



ADAPTATION FUND

AFB/PPRC.38/Inf.38
25 September 2026

Adaptation Fund Board
Project and Programme Review Committee
Thirty-eighth Meeting
Bonn, Germany, 19-23 October 2026

PROPOSAL FOR INDONESIA (5)



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"INTEGRATING CLIMATE ADAPTATION INTO COASTAL AND MARINE SPATIAL PLANNING
FOR RESILIENT COASTAL LIVELIHOODS IN INDONESIA (BLUE COAST-RZ)"

Project Title	Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast-RZ)
Project ID	AF00000595
Category	Regular size project (over \$1 million)
Type	Single country project
Stage	Concept
Country	Indonesia
Implementing Entity	IFAD
Financing Requested	USD 6,000,000.00
Reviewer	Lystra Fletcher-Paul Fletcher-Paul

Co-reviewer(s)

IE Contact Person

Anupa Rimal Lamichhane, Chiara Merola, Clarissa Conte, Dudy Nugrohoadi, Fanny Minjauw, Hani Elsadani, Pierre-Yves Guedez, Savis Sadeghian, Wietse Michiels

Secretariat's Overall Comment

The project Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast–RZ) aims to strengthen the climate resilience of vulnerable coastal communities in Demak, Central Java, by reducing exposure to tidal flooding, erosion, salinity intrusion and climate-related livelihood disruption through climate-risk-informed planning, ecosystem-based coastal protection, early warning, disaster preparedness and resilient coastal livelihoods.

The initial technical review raised several issues such as the description of the outcomes and outputs, the Theory of Change, duplication with other projects, the consultation process, justification of full cost, alignment with the AF Strategic Framework and Economic and Social risks, among others, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.

Country Eligibility

Is the country party to the Kyoto Protocol, or the Paris Agreement?

Response: Yes

Secretariat: The country is party to both the Kyoto Protocol and the Paris Agreement

Sept 8, 2026

Is the country a developing country particularly vulnerable to the adverse effects of climate change?

Response: Yes

Secretariat: Indonesia is a developing country, which is particularly vulnerable to the adverse effects of climate change. The most important climate-related effects are rising temperatures, increasingly variable and intense rainfall, flooding, sea-level rise, coastal erosion, salinity intrusion, marine and ecosystem degradation, and disruption of coastal livelihoods. In Demak, where the project will be implemented, these effects are intensified by land subsidence, mangrove loss, poverty, dependence on fisheries and aquaculture, as well as weak local adaptive capacity.

September 8, 2026

Project Eligibility

Has the designated government authority for the Adaptation Fund endorsed the project/programme?

Response: Yes

Secretariat: As per the Endorsement letter dated 14th August 2026.

September 8, 2026

Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?

Response: Cleared

Secretariat: Yes, the length of the proposal is 50 pages.

September 8, 2026

Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

Response: Not Cleared

Secretariat: Yes.

However, additional information is required.

Part II A (para 52 – 71) describes the Project Components. For each component, the section provides details of climate related impacts which will be addressed, the specific gaps which the Component hopes to fill and the activities which will be implemented to address the climate change impacts identified, showing how they lead to substantial tangible outcomes. A Theory of Change is also described and depicted in Figure 7, showing the logic of how the activities will contribute to the outputs and outcomes which eventually result in the overall objective of the project. For each component, the CN also indicates the AF Strategic Outcome to which it will contribute.

The activities are adequately suited to the climate impacts identified and are framed as concrete, additional adaptation measures rather than business-as-usual development or routine environmental protection.

CAR1: In the description of each Component, please state clearly the Outcomes not just the Outputs.

CAR 2: Where possible, please include information on the agencies which will be responsible for leading the implementation of the activities

CAR 3: Please include risks and assumptions in the description and diagram of the Theory of Change

Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Not Cleared

Secretariat: Yes, however some additional information is required

Part II B (para 72 - 79) describes how the project will provide benefits across all three dimensions - economic, social and environmental. The project is expected to directly benefit approximately 12,000–15,000 people (3,000–3,800 households) across five coastal villages as well as to provide total estimated benefits of approximately IDR 661 billion over five years. The targeting strategy to ensure areas where marginalized and vulnerable groups are identified and equitable distribution of benefits to vulnerable communities, households and individuals is described in paragraphs 36 - 39 and Table 3.

The potential negative impacts and maladaptation risks have been identified and the methods by which they will avoided or mitigated have been described. An initial gender assessment has also been conducted to determine the different needs, capabilities, roles and knowledge resources of women and men, and/or identify how changing gender dynamics might drive lasting change.

CR1: Please state the assumptions used to determine the range of the direct beneficiaries. Table 2 shows how the lower boundary of the range (3041) is estimated (i.e. minimum of 60 % of the 6767 households in the five villages of which 75 % are fishery dependent). But there is no explanation for the estimation of the upper boundary of 3800. It would also be useful to disaggregate by sex.

CR2: The CN states that the indirect beneficiaries will be estimate during the Full Proposal preparation, however, it would be good to include a rough estimate of the number of indirect beneficiaries. Please provide an estimate of the number of indirect beneficiaries disaggregated by sex even if it is a rough estimate and indicate the assumptions used to derive the estimates .

September 10, 2026

Is the project / programme cost effective?

Response: Cleared

Secretariat: Yes

Part II C (para 80 - 90) provides an analysis of the cost-effectiveness of the proposed project/programme. The analysis provides the cost per direct beneficiary and per household for the project as a whole (USD 369–461 and USD 1,455–1,843 on the pre-fee cost) and Table 6 presents the alternatives considered and the reasons for rejecting them, and explains why the hybrid engineered approach is more cost-effective than either hard defences alone or planting alone.

The cost effectiveness is also demonstrated from the perspective of the sustainability of the project.

Sept 10, 2026

Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?

Response: Cleared

Secretariat: Yes,

Part II D (para 91 - 100) describes how the project/programme is consistent with national or sub-national sustainable development strategies, including the National Adaptation Plan, the National Long-Term Development Plan 2025–2045 and Medium-Term Plan 2025–2029, the Blue Economy Roadmap 2023–2045, the marine spatial planning framework under Law No. 32/2014, the Indonesian Biodiversity Strategy and Action Plan 2025–2045, Demak's Blue Carbon Location designation. At the sub-national level, the Morodemak masterplan and Presidential Instruction No. 9/2000 on gender mainstreaming are also mentioned,

September 10 2026

Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?

Response: Cleared

Secretariat: Part II E (para 101 - 105) describes how the project/programme meets relevant national technical standards, In addition, Table 7 presents fourteen relevant national standards (in the areas of environmental protection, coastal and marine spatial planning, mangrove regulations , water resources, waste, construction services, coastal engineering standards, disaster management, fisheries, food safety, labour and occupational safety, gender mainstreaming, land administration and cultural heritage), their respective objectives and relevance to Blue Coast–RZ, the public entity responsible for compliance and the measures required to ensure compliance.

September 10, 2026

Is there duplication of project / programme with other funding sources?

Response: Not Cleared

Secretariat: Yes, however additional information is required

Part II F (para 106 - 110) explains if there is duplication of project/programme with other funding sources, Table 8 presents a summary of the various projects of relevance, the main interventions and relevance, lessons learned, areas of overlap, complementarity and no-duplication measures.

CAR 4: Please include the dates and budgetary amounts of all relevant projects

CAR 5: Please include any relevant regional projects of which Indonesia is a beneficiary

CR 3: Table 8 states that “there is no risk of duplication because there is no geographic overlap” between Blue Coast–RZ and the IFAD-financed Blue Coast programme, while paragraph 3 of the CN describes the AF project as a package “within” that programme. Please list the districts financed by the IFAD loan in order to verify that the proposed project is not included.

CAR 6 : Para 108 states that there are “five operational controls” to ensure non-duplication, however six controls are listed. Please revise the sentence accordingly.

September 10, 2026

Does the project / programme have a learning and knowledge management component to capture and feedback lessons?

Response: **Cleared**

Secretariat: Yes

Activities related to knowledge management (KM) and dissemination of lessons learned are grouped under Component 3 and described in Part II G (para 111 to 118). Five learning themes are defined, responsibilities are assigned across MMAF, district and provincial authorities, research partners and IFAD, feedback loops from trainings, drills and the grievance mechanism are built in, and products are to be retained in MMAF systems after closure.

September 10, 2026

Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: **Not Cleared**

Secretariat: Yes, however additional information is required

Part II H (para 119 - 129) describes the consultative process. Table 9 presents a summary of consultations which took place between November and December 2025. These consultations included national agencies (MMAF, Bappenas, the Ministry of Environment), research institutions (CIFOR-ICRAF, BRIN), civil society, provincial and district authorities in Central Java and Demak, and development partners (AFD, the British Embassy, the World Bank LAUTRA PMU). For each of the consultations, the table presents the issues raised and information gathered as well as how this information informed the formulation of the project.

Village-level focus group discussions with village heads, community groups, women’s groups and fisher groups took place in Demak on 28 November 2025.

CAR 7: Please revise Table 9 to include the following for each consultation:

- i) number of participants
- ii) number of male and female participants
- iii) the year of the consultations which took place on November 28.

September 10, 2026

Is the requested financing justified on the basis of full cost of adaptation reasoning?

Response: Not Cleared

Secretariat: Yes, however additional information is required

Part II I (para 130 - 142) provides the justification for the funding requested. It explicitly defines what would happen without AF funding (government routine programmes, district masterplan works, statutory disaster management, wider Blue Coast loan/GEF activities) and explains why these are insufficient to keep Demak's coast functional under climate change. It then shows the additionality of each component and explains why the financed measures are adaptation costs rather than business as usual development. It clearly states that the AF window has its own budget, results framework, procurement, safeguards and reporting, and can proceed even if some wider Blue Coast elements are delayed, using MMAF's project management structure and direct recruitment of service providers. Lessons from comparable AF coastal projects in Pekalongan, India, Mauritius and Cuba are also used to justify the design choices.

It is not clear whether there is co-financing and whether the project would achieve its outputs and outcomes without it.

CAR 8: Please prepare a table which summarizes the results of the analysis of of the scenarios with and without the interventions of the project for each component. The table should have three columns as follows:

Col 1: Baseline: Without any support from the Adaptation Fund

Col 2: Impacts of the proposed project: With Adaptation Fund support

Col 3: Quantifiable impacts

CR 4: Please indicate whether the project has co-funding from other sources and whether it is able to deliver its outcomes and outputs regardless of the success of the other project(s).

September 10, 2026

Is the project / program aligned with AF's results framework?

Response: Not Cleared

Secretariat: Yes, however some adjustments are required

Table 11 in Part III A shows the alignment of the project with the AF results framework.

CAR 9: Please include the AF core impact indicators such as the number of direct and indirect beneficiaries, number of natural assets and physical assets made more resilient to outcome indicators of the table where possible

CAR 10: The titles of the Specific Objectives are not consistent throughout the document. For example Specific Objective III (para 51 of the CN) does not align with the Objectives in Table 11 in which Specific Objective III has two parts (a and b). Please ensure that the numbering system and titles of the Specific Objectives, Outcomes and Outputs are consistent throughout the document.

CAR 11: The results framework maps Output 2.2 to AF Fund Output 2.1, whereas paragraph 65 of the narrative states that Component 2 contributes to Fund Outcomes 5 and 6 only. Please ensure consistency throughout the CN.

CAR 12: Please revise the title of Table 11 to: Alignment of Results Framework with AF Strategic Framework

September 10 2026

Has the sustainability of the project/programme outcomes been taken into account when designing the project?

Response: Cleared

Secretariat: Yes

Part II J (para 143 - 152) J describes five mutually reinforcing measures by which sustainability is taken into account in the project design: institutional anchoring, technically sound restoration design, community stewardship, operation and maintenance arrangements, and adaptive monitoring. Moreover, the project does not rely on one-off investments alone. It is also designed so that restored ecosystems, early-warning arrangements, community assets and livelihood measures remain functional after the Adaptation Fund grant closes. Thus all aspects of sustainability have been addressed: financial, institutional, technical, economic, social, environmental, institutional, and financial as well as operation and maintenance and replication and upscaling.

September 10, 2026

Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Not Cleared

Secretariat: Yes, however some additional information is required

Part II K (para 153 - 160) identifies the environmental and social impacts/risks and Table 10 screens the project against all fifteen ESP principles, with a risk statement and mitigation measures for each. The project is classified as a moderate-risk / Category B project. Direct and indirect and cumulative risks as well as transboundary impacts have been identified and their treatment explained. An exclusion list is specified and the initial gender assessment is provided. However the checklist is incomplete and the risk category is stated inconsistently in the PFG and the CN.

CAR 13: Please complete the Checklist table (Table 10) as follows:

1. Col 2 (headed "No further assessment required for compliance"): please indicated which principles will not need further assessment.
- 2, Col 3: for each risk identified, please indicate the level of risk (high, medium or low) in addition to the information already provided on the impacts and mitigation measures.

CAR 14: Please note that Principles 1, 4 and 6 always apply as continuous monitoring is expected of these principles. Thus, the Checklist and narrative in the ESMP Plan should be changed to reflect this.

The CN and PFG give different classifications for the project, Paragraphs 103 and 153 of the concept note state that the project "is expected to remain a moderate-risk / Category B operation", while the PFG states that the moderate-risk / Category B classification "derives from the screening of the sovereign Blue Coast project and cannot be confirmed for Blue Coast–RZ, and a substantial risk rating is considered the more likely outcome".

CAR 15 : Please reconcile the environmental and social risk category between the concept note and the PFG form. State a single categorisation using the AF ESP definitions, and if a higher category is anticipated, set out the consequences for the instruments and budget required at fully-developed proposal stage.

September 10, 2026

Resource Availability

Is the requested project / programme funding within the cap of the country?

Response: Cleared

Secretariat: The requested financing of USD 6,000,000 is within the single-country project cap

September 8, 2026

Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?

Response: Cleared

Secretariat: Yes, the IE Fee of USD 470,000 is 8.5 % of the total project cost before the fee. The figures are rounded and consistent across all tables - Project Components and Financing and Alignment Table. The PFG of USD 150,000 is correct for a project of this size.

September 8, 2026

Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?

Response: Cleared

Secretariat: The EE Fee USD 470,000 which is 9.5 % of the total project cost. The figures are rounded and consistent across all tables

September 8, 2026

Eligibility of IE

Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?

Response:

Cleared

Secretariat: IFAD is an accredited Multilateral Implementing Entity

Accreditation Expiration Date: 04 February 2031

September 8, 2026



CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast–RZ)

Country: Indonesia

Thematic Focal Area: Coastal zone management; ecosystem-based adaptation

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: International Fund for Agricultural Development (IFAD)

Executing Entities: Ministry of Marine Affairs and Fisheries (MMAF), Directorate General of Marine Spatial Planning (DGMSP)

Amount of Financing Requested: 6,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 150,000 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☐ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission: First submission of the concept note.

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Contents

PART I: PROJECT/PROGRAMME INFORMATION	1
Project/Programme Background and Context:	3
A. Background / Abstract	3
B. Observed climate trends and projected climate change	4
C. Impacts of Climate Change	7
D. Targeting strategy	12
Project/Programme Objectives:	14
Project/Programme Components and Financing:	16
Projected Calendar:	17
PART II: PROJECT / PROGRAMME JUSTIFICATION	17
A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.	17
PART II: PROJECT / PROGRAMME JUSTIFICATION	17
B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.	23
C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.	25
D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.	27
E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.	29
F. Describe if there is duplication of project/programme with other funding sources, if any.	33
G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.	35
H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.	36
I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.	40
J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.	42
K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.	44
PART III: IMPLEMENTATION ARRANGEMENTS	46

Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

A. Background / Abstract

1. Indonesia is the world's largest archipelagic country, with more than 108,000 km of coastline and over 140 million people living in coastal and small-island areas. Indonesia's marine biodiversity is a globally significant asset that underpins the country's Blue Economy, supporting the livelihoods of more than seven million people while contributing to food security, climate resilience, and economic growth. As the world's largest archipelagic nation, Indonesia's extensive coral reefs, mangroves, seagrass meadows, and other coastal ecosystems are recognized in the Indonesia Biodiversity Strategy and Action Plan 2025–2045¹ as critical natural capital requiring long-term conservation and sustainable management. However, these ecosystems are increasingly threatened by overexploitation, habitat degradation, pollution, unsustainable coastal development, and climate change, highlighting the urgent need for integrated conservation and restoration efforts.
2. At national level, Indonesia is highly exposed to climate change. Observed temperature has increased over recent decades and further warming is projected, increasing heat stress for people, aquaculture systems and coastal ecosystems. Rainfall is becoming more variable, with more intense extreme precipitation events that increase flash-flood, river-flood and landslide risks. Floods already dominate Indonesia's disaster profile and are increasing in frequency and impact. In coastal zones, these rainfall extremes interact with high tides, drainage constraints, sea-level rise and degraded natural buffers to produce compound flooding.
3. The proposed Adaptation Fund project will support a targeted adaptation package within the broader IFAD-financed Indonesia Blue Economy for Coastal Livelihoods Project. Within the national coastal context, the AF financing is proposed to focus on the north coast of Central Java, where climate change is interacting with land subsidence, ecosystem degradation, poverty and weak local infrastructure to undermine coastal livelihoods and increase disaster risk. Central Java is a priority because its northern coastal zone is among the most exposed areas of Indonesia to chronic tidal flooding, shoreline retreat, mangrove loss, salinity intrusion and climate-related disruption of fisheries and aquaculture livelihoods.
4. Within Central Java, Demak has been selected as the AF target district because it presents one of the strongest and most concrete adaptation cases. In Demak, relative sea-level rise is amplified by land subsidence, coastal erosion and the loss or fragmentation of mangrove belts. Chronic tidal flooding is already damaging homes, ponds, roads, landing sites and productive assets, while salinity intrusion and ecosystem degradation are reducing the viability of coastal settlements and aquaculture systems. Demak is also formally designated as a Blue Carbon Location, providing an institutional entry point for community-based mangrove management, restoration and protection.
5. The Demak focus is further justified by the availability of a locally grounded technical planning framework. The Morodemak Masterplan and related field evidence indicate that successful restoration in this context cannot rely on mangrove planting alone. In high-energy and subsiding coastal conditions, restoration requires hydrological rehabilitation, sediment management and, where appropriate, permeable or hybrid structures that enable mangroves to re-establish and provide protective ecosystem services. This makes Demak suitable for a focused AF investment that can combine climate-risk-informed planning, ecosystem-based coastal protection, disaster-risk reduction and resilient coastal livelihoods.
6. The proposed AF target area in Demak covers five pre-selected coastal villages, subject to confirmation during final village selection. The project is expected to directly benefit approximately 12,000–15,000 people, or about 3,000–3,800 households. These beneficiaries are part of a wider planning population of about 27,000 people in the five villages. They include small-scale fishers, fish workers, pond aquaculture farmers, fish processors and traders, women, youth, women-headed households, persons with disabilities and other vulnerable or marginalized groups whose livelihoods depend on climate-sensitive coastal and marine resources.
7. The project's target populations are highly vulnerable because they depend on a narrow set of income sources and have limited capacity to absorb climate shocks. Small-scale fishers, fish workers, pond aquaculture

¹ Indonesia Biodiversity Strategy and Action Plan (IBSAP); <https://lcdi-indonesia.id/wp-content/uploads/2025/02/IBSAP-2025-2045.pdf>

farmers, fish processors and traders are exposed to lost fishing days, damaged gear and ponds, post-harvest losses, salinity changes, declining ecosystem productivity and recurrent flood damage. Many households have limited savings, weak access to formal finance or insurance, and depend on middlemen for credit and market access. These conditions reduce their ability to recover from shocks or invest in adaptation.

8. Women, youth and vulnerable and marginalized groups face differentiated risks and barriers. Women play central roles in fish processing, trading, household nutrition, small-scale aquaculture and community-based enterprises, but their work is often informal and under-recognized. They have less access to productive assets, finance, training, formal fisher registration, leadership roles and climate information. Youth face limited employment opportunities in traditional fisheries and require skills, enterprise support and market pathways to participate in a more resilient blue economy. Consultations undertaken at concept note stage have not identified Indigenous Peoples in the project area. Broader consultations during Full Proposal preparation will confirm this; should any customary or Indigenous community be identified, activities will be implemented through culturally appropriate consultation and free, prior and informed consent where required.
9. The adaptation challenge is therefore not only to protect ecosystems, but to restore the relationship between coastal ecosystems, spatial planning, livelihoods, socio-cultural practices of coastal communities in Central Java and local risk management. Without additional adaptation finance, coastal communities in Demak will continue to face increasing losses from tidal flooding, river flooding, storm surge, erosion, salinity intrusion and ecosystem degradation. Public and private investments may also continue to flow into highly exposed areas unless climate risk is integrated into marine spatial planning and local development decisions.
10. The proposed project will respond through a package of concrete adaptation measures. Climate-risk-informed marine spatial planning will provide the enabling entry point by identifying exposed areas, guiding zoning and reducing the risk of maladaptive investments. The bulk of AF resources will then be directed to on-the-ground measures: ecosystem-based coastal protection, hydrological and sediment-management works, mangrove and pond restoration, community-based early warning, disaster preparedness, climate-resilient fisheries and aquaculture, livelihood diversification and selected climate-resilient local infrastructure. These measures will be implemented through the broader Blue Coast institutional and safeguards framework, including stakeholder engagement, environmental and social screening, Indigenous Peoples planning where relevant, labour management and grievance redress mechanisms. Component 2 represents the core concrete adaptation investment, accounting for about 69 per cent of the total AF request, or about 82 per cent of component financing.

B. Observed climate trends and projected climate change

11. Indonesia is among the countries most exposed to the adverse effects of climate change, and the northern coast of Java — where this project is concentrated — sits at the leading edge of that exposure. The national disaster-risk assessment² ranks Central Java 4th of 38 provinces for overall climate-related disaster risk (score 0.68, “High”). The sections below set out the observed trends and forward projections for the parameters most relevant to a coastal, mangrove- and fisheries-based system: temperature, precipitation, the frequency of climate-related disasters (especially floods), sea-level rise, and ocean conditions.
12. **Rising air temperature.** Indonesia has warmed steadily and at an accelerating rate. The observed national mean surface air temperature has risen from about 25.4°C in the early twentieth century to about 26.2°C in recent years, with the warming clearly accelerating after 1980 (Figure 1). The Indonesia Climate Risk Country Profile (2025)³ quantifies the acceleration as **+0.23°C per decade (1951–2020), +0.28°C per decade (1971–2020) and +0.32°C per decade (1991–2020).**

² BNPB. 2025. *Indeks Risiko Bencana Indonesia (IRBI) Tahun 2024*. Badan Nasional Penanggulangan Bencana, Jakarta.

