihoods and community-based enterprises (e.g. ecotourism, fisheries and natural resources based value addition, etc.) can have adverse impacts on species and h	M	Further assessments of this risk (and all others) will be undertaken during the PPG, in the course of designing the project will lead to the development of an ESMF during the PPG stage to cover this

<p>abitats if not well implemented.</p>		<p>and all other risks. Relevant experts will be involved in the design of the project.</p> <p>A participatory framework will be developed at PPG stage that ensures active participation of local communities, that activities are selected and owned by local communities and are self-managed. Monitoring indicators will be selected to ensure participatory monitoring of the health of the enterprise and the health of species and ecosystems.</p> <p>In terms of community-based enterprises, the ESMF will include specific criteria and procedures that will be used to assess potential impacts from any livelihood investment activities and define management responses before these activities are financed</p>
<p>Improved management of the OECM for multiple uses might have an unintended impact on community rights, including access could be restricted to resources from OECM areas, potentially leading to economic displacement. This might include customary community groups located within and adjacent to these areas</p>	<p>M</p>	<p>Further assessments of this risk (and all others) will be undertaken during the PPG, in the course of designing the project that will lead to the development of an ESMF during the PPG stage to cover this and all other risks. This might include the preparation of Livelihood Action Plans for any economically displaced people as part of the ESMF/ESMP and use of a GRM. Relevant experts will be involved in the design of the project.</p>
<p>The project could possibly affect land and marine tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources of marginalized and customary community groups</p>	<p>H</p>	<p>During the PPG stage, an assessment will be made of lessons from existing KEE/OECM approaches in the country to (i) assess the success of application of steps for KEE/OECM identification and its planning and management decision-making and how lands claimed by local community and customary community was carried out; and (ii) evaluate existing experiences of application of FPIC procedures and means to strengthen it, as the basis for</p>

		<p>development of ESMF/ESMP and grievance redressal mechanisms to ensure that there are suitable means and safeguards designed into the project to address any tenurial related issues that may arise. The project will also employ safeguard specialist to oversee and mitigate any land tenure issues.</p>
<p>Women (IP and rural women in particular) and other marginalized groups may not be fully involved in planning, implementation and monitoring of project interventions and getting benefits from such initiatives, rather influential leaders and/or groups at the local level may have more control on local level decision making.</p>	<p>M</p>	<p>A Gender Specialist will be assigned during the PPG stage to undertake a Gender Analysis of the proposed project interventions and develop a Gender Mainstreaming Action Plan to identify measures to ensure that the project contributes to gender equality and creates equitable opportunities for women and men at all levels of engagement.</p> <p>Development of a Comprehensive Stakeholder Engagement Plan at PPG stage that will identify key institutions in the country that can provide guidance for the preparation of the gender assessment and action plan, as well as oversee gender mainstreaming during the project period.</p> <p>Project design will include special investments based on women's requirements to ensure that they adequately benefit from project investments;</p> <p>Capacity building and training activities will be designed into the project to enhance the capacity of women and vulnerable members to take an active part in the planning and decision making process</p>
<p>Natural disasters and climate change may affect the implementation and results of project initiatives</p>	<p>M</p>	<p>Further assessment will be undertaken during PPG to consider potential climate change impacts on project activities in short-term and longer-term and to ensure that measures are reflected in project design to support climate-proofing and resilience</p>

ce of project activities and impacts as much as possible. It will also assess institutional capacity and information needs to enhance resilience to potential climate change impacts. During the PPG phase, the proposed project activities will be screened using the climate screening tool developed by the World Bank. Any identified climate change adaptation and mitigation needs for the proposed project activities will be incorporated in the project ESMF. It will identify specific management measures in design of the project to ensure that activities are environmentally sustainable and supporting best practices managed for their climate risks and improving protection and management of critical terrestrial and marine areas and ecosystems to help to increase the overall resilience of the natural systems to climate risks in the areas compared to business as usual.

The project will plan to assist the local population to protect water supplies, zone appropriate areas for various types of agriculture and agro-forests, and increase forest resilience through appropriate species mixtures. In addition, as part of Indonesia's action for climate risk reduction, local communities will be trained in climate smart and adaptive planning and processes.

During dry season and drought years, however, vulnerability to fire is a risk. The objective of this project is also increasing area of intact forest, which is much less vulnerable to the effects of climate and fire than fragmented landscapes.

The monitoring plan for the project will also include specific indicators to monitor the condition of

		<p>... specific measures to monitor the conservation of sensitive ecosystems as it relates to climate change</p> <p>A Knowledge Management and Communications strategy will be prepared at PPG stage with the aim of improving awareness of climate related impacts and promote measures to improve climate resilience.</p> <p>Climatic parameters will be included into activities and resulting plans. Planning evaluation and adaptive measures will be fully integrated into project investments.</p>
<p>The two project landscapes/seascapes have resource conflicts within the proposed OECM/KEEs (e.g. CAs, production and protection forests, private plantations, marine use areas, etc.) that could be exacerbated if the activities are not well implemented or stringent enforcement measures are instituted</p>	<p>M</p>	<p>As the project is categorized as High, an ESMF/ESMP will be prepared during the PPG stage following an ESIA. All thematic management plans (IPP, etc.) will be prepared holistically as part of the ESMP. In addition, the following requirements of High risk projects will be/have been met:</p> <ul style="list-style-type: none"> · Comprehensive Stakeholder Engagement Plan · IP Plan · Gender Action Plan · GRM
<p>The COVID19 outbreaks has disrupted the international tourism market</p>	<p>H</p>	<p>At PPG stage, with the participation of the Ministry of Tourism and Creative Economy an assessment will be made in relation to the potential for recovery of the tourism market and identify specific disease risk mitigation/prevention measures that are needed in case there is some post-Covid19 recovery of the tourism industry.</p> <p>Additionally options for promoting national tourism</p>

		<p>alternatively, options for promoting national tourism and other income generation would be investigated with financial options that might be available through a number of financial instruments promoted by the Islamic social fund (zakat), the Islamic social fund (waqf) as well as green sukuk and the Corporate Social Responsibility (CSR) fund, all of which have potential for supporting the poor and economically disadvantaged, who are likely to be most affected by zoonotic disease outbreaks.</p>
<p>The COVID19 outbreak could accelerate resource exploitation due to economic disruptions in other livelihoods as a result of reduced demand for certain products and services</p>	<p>H</p>	<p>At PPG stage an initial assessment will be undertaken of the social and economic impacts of ongoing Covid-19 on vulnerable populations as part of the ESMF preparation, mapping of hotspots and developing potential investment plans for responding to and ensuring income recovery for affected vulnerable populations and target specific livelihood interventions to facilitate such recovery as well as improving awareness of risks of zoonotic diseases. Increase awareness and knowledge of zoonotic diseases and prevention.</p>
<p>The COVID-19 and other potential zoonotic disease outbreaks could pose serious difficulties for effective project implementation and benefit sharing</p>	<p>H</p>	<p>There is likelihood that if the COVID-19 continues or is not effectively contained, project start-up and implementation could be delayed. The availability of co-financing could be affected by shifts in government fiscal priorities and exchange rates. Methods for bio-secure implementation will be needed, such as increased use of remote communication, use of PPE, etc.</p> <p>The rural areas of Flores are not well equipped for remote work, in terms of wifi availability. Covid does not change how work will be carried out in terms of pre-fieldwork preparations, holding consultations in the villages, other than by observing government safety protocols.</p> <p>Availability of international personnel on-site will depend greatly on working in a post-pandemic scenario.</p>