³ Climate Risk Profile: Indonesia (2025): The World Bank Group

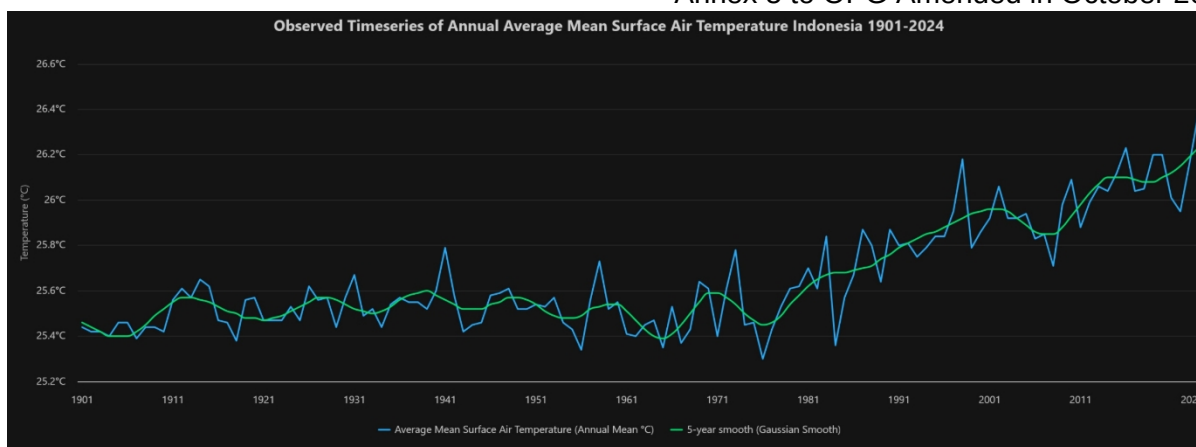


Figure 1. Observed annual mean surface air temperature, Indonesia, 1901–2024 (annual values and 5-year Gaussian smooth). Source: World Bank Climate Change Knowledge Portal, observed timeseries compiled for the project.

13. Forward projections confirm continued warming. The mean temperature is projected to rise by about **+1.18°C by 2040–2059 relative to the 1995–2014 baseline**, and the World Bank CCKP projects mid-century warming of roughly +1.5°C to +1.9°C for Central Java under a high-emission scenario (SSP5-8.5).
14. **More variable precipitation and more intense extremes.** Annual precipitation shows high year-to-year variability around a slight long-term increase (Figure 2). Nationally, observed precipitation has increased by roughly **+51 to +125 mm since 1951**, but the adaptation-relevant signal is not the mean — it is the increasing variability and the intensification of extremes. The Climate Risk Country Profile (2025) reports that intense precipitation events are becoming more frequent while the wet season in Java is shifting: seasonal rainfall is projected to decline slightly (under 2 per cent) in September–November, indicating a delayed onset and a shorter, more intense rainy season.

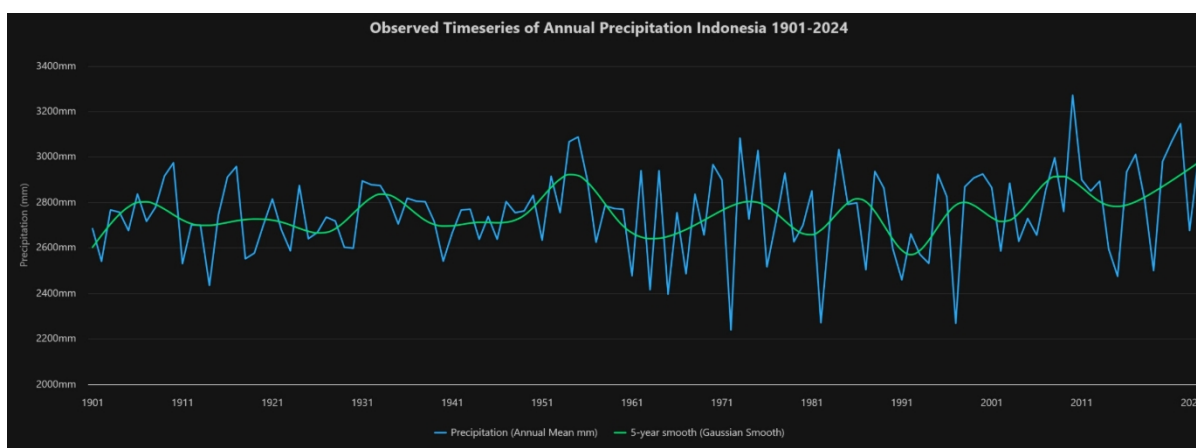


Figure 2. Observed annual precipitation, Indonesia, 1901–2024 (annual values and 5-year Gaussian smooth). Source: World Bank Climate Change Knowledge Portal, observed timeseries compiled for the project.

15. Critically for flood risk, the profile projects that **100-year extreme-rainfall events will recur approximately every 51 years** in the future, compared with the 1985–2014 baseline — a near-doubling in the frequency of the most intense events, with flash floods and landslides expected to become more common, particularly when intense rain follows *anomalously* dry spells. Inter-annual variability is further amplified by the El Niño–Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD): El Niño brings drier conditions and La Niña wetter conditions, widening the swings between drought and flood.
16. **Rising frequency of climate-related disasters, dominated by floods.** The compound effect of these trends

is visible in the disaster record. The number of recorded natural disasters in Indonesia has risen markedly since 1980, and the increase is driven above all by floods and wet mass-movements (landslides) — the hazard categories most directly linked to extreme rainfall and coastal water levels. Over the full 1980–2024 record, **floods are the single largest category of disaster**, ahead of earthquakes and wet mass-movements.

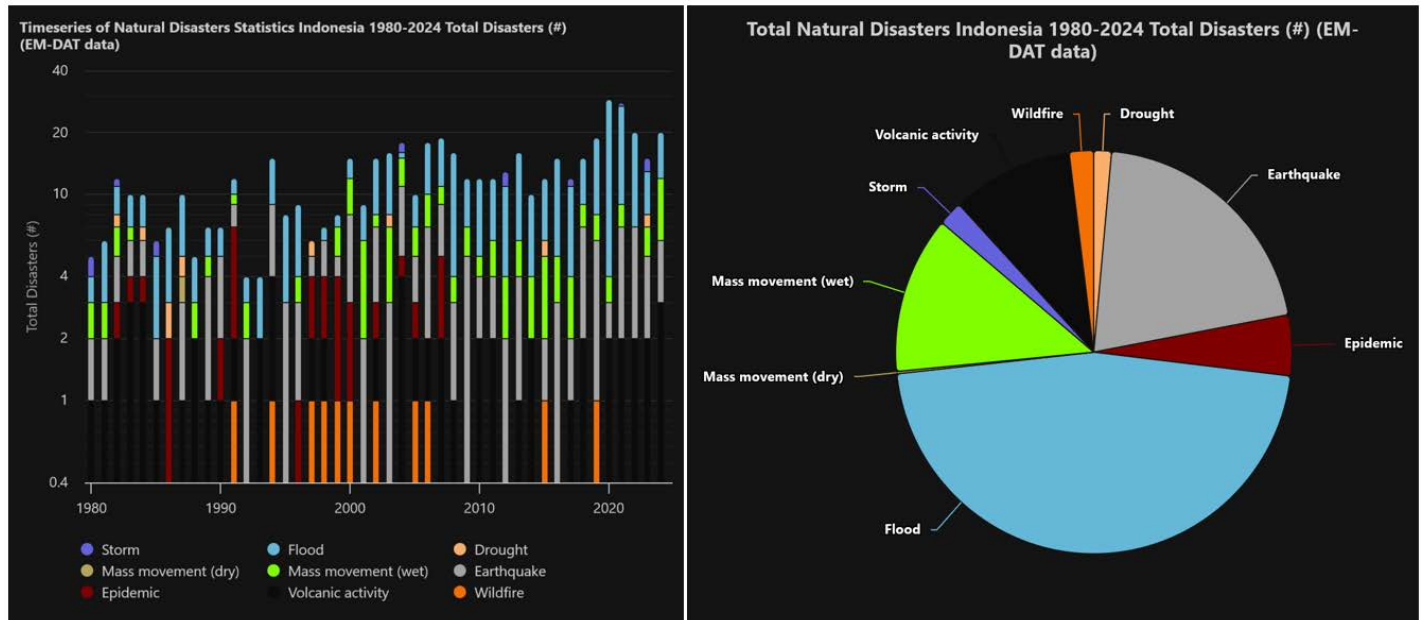


Figure 3. (Left) Natural disasters by type, Indonesia, 1980–2024 (count per year). Floods (light blue) and wet mass-movements (green) dominate the rising trend. (Right) Share of total natural disasters by type, Indonesia, 1980–2024. Flood is the largest single category. Source: EM-DAT.

17. The project's climate-risk screening, using the World Bank ThinkHazard tool, confirms **High coastal- and river-flood hazard ratings for the Central Java sites**.
18. **Sea-level rise amplified by land subsidence.** Global mean sea level is projected to rise by 0.43–0.84 m by 2100⁴. In the Java Sea, the eustatic (climate-driven) component of sea-level rise is broadly in line with global-mean rates; on the Central Java north coast (Pantura), however, the dominant driver of relative sea-level rise is not the climate signal alone but its amplification by rapid **land subsidence** caused by groundwater extraction and loading. Land subsidence is not treated as a climate-change impact in itself, but as a major non-climatic risk multiplier that increases relative sea-level rise and thereby amplifies the impacts of climate-driven sea-level rise, tidal flooding, erosion and salinity intrusion. This framing is consistent with Indonesia's Third National Communication to the UNFCCC⁵, which assessed coastal impacts using scenarios combining sea-level rise, tides and land subsidence, and with Indonesia's National Adaptation Plan, which identifies the Java coastal corridor as affected by sea-level rise, land subsidence and tidal floods. It is important to state this distinction clearly: subsidence is a non-climate (anthropogenic) driver, but it acts as a powerful **risk multiplier** on climate-driven sea-level rise. The combined effect — relative sea-level rise far exceeding the global average — produces the chronic tidal flooding (*rob*) that already inundates homes, fishponds and landing sites in some parts of the country and in Central Java (including Demak). The Adaptation Fund grant finances adaptation to this compound climate risk (climate-driven sea-level rise, rainfall extremes and ecosystem loss) and does not finance the anthropogenic driver: no groundwater-management or subsidence-control works are AF-financed, consistent with the project exclusion list.
19. **Warming, more acidic and more saline coastal waters.** Beyond sea level, the coastal ocean itself is changing. Rising sea-surface temperatures and more frequent marine heatwaves, ocean acidification, and

⁴ IPCC. 2019. *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*

⁵ <https://unfccc.int/documents/79693>

salinity changes are affecting Indonesian coastal fisheries. These ocean conditions interact with sea-level rise to drive saltwater intrusion into coastal aquifers, farmland and aquaculture ponds.

C. Impacts of Climate Change

Impact on the ecosystem.

20. Indonesia is the world's largest archipelagic state and one of its richest marine nations: its seas host an estimated 37% of the world's reef fish species, and its coasts hold extensive mangroves, seagrass meadows and coral reefs that underpin fisheries, store carbon and stabilise the shoreline. These ecosystems are under growing pressure from overfishing and destructive fishing, the conversion of mangroves to aquaculture ponds, land reclamation, coastal erosion, and climate change, including sea-level rise and ocean acidification⁶. The climate trends above translate into direct, observed pressure on the blue ecosystems — mangroves, seagrass and the wider coastal zone — that protect the communities and underpin their livelihoods. These ecosystems are both highly exposed to climate change and, when healthy, the most cost-effective natural defence against it.
21. **Mangroves under relative sea-level rise.** Mangroves can persist under rising seas only if they raise their soil surface, through sediment accretion, fast enough to keep pace with relative sea-level rise. The scientific literature places the threshold for mangrove stress and retreat at a relative sea-level rise of about **4 mm/year (retreat likely) to 7 mm/year (retreat highly likely)**. Where relative sea-level rise is amplified by subsidence to rates well above these thresholds — as on the Pantura coast — mangroves cannot keep pace without active intervention on hydrology and sediment supply, and they die back or drown. The country holds roughly one fifth of the world's remaining mangroves — the largest national coverage on Earth — and the single largest share of global mangrove carbon (about 30% of the global mangrove carbon stock, and an estimated 3.14 Pg of carbon, equivalent to roughly one third of all carbon held in the world's coastal ecosystems)^{7,8}. Mangroves store three to five times more carbon per hectare than terrestrial tropical forests, which makes their protection and restoration unusually efficient for both adaptation and mitigation. That natural capital is eroding fast. National mangrove cover fell from about 3.31 million ha in 1990 to roughly 2.57 million ha in 2025 — a loss of close to 743,000 ha, or about 22.5%, averaging nearly 24,800 ha of mangrove lost every year. Over the same period the national shoreline lost almost 24,830 km² to erosion. The figure below summarises the national picture. This loss is not incidental to the climate problem — it is part of the mechanism that turns hazards into disasters. Where mangrove belts have been cleared, mostly for aquaculture ponds and settlement, the coast loses its natural buffer against waves, storm surge and tidal flooding, accelerating erosion and saltwater intrusion. Restoring and protecting these ecosystems is therefore central to Indonesia's own climate commitments (see Part II.D). The Pantura coast has lost a large share of its mangrove belt over recent decades, and field observations during design confirmed the mechanisms: water too deep for natural mangrove establishment following erosion, wave damage to young seedlings, and insufficient sediment.⁹
22. **Loss of natural coastal protection and habitat.** As mangroves and seagrass degrade, the coast loses the wave- and surge-attenuation, sediment-trapping and shoreline-stabilisation services they provide. Mangrove vegetation dissipates the energy of waves and storm surges, so the loss of the mangrove belt directly increases the exposure of villages, ponds and infrastructure to flooding. Degraded ecosystems also lose their nursery and habitat functions, reducing the productivity of the coastal fisheries on which communities depend.
23. **Pressure on fisheries habitat from warming and acidification.** Rising sea-surface temperatures, marine heatwaves and ocean acidification add a further layer of ecosystem stress: shifting the distribution of target

⁶ IPCC, 2022, *Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report. Chapter 3 covers ocean and coastal ecosystems

⁷ Hamilton, S. E., & Friess, D. A. 2018. "Global carbon stocks and potential emissions due to mangrove deforestation from 2000 to 2012." *Nature Climate Change*, 8, 240–244.

⁸ AFD : <https://www.afd.fr/en/actualites/fifth-worlds-mangroves-indonesia-boosting-its-blue-carbon-strategy>

⁹ Site-specific sediment-accretion versus relative-sea-level-rise data will be compiled at Full Proposal, drawing on SET-MH or proxy estimates and the Morodemak Masterplan.

fish stocks, reducing catch rates. Aquaculture is exposed through heat stress, disease and salinity change in ponds. The cumulative effect is a coastal ecosystem whose protective and productive capacity is being eroded precisely as the climatic pressures on the communities intensify.



Figure 4. Indonesia — shoreline change and mangrove-cover change, 1990–2025 (province level), with estimated mangrove area per province. Source: satellite analysis (Landsat & Sentinel-2; administrative boundaries BIG 2023).

Impacts on the population

24. The combination of intensifying hazards and degrading ecosystems falls on coastal communities that are highly exposed and, for structural reasons, highly sensitive and limited in their capacity to adapt. Following the IPCC framing, risk here is the product of hazard, exposure and vulnerability — and all three are elevated in the target district.
25. **Exposure: people and productive assets in the hazard zone.** The target district concentrates population and livelihood assets in low-lying coastal zones directly exposed to tidal flooding, riverine flooding, erosion and storm surge. Chronic tidal flooding already inundates homes, fishponds, drainage and roads in Central Java.
26. **Sensitivity: dependence on a single, climate-sensitive income.** The communities are acutely sensitive to these hazards because their livelihoods rest on a narrow, climate-exposed base. Approximately **84 per cent of fishery households in the project area depend on capture fisheries as their primary source of income** — a single income stream that is directly disrupted by extreme weather, rising sea-surface temperatures and declining catches. When high tides or storms make fishing impossible, households have few alternatives, and many are already indebted to middlemen for gear and operating costs. Post-harvest losses, damage to gear and ponds, and recurrent rebuilding after floods compound the economic fragility.
27. **Adaptive-capacity constraints.** Finally, the systems that would otherwise help communities cope have limited reach at the village level: spatial-planning instruments do not yet integrate climate risk at the detailed local

scale; community-level early warning for slow-onset hydrometeorological hazards is weak (the national early-warning system focuses primarily on earthquakes and tsunamis); financial inclusion and insurance coverage are uneven, especially among women; and degraded coastal ecosystems no longer buffer the communities they once protected. These adaptive-capacity gaps are the entry points the project is designed to address.

District-level trends, impacts and adaptive solutions

28. At district level these patterns are reflected, and in places amplified. In Demak (Central Java), air temperature rose by about 0.02°C per year over 1970–2017 (roughly +0.7°C since 1990) and is projected to add a further 0.2–0.4°C by 2035.¹⁰ Annual rainfall (about 1,800–2,700 mm) is strongly ENSO-driven¹¹: strong El Niño years (1997–98, 2015–16, 2019) cut annual totals by some 700–900 mm, while wet-season events have become heavier and more concentrated since 2010.¹² On top of the subsidence-amplified sea-level rise described above, Demak experiences no direct cyclone landfall but is repeatedly affected by the indirect impacts of systems forming south of Java — such as Cempaka and Dahlia (2017) and Seroja (2021) — which raise waves, surge and extreme rainfall along its shoreline.
29. The national climate signals are reflected in a particularly acute form in Demak. Recent rainfall analysis for the northern coast of Central Java, using 22 rain-gauge stations over 1994–2023, confirms that ENSO strongly modulates seasonal rainfall. During El Niño years, rainfall in the JJA and SON seasons falls significantly across the Pantura coast, with Demak and Semarang among the most affected areas and reductions exceeding 70% in some stations. During La Niña years, the pattern reverses: rainfall increases significantly in JJA and SON across the northern coast, with Demak among the areas recording increases above 100% in JJA. For Demak, this means that climate variability does not produce a single hazard pathway. El Niño conditions increase dry-season water stress, heat stress and salinity pressure on ponds and coastal ecosystems, while La Niña and wet-season anomalies increase riverine flooding, drainage congestion, tidal-flood impacts and water-quality stress in aquaculture systems.
30. These rainfall dynamics interact with a more decisive coastal risk driver: relative sea-level rise amplified by land subsidence. A 2025 spatial analysis of tidal flooding in coastal Demak¹³ used DInSAR, land-use classification, tidal analysis, elevation data, sea-level trend analysis, wind and rainfall data, and inundation mapping. It estimated land subsidence at 2.74 cm/year and sea-level rise at 0.435 cm/year, with the highest tide reaching 61.93 cm and an average coastal elevation of only 1.893 m above sea level. The same study mapped tidal-flood inundation of 8,954.6 ha in 2023 and projected an increase to 11,394.5 ha by 2031. The 2023 inundation already affected mangroves (523.6 ha), ponds (3,857.9 ha), settlements (1,095.4 ha), industrial areas (3,453.0 ha) and rice fields (24.7 ha).
31. Sayung Subdistrict in Demak Regency is one of Indonesia's most vulnerable coastal hotspots, where the combined impacts of land subsidence, sea-level rise, and unsustainable coastal development are rapidly reducing land productivity, damaging infrastructure, and threatening the livelihoods of coastal communities. Recent remote sensing and field-based studies estimate average land subsidence of **approximately 6.0 ± 0.8 cm per year**, with localized rates reaching **7–21 cm per year**, driven by natural alluvial compaction, excessive groundwater extraction, urban and industrial expansion, and mangrove loss, resulting in persistent tidal flooding (*rob*), shoreline retreat, ecosystem degradation, and the inundation of more than **1,260 ha** of coastal

¹⁰ Sugianto, D. N., et al. (2020). Identification of the increase in the air temperature of the North Coast of Central Java as an indicator of climate change: Semarang station climatology data 1970–2017. *International Journal of Climate Change: Impacts and Responses*, 12(2).

¹¹ Firmansyah, et al. (2022). Effects of the El Niño–Southern Oscillation (ENSO) on rainfall anomalies in Central Java, Indonesia. *Arabian Journal of Geosciences*, 15. DOI: 10.1007/s12517-022-11016-2.

¹² Prapanca, et al. (2026). The impact of ENSO on rainfall changes in the northern coast of Central Java. *Journal of Meteorology, Hydrology & Geophysics (Mausam)*, 77(2). DOI: 10.54302/mausam.v77i2.6912.

¹³ Adnan, et al. (2025). Spatial distribution of tidal flooding in coastal areas of Demak Regency, Central Java. *BIO Web of Conferences*. DOI: 10.1051/bioconf/202516805012.

land.^{14,15} These accelerating risks highlight the urgent need for adaptive coastal management through dynamic spatial planning, groundwater regulation, coastal setback zones, large-scale mangrove restoration, hybrid nature-based coastal protection, and continuous geospatial monitoring to strengthen long-term climate resilience. The Blue Coast design field visit to Demak in November 2025 corroborated these findings through district-level discussions and field observation in affected villages (including Purworejo and Tambakbulsan): it gathered qualitative information on tidal-flooding patterns, mangrove loss, aquaculture-pond degradation, livelihood pressures and community priorities, and confirmed the relevance of an engineered ecosystem-based approach. These field visits informed problem analysis and design only; they did not constitute feasibility studies, safeguards assessments or detailed technical designs, which will be undertaken during Full Proposal preparation.

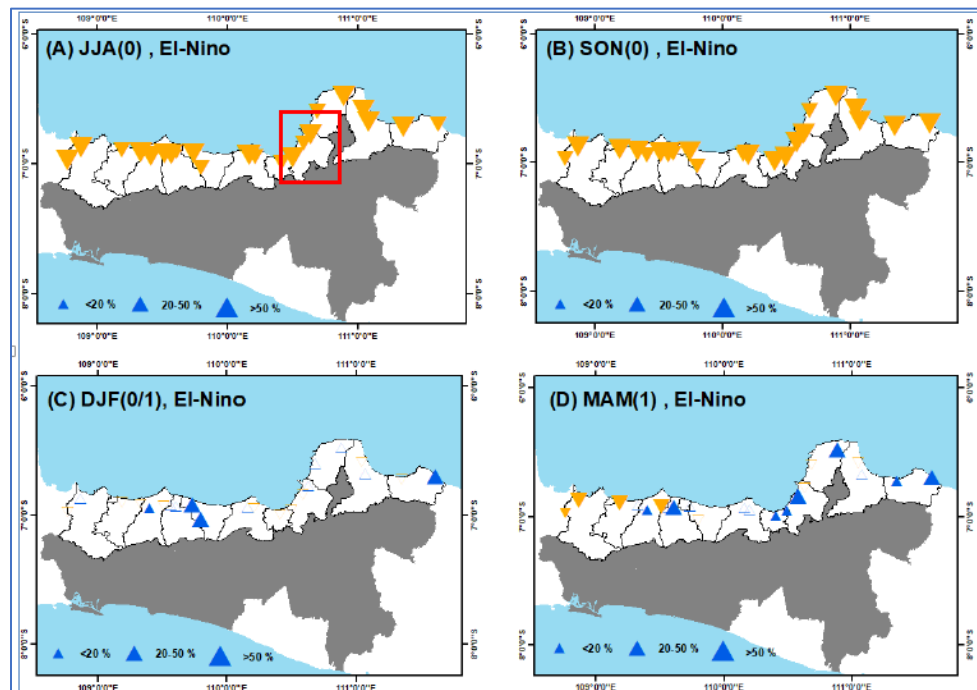


Figure 5: The impact of El Niño on rainfall changes is analyzed for the DJF (a), MAM (b), JJA (c), and SON (d) seasons. Upward-facing blue triangles indicate an increase in rainfall, while downward-facing orange triangles indicate a decrease. Red rectangle situates Demak.