		<p>enario. However, if the pandemic persists, experience in Indonesia to date with other projects indicates that remote video training modules can be developed and that planning work can be accommodated in this manner at halls and offices where wifi is available. More time is required, however, as live-attendance will be limited by restrictions on attendance at any one session.-</p> <p>Local level consultation will only be undertaken if it complies to national to local government guidelines and UNDP-CO and WWF national office guidelines. For example, it is likely that the consulting team will be small (1-2 people), national staff, and may have to be across design, gender, social and environmental issues, and they will likely consult with small group sizes (under 10 people or per local guidelines) and will have PPE for themselves and for people they talk to in person. Additionally, COVID protocol will be developed and followed, such as testing, and supply of sanitizer and masks. In any case where either party is not comfortable to engage in discussions; it will not proceed. As much as possible, remote connections will be sought, for example via local government offices visiting communities.</p> <p>In all cases, continued attention will be given to ensuring the voices of IP, women, youth, and any underrepresented community members.</p> <p>Development of the Stakeholder Engagement Plan for implementation will also address such restrictions and mitigations.</p>
Indigenous peoples within and adjacent to the project	H	During the PPG stage, the project will have consul

<p>area, may be directly or indirectly affected by the project if they are not adequately involved through defined FPIC procedures in project design and therefore not engaged in, supportive of, or benefitting from project activities. The requirement for FPIC</p>		<p>tations with indigenous Peoples (IP) experts and affected groups to better understand their relationships with natural resources and prepare an Indigenous Peoples Plan (IPP) during the PPG stage, to address any potential impacts on affected IP groups and ensure that adequate FPIC procedures are in place to continue dialogue with IPs during PPG and project implementation</p>
<p>The potential for adverse impacts of that may contribute to future zoonotic disease outbreaks</p>	<p>M</p>	<p>During the PPG stage part of the ESMF screening, the project design will include specific measures to reduce human-wildlife interface, while over the long term promote healthy landscapes</p>
<p>Captive breeding of Timor deer (Komodo deer food source) and other species to reduce pressure on illegal hunting could exacerbate illegal wildlife trade</p>	<p>M</p>	<p>In terms of captive breeding (if determined viable during PPG stage will be financed by non-GEF sources following completion of ESMF, ESIA and ESM P process). If found viable, measures will be instituted to manage the risk. This activity will be restricted to few individuals (after completion of due diligence) with signed memorandum of understanding that defines strict rules for captive breeding management, consumption and sale, that would be closely monitored and regular and transparent reporting. Brood stock will be acquired from domestic populations as this is being practiced elsewhere in the country. If promoted, specific efforts will be instituted in the design of the output to effectively manage healthy breed populations, reduce mixed wet markets, and ensure safe handling procedures</p>

Opportunities Presented by Covid19: In terms of opportunities presented by the Covid19 situation, the project will support the following activities:

- Contribute to maintaining intact forest ecosystems and functions through landscape/seascape planning, improve protection of key species and help recover wildlife populations, which can reduce risk of zoonotic diseases;

- Support coordination with regional countries (through the UNDP Combating Illegal Wildlife Trade project) to strengthen enforcement and improve livelihoods to deter wildlife poaching;
- Mainstream biodiversity in forestry, agriculture and other economic sectors and support ecologically friendly production systems, such as agroforestry, mixed cropping and sustainable alternative livelihoods to ensure improved economic conditions for local people that might help mitigate impacts of zoonotic diseases;
- Improving waste disposal (particularly in coastal and terrestrial wetlands), which will help sustain a cleaner environment for humans; and

Building community institutions and increased awareness to enhance equity and self-determination, promote a more sustainable approach to resource management, enhance local ownership and success and hence the inherent capacity of the community to better deal with crises.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

As a nationally implemented project, the overall project management responsibility will rest with the Directorate General Natural Resources and Ecosystem Conservation (KSDAE) of the Ministry of Environment and Forestry. A Project Board (also called Project Steering Committee) will provide oversight and be responsible for guiding decisions to ensure the project achieves the desired results. The Project Board will comprise of: DG-KSDAE, BAPPENAS, Ministry of Finance (Directorate General of Budget Financing and Risk Management), Ministry of Tourism and Creative Economy and Provincial Government of East Nusa Tenggara. At the discretion of the Board, others members can be added.

The Beneficiaries would be the KEE or Landscape Management Forum for Flores (made up of representatives of government, private sector, CSOs, community and IP groups, NGOs, etc.) who would be the direct decision makers for planning and management of the Flores landscape. Direct beneficiaries would be local communities, Indigenous People and local enterprises.

The key Development (or Responsible) Partners would be the Ministry of Tourism and Creative Economy (to promote sustainable medium to small enterprise development, training, policy development, marketing and access to credit), Natural Resources Conservation Bureau (support planning for protection of habitat and species, landscape planning, stakeholder consultation, etc.), Komodo Dragon National Park Authorities (support conservation activities within national park, species monitoring and visitor management), East Nusa Tenggara Environment and Forestry Department (support for planning and management of forest management units outside the protected areas, landscape planning and management, and aligning conservation with provincial development planning) and District Development Plan Agencies (support for alignment with local community livelihood and enterprise development programs) that would directly support project implementation.

A Technical Advisory Committee (TAC) will be constituted at the national level to help advise and guide the PMU in the planning and implementation of the project. The TAC will include Directorates of KSDAE, Ministry of Tourism and Creative Economy, BAPPENAS, CSOs, experts and academic institutions are required. While the TAC will primarily focus on project-related issues, the intention is that this group would evolve to provide technical support on a wide range of issues concerning landscape approaches, tourism development, livelihood and enterprise development and social aspects.

The project will be closely coordinated with the following GEF financed initiatives and other initiatives in the Wallacea region and other areas of Indonesia:

· *Eco-system Approach to Fisheries Management (EAFM) in Eastern Indonesia (Fisheries Management Area (FMA)- 715, 717 & 718)*. GEF/WWF-US/Yayasan Kehati. This project commenced in 2015. The proposed project delivers sustainable environmental, social and economic benefits, demonstrating effective, integrated, sustainable and replicable models of coastal fisheries management that are characterized by good governance and effective incentives,

which in many cases would involve dealing with community-based marine protected areas.