32. The coastal-dynamics evidence therefore supports the project's central design choice: Demak requires engineered ecosystem-based adaptation rather than generic mangrove planting or isolated hard infrastructure. A recent assessment of coastal dynamics along the northern coast of Java highlights erosion, accretion, inundation and land subsidence as linked outcomes of rapid land-cover change and coastal exploitation, with prominent shoreline changes at Sayung, Demak.¹⁶ Earlier Building with Nature work in Demak showed that permeable structures can trap sediment, elevate sediment bed level and allow mangrove seedling establishment, but also that high subsidence, structural degeneration and insufficient maintenance can prevent seedlings from developing into a full mangrove greenbelt. Monitoring found that sediment bed level decreased in control locations while rising behind permeable structures, but also concluded that year-round structural integrity, local elevation, hydrodynamic conditions, subsidence data and adaptive maintenance are critical to

¹⁴ Sutrisno, D., Dimiyati, R. D., Shofiyati, R., Prihanto, Y., Hidayat, J. T., Darmawan, M., Agus, S. B., Helmi, M., Sadmono, H., & Anggraini, N. 2025. Rapid Evaluation of Coastal Sinking and Management Issues in Sayung, Central Java, Indonesia. *Geosciences*, 15(12), 455.

<https://doi.org/10.3390/geosciences15120455>

¹⁵ Khairullah, K. K., Rifai, A., & Indrayanti, E. 2024. "Studi Luasan Genangan Banjir Rob Akibat Kenaikan Muka Air Laut Dan Penurunan Muka Tanah Di Kecamatan Sayung, Demak." *Indonesian Journal of Oceanography*, 6(4), 316–323. DOI: 10.14710/ijoc.v6i4.19468.

¹⁶ Solihuddin, T., Salim, H. L., Husrin, S., Kepel, T. L., Prasetyo, A., & Farid, M. 2026. Coastal dynamics along the Northern Coast of Java, Indonesia: Scales, impacts, and governance strategies. *Regional Studies in Marine Science*, 95, 104825. <https://doi.org/10.1016/j.rsma.2026.104825>

avoid failure.¹⁷ Evidence from low-crested breakwater applications on the north coast of Java similarly shows that performance depends on vertical and horizontal layout - including crest elevation, distance from shore, structure length and gap width - because these parameters control sediment accumulation behind the structure.¹⁸

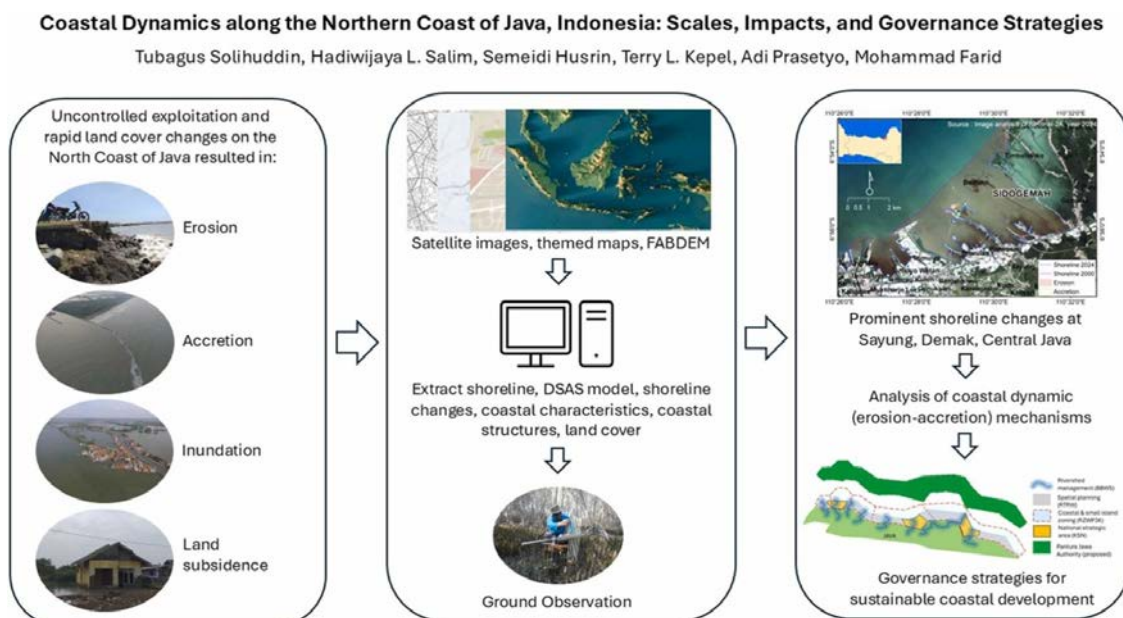


Figure 6: Coastal dynamics along the northern coast of Java, showing erosion, accretion, inundation and subsidence processes and prominent shoreline changes at Sayung, Demak. Source: Solihuddin et al. (2026),

33. Read against the mangrove retreat thresholds discussed earlier (about 4 mm/year likely and 7 mm/year highly likely), the Demak rates are decisive. Using Adnan et al.'s estimates, the combined vertical change from sea-level rise and subsidence is roughly 3.2 cm/year before considering local wave, drainage and sediment dynamics; using the Sayung-specific estimate reported by Sutrisno et al., the relative rate is even higher. These rates exceed mangrove tolerance thresholds by several multiples. Without hydrological restoration, sediment management, technically placed permeable or hybrid structures, careful site selection and sustained maintenance, the mangrove belt cannot keep pace with relative sea-level rise and subsidence. This is why the AF-financed design prioritizes climate-risk-informed zoning, sediment and hydrological works, Building with Nature measures¹⁹, adaptive monitoring and community stewardship before, or alongside, mangrove recovery and silvofishery investments.

Table 1: Climate Hazards and expected adaptation actions and results

Climate Hazard	Observer Climate Impact in Demak	expected adaptation action/result
Sea-level rise and tidal flooding (Rob)	Sea-level rise, compounded by land subsidence, has increased the frequency, duration, and extent of tidal flooding. Coastal villages in Sayung, Bonang, and Karantengah experience recurrent and, in some areas, permanent inundation, affecting settlements, aquaculture ponds, public	• Restore and protect mangrove ecosystems. • Construct hybrid engineering (permeable) coastal protection structures. • Improve climate-resilient drainage systems. • Establish community-based Early Warning Systems (EWS). • Integrate climate risk into local coastal planning.

¹⁷ Pardo, M. de Lucas, van Wesenbeeck, B., Herman, P., Winterwerp, H., & Segeren, T. 2021. Effectiveness of a Nature based Solution: Monitoring of ecological mangrove restoration by use of permeable structures. Deltares/EcoShape monitoring report.

¹⁸ Sulaiman, D. M., Nurhabni, F., & Bachtar, H. 2021. Lessons Learned From Low-Crested Breakwaters Installation in North Coast of Java. SCIREA Journal of Hydraulic Engineering, 4(3), 40-50. <https://doi.org/10.54647/hydraulic57026>

¹⁹ EcoShape. 2015. Building with Nature Indonesia: Securing eroding delta coastlines. Design and engineering plan for Demak, Central Java.

	infrastructure, and essential services.	
Coastal erosion	Progressive shoreline retreat has resulted in the loss of aquaculture ponds, agricultural land, and coastal habitats. Coastal erosion continues to undermine ecosystem integrity and increase exposure to climate hazards.	• Construct hybrid engineering structures to trap sediment. • Restore mangroves through nature-based solutions. • Protect vulnerable shoreline sections.
Salinity intrusion	Saltwater intrusion degrades soil and freshwater resources, reducing agricultural productivity, limiting freshwater availability, and affecting ecosystem restoration success	• Promote integrated water management. • Restore coastal ecosystems to reduce saline intrusion. • Support climate-resilient livelihoods, including silvofisheries and salt-tolerant production systems.
Mangrove ecosystem degradation	Coastal erosion, land conversion, and prolonged inundation have reduced mangrove cover, weakening natural coastal protection, biodiversity, and blue carbon storage.	• Restore degraded mangrove ecosystems. • Strengthen community-based mangrove management. • Protect priority mangrove areas. • Establish blue carbon and biodiversity monitoring systems.
Climate impacts on coastal livelihoods	Recurrent tidal flooding and coastal erosion reduce fisheries, aquaculture, and agricultural productivity, resulting in declining household incomes and increasing livelihood vulnerability.	• Develop climate-resilient livelihood options (silvofisheries, sustainable aquaculture, mangrove-based enterprises, eco-tourism). • Strengthen community capacity and access to climate finance. • Support local producer groups and SMEs.
Increasing climate variability and disaster risk	More frequent extreme weather events, combined with tidal flooding and heavy rainfall, increase risks to coastal communities, infrastructure, and local economies.	• Strengthen climate information services. • Establish community-based disaster risk management systems. • Improve climate early warning systems. • Integrate climate risk into coastal spatial planning and local development plans.

D. Targeting strategy

34. The AF-financed activities will directly benefit approximately **12,000–15,000 people (about 3,000–3,800 households) in 5 pre-selected coastal villages** in the target district of Demak (Central Java). Beneficiaries are drawn from the most climate-vulnerable coastal populations: small-scale fishers, pond (tambak) aquaculture farmers, fish processors and traders (predominantly women), and smallholder farmers affected by saline intrusion. Indirect beneficiaries (e.g. neighbouring communities benefiting from restored coastal buffers, improved early warning and district planning) will be estimated during Full Proposal preparation.

Geographic targeting

35. Adaptation Fund resources are concentrated where the climate-adaptation case is strongest and most concrete: a single district on the north coast of Central Java — Demak — combining marine spatial planning, nature-based solutions, ecosystem-based coastal protection and climate-resilient livelihoods. Demak lies on the Pantura (north Java) coast, one of the most rapidly subsiding and flood-exposed coastlines in Indonesia, where climate-driven sea-level rise is compounded by exceptionally rapid, human-induced land subsidence from groundwater extraction and urban and industrial loading. Subsidence here reaches the order of 7–20 cm/year in the worst-affected areas and averages about 6 cm/year in Sayung, Demak's most exposed sub-district — roughly an order of magnitude faster than natural compaction — sharply amplifying relative sea-level rise beyond the climate signal alone.²⁰ Tidal (rob) flooding across Demak Regency reached about 8,950 ha in 2023 and is projected to reach roughly 11,400 ha by 2031 on current trends;²¹ Sayung is worst affected, with shoreline retreat averaging about 33 m/year and roughly half of the Demak coastline classified as highly vulnerable.²² The project's own satellite analysis (Landsat/Sentinel-2) finds Demak's mangrove cover fell by about 53.9% (–7,294 ha) between 1990 and 2025, consistent with published evidence of severe mangrove loss in the regency (e.g., a 79% decline in Wedung sub-district over 2000–2014).²³ Economic losses from tidal

20 Rapid Evaluation of Coastal Sinking and Management Issues in Sayung, Central Java, Indonesia, *Geosciences* 15(12):455, 2025
<https://doi.org/10.3390/geosciences15120455>

21 *Spatial distribution of tidal flooding in the coastal areas of Demak Regency, Central Java*, BIO Web of Conferences, 2025 (ISOSS2024)

22 Amrullah & Ruslanjari, *Impact of Climate Change on the Dynamics of the Demak Coastal Area, Indonesia*, SSRN 6099443, 2026

23 Hartanto & Rachmawati (2017), cited in *Assessment of coastal vulnerability to support mangrove restoration in the northern coast of Java* (2024)

and coastal flooding across the worst-hit areas of northern Central Java — Semarang, Pekalongan and Demak — are estimated at around IDR 2.5 trillion per year.²⁴ Together these make Demak a nationally significant compound coastal-climate hotspot, where a concentrated, engineered ecosystem-based adaptation response is both justified and measurable, and where planting-only or business-as-usual approaches are demonstrably insufficient.

Table 2: Pre-selected villages in Demak (final selection will be done during Full Proposal). Population figures are total village residents (2025); direct project beneficiaries are a subset (see targeting text).

Province/District	Sub-District	Village	Population (2025)					Estimated Direct HH Beneficiaries (min 60%)
			Male	Female	Total	Estimated House Holds (HHs)	Estimated HH (Fisherman – 75% from population)	
Central Java Province								
Central Java, Demak	Bonang	Betahwalang	2,961	2,807	5,768	1,442	1,082	649
		Purworejo	4,687	4,421	9,108	2,277	1,708	1,025
		Morodemak	3,105	2,833	5,938	1,485	1,113	668
	Sayung	Surodadi	1,476	1,442	2,918	730	547	328
		Timbulsloko	1,689	1,606	3,295	824	618	371
Total			13,918	13,109	27,027	6,767	5,068	3,041

Targeting approach

36. Within the selected district, the project applies the Blue Coast integrated targeting strategy — combining geographic, socio-economic and self-/direct targeting — embedded in the marine spatial planning (MSP) process; urban and peri-urban areas are excluded.
37. **Geographic targeting** selects villages against evidence-based criteria: (i) high concentration of fishing and aquaculture households; (ii) significant mangrove (and, where relevant, coral and seagrass) area; (iii) high concentration of food-insecure, subsistence and vulnerable households; (iv) high numbers of unemployed youth (17–30) and women; (v) presence of community or household blue-food economic entities; and (vi) high vulnerability to climate change. Selection is informed by spatial and quantitative data (share of fisheries households by sub-sector, income and asset profiles including boats, landing infrastructure, post-harvest activity, and the extent and quality of coastal ecosystems), in coordination with MMAF and endorsed by the Project Steering Committee.
38. **Socio-economic targeting** prioritises households below province-specific poverty lines — subsistence (income below ~IDR 2.0 million/month, about USD 118), vulnerable (IDR 2.0–4.0 million) and emerging (IDR 4.0–6.0 million) households. Better-off households may take part only for value-chain coordination or producer-group development and do not receive direct project investments.

Target groups and inclusion targets

39. Within these villages the project prioritises the groups below, with measurable inclusion targets consistent with the AF Gender Policy and IFAD SECAP.

Table 3: Target groups and inclusion targets

Target group	Why prioritised (climate vulnerability)	Inclusion target
Small-scale fishers and fish workers	Dependent on a single, climate-sensitive income (around 84% on capture fisheries in target communities); lose fishing days to high tides and storms; many indebted to middlemen for gear and operating costs.	Core target group

Target group	Why prioritised (climate vulnerability)	Inclusion target
Pond / aquaculture (tambak) farmers	Ponds damaged by erosion, tidal flooding (rob) and salinity; large areas of idle/degraded ponds (Demak ~2,320 ha) are candidates for silvofishery (wanamina).	Core target group
Women and women-headed households	Around 80% of the fish-processing and selling workforce, yet least access to assets, finance and decision-making; many cannot obtain the KUSUKA fisher card as their occupation is recorded as "housewife." Women lead mangrove nurseries and joint business groups (KUB Perempuan).	≥40% overall; ≥50% of livelihood-activity participants
Youth (17–30)	High youth unemployment and migration pressure; engaged through enterprise and skills pathways in aquaculture, post-harvest processing, logistics, digital services and eco-tourism.	30%
Indigenous Peoples and customary coastal communities	Livelihoods and food systems tied to coastal and marine resources; engaged through customary institutions and free, prior and informed consent (IFAD IP policy).	screening and FPIC procedures applied where relevant
Persons with disabilities, minorities and other marginalized groups	Face accessibility and representation barriers; supported through accessible venues, adapted communication formats, targeted outreach and confidentiality safeguards.	Targeted outreach

E. Initial gender assessment and gender-responsive design

40. An initial gender assessment has been undertaken at concept note stage in line with the Adaptation Fund's requirements for gender-responsive project design. The assessment confirms that women and men in Demak's coastal communities are differently positioned in relation to climate risk, fisheries livelihoods and decision-making. Men tend to dominate capture fisheries, offshore activities, formal fisher organizations and local leadership structures. Women play a central but less visible role in fish selling, fish processing, trading, small-scale aquaculture support, household nutrition, home-based enterprises and mangrove-related activities. At national level, women represent about **42% of the fisheries labour force** and dominate fish-selling roles, including **72% of fish sellers in ports**, while only about 4% of formally recognized fishers are women.²⁵
41. The project design data confirm the relevance of these national gender patterns for the project area. The design mission notes that the targeted areas are predominantly dependent on capture fisheries, with about **84% of fishery households relying on capture fisheries as their primary source of income** and only about **16% engaged in aquaculture**. Women dominate fish selling at ports, at around **72%**, although this work remains largely informal and low paid. It also notes that women are heavily involved in pond preparation, feeding, harvesting, processing and marketing in aquaculture, but are often recorded as "helpers" rather than workers.²⁶
42. These gender gaps increase women's climate vulnerability. Tidal flooding, coastal erosion, salinity intrusion, extreme weather and declining ecosystem productivity affect fish landings, aquaculture ponds, access routes, processing, trading and local markets. Women's income and household food security are therefore directly affected by climate shocks, even when women are not formally recognized as fisheries actors. At the same time, women often have less access than men to productive assets, capital, formal finance, training, mobility, climate information, formal fisher registration and decision-making spaces. The design identifies gender inequality and labour risks in coastal communities, including lower pay, limited recognition and reduced access to government benefits due to gender bias in occupational definitions.²⁷
43. Formal recognition remains a specific constraint for women in fisheries. External evidence for Indonesia confirms that fisherwomen have faced barriers to official registration as fishers and therefore to accessing fisher identification cards and related benefits.²⁸ Other gender-and-fisheries analysis reports that women are often legally registered as wives of fishers rather than fishers themselves, even when they contribute to fishing and local fisheries economies.²⁹ This matters because the KUSUKA card, established under MMAF Regulation

²⁵ World Resources Institute Indonesia. 2020. 3 Reasons Why Women in Fisheries Matter for an Inclusive Economic Recovery

²⁶ Ministry of Marine Affairs and Fisheries Strategic Plan 2025–2029, p. 57, for the processing workforce data.

²⁷ IFAD, 2025. Indonesia Blue Economy for Coastal Livelihoods Project: SECAP Review Note, Annex 5.1, December 2025

²⁸ UNDP Indonesia, 2021. Fisherwomen in the Fisherman's World? Improving Access for Women in Indonesian Fisheries.

²⁹ Transnational Institute, 2020. Gender and Fisheries in Indonesia.

No. 39/PERMEN-KP/2017³⁰, is the formal identification instrument for marine and fisheries business actors, including fishers, fish farmers, processors and traders.

44. The assessment also identifies gender-related labour, safety and protection risks.³¹ The AF project will involve community workers, contractors, local groups and livelihood enterprises in mangrove restoration, permeable structures, pond rehabilitation, small-scale infrastructure, aquaculture, processing and monitoring. It identifies risks related to occupational health and safety in coastal and marine activities, informal labour arrangements, unequal access to employment, unequal pay, exclusion of women from decision-making, child labour, forced labour, harassment and SEA/SH risks in mixed-gender work settings. It also requires gender-equal recruitment and employment practices, voluntary and non-coercive community labour, PPE suitable for women and men, codes of conduct, confidential grievance channels and gender-disaggregated monitoring.
45. Gender-based violence and SEA/SH are relevant contextual risks for project design and grievance arrangements. Indonesia has a lifetime physical and/or sexual intimate-partner violence rate of **24.1%**³², and the fisheries sector has documented risks related to forced labour, informal work and unsafe working conditions.³³
46. Given that the AF project will introduce workers, assets, training, community labour, livelihood support and possible changes in resource-use arrangements, the project will apply SEA/SH-sensitive consultation, codes of conduct, confidential grievance channels and referral information where available.
47. The assessment applies an intersectional lens. Women are not a homogeneous group. Women-headed households, informal processors and traders, poor fish workers, wives of small-scale fishers, women supporting aquaculture ponds, young women, elderly women, women with disabilities and women from customary or marginalized groups may face different constraints. The assessment identifies women, women-headed households, youth, persons with disabilities and other vulnerable groups as stakeholders requiring early and continuing meaningful engagement, opportunities to raise concerns and measures to ensure access to project benefits.³⁴
48. At concept note stage, no confirmed Indigenous Peoples-specific issue has been identified in the Demak AF target area. This will be verified during Full Proposal preparation; if Indigenous Peoples, customary marine resource users or traditional institutions are identified, the project will apply the Indigenous Peoples Plan and FPIC-IP Implementation Plan, including specific attention to Indigenous women, youth and vulnerable members of those communities.
49. The initial gender assessment has directly informed project design. Women will be actively engaged in village consultations, coastal planning forums, mangrove nurseries, silvofishery and aquaculture support, post-harvest processing, livelihood groups, community monitoring, early-warning arrangements and grievance mechanisms. Practical measures will include flexible meeting schedules, accessible venues, women-only discussions where appropriate, female facilitators, timing adapted to women's workload where feasible, sex- and age-disaggregated monitoring, and targeted outreach to women-headed households and informal women workers. Early-warning arrangements will seek to include at least one woman operator per target village where feasible. At least **50% of participants in livelihood-related activities will be women**, and women's participation and benefit levels will be tracked through the M&E system.
50. During Full Proposal preparation, the preliminary assessment will be converted into a project-specific Gender Action Plan. The Gender Action Plan will include activity-specific gender targets; sex- and age-disaggregated indicators; gender-responsive budget tagging; measures to reduce women's time, mobility, safety and information barriers; SEA/SH prevention and response measures; gender-sensitive grievance procedures; and monitoring responsibilities for the NPMU, PIUs, SECAP staff, Gender/GESI focal points and implementing partners. The final Gender Action Plan will be based on Demak village-level consultations and will be integrated into the project results framework, Environmental, Social and Climate Management Plan, Stakeholder Engagement Plan, Labour Management Plan, Grievance Redress Mechanism and annual work planning.