- *Strengthening of Social Forestry in Indonesia*. GEF/World Bank. This project aims to improve community management of forests in select priority areas and to conserve biodiversity of global significance. This project is relevant with the proposed project in the area of inclusive forestry management.
- *Enhancing the Protected Area System in Sulawesi (E-PASS) for Biodiversity Conservation*. GEFTF/UNDP. This project commenced in 2012. The project purpose is to strengthen the effectiveness and financial sustainability of the Sulawesi PA system to respond to threats affecting globally significant biodiversity. This project is relevant with the proposed project in relation to strengthening PAs, as there are three PAs as part of the planned project intervention.
- *Transforming Effectiveness of Biodiversity Conservation in Priority Sumatran Landscapes*. GEFTF/UNDP. This project commenced in 2015. The purpose is to enhance biodiversity conservation in priority landscapes in Sumatera through the adoption of best management practices in PAs and adjacent production landscapes, using tiger recovery as a key indicator of success. This project will use a landscape approach which is highly relevant with the proposed project.

This Project will also draw from and/or coordinate with the following internationally supported projects/initiatives:

- *Critical Ecosystem Partnership Fund Hotspot Wallacea*. Burung Indonesia/CEPF. This program commenced in 2015. The purpose of the program is to strengthen civil society organizations for conservation action in the Wallacea area (Sulawesi, Lesser Sunda, and Maluku), through grant making, capacity building and mainstreaming. This project addresses focus areas and Key Biodiversity Areas that are relevant to the proposed project.
- *European Union- Forest Law Enforcement Governance and Trade (FLEGT)-Voluntary Partnership Agreement (VPA)*. Burung Indonesia/Birdlife Asia. This project commenced in 2016. The purpose of the project is capacity building for nongovernmental stakeholders engaged in forest management. This project has areas that overlap with the proposed project.
- *Landsense; A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring*. European Commission/Birdlife International/Burung Indonesia. This project began in 2017. The purpose is capacity building for citizens/villagers for better participation on land use planning, by connecting the domains of citizen science and Earth Observation to address critical issues in the field of Land use and Land Cover (LULC). This project has overlap areas with segments of the proposed project. SGP GEF 6

USAID Lestari Project: The Terrestrial NRM Project (2015-2020): The project will draw on the following lessons: (i) Adjustments made to theory of change meant that the projects' activities became more focused and integrated, bringing together four technical components to improve the management of conservation areas and forests, and to improve the protection of key species by combating wildlife trafficking and achieve a number of results in regulatory reform; (ii) maintaining good relationship, avoiding regular staff turnover and dedication of substantial time is key to project success; and (iii) ensuring that grant making is superseded by good procedures for grant design, review and award.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

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National Biodiversity Strategy and Action Plan (NBSAP) .

CBD National Report

Others (see below)

Indonesia Biodiversity Strategy and Action Plan (IBSAP 2015-2020):

The project is consistent with Indonesia Biodiversity Strategy and Action Plan (IBSAP 2015-2020). The primary vision of IBSAP 2015-2020 for Indonesian biodiversity management is “Indonesian biodiversity preservation and development that contributes to national competitiveness and a fair and sustainable use of resources to improve the welfare of current and future generations (BAPPENAS, 2016).” To achieve this vision, through policies and strategies, three missions were formulated for biodiversity management for the 2015-2020 period. These include the following three missions (BAPPENAS, 2016): a) to improve Indonesia’s biodiversity ownership, b) to treat biodiversity as source of sustainable welfare and livelihood for Indonesians and c) fully responsible biodiversity.

To support the implementation of missions and policies and to achieve the intended future conditions, the appropriate organizations and mobilization of resources is required. For the 2015 to 2020 period, three missions were developed to achieve the biodiversity management goals. These include the following:

a. Improve biodiversity management and ownership, policies are required to implemented. These include the following:

- b. Conduct research on biodiversity, data management and documentation of biodiversity as well as management of its ownership, such as patent and intellectual property rights, in support of Indonesia's needs.
- c. Secure biodiversity and its existence, through management, for Indonesia and to support the development of optimal benefits from it for the country.
- d. Develop sustainable utilization of biodiversity.
- e. Improve the economic value of biodiversity as a way to support economic growth, national competitiveness and the welfare of people.
- f. Increase the utilization of biodiversity in everyday life and activities of communities.
- g. Protect biodiversity resources and their associated ecosystems from any disturbances, which may put Indonesian biodiversity and ecosystems at risk or in danger.

The National Targets for Biodiversity Management

The project will contribute to the National Targets for Biodiversity Management. In order to ensure that various policy objectives for IBSAP 2015-2020 are achieved national target of biodiversity management for the period of 2015-2020 is prepared. The national targets follow the Aichi Targets framework, but they are adjusted to the national conditions and requirements (Ministry of National Development Planning or BAPPENAS, 2016).

Biodiversity Management Action Plan

The biodiversity management action plan aims to achieve the vision, mission and target of biodiversity management as mentioned earlier. For the 2015- 2020 period, the action plan consists of four groups, used to support the mission and policies of biodiversity management, with respect to research, conservation, utilization, and capacity building. The biodiversity management action plans are as followed:

- a. Action plan for research, data management and documentation of biodiversity and management of ownership.
- b. Action plan for developing biodiversity to support economic growth, national competitiveness and community welfare.
- c. Action plan for maintaining and preserving biodiversity for Indonesian people and for supporting the realization of optimal benefits for Indonesia.
- d. Action plan for improving the capacity to manage biodiversity using a participatory and integrated approach.

The new mid-term development plan, RPJMN 2020-2024, incorporates biodiversity preservation and conservation as central themes. This plan contributes to the national government's efforts to formally increase protections for high conservation value areas from 52 million hectares (2019) to 70 million hectares by 2024. This plan also directly contributes to the conservation of 27 million hectares of terrestrial areas and 26.9 million hectares of marine areas. Within the new mid-term development plan, the 25 priority species identified in the Indonesian Biodiversity Strategy and Action Plan 2003-2020 are also included, which is pertinent to this project, as the Komodo dragon is one of the 25 listed species.

As mentioned, the project is consistent and contributes to Indonesia Biodiversity Strategy and Action Plan as follows:

- a. The project will facilitate development investment plan based on existing Komodo Dragon Strategic Action Plan (SRAK) and implemented with adequate investments in innovative tools, practices and financing; improve guideline and planning framework integrating conservation outcomes in development sectors and facilitation development of integrated ecosystem management landscape framework in Flores
- b. Alternative new economic models and environmentally friendly livelihood activities for financial sustainability of conservation efforts and benefit to surrounding communities be developed as part of incentive and disincentive system for business and communities for conserving Komodo dragon landscape
- c. Throughout bio-based business promoted as new economic model, this encourage business and local entrepreneur to operate in sustainable way
- d. New economic model based on biodiversity conservation encourage sustainable land management, agriculture and animal husbandry
- e. The project will contribute to capacity development of PA's staff and related stakeholders
- f. Komodo dragon has been assigned as one of 25 priority species by the government. Strategic action plan for Komodo dragon has been developed
- g. Application of site-specific integrated conservation plans designed for KNP, CAs and areas of critical high biodiversity within the landscape, including connecting corridors

The Indonesian Biodiversity Strategy and Action Plan 2003-2020, particularly the mission “to implement a balanced program of conservation and sustainable use of biodiversity”; Indonesia is an active contributor to the Sustainable Development Goals agenda and low carbon economy, which aims to steer the world onto a sustainable development pathway. Sustainability and low carbon economy are still a strategic and important element in RPJMN 2020-2024. As new Biodiversity Strategy and Action Plans are introduced, the project will adapt to meet the targets of the new biodiversity strategies.