30 Ministry of Marine Affairs and Fisheries, 2017. Regulation No. 39/PERMEN-KP/2017 on the Marine and Fisheries Business Actor Card.

31 IFAD, 2025. Indonesia Blue Economy for Coastal Livelihoods Project: Labour Management Plan, Annex 5.5

32 UN Women Global Database on Violence against Women, Indonesia country data, accessed July 2025; UNFPA/BPS. 2025. *The Indonesian National Women's Life Experience Survey / SPHPN 2024*.

33 ILO. 2025. *Understanding working conditions of fishers in Indonesia: Evidence from the 2024 Survey on Decent Work in Marine Fishing*.

34 IFAD, 2025. Indonesia Blue Economy for Coastal Livelihoods Project: Stakeholder Engagement Plan, Annex 5.2

Project/Programme Objectives:

Overall objective

51. The overall objective of Blue Coast–RZ is to strengthen the climate resilience of vulnerable coastal communities in Demak, Central Java, by reducing exposure to tidal flooding, erosion, salinity intrusion and climate-related livelihood disruption through climate-risk-informed planning, ecosystem-based coastal protection, early warning, disaster preparedness and resilient coastal livelihoods.

Specific objectives

- I. Strengthen climate-risk-informed coastal planning and last-mile early warning in Demak.
- II. Restore coastal ecosystem functions and reduce the physical exposure of communities, ponds, infrastructure and livelihood assets to tidal flooding, erosion and salinity intrusion.
- III. Strengthen community preparedness, livelihood resilience and adaptive capacity of poor and vulnerable coastal households, with particular attention to women and youth.
- IV. Generate practical adaptation evidence, monitoring results and knowledge products to support adaptive management and inform wider coastal adaptation learning.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term. For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well defined interventions / projects.

Table 4: Project/Programme Components and Financing

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Climate-informed coastal planning, early warning & institutional capacity	1.1. Climate risk integrated into district coastal and marine spatial planning and detailed zoning	Outcome 1. Climate-risk-informed coastal planning and last-mile early warning strengthened	130,000
	1.2. Community-based hydrometeorological early-warning system established and operational		520,000
Total Component 1			650,000
2. Ecosystem-based coastal protection, disaster risk reduction & climate-resilient livelihoods	2.1 Mangrove restoration and ecosystem-based coastal protection implemented	Outcome 2. Physical exposure of coastal communities, ecosystems and livelihood assets to tidal flooding, erosion and salinity intrusion reduced	2,250,000
	2.2. Community disaster-risk reduction and preparedness strengthened	Outcome 3. Community preparedness, livelihood resilience and adaptive capacity of vulnerable coastal households strengthened	775,000
	2.3. Climate-resilient livelihoods and resilient community assets strengthened		1,100,000
Total Component 2			4,125,000
3. Adaptation	3.1 Integrated adaptation monitoring and learning system	Outcome 4. Practical adaptation evidence and knowledge	150,000

learning, technical monitoring & policy uptake	established	products generated and used for adaptive management and wider learning	
	3.2 Knowledge products for policy uptake and wider learning		80,000
Total Component 3			230,000
4. Project/Programme Execution cost			525,000
5. Total Project/Programme Cost			5,530,000
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			470,000
Amount of Financing Requested			6,000,000

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Table 5: Projected Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	01/2028
Mid-term Review (if planned)	06/2030
Project/Programme Closing	12/2032
Terminal Evaluation	06/2033

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

52. Blue Coast–RZ is the Adaptation Fund-financed adaptation window of the broader IFAD-supported Blue Coast programme. It concentrates AF resources on geographically targeted, concrete adaptation in Demak, Central Java, where accelerating relative sea-level rise, land subsidence, tidal flooding, erosion, salinity intrusion and the loss of protective mangrove ecosystems are already increasing the vulnerability of coastal communities, fishpond systems, access routes, landing sites and coastal livelihoods.
53. The project has a clear adaptation-specific logic. Climate change and relative sea-level rise are increasing exposure to tidal flooding, erosion and salinity intrusion, while ecosystem degradation has weakened the mangrove and pond systems that once provided natural protection and supported local fisheries and aquaculture. At the same time, many households depend on climate-sensitive coastal livelihoods, with limited capacity to anticipate hazards, diversify income or recover from shocks. Blue Coast–RZ responds to these risks through three mutually reinforcing components.
54. **Component 1** provides the enabling foundation for adaptation by strengthening climate-risk-informed coastal planning and last-mile early warning. It will generate district-level climate-risk and coastal-hazard information, support its use in spatial planning and zoning processes, establish participatory coastal planning forums, and strengthen village-level hydrometeorological early warning, response protocols, drills and trained operators.
55. **Component 2** is the concrete adaptation core of the project and holds the largest share of financing. It will reduce physical exposure and livelihood sensitivity through engineered ecosystem-based coastal protection, hydrological and sediment-management works, permeable structures, mangrove recovery, silvofishery, community disaster preparedness, resilient community assets and climate-resilient livelihood activities for fishers, aquaculture households, women and youth.

56. **Component 3** supports adaptive management and wider learning. It will establish an integrated adaptation monitoring and learning system and prepare practical knowledge products on climate-risk-informed coastal planning, Demak's Blue Carbon Location designation, community-based mangrove management, restoration performance, silvofishery and livelihood resilience. The project will not claim to directly replicate the model outside Demak, but it will generate evidence and guidance that MMAF, local governments and partners can use to assess potential adaptation of relevant lessons elsewhere.

Theory of Change

57. IF climate-risk and coastal-hazard information is generated, shared and used by local planners and communities, AND IF village-level early warning, preparedness protocols and trained operators are established, THEN coastal communities and institutions in Demak will be better able to anticipate, plan for and respond to tidal flooding, extreme rainfall, storm surge, erosion and related climate hazards.
58. IF engineered ecosystem-based restoration is implemented in technically suitable sites, including hydrological rehabilitation, sediment management, permeable structures, mangrove recovery and community stewardship, THEN Demak's coastal ecosystem functions and natural protective buffers will be strengthened, reducing exposure of settlements, ponds, access routes and livelihood assets to tidal flooding, erosion and salinity intrusion.
59. IF disaster preparedness, climate-resilient aquaculture and silvofishery, women-led mangrove nurseries and processing enterprises, youth-sensitive livelihood pathways, climate information and selected resilient community assets are supported, THEN vulnerable fishing and aquaculture households will have stronger adaptive capacity, more resilient livelihood options and improved ability to recover from climate-related shocks.
60. IF adaptation results are monitored through ecological, physical and socio-economic indicators, and IF practical lessons are documented and shared with MMAF, Demak authorities and other coastal stakeholders, THEN the project will be able to adjust implementation during delivery and generate useful evidence for wider coastal adaptation learning.
61. Therefore, Blue Coast–RZ is expected to strengthen the climate resilience of vulnerable coastal communities in Demak by reducing exposure to coastal hazards, restoring ecosystem-based protection, improving preparedness, strengthening climate-resilient livelihoods and generating practical evidence for adaptive management and future uptake.

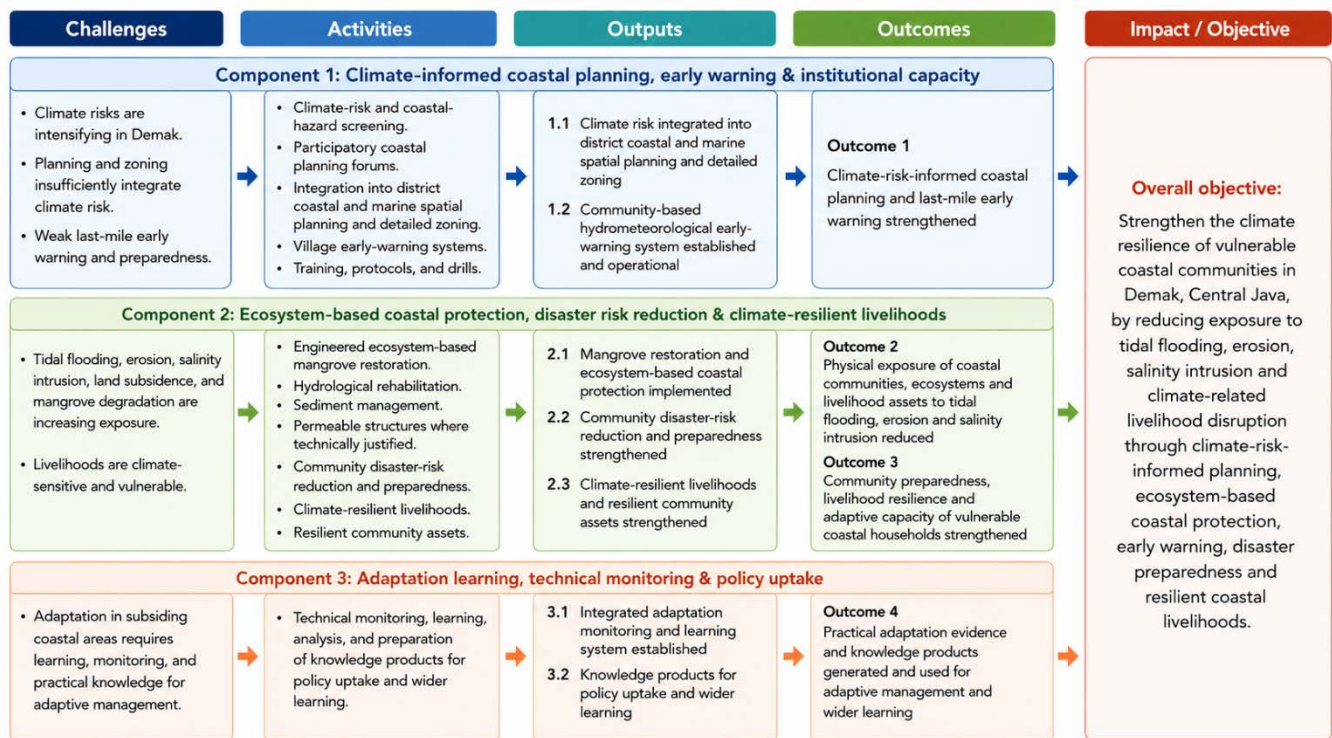


Figure 7: Theory of Change

Component 1. Climate-informed coastal planning, early warning and institutional capacity (USD 650,000)

62. Component 1 establishes the enabling foundation for adaptation in Demak, but has been kept deliberately lean so that resources are concentrated on concrete adaptation under Component 2. It responds to two gaps identified in Part I: spatial-planning instruments do not yet integrate climate risk at the local scale, allowing investment to continue flowing into areas that current trends will render unviable; and community-level early warning for slow-onset hydrometeorological hazards is weak, leaving households unable to anticipate tidal floods, storm surge and extreme rainfall. The component contributes to Adaptation Fund Outcome 1 *Reduced exposure to climate-related hazards and threats*.

Output 1.1 — Climate risk integrated into district coastal and marine spatial plans and detailed zoning (Target: 1 district-level climate-risk and coastal-hazard screening completed; 1 spatial data package prepared; participatory planning forums established in the 5 pre-selected villages). The output 1.1 explicitly align with and support the implementation of Indonesia's National Adaptation Policy Plan (NAP) and the Climate Village Programme (Program Kampung Iklim/ProKlim)³⁵.

63. This output ensures that where the project restores ecosystems and where communities invest is guided by climate risk, and that restored areas gain legal protection against future clearing or encroachment.

- Activity 1.1.1 —** Conduct a focused, district-level climate-risk and coastal-hazard screening to map the exposure of settlements, ponds, infrastructure and ecosystems and to define no-build and priority-restoration zones in Demak.

³⁵ <https://kemenlh.go.id/contents/16/Program-Kampung-Iklim-ProKlim>

- **Activity 1.1.2** — Integrate the resulting climate-risk information into district detailed coastal/marine zoning (RZWP3K) and local spatial plans (RDTR), and make the underlying spatial data available to district planners for routine use, with legal and technical support to feed into formal update and endorsement processes where feasible.
- **Activity 1.1.3** — Establish district-level participatory coastal planning forums that bring together local government, fishers, aquaculture farmers, women, youth and customary institutions to validate zoning and prevent the displacement of traditional users.

Output 1.2 — Community-based hydrometeorological early-warning system established and operational (Target: EWS arrangements operational in 5 target villages; at least 2 operators per village trained, including at least 1 woman where feasible).

64. This output closes the gap between national scientific monitoring and village-level response, covering the Demak tidal-flood sites.

- **Activity 1.2.1** — Install and commission tide gauges, rainfall sensors and community alert systems (sirens, loudspeakers and mobile messaging) in target villages, connected to and calibrated with BMKG and BPBD data.
- **Activity 1.2.2** — Develop village-level response protocols, evacuation routes and standard operating procedures, and run regular community drills so that warnings translate into timely action.
- **Activity 1.2.3** — Train at least two early-warning operators per village, including at least one woman operator where feasible and with women's participation tracked, and integrate alerts with fisher safety-at-sea practices and seasonal calendars.

Component 2. Ecosystem-based coastal protection, disaster risk reduction and climate-resilient livelihoods (USD 4,125,000)

65. Component 2 is the concrete-adaptation core of the project and holds a strengthened share of the budget. It rebuilds the natural coastal buffer, reduces the physical exposure of communities and assets, and protects and diversifies the livelihoods that depend on the coast, anchored in the zoning established under Component 1. Each output applies to Demak. The component contributes to Adaptation Fund Outcome 5 *Increased ecosystem resilience in response to climate change and variability-induced stress* and Outcome 6 *Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas*.

Output 2.1 — Mangrove restoration and ecosystem-based coastal protection (Target: Engineered ecosystem-based restoration package designed and implemented in priority Demak sites — hydrological and sediment-management works, permeable structures where technically justified, mangrove recovery, community nurseries and stewardship arrangements; indicative AF-financed targets (provisional, to be confirmed at Full Proposal on the basis of site-specific technical design): of the order of 1.5–2.5 km of ecosystem-based coastal protection and 150–250 ha of mangrove/pond rehabilitation, a bounded sub-set of the Morodemak planning envelope of 5.1 km coastal protection and 772 ha of mangrove/pond rehabilitation).

66. On the subsiding Pantura coast of Demak, land subsidence, sea-level rise and sediment starvation have dropped the mudflat below the elevation mangroves require and raised wave energy, so direct planting fails and the coastal profile must first be rebuilt through engineering.

- **Activity 2.1.1** — Carry out engineered, ecosystem-based restoration using the Building with Nature / three-layer model: install permeable, sediment-trapping structures and undertake hydrology works to raise

the subsided mudflat back into the tidal frame and dampen wave energy, re-creating the conditions under which mangroves can recover.

- **Activity 2.1.2** — Restore mangroves on the rebuilt foreshore and on degraded pond bunds once conditions allow, supported by community nurseries and several seasons of maintenance and replanting.
- **Activity 2.1.3** — Secure the legal protection and community stewardship of restored areas through the zoning established under Output 1.1, the Blue Carbon Location designation (Demak), community management agreements and community surveillance groups (pokwasmas).

Output 2.2 — Community disaster risk reduction and preparedness (Target: 5 villages with hazard maps, preparedness/contingency plans, evacuation routes, trained community actors and drills linked to BPBD).

67. This output strengthens communities' ability to anticipate and act on hazards, on the tidal-flood-prone Demak coast. It complements the early-warning system under Component 1 and the mangrove bioshield under Output 2.1.

- **Activity 2.2.1** — Establish community-based disaster risk reduction in target villages: participatory hazard mapping, village preparedness and contingency plans, evacuation routes and readiness, and regular community drills, linked to the district disaster management agency (BPBD).
- **Activity 2.2.2** — Strengthen and equip community preparedness institutions with basic preparedness materials, and integrate preparedness arrangements with the early-warning operators trained under Component 1.

Output 2.3 — Climate-resilient livelihoods and resilient community assets (Target: 3,000–3,800 vulnerable households reached through livelihood-resilience and/or community-asset support; including approximately 1,000 vulnerable households receiving direct livelihood or enterprise support, of which at least 50% women participants).

68. Because about 84% of fishery households depend on a single, climate-sensitive income (see Part I – Target group) and women carry out most processing and trade, this output protects and diversifies incomes in Demak and rebuilds selected community assets threatened or damaged by climate hazards, including support to priority pond communities in Demak. At least 50% of participants are women.

- **Activity 2.3.1** — Promote climate-resilient aquaculture and silvofishery (wanamina) on rehabilitated and idle ponds in Demak — improved water and disease management, salinity-tolerant species and climate-adjusted stocking — on selected idle or degraded ponds.
- **Activity 2.3.2** — Support women-led mangrove nurseries and post-harvest processing enterprises (women's joint business groups, KUB Perempuan), with at least 50% women participants, improving access to finance, equipment and markets.
- **Activity 2.3.3** — Develop diversified, climate-resilient livelihood pathways for youth — mangrove-based products, value addition and eco-services — with business training and market linkages.
- **Activity 2.3.4** — Provide small-scale, climate-resilient community infrastructure — raised access paths, drainage improvements and protection of jetties and fish-landing sites — concentrated in subsiding Demak.
- **Activity 2.3.5** — Strengthen the use of climate and weather information, including seasonal fishing calendars, so that fishers can plan around increasingly variable conditions.

Component 3. Adaptation learning, technical monitoring and policy uptake

(USD 230,000)

69. Component 3 ensures that the project's technical lessons, adaptation evidence and policy implications are documented and used to support wider learning beyond the grant. Through this component, the project has strong potential to contribute to Indonesia's Nationally Determined Contribution (NDC) by strengthening climate adaptation and ecosystem resilience, while generating scalable models and lessons that can inform potential uptake and context-specific adaptation and expanded across other coastal districts in Indonesia. It contributes to Adaptation Fund Outcome 3 *Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level*.

Output 3.1 — Integrated adaptation monitoring and learning system established (1 monitoring system covering mangrove condition, shoreline change, sediment accretion, pond/livelihood resilience and household adaptive capacity).

70. This output generates the technical evidence needed to manage restoration, disaster-risk reduction and livelihood-resilience measures adaptively and to document lessons for wider learning.

- **Activity 3.1.1 — Establish an integrated adaptation monitoring and learning system.** The project will monitor ecological, physical and socio-economic adaptation results, including mangrove extent and condition, shoreline change, sediment accretion relative to sea-level rise, pond and livelihood resilience, and household adaptive capacity. Monitoring will combine technical assessments, remote sensing, community-based monitoring and selected site-specific studies to verify results, guide adaptive management and feed into the project M&E system.

Output 3.2 — Knowledge products for policy uptake and wider learning (Practical guidance and learning products prepared and shared with MMAF, Demak authorities and other stakeholders).

71. This output will translate field experience from Demak into practical knowledge products, guidance and learning exchanges that can inform coastal adaptation planning and support wider learning and potential uptake by government and other partners.

- **Activity 3.2.1 — Prepare practical guidance on climate-risk-informed coastal and marine planning.** The project will produce concise technical notes, planning briefs and operational guidance based on field experience, to help district, provincial and national stakeholders better integrate climate risk, ecosystem-based adaptation and community preparedness into relevant coastal and marine planning processes.
- **Activity 3.2.2 — Document lessons from Demak's Blue Carbon Location designation and community-based mangrove management.** The project will document how the Blue Carbon Location designation in Demak can support community-based mangrove restoration, protection and monitoring, including lessons on institutional roles, zoning, community stewardship and safeguards.
- **Activity 3.2.3 — Facilitate cross-district and national learning for potential uptake.** The project will organize learning exchanges, policy dialogues and knowledge-sharing events with other vulnerable coastal districts and national stakeholders, enabling them to assess and adapt relevant lessons from the project for their own contexts.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

72. The Blue Coast–RZ project will generate economic, social and environmental benefits for climate-vulnerable coastal communities in Demak, Central Java, with particular attention to poor and low-income fishing and aquaculture households, women, youth, women-headed households, fish processors and traders, small-scale pond farmers, and other groups facing barriers to participation in coastal adaptation and blue economy development. The project is expected to directly benefit approximately 12,000–15,000 people, or about 3,000–3,800 households, in 5 exposed coastal villages, subject to confirmation during final village selection. The project will apply the broader Blue Coast targeting approach, prioritizing subsistence and vulnerable households while ensuring the participation of women and youth in planning, livelihood activities, early warning, monitoring and community-based restoration.
73. **The project's economic benefits** will arise mainly from reduced climate-related losses, strengthened livelihood continuity, and more resilient coastal production systems. In Demak, households are exposed to recurrent tidal flooding, erosion, salinity intrusion, damage to ponds, loss of access routes, and disruption of fishing, processing and local trading. By investing in climate-risk-informed zoning, early warning, mangrove and silvofishery restoration, hydrological and sediment-management measures, permeable structures, resilient access paths, drainage improvements, and protection of fish-landing and processing-related community assets, the project will help reduce damage to productive assets and improve the continuity of livelihood activities during and after climate shocks.
74. Available local evidence from the Morodemak sustainable coastal area masterplan illustrates the scale of benefits that integrated coastal adaptation can generate in the Demak context. The masterplan estimates that a package combining coastal protection, mangrove and pond rehabilitation, settlement protection, shorter fishing routes, ecotourism/MSME development and the recovery of land affected by tidal flooding and saline intrusion could generate significant benefits, including: 772 ha of coastal protection, mangrove and pond rehabilitation; protection benefits for around 5,050 families; fuel savings for about 500 fishing vessels; annual benefits from fishpond rehabilitation, mangrove ecosystem services, settlement protection, reduced fishing-route costs, ecotourism/MSME development and reactivation of affected agricultural land; and total estimated benefits of about IDR 661 billion over five years. These figures are not treated as direct project targets at concept note stage, but they provide a locally grounded proxy for the potential economic, social and environmental value of integrated nature-based coastal adaptation in Demak. At household level, the project will support livelihood resilience by reducing dependence on single, climate-sensitive income sources. Available Blue Coast targeting data indicate that most fisheries households in the broader project area depend primarily on capture fisheries, while a smaller share is engaged in aquaculture. Capture fisheries households are particularly exposed to lost fishing days, unsafe sea conditions, weather variability, declining ecosystem productivity, and damage to gear and landing points. Aquaculture households are exposed to salinity changes, tidal flooding, pond damage, disease risk and water-quality stress. The project will therefore support climate-resilient aquaculture and silvofishery, improved water and disease management, salinity-tolerant and climate-adjusted production practices, post-harvest processing, women-led mangrove nurseries, small blue enterprises, value addition and market linkages. These measures are intended to help households smooth income across seasons, reduce post-shock losses, and strengthen their capacity to recover from climate-related disruptions.
75. **The project will also generate important social benefits.** The targeting strategy will prioritize households most exposed to tidal flooding, erosion, ecosystem degradation and climate-sensitive livelihoods. The broader Blue Coast targeting framework distinguishes three income groups: very poor and poor households earning below IDR 2.0 million per month; vulnerable low-income households earning IDR 2.0–4.0 million per month; and a limited share of emerging lower-middle-income households earning IDR 4.0–6.0 million per month where their participation is needed to connect poorer households to upgraded value chains, post-harvest systems

and local enterprise networks. In the Demak AF area, this framework will be applied in a pro-poor way, with priority to subsistence and vulnerable households, and with transparent eligibility criteria, community validation and beneficiary registries to reduce the risk of elite capture.

76. Gender considerations are central to the project's expected benefits. Women in coastal communities play major roles in fish processing, trading, household nutrition, aquaculture support, mangrove-related activities and small-scale enterprises, but their work is often informal, under-recognized and weakly represented in formal decision-making. Women may also face barriers in access to productive assets, finance, training, mobility, fisher registration, leadership roles and climate information. The project will address these constraints by promoting women's participation in consultations, coastal planning forums, livelihood groups, mangrove nurseries, processing enterprises, early-warning arrangements and community monitoring. At least 50 per cent of participants in livelihood-related activities will be women, and sex- and age-disaggregated data will be collected and used to track participation, benefits and corrective actions. Consultations will include women-only discussions where appropriate, meeting times and locations will be adapted to women's availability and mobility constraints, and women's feedback will be reflected in activity selection, training design and grievance monitoring. Youth will benefit through skills development, livelihood diversification and participation in emerging blue economy activities. Traditional capture fisheries are often dominated by older men, while younger women and men face limited access to productive assets, finance, digital skills, training and stable employment. The project will create opportunities for youth to participate in mangrove nurseries, restoration monitoring, climate and weather information use, post-harvest processing, digital marketing, ecotourism-related services where appropriate, and locally relevant blue economy enterprises. These activities will help create safer and more diversified livelihood pathways while reducing pressure on over-exploited capture fisheries. The project will also promote inclusion of other vulnerable groups. Persons with disabilities, elderly persons, women-headed households, poorer fish workers, informal processors and traders, and households without strong representation in local institutions will be considered in village-level targeting, consultations and grievance arrangements. Concept-note consultations have not identified Indigenous Peoples in the project area; this will be confirmed through broader Full Proposal consultations.
77. **Environmental benefits will be significant.** The project will restore and protect coastal ecosystem functions that are essential for adaptation in Demak. Mangrove and silvofishery restoration, hydrological rehabilitation, sediment management and permeable/hybrid structures will help rebuild natural coastal buffers, reduce wave energy, support sediment accretion, stabilize shorelines and improve conditions for mangrove recovery. These measures are expected to reduce exposure to tidal flooding, erosion and salinity intrusion while improving nursery habitat for fish and crustaceans, enhancing water quality, supporting biodiversity and strengthening the ecological basis of local fisheries and aquaculture. The project will avoid a narrow planting-only approach and will instead address the physical causes of mangrove failure in subsiding and eroding coastal areas, including altered hydrology, insufficient sediment supply and unsuitable pond management. The project will also improve environmental governance. Climate-risk-informed coastal planning and zoning will help identify areas where restoration, protection, livelihood investments and local infrastructure are most appropriate, and areas where new investment may be maladaptive because of increasing exposure to tidal flooding, erosion or subsidence. Community stewardship and monitoring arrangements, including community surveillance groups where relevant, will help protect restored areas from encroachment, clearing and unsustainable use. Technical monitoring of mangrove condition, shoreline change, sediment accretion, pond resilience and household adaptive capacity will support adaptive management during implementation.
78. **Potential negative impacts and maladaptation risks will be avoided or mitigated** through IFAD's Social, Environmental and Climate Assessment Procedures and the Adaptation Fund Environmental and Social Policy and Gender Policy. The main maladaptation risks include: restoration failure if mangroves are planted in unsuitable hydrological or sediment conditions; protection works that shift erosion or flood risk to adjacent areas; infrastructure sited in highly exposed zones without adequate design; livelihood activities that increase pressure on ecosystems; aquaculture improvements that increase pollution or disease risk if not properly managed; unequal access to benefits; elite capture of livelihood or infrastructure support; increased workloads for women; exclusion of informal fish workers, women or youth; and possible restrictions on resource access if restored areas are protected without adequate consultation or benefit-sharing. These risks will be managed through climate-risk screening, technical design review, environmental and social screening, community consultation, transparent beneficiary selection, gender-responsive participation measures, operation and

maintenance arrangements, and adaptive monitoring. All AF-financed activities will be screened before approval. Activities with unacceptable environmental or social risks will not be financed. The project will not finance involuntary resettlement, land acquisition, forced eviction, permanent relocation of households or businesses, groundwater extraction in subsidence-prone areas, significant water abstraction, large-scale aquaculture sites, harmful or destructive fishing practices, conversion of intact mangroves, activities affecting cultural heritage, child labour, forced labour, or activities involving significant unmitigated occupational health and safety risks. Small-scale infrastructure and ecosystem restoration works will be subject to site-specific screening and, where needed, simplified environmental and social management measures, permits and community agreements before implementation. Labour and working-condition risks will be managed through the Blue Coast Labour Management Plan. This is important because the project may involve contractors, community workers, traditional fishing communities, women, youth and local groups in mangrove restoration, permeable-structure installation, pond rehabilitation, small infrastructure works, post-harvest activities and monitoring. Occupational health and safety measures will cover work in tidal, muddy, waterlogged and exposed coastal areas; safe use of tools and equipment; weather-related risks; safe working conditions for women and men; and prevention of child labour, forced labour, discrimination, sexual exploitation and abuse, and sexual harassment. Community labour will be voluntary, documented and non-coercive. Stakeholder engagement will remain continuous throughout implementation. Consultations will be organized at district, sub-district and village levels and adapted to the needs of women, youth, poor households, persons with disabilities and other vulnerable groups. Information will be disclosed in accessible formats and local languages where needed. Participation in spatial planning, early warning, restoration, livelihood and monitoring activities will be tracked to ensure that project benefits do not accrue only to better-connected or better-off groups. The project grievance redress mechanism will provide accessible channels for communities and workers to raise concerns related to exclusion, benefit-sharing, labour conditions, environmental impacts, gender-based risks, community health and safety, or access to resources.

79. Through these measures, Blue Coast–RZ is expected to generate tangible economic, social and environmental benefits while avoiding or mitigating adverse impacts. The project will reduce climate vulnerability in highly exposed coastal villages in Demak, strengthen the resilience of poor and low-income fishing and aquaculture households, expand opportunities for women and youth, restore ecosystem services that underpin local livelihoods, and support inclusive and accountable adaptation planning in line with the Adaptation Fund Environmental and Social Policy and Gender Policy.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

80. Blue Coast–RZ is cost-effective because it concentrates a reduced Adaptation Fund envelope on a small number of highly exposed coastal villages in Demak, where climate risks are already causing recurrent losses to settlements, fishponds, access routes, landing sites and coastal livelihoods. Rather than spreading resources thinly across several districts or financing broad policy and finance activities, the project focuses on a compact package of concrete adaptation measures: climate-risk-informed planning, last-mile early warning, engineered ecosystem-based coastal protection, mangrove and silvofishery restoration, community disaster preparedness, resilient local assets, and livelihood diversification.
81. At concept note stage, the project is expected to directly benefit approximately 12,000–15,000 people, or about 3,000–3,800 households, in 5 coastal villages. Using the total project cost before the Implementing Entity fee (USD 5.53 million), the indicative cost is approximately USD 369–461 per direct beneficiary, or USD 1,455–1,843 per beneficiary household. Using only the component budget (USD 5.005 million), the indicative cost is approximately USD 334–417 per direct beneficiary, or USD 1,317–1,668 per beneficiary household. These are proxy estimates and will be refined during full proposal preparation once final village selection, restoration sites, asset packages and beneficiary numbers are confirmed.
82. The project builds on the economic logic of the wider Blue Coast programme, which has been assessed as economically viable, with an estimated economic net present value of approximately IDR 2.2 trillion over 20 years, an economic internal rate of return of 21 per cent under the base case, and benefit-cost ratios above 1 even under conservative assumptions including a 30 per cent failure rate. While the Demak AF project covers a smaller geographic area and a more targeted set of adaptation activities, it contributes to the same benefit

pathways: reduced climate-related losses, improved fisheries and aquaculture resilience, stronger community assets, diversified livelihoods, and restored coastal ecosystem services.

83. Local evidence from the Morodemak Sustainable Coastal Area Masterplan further supports the cost-effectiveness of the selected approach. The masterplan estimates that an integrated package combining coastal protection, mangrove and pond rehabilitation, settlement protection, reduced fishing travel costs, MSME/ecotourism development and recovery of productive land affected by tidal flooding and salinity could generate around IDR 661 billion in benefits over five years. Specific benefit streams include settlement protection for around 5,050 families, rehabilitation of 772 ha of coastal protection/mangrove/fishpond systems, fuel savings for around 500 fishing vessels, mangrove ecosystem-service benefits, and increased fishpond income. These figures are not used as direct project targets, but they provide a locally grounded proxy showing that the potential avoided-loss and livelihood benefits of integrated coastal adaptation in Demak are large relative to the AF grant envelope.
84. **Component 1** is cost-effective because it reduces the risk of maladaptive or poorly targeted investment before larger works are financed. With USD 650,000, it represents about 13 per cent of the component budget. This is equivalent to approximately USD 130,000 per village, USD 171–217 per household, or USD 43–54 per direct beneficiary. This modest upfront investment will help ensure that restoration, infrastructure and livelihood activities are located in areas where they are technically justified, socially acceptable and aligned with climate-risk information. The alternative — implementing works without climate-risk screening, zoning and participatory validation — would increase the risk of placing assets in areas likely to become unviable because of tidal flooding, erosion, subsidence or future sea-level rise.
85. **Component 2** is the most cost-effective part of the project because it finances the core preventive adaptation investments. With USD 4.125 million, it represents about 82 per cent of component spending. This is equivalent to approximately USD 825,000 per village, USD 1,086–1,375 per household, or USD 275–344 per direct beneficiary. The component addresses the main drivers of vulnerability directly: loss of mangrove buffers, erosion, tidal flooding, salinity intrusion, pond degradation, livelihood disruption and weak community preparedness. The investment package is preventive rather than reactive: it aims to reduce repeated damage and recovery costs by restoring natural buffers, improving preparedness, protecting local assets, and strengthening household income resilience.
86. The project's hybrid ecosystem-based approach is more cost-effective than relying only on hard infrastructure or only on mangrove planting. Hard coastal defences alone are costly, require high maintenance and can shift erosion or flood risk if they are not designed around coastal processes. Planting mangroves without first restoring hydrology and sediment conditions is also unlikely to be cost-effective in subsiding and eroding parts of Demak, because seedlings may fail where the foreshore is too deep or too exposed. The project therefore combines sediment management, hydrological restoration, permeable structures, mangrove recovery and silvofishery, following the Building with Nature logic and the Morodemak three-layer model. This increases the likelihood that restoration survives, buffers communities and generates recurrent ecosystem and livelihood benefits.
87. **Component 3** is cost-effective because it reduces the risk of technical failure and future maladaptation. With USD 230,000, it will finance the technical monitoring, adaptive learning and practical knowledge products needed to verify whether restoration, shoreline protection, silvofishery, livelihood and preparedness measures are working under Demak's rapidly changing coastal conditions. Monitoring of mangrove condition, shoreline change, sediment accretion, pond and livelihood resilience, and household adaptive capacity will allow the project to adjust implementation before problems become costly failures. The lessons generated will also provide practical guidance for MMAF, Demak authorities and other coastal districts, helping future investments avoid ineffective approaches such as planting mangroves in unsuitable sites or constructing assets without considering erosion, subsidence, hydrology and long-term maintenance. Routine project M&E, baseline and completion surveys, reporting and audits are financed under Project Execution Cost, so Component 3 remains focused on adaptation learning and technical evidence that can improve this project and inform better-designed future investment elsewhere.
88. From a sustainability perspective, the project is more cost-effective than alternatives that depend on externally managed works or one-off asset distribution. Restored areas will be linked to climate-informed zoning, community stewardship and Demak's Blue Carbon Location designation. Community groups, including pokwasmas and women/youth livelihood groups, will be involved in implementation, monitoring and

maintenance. Early-warning operators will be trained at village level and linked to BMKG/BPBD systems. Small-scale infrastructure and livelihood assets will be selected only where operation and maintenance arrangements are feasible. This reduces recurrent costs and increases the likelihood that benefits continue after the AF grant closes.

89. The table below summarizes the main cost-effectiveness proxies and alternatives considered.

Table 6: Cost-effectiveness logic of the project

Project element	Quantitative / proxy estimate	Cost-effectiveness logic	Alternative considered and reason not selected
Overall project	USD 5.53 million before IE fee; approximately 12,000–15,000 people and 3,000–3,800 households	About USD 369–461 per direct beneficiary, or USD 1,455–1,843 per household, for an integrated coastal adaptation package in highly exposed villages	Spreading the budget across more districts. Rejected because it would dilute concrete adaptation benefits and reduce implementation depth.
Component 1: Planning, EWS and capacity	USD 650,000; about USD 130,000 per village	Low-cost enabling investment to avoid maladaptive siting and improve preparedness before major works are financed	Investment-first approach without climate-risk screening. Rejected because it could finance assets in unsuitable or increasingly exposed locations.
Component 2: Ecosystem-based protection, DRR and livelihoods	USD 4.125 million; about 82% of component spending	Concentrates resources on direct risk reduction: restored coastal buffers, preparedness, resilient assets and livelihood resilience	Hard infrastructure only. Rejected because of high cost, maintenance burden and potential erosion/flood-transfer risks.
Output 2.1: Mangrove and hybrid coastal protection	Main concrete adaptation package under Component 2	Hydrology-first and sediment-based restoration increases survival and reduces the risk of failed planting	Planting-only mangrove rehabilitation. Rejected because it is unlikely to work in eroded/subsiding sections without restoring physical conditions first.
Output 2.2: Community DRR and preparedness	Integrated with EWS and village-level response	Low-cost preparedness reduces losses by improving warning, response and evacuation readiness	EWS hardware without community protocols. Rejected because warnings do not reduce risk unless communities know how to act.
Output 2.3: Livelihoods and resilient assets	Targeted support to fishers, pond farmers, women and youth	Reduces dependence on single climate-sensitive income sources and protects key livelihood assets	Generic livelihood support. Rejected because AF financing must be tied to climate-risk pathways and adaptation outcomes.
Component 3: Learning and technical monitoring	USD 230,000; about 5% of component spending	Keeps KM lean while ensuring adaptive management and evidence for wider uptake	Large policy/KM component. Rejected because the reduced envelope should prioritize concrete adaptation.

90. The proposed design is therefore cost-effective because it combines a focused geographic scope, high concentration of financing on concrete adaptation, quantified local benefit proxies, avoidance of known maladaptation risks, and sustainability measures that reduce recurrent costs and support continued benefits after project closure.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

91. Blue Coast–RZ is fully consistent with Indonesia's national climate, blue economy, coastal resilience, biodiversity, gender and sustainable development priorities. The project directly supports Indonesia's policy

direction to strengthen climate resilience in coastal and marine areas, protect blue carbon ecosystems, operationalize marine spatial planning, and improve the livelihoods of vulnerable coastal communities.

92. At the international level, the project is aligned with Indonesia's commitments under the Paris Agreement and its **Enhanced Nationally Determined Contribution**. Indonesia's adaptation objective is to reduce climate risks, enhance adaptive capacity and strengthen resilience across key sectors and landscapes. Blue Coast–RZ contributes to this objective by financing concrete adaptation measures in Demak, where coastal communities are exposed to relative sea-level rise, land subsidence, tidal flooding, erosion, salinity intrusion and the loss of protective mangrove ecosystems. The project also contributes to Indonesia's commitments under the Convention on Biological Diversity and to the **Sustainable Development Goals**, particularly SDG 1, SDG 2, SDG 5, SDG 13 and SDG 14.
93. The project is also aligned with Indonesia's National Adaptation Plan, which provides the national framework for medium- and long-term adaptation planning. The NAP recognizes the importance of strengthening resilience in climate-exposed coastal areas and improving the integration of climate risk into development planning. Blue Coast–RZ directly operationalizes this approach by linking climate-risk-informed coastal planning, village-level early warning, ecosystem-based adaptation, resilient livelihoods and technical monitoring in one highly exposed coastal district.
94. The project is consistent with the **National Long-Term Development Plan 2025–2045** and the **National Medium-Term Development Plan 2025–2029**, which emphasize climate resilience, low-carbon development, sustainable use of natural resources, and the transformation of Indonesia's marine economy. The Blue Coast programme is already positioned within this national development agenda by supporting the Government's objective of advancing a sustainable and inclusive blue economy. The AF-financed Blue Coast–RZ window contributes specifically by focusing on the adaptation dimension of this agenda: protecting vulnerable coastal communities and productive assets from climate-related hazards while restoring the ecosystem services on which fisheries, aquaculture and coastal livelihoods depend.
95. The project is strongly aligned with **Indonesia's Blue Economy Roadmap 2023–2045** and the Ministry of Marine Affairs and Fisheries' blue economy priorities. The Roadmap promotes the sustainable use of ocean resources, improved livelihoods, ecosystem protection, marine spatial planning and climate-resilient coastal development. Blue Coast–RZ contributes to these priorities through climate-informed spatial planning, community-based mangrove and silvofishery restoration, protection of coastal ecosystem services, support to sustainable fisheries and aquaculture practices, and livelihood diversification for women, youth and vulnerable households.
96. The project is also consistent with Indonesia's marine spatial planning framework under Law No. 32/2014 on Marine Affairs and the wider legal and policy framework for coastal and small-island management. Marine spatial planning provides the basis for balancing ecological protection, climate resilience, sustainable production and community access to coastal and marine resources. Blue Coast–RZ will support the integration of climate-risk information into relevant spatial planning and zoning processes in Demak, helping to guide restoration, local infrastructure and livelihood investments away from maladaptive locations and toward areas where they can generate durable resilience benefits.
97. The project supports Indonesia's biodiversity and blue carbon agenda, including the **Indonesian Biodiversity Strategy and Action Plan 2025–2045** and national priorities for mangrove protection and rehabilitation. Demak is formally designated as a Blue Carbon Location, providing an important policy entry point for community-based mangrove management, restoration and protection. The project will help translate this designation into practical adaptation outcomes by restoring mangrove and silvofishery systems, improving hydrology and sediment conditions, supporting community stewardship, and documenting lessons that can inform other coastal districts.
98. At sub-national level, the project is consistent with the Government-backed Morodemak sustainable coastal area masterplan and ongoing efforts by national, provincial and district authorities to address tidal flooding, coastal erosion, mangrove degradation and livelihood vulnerability along the Demak coast. The Morodemak masterplan validates the integrated approach applied by the project: combining coastal protection, mangrove and pond rehabilitation, settlement protection, livelihood benefits and local economic opportunities. Blue Coast–RZ will not duplicate the masterplan; rather, it will support a focused AF-financed adaptation package that contributes to its broader direction and generates evidence for wider learning.

99. The project is also aligned with Indonesia's gender mainstreaming framework, particularly Presidential Instruction No. 9/2000 on **Gender Mainstreaming in National Development**, which requires public institutions to integrate gender perspectives into planning, implementation, monitoring and evaluation. The project will apply this principle by ensuring women's participation in consultations, coastal planning forums, mangrove nurseries, processing enterprises, livelihood activities, early warning and community monitoring. Sex- and age-disaggregated data will be collected, and activity design will take account of women's roles in fish processing, aquaculture, trading, household nutrition and small-scale enterprises, as well as the barriers they face in access to assets, finance, training and decision-making.
100. Finally, Blue Coast–RZ is consistent with IFAD's country engagement in Indonesia and the broader Blue Coast programme's objective of linking sustainable marine resource management with inclusive rural livelihoods. While the wider Blue Coast programme addresses marine spatial planning, blue value chains, private sector investment and blue finance at a broader scale, the AF-financed window has a narrower and clearly adaptation-specific role: financing concrete measures that reduce climate vulnerability in Demak through ecosystem-based coastal protection, early warning, disaster preparedness, resilient community assets and livelihood diversification. This ensures that the project is aligned with national priorities while remaining focused on the Adaptation Fund's mandate for concrete adaptation.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

101. Blue Coast–RZ will be implemented in compliance with applicable national environmental, social, spatial planning, coastal management, construction, disaster-risk management, fisheries, labour, gender and safeguards requirements of the Government of Indonesia, as well as the Adaptation Fund Environmental and Social Policy and Gender Policy. At concept note stage, the project activities are defined within a bounded menu of eligible adaptation measures in Demak: climate-risk-informed planning, community early warning, engineered ecosystem-based mangrove restoration, hydrological and sediment-management works, permeable structures, silvofishery, small-scale climate-resilient community assets, livelihood-resilience measures, and technical monitoring.
102. Because final village sites and detailed designs will be confirmed during full proposal preparation and implementation, compliance will be verified in two stages. First, during full proposal preparation, the project will confirm the applicable national permits, technical requirements, screening procedures and exclusion criteria for each activity type. Second, before procurement or implementation of each site-specific activity, the project will verify the required permits, technical designs, community agreements, land-use arrangements, environmental and social screening results, and mitigation measures. No civil works, restoration works, hydrological works, permeable structures, livelihood infrastructure, processing equipment or community assets will proceed until applicable national requirements and project safeguards have been confirmed and documented.
103. The project is expected to remain a moderate-risk / Category B operation. Activities that would require involuntary resettlement, land acquisition, physical displacement, groundwater extraction in subsidence-prone areas, significant water abstraction, conversion of intact mangroves, large-scale aquaculture, destructive fishing, damage to cultural heritage, child or forced labour, or significant unmitigated occupational health and safety risks will not be financed. The completed SECAP screening checklist will be annexed to the proposal, as required for IFAD, and all activities will additionally be screened under the AF Environmental and Social Policy. All activities will be screened and implemented in accordance with the Adaptation Fund Environmental and Social Policy and Gender Policy, alongside IFAD SECAP. The project will apply the Blue Coast Exclusion List, SECAP screening tools, Environmental, Social and Climate Management Plan, Stakeholder Engagement Plan, Labour Management Plan, where relevant, and Grievance Redress Mechanism.