Sustainable Development Goals and Aichi Targets

The proposed project will support the achievement of the Sustainable Development Goals (SDGs) in Indonesia, most notably SDG15 to *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss, in particular [Target 15.2](#): By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally; [Target 15.5](#): Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species; and [Target 15.9](#): integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. The proposed project will contribute to the following Aichi Targets: [Target 11](#): By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider*

landscapes and seascapes; and Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Sixth National Report to CBD

The project is consistent with the national targets as reflected in Indonesia's sixth national report to the CBD. In particular, this relates to the following:

- a. National Target 2: Implementation of sustainable management of biodiversity resources in the planning and implementation of national and regional development to improve community economies
- b. National Target 3: Realization of incentives and disincentives system in business and the sustainable management of biological resources
- c. National Target 4: Establishment of increased availability and implementation of policies supporting sustainable consumption and production in the utilization of biodiversity resources
- d. National Target 6: Implementation of policies for sustainable management and harvesting
- e. National Target 7: Improved sustainably managed land for agricultural, plantation and animal husbandry
- f. National Target 11: Realization of sustainable maintenance and improvement of conservation areas
- g. National Target 12: Realization of efforts to maintain the populations of endangered species as a national conservation priority
- h. National Target 14: Improved functionality of integrated ecosystems to ensure the improvement of essential services
- i. National Target 15: Realization of conservation and restoration of degraded ecosystems
- j. National Target 19: Implementation of science and technology capacity building for sustainable management of biodiversity
- k. National Target 21: Implementation of comprehensive and integrated data gathering and information mapping on biodiversity.

The project will support Indonesia to comply with its CITES requirements. The project will focus on two species listed in CITES Appendix 1 (Komodo dragon, Yellow-crested Cockatoo and Flores Hawk Eagle), the most endangered among the CITES-listed animals which are threatened with extinction. The project will support the establishment and/or enforcement of the National Strategy and Action Plan for the Komodo dragon and Flores Hawk Eagle species. A National Strategy and Action Plan for the Yellow-crested cockatoo is expected to be prepared in 2021/22.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

An integral element of site conservation and protection in sustainable landscapes is developing the mechanisms for knowledge development and continuous learning. The commitment to continuous learning will be embedded throughout the project cycle by developing feedback mechanisms where stakeholders have the opportunity to reflect, share experiences, and assess progress against set targets. The idea is to have mechanisms in place that link the knowledge/experience of the stakeholders to actions in the field. The monitoring and evaluation system under Component 3 will track achievements against targets, produce and disseminate best practices and lessons learned, and assess the effectiveness of the whole approach. The project's communications and partnership outreach are integral elements of the project's knowledge management strategy. Therefore, the inclusion of and collaboration with a broad range of stakeholders and institutions is of key importance.

The project has several different target audiences, such as: PA managers, local and national government, CSOs, universities, and local communities. Each of these audiences will have different informational needs, and the project will develop materials to present analyses, data and lessons learned that are tailored to respond to those needs. For example, at the national level, policy discussions with various stakeholders will help determine specific needs that will be presented through information briefs for use by decision makers.

In addition to targeting specific audiences, the communication materials and activities will be directed at a broader audience. Short documentary films, along with radio talk shows, book publications and other communication materials will be created. Furthermore, media representatives will be invited to visit the sites to inform the broader public about the biodiversity conservation activities taking place under the project. As such, media representatives will play an important role in informing the broader public about the project's findings. There will also be a national seminar to disseminate the lessons learned with various public and civil society organizations. Finally, the project will create a website to present information, including best practices and lessons learned. The project will also support the development of an online portal for information dissemination and receipt of feedback.

9. 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

High or Substantial

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Project Information

<i>Project Information</i>	
1. Project Title	Investing in the Komodo Dragon and other globally threatened species in Flores
2. Project Number	6506
3. Location (Global/Region/Country)	Indonesia

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the Project mainstreams the human-rights based approach

The proposed project is designed to conserve globally important species - Komodo dragon and other threatened species and their habitats in Flores. To achieve this objective, the proposed project aims to integrate biodiversity conservation in land use and land practices within the landscape, in particular, outside protected areas and including protection forests, production forests and other production areas. Targeted outputs will support necessary assessments, provide technical guidance and promote alternative community and private sector business models and livelihood, including related to tourism, agriculture, grazing and forest production. This will be initiated through the following actions (a) private-community partnerships to conserve important Komodo dragon and other threatened species; (ii) enhance conservation outcomes in production areas, restoration of degraded forest, savannah and agricultural lands; (iii) enhance the health and diversity of prey for the Komodo dragon through improvement in species and habitat conservation a

and agricultural lands; (iii) enhance the health and diversity of prey for the Komodo dragon through improvement in species and habitat conservation and reduction of poaching of the Komodo dragon natural prey; (iv) improve understanding of Komodo dragon distribution, genetic diversity and threats and (v) ensure sustainable sources of income for local communities and small businesses so as to enhance co-benefits and improve investment in the conservation of the Komodo dragon and its habitats and associated threatened species

At the ground level, the project will apply a collaborative partnership approach that integrates species conservation, ecosystem protection, sustainable forest and land management practices and local economic development within the Komodo dragon habitats in Flores landscape. Private business operators, farmers and local communities who live in these habitats will be engaged to act as stewards for biodiversity conservation and sustainable land management, adopting eco-friendly tourism, land, forestry and agricultural management that provides livelihood benefits, improves quality, extent and condition of species and ecosystems and promotes habitat connectivity, improved forest and marine habitat conditions.

The project will uphold human rights principles, by ensuring inclusiveness and equitable distribution of development opportunities and benefits, including to women, smallholders, farmers, IPs and marginalized groups. Project design and implementation will be built around meaningful engagement, participation and inclusion of stakeholders, at regional level and at project sites. The project will promote accountability and transparency and develop a grievance redress process to address any conflicts in resource use and benefit sharing.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

A gender analysis will be conducted during the PPG phase, in accordance with UNDP's SES procedure, to identify the differences, needs, roles and priorities of women and men as they relate to engagement in activities in the tourism, agriculture, fisheries and related sectors. Specific project activities will be developed to support the engagement of women in project activities during the PPG phase. The results of the gender analysis conducted during the PPG will be integrated into the project design to ensure that gender-based differences are built into project activities as appropriate, and gender-disaggregated targets developed as indicators of project's success. A gender responsive evaluation and adaptive learning assessment will be undertaken during the PPG in order to assess opportunities to enhance the status of women in respect to economic and land management activities, to address the gender gap and to help design project activities and indicators that will ensure women's full participation as beneficiaries (and deliverers) of technical cooperation and knowledge building efforts. Consultation sessions will be held to obtain views and inputs of a wide range of local stakeholders, including women and IPs to develop project activities and to inform a robust stakeholder involvement plan with full gender considerations. A corresponding gender mainstreaming plan for the project will be completed and submitted with the project document at time of CEO Endorsement. Gender-disaggregated targets and indicators will be included within the project results framework.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The project will develop cost-effective and sustainable solutions for effective management of forests, aquatic habitats (marine and riparian systems), restore degraded agricultural land and Komodo habitat and develop and new environment-friendly business models for tourism and community enterprises. It will institutionalize conservation practices at the landscape level, particularly in areas outside the protected areas, with the intent to conserve HC VFs and in enhancing capacities of relevant public, private and community institutions at provincial and local levels. Further, the project will integrate outputs and lesson learned into existing development programs (e.g. conservation plans for remaining HC VFs and aquatic systems), provide incentives mechanism for tourism enterprises and Customary Law Communities (CLCs) to integrate biodiversity outcomes into management of their traditional lands and private-community partnerships to sustain community participation beyond project period.