Table 7: Applicable national standards and project compliance measures

Law / standard / framework	Objective and relevance to Blue Coast-RZ	Public entity in charge	Compliance steps and how the project will ensure compliance
Law No. 32/2009 on Environmental Protection and Management, and Government Regulation No. 22/2021 on Environmental Protection and Management	Provides the national framework for environmental protection, pollution prevention, environmental approvals, water and marine quality management, waste management, environmental supervision and sanctions. Relevant to all restoration, civil works, livelihood and coastal activities.	Ministry of Environment and Forestry, provincial/district environmental agencies, and other competent authorities.	All activities will be screened for environmental risks. Site-specific mitigation measures will be included in designs, contracts and implementation plans. Activities requiring environmental approval or documented environmental management measures will not proceed until the required documentation is confirmed.
Minister of Environment and Forestry Regulation No. 4/2021 on activities requiring AMDAL, UKL-UPL or SPPL	Determines which activities require full environmental impact assessment, environmental management and monitoring plans, or a statement of environmental management and monitoring capacity. Relevant to small infrastructure, restoration, processing or coastal works depending on scale and location.	Ministry of Environment and Forestry and provincial/district environmental agencies.	During full proposal preparation and before procurement, each activity type will be checked against AMDAL/UKL-UPL/SPPL thresholds. Most project activities are expected to be small-scale, but any activity requiring UKL-UPL, SPPL or other approval will prepare the required documentation before implementation.
Law No. 27/2007 on Coastal Areas and Small Islands Management, as amended by Law No. 1/2014	Regulates planning, utilization, supervision and control of coastal and small-island resources, including community welfare, conservation and coordination across sectors. Relevant to coastal restoration, community use areas, coastal zoning and protection of coastal resources.	Ministry of Marine Affairs and Fisheries, provincial marine and fisheries offices, district governments and related agencies.	Project activities will be aligned with relevant coastal zoning and coastal resource-management requirements. Restoration sites, livelihood activities and community assets will be validated with MMAF, provincial/district authorities and local communities to avoid conflicts over access and use rights.
Law No. 32/2014 on Marine Affairs and applicable marine spatial planning / zoning regulations	Provides the legal basis for marine governance, marine spatial planning and sustainable use of marine resources. Relevant to climate-risk-informed coastal and marine zoning, restoration areas and livelihood investments.	Ministry of Marine Affairs and Fisheries, especially the Directorate General of Marine Spatial Planning (DGMSP), with provincial and district planning authorities.	Climate-risk information generated by the project will be integrated into relevant planning and zoning processes where feasible. Spatial data, restoration priorities and no-build/priority-restoration areas will be shared with district and provincial planners.
Marine and coastal spatial planning framework, including Government Regulation (PP) No. 21 of 2021 on the Implementation of Spatial Planning, Minister of Marine Affairs and Fisheries Regulation (Permen KP) No. 28 of 2021 on marine spatial planning, and Central Java Regional Regulation (Perda) No. 8 of 2024 on provincial spatial planning (RTRW/RZ).	Provides the up-to-date legal basis for marine and coastal spatial planning and zoning, and for authorising physical interventions in coastal and marine space. Relevant to Output 2.1 (permeable/sediment-trapping structures, coastal protection and mangrove restoration within the shoreline) and to climate-risk-informed zoning under Component 1.	Ministry of Marine Affairs and Fisheries (MMAF), Directorate General of Marine Spatial Planning (DGMSP); Provincial/District Development Planning Agency (Bappeda).	During project preparation and before procurement or construction, the project will obtain all applicable marine and coastal spatial-planning permits and statutory approvals for physical interventions, and will confirm conformity with the applicable RTRW/RZ, consistent with applicable law.
Spatial planning framework, including Law No. 26/2007 on Spatial Planning and Government Regulation No. 21/2021 on Spatial Planning Implementation	Regulates spatial planning, spatial utilization and conformity with spatial plans. Relevant to ensuring that community assets, restoration activities and livelihood investments are not placed in areas where exposure to flooding, erosion or	Ministry of Agrarian Affairs and Spatial Planning / National Land Agency, provincial and district governments,	The project will review spatial-plan consistency before approving site-specific investments. Climate-risk and hazard screening will inform the siting of community assets and restoration activities. Activities inconsistent with

Annex 5 to OPG Amended in October 2017

	subsidence would make them maladaptive.	Bappeda and related technical agencies.	spatial plans or located in unsuitable high-risk areas will be redesigned or excluded.
National regulations on mangrove protection and management, including PP No. 27/2025, Permen LHK No. 8/2026 and Permen LH/BPLH No. 26/2025, together with local blue-carbon and coastal-ecosystem provisions, including Demak's Blue Carbon Location designation.	Provide the current national legal and technical basis for protecting, managing, restoring and monitoring mangrove ecosystems, including the Mangrove Landscape Unit (Kesatuan Lanskap Mangrove, KLM) approach, classification of protection and cultivation functions, damage thresholds and mandatory ecosystem recovery, and a standardised national mangrove inventory and mapping methodology. Highly relevant to Output 2.1 (engineered ecosystem-based mangrove restoration and the legal protection of restored areas) and to blue-carbon stewardship.	Ministry of Environment / Environmental Control Agency (KLH/BPLH), including the Peat and Mangrove Ecosystem Management Agency (BPEGM); Ministry of Forestry for mangroves within forest areas; Ministry of Marine Affairs and Fisheries for coastal areas; provincial/district authorities and local community institutions.	Restoration will follow the ecosystem-based approach and mangrove-function classification under PP 27/2025, use the national mangrove inventory and mapping methodology (Permen LH/BPLH 26/2025) for baseline and monitoring, and respect determined mangrove functions and any applicable function-change procedures (Permen LHK 8/2026). Activities will be aligned with Demak's Blue Carbon Location designation; community stewardship agreements, monitoring arrangements and surveillance groups will be established to support long-term protection. The project will not finance conversion of intact mangroves.
Law No. 17/2019 on Water Resources and related water-management regulations	Regulates water resource management, protection and use. Relevant to hydrological restoration, drainage improvements, water circulation in ponds and avoidance of significant water abstraction.	Ministry of Public Works and Housing, Ministry of Environment and Forestry, provincial/district water-resource agencies and local authorities.	The project will not finance significant water abstraction or groundwater extraction in subsidence-prone areas. Hydrological restoration and drainage activities will be screened to avoid negative downstream impacts, pollution, salinity-related harm or conflicts over water use.
Law No. 18/2008 on Waste Management and relevant pollution-control requirements under PP 22/2021	Regulates management of solid waste and pollution. Relevant to civil works, restoration materials, nursery operations, post-harvest processing, packaging and small-scale enterprise activities.	Ministry of Environment and Forestry, district environmental agencies and local waste-management authorities.	Contractor clauses and site-specific management measures will require safe handling, reuse where appropriate, and disposal of construction, packaging and processing waste. No hazardous or banned materials will be financed.
Law No. 2/2017 on Construction Services and applicable national construction standards / SNI	Sets requirements for construction services, technical design, quality, safety and accountability. Relevant to raised access paths, drainage works, fish-landing improvements, small processing spaces, permeable structures and other community assets.	Ministry of Public Works and Housing, local public works agencies, certified engineers and construction-service authorities.	All civil works will be designed or reviewed by qualified technical personnel. Procurement documents will include technical specifications, safety requirements, material standards, construction supervision and handover requirements. Works that cannot meet minimum safety and durability standards will not be financed.
Coastal engineering and public works technical standards applicable to shoreline protection, drainage and small coastal infrastructure	Provides technical requirements for safe, durable and fit-for-purpose coastal and drainage works. Relevant to permeable structures, sediment-trapping measures, drainage improvements and protection of landing sites or access routes.	Ministry of Public Works and Housing, MMAF technical units, provincial/district public works and marine/fisheries offices.	Detailed designs will assess hydrology, sediment dynamics, erosion risk, wave exposure, drainage and possible impacts on adjacent areas. Permeable structures and hybrid works will be technically reviewed to avoid transferring risk or creating maladaptation.
Law No. 24/2007 on Disaster Management and related BNPB/BPBD procedures	Establishes the national disaster management system, including prevention, preparedness, emergency response and rehabilitation. Relevant to early warning, village preparedness, evacuation protocols and community disaster-risk reduction.	BNPB, BPBD, BMKG, district government and village authorities.	Early-warning activities will be linked to BMKG and BPBD systems. Village protocols, evacuation routes, drills and community preparedness materials will be validated with local disaster-management authorities.
Fisheries legal framework, including Law No. 31/2004 on Fisheries as amended by Law No. 45/2009, and Law No.	Regulates fisheries management and supports protection and empowerment of fishers and fish farmers. Relevant to climate-resilient fisheries, aquaculture,	Ministry of Marine Affairs and Fisheries, provincial/district marine and fisheries offices.	Fisheries, aquaculture and post-harvest activities will be checked for consistency with sustainable fisheries and aquaculture requirements. The project will not finance destructive fishing, large-scale

Annex 5 to OPG Amended in October 2017

7/2016 on Protection and Empowerment of Fishers, Fish Farmers and Salt Farmers	silvofishery, fisher groups, post-harvest activities and livelihood diversification.		aquaculture above the exclusion threshold, invasive species, or activities that increase pressure on vulnerable ecosystems.
Food safety, fish processing and public health requirements applicable to small-scale processing and post-harvest activities	Regulate hygiene, food safety, handling, storage and processing of fish and aquaculture products. Relevant to women-led processing, cold storage, packaging, value addition and market-oriented livelihood activities.	Ministry of Marine Affairs and Fisheries, BPOM where applicable, Ministry of Health, local health and fisheries offices.	Processing and storage support will include food safety, hygiene, equipment cleaning and safe handling requirements. Any facility or equipment package requiring registration, certification or inspection will be checked before operation.
Labour Law No. 13/2003, as amended, Law No. 1/1970 on Occupational Safety, and related occupational health and safety regulations	Regulate labour conditions, non-discrimination, worker protection and occupational safety. Relevant to contractors, service providers, project staff and community workers involved in restoration, coastal works, nurseries, processing and monitoring.	Ministry of Manpower, labour inspectorates, contractors, MMAF/NPMU and implementing units.	Contracts will include labour and OHS clauses. The Labour Management Plan will apply to direct, contracted, community and primary supply workers. Community labour will be voluntary and documented. Child labour, forced labour, discrimination, unsafe working conditions and SEA/SH will be prohibited.
Presidential Instruction No. 9/2000 on Gender Mainstreaming in National Development	Requires gender perspectives to be integrated into planning, implementation, monitoring and evaluation. Relevant to women's participation in planning forums, livelihood activities, early warning, restoration, monitoring and grievance systems.	Ministry of Women's Empowerment and Child Protection, MMAF, local governments and project implementing units.	The project will apply gender-responsive consultation, sex- and age-disaggregated monitoring, women's participation targets, adapted training schedules, women-only discussions where appropriate, and gender-responsive grievance channels.
National rules on land administration, land use and public-interest land acquisition, including Law No. 2/2012 where applicable	Regulates land acquisition and land administration. Relevant because restoration, access paths, drainage works and community assets must not cause involuntary resettlement or land acquisition.	Ministry of Agrarian Affairs and Spatial Planning / National Land Agency, district government and village authorities.	The project will avoid land acquisition and involuntary resettlement. Site selection will verify land/use status, community agreement and absence of disputes. Activities requiring land acquisition, eviction, relocation or demolition of houses or businesses will be excluded.
Cultural heritage and customary rights provisions under national law and relevant local regulations	Protect tangible and intangible cultural heritage and recognize relevant customary institutions and rights where applicable. Relevant to restoration, zoning and livelihood activities in coastal villages.	Ministry of Culture, local governments, customary institutions and relevant sector agencies.	Screening will identify whether cultural heritage, graves, places of worship, traditional meeting places or customary-use areas could be affected. Activities affecting cultural heritage or customary rights without appropriate consultation and consent will not be financed.

104. Implementation and monitoring of compliance will be led by the Blue Coast project management structure under MMAF, with oversight by IFAD as Implementing Entity. The National Project Management Unit and relevant provincial/district implementation units will maintain compliance files for each AF-financed site-specific activity. These files will include screening forms, technical designs or specifications, environmental and social requirements, permit checks, stakeholder consultation records, land/use confirmations, community agreements, O&M arrangements, contractor clauses, incident records where relevant, and monitoring reports.
105. The Environmental and Climate Expert financed under the AF, environmental and social safeguards staff, Gender and Social Inclusion expertise, M&E/KM staff, engineers and relevant technical specialists will support the implementation of these requirements. IFAD will review compliance through supervision, implementation support, annual reporting, safeguards monitoring and the project grievance system. During full proposal preparation, the table above will be validated with MMAF, Ministry of Environment and Forestry, provincial and district authorities, and relevant technical agencies, and will be adjusted to reflect the final village selection, final activity menu, site-specific technical standards and any additional permits or approvals required before implementation.

F. Describe if there is duplication of project/programme with other funding sources, if any.

106. Blue Coast–RZ has been designed to avoid duplication with the broader IFAD-supported Blue Coast programme and with other ongoing or completed coastal, mangrove, fisheries and climate-resilience initiatives in Indonesia. The project will use the institutional platform of the broader Blue Coast programme, but the Adaptation Fund resources will remain separately budgeted, separately planned, separately procured, separately monitored and linked to a standalone AF results framework. This is essential to ensure that the AF grant finances additional, clearly identifiable adaptation outcomes in Demak and does not substitute for IFAD loan resources, government financing or other partner-funded activities. The AF project is designed to be implementable on its own: it has its own financing, its own outputs and outcomes, its own results framework and its own implementation and reporting arrangements, and the achievement of its adaptation objective is not contingent on financing from the broader Blue Coast programme.
107. The main boundary is as follows. The broader Blue Coast programme supports sustainable marine spatial planning, blue economy livelihoods, value chains, private sector engagement, blue finance and institutional strengthening across a wider national footprint. Blue Coast–RZ is narrower: it finances a Demak-specific adaptation package focused on climate-risk-informed coastal planning, last-mile early warning, engineered ecosystem-based mangrove restoration, hydrological and sediment-management works, permeable structures, silvofishery, community disaster preparedness, resilient local assets, and adaptation learning, all of which are financed in full by the AF grant. It will not finance general blue economy development, broad private sector investment promotion, large fish hubs, blue finance mechanisms, or activities in other Blue Coast districts unless they are explicitly included in the approved AF scope.
108. No-duplication will be ensured through five operational controls: (i) final AF villages and intervention sites will be confirmed and georeferenced during full proposal preparation; (ii) AF-financed assets, restoration areas, beneficiaries and contracts will be recorded in a dedicated registry; (iii) each proposed site-specific activity will be checked against government, IFAD, partner and district investment records before approval; (iv) annual work plans and procurement plans will identify AF-financed activities separately; and (v) coordination with MMAF, Central Java Province, Demak District, Bappeda, DKP, public works agencies and relevant partners will be maintained throughout implementation; (vi) AF and IFAD loan activities will be reported separately, so that AF-financed results can be identified and attributed independently at any point during implementation. Activities already financed by another source, or proposed on the same site for the same purpose, will not be financed by the AF grant. Any beneficiary or partner contribution mobilized during implementation will be treated as complementary and will not be counted towards the delivery of AF outputs or targets.
109. The table below summarizes the most relevant related initiatives, the lessons they provide, and how duplication will be avoided. This table will be updated during full proposal preparation once final villages and intervention sites are confirmed.

Table 8: Duplication of project with other funding sources

Related initiative	Main interventions and relevance	Lessons reflected in Blue Coast–RZ	Overlap, complementarity and no-duplication measures
Broader Indonesia Blue Economy for Coastal Livelihoods / Blue Coast programme – IFAD and Government of Indonesia 2027-2032	Wider programme supporting marine spatial planning, blue economy livelihoods, value chains, private sector engagement, blue finance and institutional strengthening across selected coastal districts.	Provides the institutional platform, targeting approach, safeguards system, implementation arrangements and broader blue economy logic.	There is no risk of duplication because there is no geographic overlap: Blue Coast–RZ is implemented within the same programme platform but in a separate district (Demak), distinct from the districts financed by the IFAD loan. Duplication will be avoided through a separate AF budget, results framework, procurement records, beneficiary and asset registry, and a clearly bounded Demak adaptation activity menu. IFAD loan resources will finance broader blue economy activities; AF will finance only the approved concrete adaptation package.

Annex 5 to OPG Amended in October 2017

Morodemak Sustainable Coastal Area Masterplan / Government-backed Demak coastal planning work	Provides an integrated planning framework for coastal protection, mangrove and pond rehabilitation, settlement protection, fisheries route efficiency, MSME/ecotourism opportunities and recovery of land affected by tidal flooding and salinity.	Validates the integrated three-layer model used by the project: coastal protection, mangrove/pond rehabilitation and livelihood resilience. Provides local benefit proxies and technical rationale.	The masterplan is a planning and investment framework, not the same as AF financing. Blue Coast–RZ will support a focused adaptation package consistent with the masterplan, while checking during full proposal preparation that AF resources do not finance works already covered by government or other sources.
Building with Nature Indonesia / Demak, 2015–2021	Implemented in Demak by Wetlands International, EcoShape and Indonesian partners; combined mangrove restoration, permeable structures and sustainable aquaculture to reduce erosion and flooding.	Provides the key technical lesson that mangrove planting alone is insufficient in subsiding and eroding coasts; hydrology, sediment conditions and permeable structures must be addressed first.	No duplication because the initiative has ended. Blue Coast–RZ builds on its lessons and local experience, but will finance new AF-approved activities, in selected villages/sites, with updated safeguards, targeting and monitoring. Any earlier restored sites will be assessed to avoid double-financing the same works.
World Bank Mangroves for Coastal Resilience Project / M4CR (2022–ongoing)	National mangrove management and livelihood project supporting mangrove conservation/restoration systems and community livelihoods in selected provinces outside the current Demak AF focus.	Reinforces the importance of national mangrove governance, community livelihoods, monitoring and restoration quality.	Geographic duplication is expected to be limited because M4CR targets other priority provinces, not Demak. Blue Coast–RZ will coordinate through MMAF and national mangrove stakeholders to ensure consistency with national systems and avoid overlap if any future M4CR-supported activity reaches Central Java.
Adaptation Fund / Kemitraan ecosystem-based adaptation project in Pekalongan, Central Java (2021–2026)	AF-financed coastal resilience project in another Pantura city affected by sea-level rise, subsidence and flooding, combining social, technical and nature-based measures.	Provides highly relevant lessons for the north coast of Java: combine community preparedness, technical works, social resilience and ecosystem-based adaptation.	No geographic duplication because the project is in Pekalongan, not Demak. Blue Coast–RZ will draw lessons and coordinate where useful through AF/Kemitraan/MMAF channels, but will finance different sites and beneficiaries.
Indonesia Sustainable Oceans Program / LAUTRA / COREMAP-related and other marine conservation or fisheries initiatives (2014–2027)	Support sustainable fisheries, marine conservation, coral reef management, marine protected areas, blue economy knowledge and fisheries governance.	Provides lessons on fisheries governance, marine conservation, community engagement and sustainable use of coastal resources.	These initiatives are mostly national or focused on fisheries, MPAs, coral reefs or broader marine governance, rather than Demak-specific coastal protection and tidal-flood adaptation. Blue Coast–RZ will not finance coral reef rehabilitation, MPA management or broad fisheries certification work. Any fisheries or livelihood support in Demak will be screened to avoid duplicating existing MMAF or partner programmes.
National and local mangrove rehabilitation programmes, including government-supported mangrove planting and protection activities	Government and local initiatives may support mangrove planting, nursery development, protection or rehabilitation in different locations.	Reinforces the need for technically sound restoration and legal/community stewardship of restored areas.	Potential overlap may exist at site level if government or local programmes support mangrove activities in Demak. Blue Coast–RZ will avoid financing the same hectares, seedlings, nurseries, structures or community groups already funded by another source. The project will prioritize technically validated sites where AF additionality is clear, especially hydrology-first and sediment-based restoration.
Local disaster-risk management and early-warning activities supported by BPBD, BMKG, district authorities or NGOs	Existing systems may include flood warnings, disaster preparedness, emergency response, community volunteers or evacuation procedures.	Provides institutional entry points for last-mile early warning, village protocols, drills and preparedness.	Blue Coast–RZ will not replace government mandates. It will strengthen last-mile village-level connectivity to BMKG/BPBD systems, with clear coordination on equipment, protocols, operators and maintenance. Any equipment already financed by another source will not be duplicated.

110. The project therefore builds on existing experience without duplicating it. Its additionality lies in combining, within a single Demak-focused AF package, climate-risk-informed planning, last-mile early warning, engineered ecosystem-based restoration, silvofishery, disaster preparedness, resilient community assets and

livelihood resilience. The no-duplication controls described above will be confirmed in the full proposal and incorporated into implementation procedures, procurement planning, safeguards screening and project monitoring.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

111. Blue Coast–RZ includes a dedicated learning, technical monitoring and knowledge-management function under Component 3. The purpose is to ensure that lessons from the Demak adaptation package are documented, used during implementation and made available to MMAF, local governments and other coastal districts facing similar risks. The project will not aim to directly replicate the model in other districts through AF financing. Instead, it will generate practical evidence and tools that can help government and partners assess whether and how relevant approaches could be adapted elsewhere.
112. Learning and knowledge management will focus on five themes: (i) climate-risk-informed coastal planning and zoning; (ii) engineered ecosystem-based mangrove restoration in subsiding and eroding coastal areas; (iii) silvofishery and climate-resilient pond management; (iv) village-level early warning and disaster preparedness; and (v) livelihood resilience for women, youth and vulnerable coastal households. These themes reflect the main adaptation questions addressed by the project and respond directly to the need for practical lessons on what works, under what physical and institutional conditions, and at what cost.
113. The project will finance a focused set of knowledge products and learning activities. These will include: technical briefs on the Building with Nature / three-layer restoration approach in Demak; practical guidance on integrating coastal climate risk into planning and zoning; short learning notes on silvofishery, mangrove stewardship and women-led coastal enterprises; community-friendly materials on early warning and preparedness; documentation of lessons from Demak's Blue Carbon Location designation; and case studies on restoration performance, shoreline change, sediment accretion, livelihood resilience and community participation. These products will be concise and operational, designed for use by MMAF, provincial and district authorities, village institutions, community groups and other coastal adaptation programmes.
114. Learning will be generated through the integrated adaptation monitoring and learning system under Output 3.1. The project will track ecological, physical and socio-economic adaptation results, including mangrove extent and condition, shoreline change, sediment accretion relative to relative sea-level rise, pond and livelihood resilience, women's and youth participation, and household adaptive-capacity indicators. Monitoring will combine remote sensing, field-based technical assessments, community-based monitoring and beneficiary feedback. Results will be reviewed regularly to support adaptive management, for example by adjusting restoration techniques, maintenance arrangements, livelihood support, training content or preparedness protocols where monitoring shows weak performance.
115. Responsibilities for learning and knowledge management will be clearly assigned. MMAF, through the Blue Coast project management structure, will lead implementation and ensure that AF-specific knowledge products are prepared, stored and shared. District and provincial authorities, technical service providers, universities or research partners, community groups and restoration practitioners will contribute field data, monitoring results and technical analysis. IFAD will provide implementation support, review knowledge outputs during supervision, and help ensure that lessons are documented in a form that is useful for wider dissemination and future programming.
116. Feedback mechanisms will be built into project implementation. Training participants, women's groups, youth groups, fishers, aquaculture farmers, early-warning operators, community monitoring groups and local authorities will provide feedback after trainings, drills, restoration activities and livelihood support. This feedback will be used to improve training modules, facilitation methods, technical guidance, community protocols and safeguards procedures during implementation. Grievances, complaints and suggestions received through the project grievance redress mechanism will also be reviewed as part of the learning process, especially where they relate to inclusion, benefit-sharing, access to restored areas, labour conditions or community safety.
117. Knowledge generated by the project will be maintained after project completion through the wider Blue Coast and MMAF institutional systems. Spatial data, monitoring results, technical briefs, guidance materials, training modules and case studies will be stored by MMAF and shared with relevant provincial and district

agencies. Practical lessons from Demak will be presented through cross-district exchanges, national learning events and policy dialogues, enabling other coastal districts to assess which approaches may be relevant to their own physical, social and institutional contexts.