The proposed project intervention and leveraged resources will generate global environmental benefits both direct and indirect of 63,998 hectares of terrestrial protected areas and 123,433 hectares of marine protected areas, improve conservation measures in landscapes (outside protected areas such as production and other forests) covering 267,531 hectares, that would include high conservation forests and key species habitats. It will restore around 500 hectares of degraded species habitats and agricultural lands. This will ensure achievement of stable and/or increased population of key threatened and endemic species. In the long term, it will improve quality of species habitat and environment and improve the quality of terrestrial, coastal and

ned and endemic species. In the long term, it will improve quality of species habitat and environment and improve the quality of terrestrial coastal and marine aquatic habitats for key species through improved practices. The overall results of the project will contribute to achievement of SDGs, Aiche and national biodiversity targets.

Part B. Identifying and Managing Social and Environmental Risks

<p>QUESTION 2: What are the Potential Social and Environmental Risks?</p> <p><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).</i></p>	<p>QUESTION 3: What is the level of significance of the potential social and environmental risks?</p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i></p>			<p>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</p>
<p>Risk Description</p>	<p>Impact and Probability (1-5)</p>	<p>Significance (Low, Moderate, High)</p>	<p>Comments</p>	<p>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</p>
<p>Risk 1: Development interventions in terms of community livelihoods and community-based enterprises (e.g. ecotourism and nature-based value addition, etc.) can have adverse impacts on species and habitats including cultural, historical and religious sites if not well implemented.</p> <p>Standard 1, Standard 3, Standard 4, Standard 6</p>	<p>I=3 P=2</p>	<p>Moderate</p>	<p>Development interventions for tourism, income generation and economic activities can destroy critical habitats through infrastructure development in critical habitats, over demand for natural resources and poorly managed tourism operations and waste disposal</p>	<p>During the PPG phase consultation will be held with the potentially affected individuals (including estate labor, smallholders, etc.) and local communities to assess impacts on current levels of accessibility and use, in particular, for fuel wood and forest resources. Based on this consultation, an ESMF covering this risk and all others will be prepared during the PPG to ensure preparation of the ESIA and ESMP during the project implementation, if confirmed necessary during PPG-stage assessments.</p> <p>A project grievance redressal mechanism will be developed at PPG stage to provide a mechanism to address any specific labor concerns during project implementation.</p>
<p>Risk 2: Improved management</p>	<p>I=4</p>		<p>Given the focus on conservation of hi</p>	<p>Further assessments of this risk (and all others) will</p>

<p>Risk 2: Improved management of the OECM for multiple uses might have an unintended impact on community rights, including access could be restricted to resources from OECM areas, potentially leading to economic displacement. This might include customary community groups located within and adjacent to these areas.</p> <p>Principle 1 and Standard 5, Standard 6</p>	<p>I=4 P=3</p>	<p>High</p>	<p>Given the focus on conservation of high conservation habitats outside the protected areas, there is likelihood that access to resources (grazing, firewood collection and NTFP collection) might be affected unless there is a strong effort to ensure that any decisions on resource restrictions should not be imposed from outside, but evolve through a community decision making process</p>	<p>Further assessments of this risk (and all others) will be undertaken during the PPG, in the course of designing the project that will lead to the development of an ESMF during the PPG stage to cover this and all other risks. This might include the preparation of Livelihood Action Plans for any economically displaced people as part of the ESMP and use of a GRM. Relevant experts will be involved in the design of the project.</p> <p>Any loss of resource access would be compensated through preparation of a livelihood action plan or avoided entirely if FPIC is not first secured (where required per the SES).</p>
<p>Risk 3: The project could possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources of marginalized and customary community groups.</p> <p>Principle 1, Standard 6</p>	<p>I=4 P=3</p>	<p>High</p>	<p>Creating biodiversity corridors and zoning might affect the land tenure arrangements causing hardships to the people</p>	<p>During the PPG stage, an assessment will be made of lessons from existing KEE/OECM approaches in the country to (i) assess the success of application of steps for KEE/OECM identification and its planning and management decision-making and how lands claimed by local community and customary community was carried out and in keeping with UNDP's SES procedures to identify gaps for ensuring compliance; and (ii) evaluate existing experiences of application of FPIC procedures and means to strengthen it, as the basis for starting FPIC during the PPG and development of the ESMF (and subsequent ESMP) and grievance redressal mechanisms to ensure that there are suitable means and safeguards designed into the project to address any tenorial related issues that may arise. The project will also employ safeguard specialist to oversee and mitigate any land tenure issues.</p>
<p>Risk 4: Women (IP and rural women in particular) and other marginalized groups may not be fully involved in planning, implementation and m</p>	<p>I=3 P=2</p>	<p>Moderate</p>	<p>There are gender disparities in the local economic sectors that needs to be identified and considered in project design. There is a risk that these consultations might not fully capture or reflect</p>	<p>A Gender Specialist will be assigned during the PPG stage to undertake a Gender Analysis of the proposed project interventions and develop a Gender Mainstreaming Action Plan to identify measures to ensure that the project contributes to gender equality and crea</p>

<p>onitoring of project intervent ions and getting benefits fro m such initiatives, rather infl uential leaders and/or group s at the local level may have more control on local level d ecision making.</p> <p>Principle 2, Standard 6</p>			<p>t views of women and girls and other disadvantaged groups</p>	<p>tes equitable opportunities for women and men at all levels of engagement.</p> <p>Development of a Comprehensive Stakeholder Engag ement Plan at PPG stage that will identify key instituti ons in the country that can provide guidance for the p reparation of the gender assessment and action plan, as well as oversee gender mainstreaming during the project period.</p> <p>Project design will include special investments based on women’s requirements to ensure that they adequa tely benefit from project investments;</p> <p>Capacity building and training activities will be design ed into the project to enhance the capacity of women and vulnerable members to take an active part in the planning and decision making process</p>
<p>Risk 5: Natural disasters and climate change may affect t he implementation and resul ts of project initiatives. Clim ate change may likely increa se the threat of IAS by decre asing ecosystem resilience and creating conditions whe re IAS can more easily beco me established.</p> <p>Standard 1, Standard 2</p>	<p>I=3 P=2</p>	<p>Moderate</p>	<p>Climate change could result in increas ed frequency and/or severity of extre me climatic events or natural hazards that could impede project impact in m edium and long term</p>	<p>Further assessment will be undertaken during PPG to consider potential climate change impacts on project activities in short-term and longer-term and to ensure that measures are reflected in the project design to s upport climate-proofing and resilience of project acti vities and impacts as much as possible. It will also a ssess institutional capacity and information needs to enhance resilience to potential climate change impac ts.</p> <p>However, any potential climate change impacts, inclu ding potential threat of IAS will be addressed in the pr oject specific Social and Environment Screening Proc edure (SESP) or ESMF, as relevant during the PPG sta ge that will identify specific management measures i n design of the project to ensure that activities are en vironmentally sustainable and supporting best practi</p>

				<p>environmentally sustainable and supporting best practices managed for their climate risks.</p> <p>The monitoring plan for the project will also include specific indicators to monitor the condition of sensitive ecosystems as it relates to climate change. Climatic parameters will be included into activities and resulting plans.</p>
<p>Risk 6: The two project landscapes have resource use conflicts within the proposed OECM/KEEs (e.g. CAs, production and protection forests, private plantations, etc.) that could be exacerbated if the activities are not well implemented or stringent enforcement measures are instituted</p> <p>Principle 1</p>	<p>I=4 P=3</p>	<p>High</p>	<p>In the absence of effective strategies to integrate socially sensitive approaches to biodiversity conservation across the KEEs there could likely be lack of recognition of overlaps in community tenure and resource uses</p>	<p>As the project is categorized as having high risk, an ESMF will be prepared during the PPG stage. All thematic management plans (IPP, etc.) will be prepared holistically as part of the ESMP during project implementation, per that ESMF. In addition, the following requirements of High risk projects will be met during the PPG:</p> <ul style="list-style-type: none"> · Comprehensive Stakeholder Engagement Plan · IP Framework (with subsequent preparation of IP Plan during early project implementation before any on-the-ground investments are made) · Gender Action Plan · GRM
<p>Risk 7: Indigenous peoples within and adjacent to the project area, may be directly or indirectly affected by the project, and might not be adequately involved through defined FPIC procedures in project design and therefore, not engaged in, and supportive of or benefitting from project activities.</p>	<p>I = 4 P = 3</p>	<p>High</p>	<p>This would likely prevent the full recognition of the rights of customary communities and exclude them from decision-making and benefits from project investments</p>	<ul style="list-style-type: none"> · During the PPG stage, the project will assess potential impacts of the project on rights and interests, lands, territories, resources, and traditional livelihoods. · FPIC will be applied to any project activities related to resource management and land and, extended to the livelihoods Output as well. An IPP framework (which will be fully developed into an IP plan in the early part of implementation) will also be prepared during the PPG stage, in close collaboration with a technical expert and following Stakeholder

Standard 6				<p>tion with a technical expert and following Stakeholder Engagement and FPIC. The IPP framework will assess the potential impacts of the Project on the rights, interests, lands, territories, resources, and traditional livelihoods of Indigenous Peoples.</p> <p>Livelihoods Outputs will be designed in consultation with the stakeholders, and only implemented with FPIC.</p>
<p>Risk 8: The COVID19 and other potential zoonotic disease outbreaks could pose serious difficulties for effective project implementation and benefit sharing</p> <p>Standard 3</p>	I =4 P =3	High	As a consequence it would affect the ability of vulnerable people to get back into economic activities as any lingering or new zoonotic disease outbreaks can affect these groups the most and leave them out from participating and accruing benefits from the project in particular from the livelihood activities.	At PPG stage and initial assessment will be undertaken of the social and economic impacts of ongoing Covid19 on vulnerable populations as part of the ESMF preparation, mapping of hotspots and developing potential investment plans for responding to and ensuring income recovery for affected vulnerable populations and target specific livelihood interventions to facilitate such recovery as well as improving awareness of risks of zoonotic diseases. Increase awareness and knowledge of zoonotic diseases and prevention.
<p>Risk 9: Captive breeding of Timor deer (Komodo dragon prey base) and other species to reduce pressure on illegal hunting could exacerbate illegal wildlife trade and/or cause harm to species such as Timor Deer, Yellow-crescent cockatoo and other species that might be captured from the wild and traded in the disguise of being captive bred.</p> <p>Standard 1</p>	I = 3 P = 2	Moderate	Potential risks can occur if this activity is not monitored as it might contribute to IWT	The viability of captive breeding will be assessed at PPG stage taking into consideration the experiences in the country. To avoid any concerns relating to IWT with this activity, this will be taken into consideration through the ESMF, ESIA and ESMP process. If found to be manageable, this activity will be funded by non-GEF resources and it will be managed by ensuring that activities will be restricted to few individuals (after completion of due diligence) with signed memorandum of understanding that defines strict rules for captive breeding management, consumption and sale, that would be closely monitored with regular and transparent reporting. Brood stock will be acquired from domestic populations as this is being practiced elsewhere in the country.

<p>Risk 10: Potential impacts, currently unforeseeable, associated with loans under output 2.2 and micro-grants under output 2.3</p>	<p>I=2 P=3</p>	<p>Moderate</p>	<p>As the project is promoting a participatory approach to define community livelihood and resource management investments, the location and scale of such activities will only be defined during the community consultation process in early project period, but protocols and procedures are needed to ensure that any social and environmental impacts and management measures are integrated into the investment activities</p>	<p>The ESMF will identify potential menu of livelihood and resource management activities, and their potential impacts and management interventions. The ESMF will then include specific guidelines and procedures for or separate screening, assessment and management for these activities, since they will not be fully defined during the PPG and therefore, the risks (and required A&M) will not be known until commencement of the village planning process in early implementation.</p>
<p>QUESTION 4: What is the overall Project risk categorization?</p>				
<p>Select one (see SESP for guidance)</p>			<p>Comments</p>	
<p><i>Low Risk</i></p>			<p><input type="checkbox"/></p>	
<p><i>Moderate Risk</i></p>			<p><input type="checkbox"/></p>	
<p><i>High Risk</i></p>			<p>R</p>	<p>At PIF stage, the overall risk for the project is classified as 'High'. The identified risks will be revised based on further assessment and information during the project formulation. To meet the SES requirements, at the PPG stage, the following will be prepared: (i) ESMF; (ii) Stakeholder analysis and comprehensive Stakeholder Engagement Plan including FPIC process; (iii) Gender Analysis and Gender Action Plan; (iv) KM and communication plan; (v) design of incentives and other investments that support nature-friendly investments; (vi) design and implementation of the project in close collaboration with private sector and local communities; and (vii) IPP framework.</p>
<p>QUESTION 5: Based on the identified risks and risk categorization</p>				

QUESTION 5. Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
Check all that apply	Comments	
<i>Principle 1: Human Rights</i>	R	High
<i>Principle 2: Gender Equality and Women's Empowerment</i>	R	Moderate
<i>1. Biodiversity Conservation and Natural Resource Management</i>	R	Moderate
<i>2. Climate Change Mitigation and Adaptation</i>	R	Moderate
<i>3. Community Health, Safety and Working Conditions</i>	R	High
<i>4. Cultural Heritage</i>	<input type="checkbox"/>	NA
<i>5. Displacement and Resettlement</i>	R	Moderate
<i>6. Indigenous Peoples</i>	R	High
<i>7. Pollution Prevention and Resource Efficiency</i>	<input type="checkbox"/>	Moderate

[1] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

[2] In regards to CO₂, ‘significant emissions’ corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

[3] Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

Supporting Documents

Upload available ESS supporting documents.