118. Component 3 has been kept deliberately lean to avoid diverting resources from concrete adaptation. Routine M&E, reporting, audits, baseline and completion surveys will be financed under Project Execution Cost. Component 3 will focus only on the technical monitoring, applied learning and knowledge products needed to improve implementation, document results and inform future coastal adaptation planning in Indonesia.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

119. Blue Coast-RZ has been prepared through a two-level consultative process. First, it draws on the wider Blue Coast design consultations carried out in 2025 with national agencies, provincial and district authorities, technical partners, civil society organizations, community representatives and local livelihood groups. Second, it has been refined through targeted discussions among MMAF, IFAD and the National Designated Authority on the Adaptation Fund scope, geographic focus and budget envelope. These discussions confirmed the need to concentrate the AF grant in Demak, where the adaptation rationale is strongest and where a focused package of ecosystem-based coastal protection, early warning, disaster preparedness and climate-resilient livelihoods can be delivered with sufficient depth.
120. The consultation record available at concept note stage is strongest at national level and across the broader Blue Coast programme geography. It includes documented meetings from 18-25 November 2025 with MMAF, Bappenas, the GEF Operational Focal Point, the Ministry of Environment, IFAD, technical and civil society partners, and province/district/village-level stakeholders in Riau Islands, East Nusa Tenggara and Central Sulawesi. These consultations are relevant to Blue Coast-RZ because they shaped the broader Blue Coast approach to marine spatial planning, community stewardship, OECM, blue carbon, ecosystem restoration, sustainable fisheries and community livelihoods. The record also includes Demak-specific engagement documented in the table below, comprising district-level focus group discussions and field visits in Demak (including Purworejo and Tambakbulsan) with the district Marine and Fisheries Agency and community stakeholders. This Demak-specific record will be further strengthened during Full Proposal preparation through village-level consultations in the pre-selected villages and a dedicated consultation annex; at this stage these field visits informed problem analysis and design and did not constitute feasibility studies, safeguards assessments or detailed technical designs.
121. The stakeholder engagement process has already influenced the AF design in several ways. It supported the decision to keep the AF project geographically focused; to avoid duplication with the wider Blue Coast programme and other funding sources; to prioritize concrete adaptation rather than broad policy or finance activities; to avoid mangrove planting-only approaches; to strengthen community-based stewardship and safeguards; and to include women, youth and vulnerable households in livelihood, early-warning and monitoring activities.
122. The table below summarizes the consultations documented to date and explains how they informed the current AF concept. Where consultations were undertaken outside Demak as part of the wider Blue Coast design, their relevance is treated as programmatic learning rather than direct consultation with AF beneficiaries. This distinction is important and will be made explicit in the Full Proposal.

Table 9: Stakeholders consulted, issues raised/information gathered, and how inputs informed design

Date / period	Location / modality	Stakeholders consulted	Issues raised / information gathered	How inputs informed Blue Coast-RZ
18-19 Nov	National level /	Ministry of Marine Affairs and Fisheries (MMAF)	Formal support was secured from key national agencies to proceed with the development of the	Confirmed national ownership of the broader

Annex 5 to OPG Amended in October 2017

2025	Blue Coast Kick-off Mission (Jakarta)	and Bappenas (National Planning Agency).	Project Identification Form and ensure alignment with the proposed investment project.	Blue Coast programme and provided the institutional basis for developing the AF window through MMAF/DGMSP and IFAD.
24 Nov 2025	Technical consultation (online)	CIFOR-ICRAF.	Importance of mangrove and seagrass ecosystems for biodiversity, blue carbon storage, fisheries productivity, shoreline protection and climate mitigation. Emphasis on community participation, OECM, equitable benefit-sharing and long-term local stewardship. CIFOR has been conducting research on the north coast of Java, particularly in Demak related to the mangrove restoration and blue carbon, called ReCLAIM.	Informed the AF focus on community-based mangrove stewardship, equitable benefit-sharing, monitoring and avoidance of simple planting-only restoration. It also supports use of Demak's Blue Carbon Location designation as an institutional entry point.
24 November 2025	Technical Discussion (online)	National Research and Innovation Agency (BRIN)	Biodiversity conservation and the protection of marine ecosystems are fundamental to advancing Indonesia's Blue Economy by sustaining fisheries, strengthening coastal resilience, and supporting sustainable livelihoods. Conserving mangroves and seagrass meadows also enhances Indonesia's blue carbon potential, contributing to climate change mitigation while generating long-term socio-economic benefits. Equally important is strengthening community participation through citizen science, enabling local communities to play an active role in biodiversity monitoring, ecosystem stewardship, and evidence-based marine resource management.	Meaningful engagement of local communities is essential for effective coastal and marine conservation. Their knowledge, stewardship, and active participation enhance biodiversity protection, strengthen ecosystem resilience, and deliver lasting environmental and socio-economic benefits for coastal areas.
25 Nov 2025	Technical and civil society consultation (online)	Yayasan Pesisir Lestari, MMAF, MPA and OECM Vision Consortium, including WWF Indonesia, Rare, Coral Triangle Center, Rekam Nusantara Foundation, Konservasi Indonesia and Pesisir Lestari; participants from government, civil society, academia and the financial sector.	OECM information, community-driven conservation models, innovative financing mechanisms, blue carbon credits, ecological fiscal transfers and blended finance. Strong message that marine conservation requires policy, investment and local stewardship.	Informed the broader Blue Coast approach to community-based conservation and stewardship. For the AF CN, the lesson is used cautiously: AF will not finance broad blue finance mechanisms, but will support practical community stewardship, restoration monitoring and knowledge products.
27 November 2025	Offline meeting with key Stakeholders at Province Level, in Semarang, Central Java	Key stakeholders include the Provincial Government Secretariat, Advisors for Environment and Economic Affairs, the Marine and Fisheries Agency, the Provincial Development Planning Agency, the Public Works Agency, and other relevant provincial government agencies.	The discussion focused on economic development supported by the marine and fisheries sector, as well as the challenges posed by climate change and its impacts on coastal ecosystems and local livelihoods. It also covered the existing regulatory framework for spatial planning at national, provincial, and local levels, the Provincial Government's commitment to coastal ecosystem restoration and community development, and the need for continued support from development partners to strengthen implementation and scale up sustainable interventions.	The Provincial Government welcomed the initiative of the Ministry of Marine Affairs and Fisheries (MMAF) and IFAD to support integrated coastal management, particularly along the northern coast of Java. The Government expressed its commitment to collaborating on efforts to strengthen coastal ecosystem restoration, enhance community resilience, and promote sustainable coastal development.
27 November 2025	Focus group discussion (FGD), Semarang	Marine & Fisheries Agency at Province Level, in Semarang	Conducted group discussions to identify potential partnerships with ongoing projects in Central Java, avoid duplication with the proposed MMAF-IFAD project, and collect information to support project concept development in line with national priorities.	Data/information collected to improve the concept note Blue Coast.

Annex 5 to OPG Amended in October 2017

	g, Central Java.			
28 November	Focus group discussion (FGD), Demak, Central Java.	Marine & Fisheries Agency at District Level, Demak	Conducted discussions on district-level priorities in the marine and fisheries sector, mapped ongoing programmes and activities, identified key partners engaged in coastal restoration, and documented feedback and recommendations from relevant government agencies.	Collected data and information to strengthen and refine the Blue Coast Concept Note.
28 November	Key Stakeholders meeting at District Level, Demak, Central Java.	District Advisor; representatives from the Marine and Fisheries Agency, Regional Development Planning Agency (Bappeda), Environment and Forestry Agency, village heads, and non-governmental organizations (NGOs).	Collected, consolidated, and synthesized data and information provided by district-level stakeholders to inform the baseline assessment, including climate-related conditions, key challenges, and opportunities for coastal restoration and sustainable economic development. The consultations also identified priority project locations based on stakeholders' recommendations to support project design and implementation planning.	Collected data and information to strengthen and refine the Blue Coast Concept Note.' Taken their suggestion for the field visit relevant with climate adaptation.
28 November	Focus group discussion (FGD), Jakarta	Discussion with representative from National Planning Agency (Bappenas)	Discussions focused on relevant regulations, national development priorities, and medium- and long-term plans to ensure that coastal management and restoration interventions are aligned with the Blue Economy agenda and climate change mitigation and adaptation priorities.	Collected data and information to strengthen and refine the Blue Coast Concept Note.
28 November	Field Visits and Technical Discussions, Demak, Central Java.	Conducted focus group discussions (FGDs) and field visits in Purworejo, Tambakbulsan, and Timbulsloko villages, engaging village heads, community groups, women's groups, and fisher groups	Conducted group discussions on coastal village development, the impacts of climate change on local livelihoods and the environment, and community priorities for coastal restoration. The mission included field verification visits, collection of feedback from community groups, and a review of village regulations supporting coastal management and climate change adaptation.	Collected data and information to strengthen and refine the Blue Coast Concept Note.
3 December 2025	In person Meeting, Jakarta	Potential collaboration meeting with AFD (France)	Engaged with AFD to explore potential collaboration on coastal management, climate change adaptation, and the blue economy. AFD expressed strong interest in supporting climate change adaptation initiatives related to sustainable aquaculture, which could be integrated with coastal management efforts to strengthen local economic development and enhance community resilience.	The collected data and information were systematically compiled and tabulated to support the refinement of the Concept Note.
3 December 2025	Online meeting	Project Management Unit (PMU) of LAUTRA Project – World Bank	Exchanged lessons learned and good practices from the World Bank's LAUTRA Project, with a focus on coastal restoration, community engagement, and sustainable coastal management.	Input for the institutional arrangement and project management
15 December 2025	In person meeting, Jakarta	The meeting explored opportunities for potential collaboration with the UK Coast Project, implemented by the British Embassy Jakarta, to identify areas of synergy and strengthen coordination on coastal resilience, ecosystem restoration, and sustainable coastal	The British Embassy Jakarta is currently supporting the UK COAST Programme and several other grant-funded initiatives in Central Java, focusing on community-based coastal management and resilience. The meeting identified potential areas for collaboration and coordination to maximize synergies, complement ongoing interventions, and avoid duplication of efforts.	Mitigate duplication or overlap activity in the same locations.

		management initiatives.		
22 December 2025	Coordination Meeting, Offline in Jakarta.	Coordination meeting between IFAD and National Designated Authority (NDA)	A coordination meeting was held with Mr. Franky, Director of Climate Adaptation, during which the initial Concept Note was presented. He provided constructive feedback and recommended strengthening the Concept Note by aligning it with Indonesia's National Adaptation Plan (NAP) and the Climate Village Program (ProKlim) to ensure consistency with national priorities and enhance its strategic relevance.	The Concept Note was reformulated to incorporate the inputs and recommendations provided by the National Designated Authority (NDA), ensuring stronger alignment with national priorities and strategic objectives.

123. The consultations to date show strong national and programmatic ownership but also identify one important gap for Full Proposal preparation: the Demak village-level consultation record must be completed and annexed. The Full Proposal will therefore include focused consultations in the five pre-selected villages - Betahwalang, Purworejo, Morodemak, Surodadi and Timbulsloko - or in the final target villages if these are adjusted after technical screening.
124. Particular attention will be given to vulnerable groups. The project will prioritize poor and low-income fishing and aquaculture households, women, women-headed households, fish processors and traders, youth, informal fish workers, persons with disabilities and other groups that may face barriers to participating in project benefits. Consultation methods during Full Proposal preparation will include separate discussions with women and vulnerable groups where appropriate, accessible venues, meeting times adapted to women's and fishers' schedules, local-language explanations of project eligibility and risks, and documentation of how stakeholder inputs affect final activity selection.
125. Gender considerations will be integrated into the consultation process, not treated as a separate add-on. Women's roles in fish processing, trading, aquaculture support, mangrove nurseries, household nutrition and informal enterprises will be discussed by activity type, so that the Full Proposal can translate women's priorities and constraints into targets, budget tagging, safeguards measures and M&E indicators. The consultation process will also check whether proposed meeting times, training locations, early-warning arrangements, livelihood support and grievance channels are accessible and safe for women and girls.
126. Consultations undertaken at concept note stage have not identified Indigenous Peoples in the Demak project area. Broader consultations during Full Proposal design will further verify whether Indigenous Peoples, customary marine resource users, customary institutions or traditional resource-use rights are present. If any activity may affect customary access, cultural heritage, traditional livelihoods or collective rights, the project will apply the Blue Coast Indigenous Peoples Plan and FPIC Implementation Plan before implementation.
127. Consultations will continue during Full Proposal preparation and implementation. The next phase will include: confirmation of final villages; village-level climate-risk and vulnerability diagnostics; participatory mapping of exposed settlements, ponds, access routes, landing sites, drainage constraints and restoration areas; women-only and youth-focused discussions; validation of early-warning needs and evacuation arrangements; screening of restoration and small infrastructure sites; consultation on land/use arrangements and community stewardship; disclosure of safeguards instruments; and explanation of the grievance redress mechanism.
128. The Full Proposal will annex a consultation matrix including date, location, stakeholder group, institutions represented, participant numbers, sex- and age-disaggregated attendance, issues raised, responses provided and design changes made. This annex will also distinguish clearly between broader Blue Coast consultations and Demak-specific AF consultations. This will help demonstrate compliance with the Adaptation Fund Environmental and Social Policy and Gender Policy and ensure that the final AF-financed activities are technically sound, socially inclusive and gender-responsive.
129. Stakeholder engagement will remain an ongoing process throughout implementation. The Blue Coast Stakeholder Engagement Plan will guide information disclosure, consultation, feedback and grievance management. The Environmental, Social and Climate Management Plan, Labour Management Plan, Indigenous Peoples Plan, FPIC procedures and Grievance Redress Mechanism will be used to ensure that affected communities and vulnerable groups are informed, consulted and able to raise concerns throughout the project cycle.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

130. Blue Coast–RZ requests Adaptation Fund financing to cover the full cost of a targeted adaptation package for highly exposed coastal communities in Demak, Central Java. These communities are already facing recurrent tidal flooding, shoreline erosion, salinity intrusion, land subsidence, degradation of mangrove and pond systems, damaged access routes and increasing disruption to fishing, aquaculture, processing and local trade. These risks are not temporary shocks; they reflect a structural increase in climate vulnerability driven by relative sea-level rise, more intense rainfall, coastal ecosystem degradation and the loss of natural protection.
131. The baseline in Demak comprises the coastal-development and coastal-management investments that would proceed with or without the AF grant. These include: (i) the Government of Indonesia's routine marine and coastal spatial planning, fisheries and coastal-development programmes and its national mangrove-rehabilitation agenda (including, in other provinces, the World Bank Mangroves for Coastal Resilience (M4CR) programme, which does not cover Central Java); (ii) the district's own coastal and sedimentation-management efforts, including the Morodemak masterplan works, part-financed through local government and corporate social responsibility (CSR) contributions; (iii) the statutory disaster-management mandate of the district BPBD and the meteorological and early-warning services of BMKG; and (iv) the wider IFAD Blue Coast programme, whose loan- and GEF-financed activities are directed to other districts and are oriented toward blue-economy development, marine spatial-planning systems and general coastal livelihoods. This baseline delivers development and coastal-management benefits, but it does not, on its own, finance the additional measures needed to keep Demak's coast and communities functional under climate change, and it does not reach Demak with a climate-adaptation response.
132. The project will be implemented as a standalone AF-financed window within the broader Blue Coast platform. AF resources will have their own budget, results framework, activity menu, procurement records, beneficiary and asset registry, safeguards screening and reporting arrangements. The broader Blue Coast programme will provide implementation synergies, institutional continuity and technical alignment, but its resources are not required to finance the outputs included in the AF results framework. The AF grant will be sufficient to deliver the proposed Demak adaptation package on its own. If some wider Blue Coast structures or activities are delayed, implementation can proceed through MMAF's project management structure, with direct recruitment of technical service providers, facilitators, engineering expertise, restoration practitioners, safeguards specialists and community organizations as needed.
133. **Under Component 1**, AF financing will cover the full adaptation cost of integrating climate risk into local coastal planning and preparedness. This includes district-level climate-risk and coastal-hazard screening, participatory planning forums, village-level early warning systems, preparedness protocols, drills and training of local operators. These are adaptation costs because vulnerable coastal communities and local planners do not currently have the detailed climate-risk information, last-mile warning arrangements or operational protocols needed to anticipate and manage tidal flooding, storm surge, extreme rainfall and coastal erosion risks.
134. **Under Component 2**, AF financing will cover the full cost of the concrete adaptation measures needed to reduce physical exposure and livelihood sensitivity. This includes engineered ecosystem-based mangrove restoration, hydrological rehabilitation, sediment management, permeable structures, community nurseries, silvofishery, community disaster preparedness, resilient access and drainage improvements, and selected livelihood-resilience measures. These are not generic environmental or livelihood activities. They respond directly to climate-risk pathways in Demak: loss of natural coastal buffers, pond and settlement exposure to tidal flooding, declining viability of conventional aquaculture, disruption of fishing and processing, and household dependence on climate-sensitive income sources.
135. The mangrove and coastal protection activities are justified as adaptation because planting alone is unlikely to work in subsiding and eroding sections of Demak. AF financing will therefore support the additional technical measures required to restore the physical conditions for mangrove recovery, including hydrology and sediment management and permeable structures where technically justified. These measures increase the likelihood that restoration survives and provides durable protection against waves, erosion, tidal flooding and salinity intrusion.

136. The livelihood and community-asset activities are also justified as adaptation. Climate-resilient aquaculture and silvofishery will be financed where they help households adjust production systems to salinity, flooding and water-quality stress. Women-led nurseries, processing, value addition and small enterprises will be supported where they reduce post-shock income losses, diversify climate-sensitive livelihoods and strengthen household recovery capacity. Youth-sensitive activities will be linked to restoration, monitoring, post-harvest processing, digital services or other locally relevant blue economy activities that reduce dependence on declining or unsafe capture fisheries. Small-scale community assets, such as raised access paths, drainage improvements or protection of landing-related infrastructure, will be financed only where they reduce climate-related disruption to livelihoods and services.
137. **Under Component 3**, AF financing will cover the adaptation learning and technical monitoring costs needed to manage the project adaptively and inform wider uptake. Monitoring of mangrove condition, shoreline change, sediment accretion, pond resilience, livelihood outcomes and household adaptive capacity is part of the full cost of adaptation because restoration and hybrid coastal protection in Demak must be adjusted to changing physical conditions. Knowledge products will document practical lessons for MMAF, local governments and other vulnerable coastal districts.
138. The project design also draws on lessons from previous and ongoing Adaptation Fund coastal adaptation projects. These experiences confirm that the full cost of adaptation in exposed coastal areas is not limited to planting mangroves or financing isolated infrastructure. It also includes the technical measures needed to make restoration viable, the planning and preparedness systems needed to avoid maladaptation, and the community and monitoring arrangements needed to sustain benefits.
139. Comparable AF-supported projects provide directly relevant lessons for Demak. The Pekalongan project³⁶ on the same Pantura coast showed the importance of combining mangrove restoration with bamboo or permeable structures to protect seedlings from strong tides and waves. The India Krishna Delta experience³⁷ demonstrated that silvofishery can link mangrove recovery with aquaculture income. The Mauritius and West Nusa coastal projects³⁸ confirmed that light hybrid infrastructure can complement ecosystem-based protection when hard infrastructure is kept modest and technically justified. The AF Cuba³⁹ project highlight the importance of long-term monitoring, spatial planning, legal protection of restored areas, early warning, gender inclusion and community stewardship.
140. These lessons are reflected in Blue Coast–RZ by financing the additional adaptation measures required in Demak: hydrological rehabilitation, sediment management, permeable structures, mangrove and silvofishery restoration, early warning, community preparedness, inclusive livelihood resilience and technical monitoring. Without these elements, the project would risk financing a cheaper but less effective response, such as planting mangroves in unsuitable physical conditions or constructing isolated assets that may not withstand future tidal flooding, erosion and relative sea-level rise.
141. All AF-financed activities will be subject to climate-rationale verification, technical review, environmental and social screening, gender-responsive consultation and exclusion-list checks. Activities without a clear adaptation rationale, activities that duplicate other funding sources, or activities that fall outside the approved eligible menu will not be financed. This will help ensure that the requested funding remains additional, adaptation-specific and compliant with the Adaptation Fund Environmental and Social Policy and Gender Policy.
142. The requested AF financing is therefore justified on a full-cost-of-adaptation basis. It will finance the complete set of additional planning, early warning, ecosystem-based protection, livelihood-resilience, safeguards, monitoring, learning and execution costs required to reduce climate vulnerability in Demak. Without this grant, coastal communities would remain exposed to escalating tidal flooding, erosion, salinity intrusion and livelihood disruption, and the broader Blue Coast programme would lack a sufficiently

³⁶ <https://www.adaptation-fund.org/project/safekeeping-surviving-sustaining-towards-resilience-3s-approach-to-build-coastal-city-resilience-to-climate-change-impacts-and-natural-disasters-in-pekalongan-city-central-java-province-2/>

³⁷ <https://www.adaptation-fund.org/project/conservation-and-management-of-coastal-resources-as-a-potential-adaptation-strategy-for-sea-level-rise/>

³⁸ <https://www.adaptation-fund.org/project/climate-change-adaptation-programme-in-the-coastal-zone-of-mauritius/> & <https://www.adaptation-fund.org/project/increasing-the-resilience-of-smallholders-from-climate-impacts-through-smart-agriculture-based-on-livelihood-diversification-in-indonesia/>