Title

Submitted

PIMS_6506_Pre-SESP_14 Aug 2020_rev

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Ms. Laksmi Dhewanthi	GEF Operational Focal Point for Indonesia, Senior Advisor to the Minister for Industry and International Trade	Ministry of Environment and Forestry	9/28/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

PROJECT DESCRIPTION, MAP AND GEOGRAPHIC COORDINATES

Flores Island

Flores Island has an area of 13,540 km² and a human population of around 1.8 million, with a population density of more than 90 people per km². The island's climate is dry, the impact of monsoons and wind movements. Rainfall is less than an average of 1,000 mm per year with heights varying from 500 mm per year in coastal areas and more than 3,000 mm per year in mountainous areas. The western part of the island is a little wetter than the eastern part, and the north coast is drier than the south. The main habitats on this island are generally mangrove forests, savannahs and grasslands, a few thorny tropical forests, wet and dry deciduous forests, semi-green forests, and mountain forests.

Komodo habitat

In Flores, Komodo dragon populations are found in three nature reserves and one nature tourism park namely: CA (nature reserve) Wae Wuul, CA Wolo Tadho, CA Riung, and TWA Seventeen Islands. The Wolo Tadho Nature Reserve is on land from the coastline to a height of 600 meters, covering an area of approximately 4,000 hectares. The main habitat includes savanna, dry season forest, and semi-green forest. Two additional nature reserves are on the border of Wolo Tadho: Riung and Seventeen Islands. The Riung Nature Reserve includes protection areas on land and sea. Dry land is a hill with a height of no more than 150 meters, mostly covered by savannah grasslands dominated by palms and tamarind trees. Brackish and saltwater mangrove forests are also found on the coastline.

17 Islands Reserve Park

The Seventeen Island Nature Reserve consists of land and seawater. About 16 km of coastline is the southern and western boundaries of this nature reserve, up to 5 km to the sea from the north coast of Flores. This nature reserve includes 20 islands, islets, and coral reef areas. Seventeen Islands Nature Tourism Park (TWA) covering an area of 7,303.16 hectares, designated as one of the conservation areas in East Nusa Tenggara Province through a Decree of the Minister of Environment and Forestry, Number: SK.3911/ Menhut-VII/KUH /2014 dated 14 May 2014, which administratively governs the area in the Riung District area, Ngada Regency, East Nusa Tenggara Province.

Representing the type of tropical forest ecosystems that are dry, savanna, mangrove, and waters that have important meaning as a buffer for the life of the surrounding area. In addition, in this area there are several types of dominant tree species including; tamarind (*Tamarindus indica*), kesambi (*Schleichera oleosa*), lontar (*Borrassus flabellifer*) and several other types with rare abundance such as ure (*Cagenaria sicecaria*), red wood and (*Pterocarpus indicus*). There are about 17 species of mangrove composing trees from 10 families and there are 3 types of mangrove associations (coastal vegetation).

Wae Wuul Nature Reserve

Wae Wuul Nature Reserve (CA) is a hilly area with a height of up to 356 m above sea level, located in the southern city of Labuan Bajo. CA Wae Wuul was established in 1996 based on a decree from the Indonesian Ministry of Forestry No. 47/Kpts-II/1996 and currently the management is in the Balai KSDA East Nusa Tenggara. CA Wae Wuul has a humid climate than Komodo dragon NP, but is relatively drier than other areas in central Flores. In 2010, the temperature in Wae Wuul ranged from 16.4 ° C to 39.7 ° C with 1,500 mm of rainfall from January to October. Its main habitat is savannah grasslands dominated by tamarind and palm trees and seasonal forests. There is a marsh located in the northeast, and rice fields on the eastern border of the Nature Reserve.

CA Wolo Tado Nature Reserve

Wolo Tadho Nature Reserve (CA) covering an area of 4,016.80 ha is designated as a conservation area through a Decree of the Minister of Forestry, Number: 429/Kpts-II/1992, May 5, 1992, which administratively governs the area in the Riung District, Regency Ngada, East Nusa Tenggara Province. Is a representative type of medium-scale natural forest ecosystem that has an important meaning as a buffer for the life of the surrounding area. In addition, this area stores a variety of potential flora and fauna. Potential flora in the form of woody plants recorded in this area as many as 61 species, including *Dyospiros* sp., *Tamarindus indica*, *Cinnamomum indica*, *Celtis petandra*, *Palaquium obovatum*, and *Ficus benjamina*. There are also various types of fauna, including *Cervus timorensis*, *Zaglossus* sp., *Macaca fascicularis*, *Sus vitatus*, *Gallus varius*, and various bird species, including *Passer montanus*, *Caridonax fulgidus*, *Corvus florensis*, *Phillemon moluccensis* and *Macrocephalo maleo*.

CA Riung Nature Reserve

Riung Nature Reserve (CA) covering an area of 416.20 ha was designated as one of the conservation areas in East Nusa Tenggara Province through a Decree of the Minister of Environment and Forestry, Number: SK.3911/ Menhut-VII/KUH/2014 dated May 14, 2014, which administratively the area is located in the region of Riung District, Ngada Regency, East Nusa Tenggara Province. Representing the type of dry forest ecosystem with mixed vegetation including mangroves that have important meaning as a buffer for the life of the surrounding area. In addition, in this area there are several types of mammals, reptiles including Komodo (*Varanus komodoensis*), and avifauna of Wallacea region.

Torong Padang Peninsula

The Torong Padang Peninsula is an area of 850 hectares that is one of the Komodo dragon's natural habitats. This area is dominated by savanna grasslands and open deciduous forests. In addition to Komodo dragons, in the area can also be found deer, boars, monkeys who are prey of Komodo dragons. This area is one of the areas in northern Flores that has relatively good habitat quality and Komodo dragon population. This is because Torong Padang is a customary land of the *Baar* tribe that has local wisdom to protect the area from human activities other than the need for traditional events.

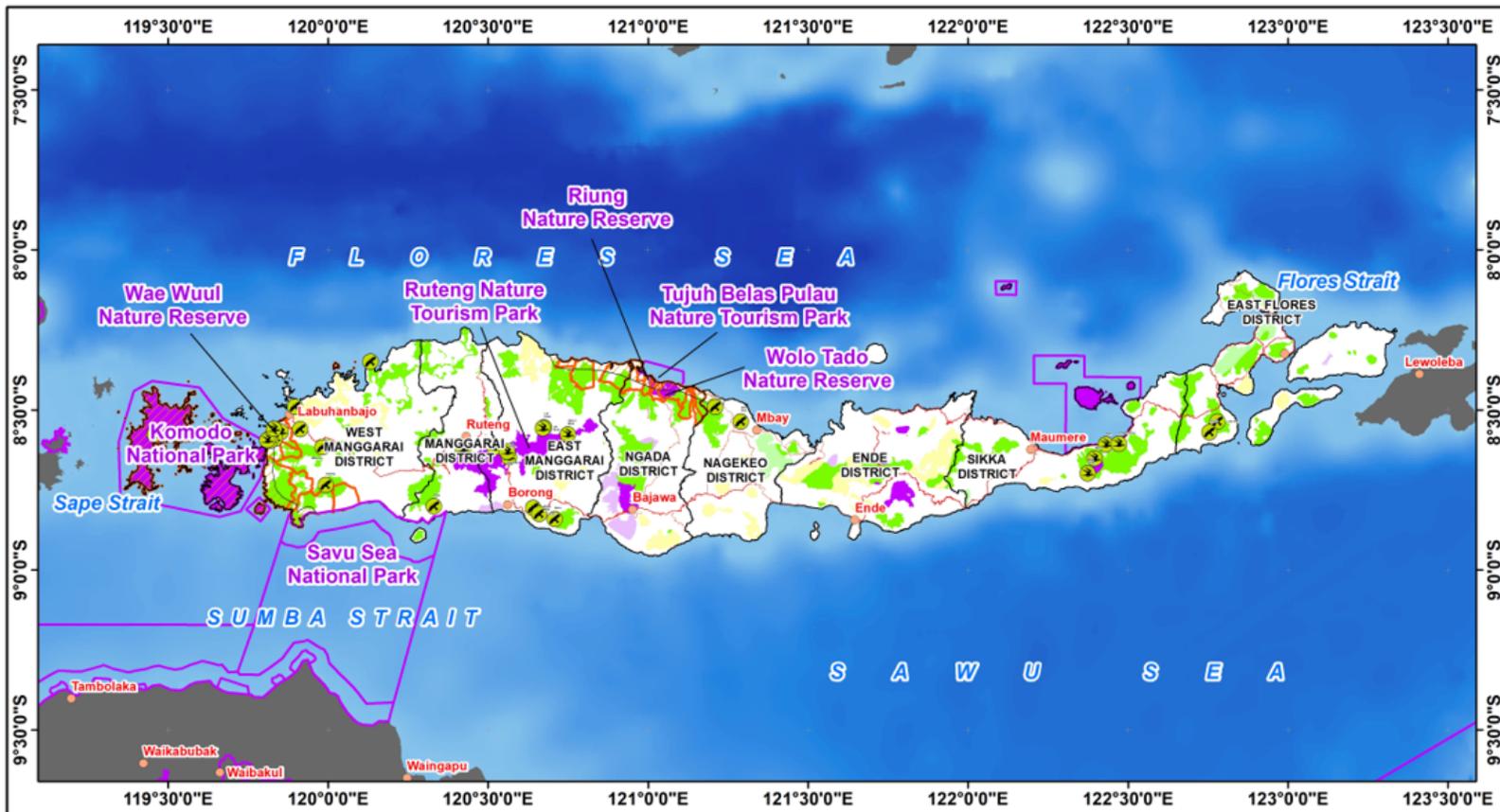
Longos Island

Longos Island is located at 500 meters from the north coast of Flores, between Terang bay and Bari village. The island has an area of 478 hectares and has four villages with an estimated population of around 1,000 people who generally have a livelihood as fishermen. Beside small areas of teak and *lamtoro* plantations, there are limited plantation areas and healthy dry forests and mangrove forests. Longos is not included in the network area of the Flores Nature Reserve.

Pota

Located on the northern coast of the island of Flores, it is part of the Komodo dragon spreading range to the west of Riung. Administratively, this area is part of Sambu Rampas Sub-district, East Manggarai Regency. Since 2014, BBKSDA NTT and the Komodo Survival Program Foundation have conducted annual monitoring activities for Komodo dragon populations in Pota. With open deciduous forest habitat types, coastal and mangrove forests, Komodo dragons can also be found at this location. Komodo dragons in the pota forest are spread from Nanga Baras in the west to Nampar Sepang in the east.

(Map disclaimer: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries)



<p>1:1,250,000</p> <p>Datum : WGS 1984 Projection : Geographic System</p>	Legend		Forest Area : <ul style="list-style-type: none"> Protected Area (Land) Protection Forest Production Forest Convertible Forest Limited Production Forest Protected Area (Water) Others
	<ul style="list-style-type: none"> Yellow-crested cockatoo Distribution Flores Hawk Eagle Distribution Main City Primary Road Secondary Road 	<ul style="list-style-type: none"> Komodo Indicative Area Distribution District Border Village Program 	

Source:
1. Secondary Area, MAF 2016
2. Garaka, Centre Body 2017
3. www.komodoindonesia.org

Name of project sites	Geospatial Coordinates
Komodo National Park	119° 18' 30.360" E - 119° 49' 37.761" E
Wae Wuul Nature Reserve	119° 48' 3.877" E - 119° 51' 23.980" E
Ruteng Nature Tourism Park	120° 20' 59.210" E - 120° 52' 47.043" E
Riung Nature Reserve	120° 57' 38.865" E - 120° 58' 49.587" E
Tujuh Belas Pulau Nature Tourism	120° 58' 51.433" E - 121° 6' 35.371" E
Wolo Tado Nature Reserve	120° 59' 43.255" E - 121° 5' 58.765" E
Savu Sea National Park	118° 51' 52.837" E - 120° 22' 30.571" E

Key Units and Extents within landscapes

Unit	Hectares
KPHL Unit I Manggarai Barat	72,433
KPHL Unit III Manggarai Timur	48,886
KPHL Unit II Manggarai	51,787
KPHL Unit IV Ngada	35,370
KPHP Unit V Nagekeo	28,549
Komodo National Park	173,300
Wae Wuul Nature reserve	1,497
Riung Nature Reserve	416
Wolo Tado Nature reserve	4,017
Riung 17 Islands Nature Park	7,303

Cluster	Village	Male	Female	Total Population
Komodo NP	Komodo	891	873	1,764
	Papagarang	743	781	1,524
North Flores	Sambinasi	469	240	709
	Lengkosambi	373	352	725
	Lengkosambi Timur	361	304	665
	Lengkosambi Barat	487	474	961
	Nangambaur	1,652	1,621	3,273
	Pota	1,865	1,822	3,687
	Golo Lijun	676	679	1,355
	Benteng Tengah	1,014	984	1,998
	Latung	433	417	850
	Nangamese	946	864	1,810
	Tadho	981	435	1,416
West Flores	Benteng Dewa	841	834	1,675
	Golomori	927	841	1,768
	Macang Tanggar	1,389	1,463	2,852
	Matawae	715	662	1,377
	Nangabere	638	669	1,307
	Tiwu Nampar	541	533	1,074
	Warloka	766	776	1,542
	Tanjung Pontianak	594	581	1,175
Sum				32,332