³⁹ <https://www.adaptation-fund.org/adaptation-fund-project-story-cuba/>

concentrated adaptation window to demonstrate an integrated coastal resilience model in one of Indonesia's most exposed coastal districts.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

143. Sustainability has been built into Blue Coast–RZ through five mutually reinforcing measures: institutional anchoring, technically sound restoration design, community stewardship, operation and maintenance arrangements, and adaptive monitoring. The project does not rely on one-off investments alone. It is designed so that restored ecosystems, early-warning arrangements, community assets and livelihood measures remain functional after the Adaptation Fund grant closes.
144. Institutional sustainability will be supported by embedding the project within MMAF's Blue Coast implementation structure and by working through provincial, district and village institutions in Demak. Climate-risk information, restoration priorities and monitoring results will be shared with relevant planning, marine and fisheries, disaster-management and public works authorities. This will help ensure that project outputs inform routine local planning and investment decisions, without assuming that the project itself will directly change policy. The Demak Blue Carbon Location designation provides an additional institutional entry point for sustaining community-based mangrove management, protection and monitoring.
145. Technical sustainability will be strengthened by avoiding a planting-only restoration model. In Demak, mangrove recovery is constrained by land subsidence, erosion, altered hydrology and sediment deficits. For this reason, the project will support engineered ecosystem-based restoration, including hydrological rehabilitation, sediment management and permeable structures where technically justified, before or alongside mangrove planting. This approach is expected to improve survival rates, reduce repeated replanting costs and generate longer-lasting coastal protection benefits. Site-specific technical designs, maintenance schedules and monitoring protocols will be prepared before implementation. This is grounded in local evidence: the Building with Nature initiative in Demak has shown since 2013 that permeable sediment-trapping structures combined with hydrological and pond restoration reduce wave energy, capture sediment and trigger natural mangrove regeneration, scaling from pilots to some 20 km of coastline and around 477 ha restored, and replicated by MMAF elsewhere. Its lessons are applied here: structures dimensioned to local hydrodynamic and sediment conditions rather than to a standard template, refined through adaptive monitoring, and combined with silvofishery, community management and attention to the underlying drivers of subsidence.⁴⁰
146. Community sustainability will be supported through participatory planning, community stewardship and locally anchored management arrangements. Community groups, including mangrove groups, aquaculture groups, women's groups, youth groups and community surveillance groups such as pokwasmas where relevant, will be involved in restoration, monitoring, livelihood activities and protection of restored areas. These arrangements will help reduce risks of encroachment, unmanaged use or abandonment after project closure. Women and youth will be specifically involved in livelihood activities, mangrove nurseries, processing enterprises, early-warning arrangements and community monitoring, strengthening local ownership beyond formal institutions.
147. Operation and maintenance (O&M) arrangements are matched to each asset type and agreed, with a named responsible owner, before any asset is financed, and are documented in signed community agreements, handover records or group management plans. (i) Early-warning hardware — tidal and water-level gauges, rainfall and wave sensors, and siren, loudspeaker and radio units — will be operated during implementation by trained village early-warning operators (at least two per village, with women prioritized), supported by quarterly refresher training and annual system calibration and maintenance. Institutionally, the community early-warning structure will be integrated into the operational framework of the Demak District Disaster Management Agency (BPBD) and aligned with the National Disaster Management Agency (BNPB) Disaster-Resilient Village (Destana) model, and connected to Meteorology, Climatology and Geophysics Agency (BMKG) data flows, so that recurrent operation, calibration, repair and eventual replacement of the equipment are carried through BPBD and BMKG mandates and routine district and village disaster budgets

⁴⁰ <https://ijaseit.insightsociety.org/index.php/ijaseit/article/view/14402>

<https://www.ecoshape.org/en/cases/rehabilitation-of-a-mangrove-mud-coast-in-timbul-sloko-java-indonesia/lesson-learned/>

rather than by the grant; community surveillance groups (pokmaswas) interface with the provincial surveillance unit. (ii) Restored mangroves and coastal buffers will be maintained by community mangrove and surveillance groups (pokmaswas) and village institutions under stewardship agreements, protected legally through the inclusion of restoration areas in the revised marine spatial and zoning plan and Demak's Blue Carbon Location designation, and managed consistent with the ecosystem-based provisions of Government Regulation No. 27/2025 on mangrove ecosystems; planting stock is supplied from community-managed nurseries, and ecological performance is monitored for at least five years. (iii) Community infrastructure (raised access paths, drainage improvements, permeable structures, fish-landing and small processing assets) will be formally handed over through signed agreements that specify the owner, maintenance tasks and estimated recurrent costs — typically the village government (Pemerintahan Desa), drawing on village development funds (Dana Desa/APBDes); the relevant district technical agency (Public Works, or the District Marine and Fisheries Office); or the user group concerned. (iv) Livelihood and nursery equipment will be owned and maintained by the women's, aquaculture and silvofishery groups that use it, with recurrent costs met from group savings, service fees or enterprise income. Assets without a realistic O&M owner and financing source will be redesigned or excluded. The full O&M and recurrent-cost schedule, by asset type and responsible institution, will be detailed at Full Proposal.

148. Financial sustainability will be pursued through low-recurrent-cost technologies, community-managed assets and links with existing government and Blue Coast systems. Early-warning systems will be connected to BMKG/BPBD information flows where feasible. Livelihood assets will be linked to women's groups, aquaculture groups, Village Economic Entities and local market channels, so that recurrent costs can be covered through use, group savings, service fees or business income where appropriate. Aquaculture will be low-input and ecosystem-based rather than intensive: extensive and improved-extensive silvofishery on rehabilitated and idle ponds, centred on milkfish (*Chanos chanos*) and black tiger shrimp (*Penaeus monodon*), which are salinity-tolerant, already cultured in Demak and have established domestic markets, with whiteleg shrimp (*Litopenaeus vannamei*) only where water quality allows. Working capital will be met through producer organizations, existing government financing schemes and village revolving funds rather than continued grant support, with linkages to local traders and processors. Business models and financial analyses for each livelihood option will be prepared at Full Proposal. Small infrastructure will be selected only where maintenance can realistically be handled by village institutions, district authorities or user groups. Where blue-carbon or payment-for-ecosystem-service mechanisms are developed, a share of carbon or ecosystem-service revenues will be channelled back to mangrove-custodian communities to reward long-term stewardship and reduce reliance on public funding.
149. Environmental sustainability will be ensured through climate-risk screening, environmental and social safeguards, and adaptive monitoring. The project will not finance activities that increase exposure to flooding, erosion, subsidence, ecosystem degradation or resource conflict. Groundwater extraction in subsidence-prone areas, conversion of intact mangroves, significant water abstraction, large-scale aquaculture, destructive fishing, involuntary resettlement and activities affecting cultural heritage or customary rights will be excluded. Monitoring of mangrove condition, shoreline change, sediment accretion, pond resilience and household adaptive capacity will be used to adjust implementation where needed.
150. Social sustainability will be supported through inclusive targeting, transparent beneficiary selection, stakeholder engagement and a grievance redress mechanism. Poor and vulnerable households, women, informal fish workers, youth and other groups with weaker access to assets and decision-making will be prioritized. These measures will help ensure that adaptation benefits are not captured only by better-connected households or groups.
151. After project completion, knowledge products, spatial data, monitoring results and technical guidance will remain with MMAF and relevant provincial and district authorities. The project will facilitate cross-district and national learning so that other coastal districts can assess whether lessons from Demak are relevant to their own contexts. The project will provide practical evidence that government and partners can use to adapt and scale relevant approaches through future programmes and public investment.
152. The main sustainability risks are restoration failure, weak maintenance of early-warning or infrastructure assets, limited community ownership, elite capture of livelihood benefits, and insufficient uptake of lessons by local institutions. These risks will be mitigated through technical design review, maintenance agreements,

community stewardship, transparent targeting, safeguards screening, adaptive monitoring and continued engagement with MMAF, Demak authorities and community groups throughout implementation.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

153. Blue Coast–RZ is expected to be classified as a moderate-risk / Category B project. The proposed activities are geographically focused in Demak and consist of a bounded set of adaptation measures: climate-risk-informed planning, community early warning, engineered ecosystem-based mangrove restoration, hydrological and sediment-management works, permeable structures, silvofishery, small-scale resilient community assets, livelihood-resilience activities, and technical monitoring. Potential adverse impacts are expected to be site-specific, limited in scale, reversible or manageable, and capable of being addressed through screening, technical design, consultation, mitigation measures, supervision and monitoring.
154. The project is expected to generate significant positive environmental and social impacts by reducing exposure to tidal flooding, erosion, salinity intrusion and livelihood disruption; restoring mangrove and pond ecosystems; improving disaster preparedness; strengthening women's and youth participation in resilient coastal livelihoods; and supporting climate-informed coastal planning. However, several risks require active management. Direct risks may arise from small coastal works, permeable structures, hydrological works, mangrove restoration, pond rehabilitation, silvofishery, livelihood equipment, early-warning installations and community-based implementation. Indirect and cumulative risks may include restoration failure if physical conditions are not suitable, shifting erosion or flood risk to adjacent areas, unequal access to restored areas or livelihood benefits, elite capture, increased pressure on mangrove or pond ecosystems, increased women's workload, exclusion of informal fish workers and youth, and weak maintenance of assets after completion. No material transboundary impacts are anticipated because activities are local, small-scale and confined to Demak, and the project will not finance activities that divert international waterways, affect neighbouring countries or generate significant cross-border environmental impacts.
155. **Unidentified Sub-Projects / site-specific activities.** Blue Coast–RZ does not include fully unidentified or open-ended USPs. The geographic scope is limited to Demak, the five pre-selected villages are identified, the eligible activity menu is defined, and exclusion criteria are already available through the Blue Coast safeguards framework. Some site-specific investments — such as the exact location and design of permeable structures, drainage improvements, raised access paths, landing-related protection, pond/silvofishery sites and livelihood asset packages — will be finalized during Full Proposal preparation and implementation based on climate-risk screening, technical feasibility, community consultation and safeguards review. These are therefore treated as partially identified, framework-bound activities. Each activity will be screened before approval against the AF ESP, Gender Policy and IFAD SECAP, including climate rationale, land/use status, biodiversity and natural habitats, gender and vulnerable group impacts, labour and OHS risks, cultural heritage, consultation, GRM access and O&M arrangements. Activities that are fully unidentified, high risk, outside the eligible menu, inconsistent with Category B, require land acquisition or involuntary resettlement, affect intact mangroves or critical habitats, or lack a clear adaptation rationale will not be financed. Screening results, consultations, mitigation measures and monitoring requirements will be recorded in the ESCMP/ESMP and reported through project supervision and annual reporting.
156. The project will apply the AF ESP, complemented with the Blue Coast safeguards instruments, including the SECAP Review Note, Environmental, Social and Climate Management Plan, Stakeholder Engagement Plan, Labour Management Plan, Indigenous Peoples Plan, FPIC Implementation Plan, Exclusion List and Grievance Redress Mechanism where applicable. These instruments will be updated and adapted to the final AF scope during full proposal preparation. Site-specific screening will determine whether simplified environmental and social management measures, permits, technical studies, community agreements or additional consultations are required before procurement and implementation.

Table 10: Checklist of environmental and social principles

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>		There is a risk that small works, restoration, pond rehabilitation, early-warning equipment or livelihood activities may proceed without all relevant national permits, spatial-plan checks, environmental documentation or technical approvals. Mitigation measures are that the project will screen each activity for applicable laws, permits and standards before approval, and activities that cannot comply will not be financed.
<i>Access and Equity</i>		There is a risk that benefits may be captured by better-connected households, larger pond owners, established fisher groups or male-dominated institutions, while poorer households, women, youth, informal fish workers and processors receive fewer benefits. Mitigation measures are transparent eligibility criteria, community validation, beneficiary registries, sex- and age-disaggregated monitoring, and targeted outreach.
<i>Marginalized and Vulnerable Groups</i>		There is a risk that women-headed households, informal processors and traders, youth, persons with disabilities, elderly persons and poorer fish workers may be excluded from consultations, training, early-warning arrangements or livelihood support. Mitigation measures are adapted consultations, accessible venues, targeted outreach and monitoring of participation and benefit distribution.
<i>Human Rights</i>		There is a risk that community restoration, zoning or protection measures could restrict access to coastal resources, ponds, fishing routes or livelihood spaces if not properly consulted and agreed. Mitigation measures are meaningful consultation, FPIC where relevant, grievance mechanisms and benefit-sharing arrangements.
<i>Gender Equality and Women's Empowerment</i>		There is a risk that women's fisheries and processing roles remain under-recognized; that women have weaker access to assets, finance, training and decision-making; or that livelihood and restoration activities increase women's unpaid workload. Mitigation measures include promoting women's participation, applying participation targets, and addressing workload, safety and access constraints.
<i>Core Labour Rights</i>		There is a risk of unsafe working conditions, informal or unpaid labour, child labour, forced labour, discrimination or SEA/SH risks. Mitigation measures are application of the Labour Management Plan, contractual clauses, prohibition of child and forced labour, and SEA/SH prevention measures.
<i>Indigenous Peoples</i>		Consultations at concept note stage have not identified Indigenous Peoples in the Demak project area. Broader consultations during Full Proposal design will further verify whether customary resource users or traditional institutions are present. If any are identified, the project will apply the Indigenous Peoples Plan and FPIC procedures; mitigation measures include broadened consultation, screening and application of IPP/FPIC procedures where required.
<i>Involuntary Resettlement</i>		There is a risk that small infrastructure or restoration measures could affect land or users if poorly sited. Mitigation measures are that the project will not finance land acquisition, involuntary resettlement or displacement, and will verify land status before approval.
<i>Protection of Natural Habitats</i>		There is a risk that restoration works or livelihood activities could disturb mangroves, wetlands or sensitive ecosystems if poorly designed. Mitigation measures are ecological screening, avoidance of intact habitats and prioritization of degraded sites.
<i>Conservation of Biological Diversity</i>		There is a risk of introducing non-native species, disturbing fauna or reducing biodiversity if activities are not well managed. Mitigation measures are avoiding invasive species, applying biodiversity-sensitive designs and monitoring.
<i>Climate Change</i>		There is a risk of maladaptation if assets are located in high-risk areas or if restoration fails due to sea-level rise or hydrological conditions. Mitigation measures are climate-risk screening, technical design review and exclusion of non-viable sites.
<i>Pollution Prevention and Resource Efficiency</i>		There is a risk of waste generation, pollution or poor resource management. Mitigation measures are safe waste handling, pollution prevention and contractor obligations.

<i>Public Health</i>		There is a risk of accidents, unsafe processing or community health impacts. Mitigation measures are OHS measures, hygiene standards and community safety procedures.
<i>Physical and Cultural Heritage</i>		There is a risk that works could affect cultural sites if not identified early. Mitigation measures are site screening, consultations and chance-find procedures.
<i>Lands and Soil Conservation</i>		There is a risk that works could disturb soils, increase erosion or affect sediment dynamics. Mitigation measures are technical design assessments, monitoring and adaptive management.

157. The main cumulative risks are linked to the concentration of several activities in the same coastal villages: restoration works, community assets, silvofishery, livelihood activities and early-warning systems. If poorly coordinated, these could create pressure on local institutions, increase competition for benefits, or lead to inconsistent land and resource-use arrangements. To mitigate this risk, all site-specific activities will be planned through a coordinated village-level process, supported by climate-risk mapping, participatory consultation, safeguards screening, beneficiary validation and O&M agreements.
158. The main indirect risks relate to changes in access and incentives. Restored mangrove areas may require protection rules that affect current users; silvofishery may change pond-management practices; livelihood support may alter local market dynamics; and improved access paths or landing-site protection could increase use of sensitive areas. These risks will be managed through participatory planning, community agreements, equitable benefit-sharing, monitoring of resource use, and grievance redress.
159. No significant transboundary impacts are expected. The project is confined to Demak and will not finance activities that affect international waterways, cross-border ecosystems or neighbouring countries. Any indirect impacts are expected to remain local and manageable through the project's environmental and social screening and monitoring procedures.
160. At full proposal stage, the environmental and social risk table will be updated based on final village selection, technical designs, consultations and screening results. The ESCMP will include roles and responsibilities, mitigation measures, monitoring indicators, budget, reporting arrangements and incident-response procedures. Compliance with the AF Environmental and Social Policy and Gender Policy will be monitored through implementation support, annual reporting, safeguards supervision, grievance tracking and mid-term and final evaluations.

PART III: IMPLEMENTATION ARRANGEMENTS

The Implementing Entity for the proposed project will be the International Fund for Agricultural Development through an international implementation modality. IFAD will be responsible for the receipt and disbursement of Adaptation Fund funds to the executing entity and executing partners, as well as all monitoring and evaluation of the proposed project deliverables. Moreover, IFAD will oversee project implementation against the Environmental and Social Management Plan that will be developed during the Funding Proposal development stage and oversee the effective operation of a grievance redress mechanism. As the Implementing Entity, IFAD will be responsible for all financial and narrative reporting to the Adaptation Fund.

The lead Executing Entity for the proposed project will be the Ministry of Marine Affairs and Fisheries. This ministry will host the Project Management Unity (PMU) that will be responsible for the day-to-day implementation of project activities. Final implementation arrangements and the structure of the PMU will be determined during the development of an Adaptation Fund Funding Proposal

A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Table 11: Results Framework

Project Objective(s) ¹	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
The overall objective of Blue Coast–RZ is to strengthen the climate resilience of vulnerable coastal communities in Demak, Central Java, by reducing exposure to tidal flooding, erosion, salinity intrusion and climate-related livelihood disruption through climate-risk-informed planning, ecosystem-based coastal protection, early warning, disaster preparedness and resilient coastal livelihoods.				
Objective 1. Strengthen climate-risk-informed coastal planning and last-mile early warning in Demak.	Climate-risk and coastal-hazard information generated, disseminated and used in planning and preparedness processes in 5 target villages; early-warning arrangements established and operational, with operators trained and beneficiaries covered.	Outcome 1: Reduced exposure to climate-related hazards and threats.	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis.	650,000
Objective 2. Reduce physical exposure of coastal communities, ecosystems and livelihood assets to tidal flooding, erosion, salinity intrusion and extreme weather.	Area and type of mangrove, pond and shoreline systems restored, maintained or improved; length of ecosystem-based coastal protection established; and evidence of improved ecosystem condition and protective function.	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress.	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress.	2,250,000
Objective 3a. Strengthen community disaster preparedness and response capacity in target villages.	Number of target villages with preparedness protocols and drills;	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	2.1 Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased.	775,000
Objective 3b. Strengthen climate-resilient livelihoods and livelihood-supporting community assets for vulnerable households.	Number of households and people benefiting from livelihood-resilience measures; number and type of livelihood-supporting community assets strengthened; at least 50% women participants in livelihood-related activities.	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	6.1 Percentage of households and communities having more secure access to livelihood assets.	1,100,000
Objective 4. Strengthen institutional and community learning and application of effective coastal adaptation approaches.	Percentage of targeted institutions and community groups applying project-generated monitoring, planning, restoration, preparedness or livelihood-resilience tools and guidance; baseline and target to be established during Full Proposal preparation.	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses.	230,000
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)

Output 1.1. Climate risk integrated into district coastal and marine spatial planning and detailed zoning	1 district-level climate-risk and coastal-hazard screening completed; 1 spatial data package prepared; participatory planning forums established in the 5 pre-selected villages	AF Output 1.1: Risk and vulnerability assessments conducted and updated.	No. of projects/programmes that conduct and update risk and vulnerability assessments, by sector and scale.	130,000
Output 1.2. Community-based hydrometeorological early-warning system established and operational	EWS arrangements operational in 5 target villages; at least 2 operators per village trained, including at least 1 woman where feasible	AF Output 1.2: Targeted population groups covered by adequate risk reduction systems.	1.2.1 Percentage of target population covered by adequate risk-reduction systems.	520,000
Output 2.1. Mangrove restoration and ecosystem-based coastal protection implemented	Engineered EbA package designed and implemented in priority sites within the Morodemak/Masterplan area; indicative AF-financed targets (provisional, to be confirmed at Full Proposal): of the order of 1.5–2.5 km of ecosystem-based coastal protection and 150–250 ha of mangrove/pond rehabilitation—a bounded sub-set of the Morodemak planning envelope (5.1 km coastal protection; 772 ha mangrove/pond rehabilitation)	AF Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability.	No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change, by type and scale.	2,250,000
Output 2.2. Community disaster-risk reduction and preparedness strengthened	5 villages with hazard maps, preparedness/contingency plans, evacuation routes, trained community actors and drills linked to BPBD/BMKG	AF Output 2.1: Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events.	2.1.1 No. of staff trained to respond to, and mitigate impacts of, climate-related events, by gender.	775,000
Output 2.3. Climate-resilient livelihoods and resilient community assets strengthened	3,000–3,800 vulnerable households reached through livelihood-resilience and/or community-asset support; including Approximately 1,000 vulnerable households receiving direct livelihood or enterprise support, of which at least 50% women participants	AF Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability.	No. and type of adaptation assets created or strengthened in support of individual or community livelihood strategies; type of income sources for households generated under climate change scenario.	1,100,000
Output 3.1. Integrated adaptation monitoring and learning system established	1 integrated adaptation monitoring and learning system established, including monitoring protocols/tools for mangrove condition, shoreline change, sediment accretion, pond/livelihood resilience and household adaptive capacity.	AF Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning.	3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders.	150,000
Output 3.2. Knowledge products for policy uptake and wider learning	Practical guidance and learning products prepared and shared with MMAF, Demak authorities and other stakeholders	AF Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate	3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge	80,000

		knowledge and learning.		
Total				5,005,000

¹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

- A. Record of endorsement on behalf of the government²** *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Mr. Ary Sudijanto Deputy Minister Climate Change and Carbon Governance Ministry of Environment/Environmental Protection Agency  MINISTRY OF ENVIRONMENT/ ENVIRONMENTAL PROTECTION AGENCY DEPUTY OF CLIMATE CHANGE AND CARBON GOVERNANCE Plaza Kuningan, South Tower 3rd floor, H. R. Rasuna Said St., Karet Kuningan, South Jakarta 12920 website: http://kemper.go.id e-mail: rumahsantia@kemper.go.id Our Ref: : 0-149/H/PP/4-1/08/2026 Jakarta, 14 August 2026 Subject: : Endorsement to concept note of the "Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast-RZ)" To: The Adaptation Fund Board c/o Adaptation Fund Board Secretariat Email: Secretariat@Adaptation-Fund.org Fax: 202 522 5240/5 In my capacity as the designated authority for the Adaptation Fund in Indonesia, I am writing to you in conjunction with the project concept note entitled "Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast-RZ)". The concept note has been reviewed, and I confirm that the above concept note is in accordance with Indonesia's national priorities and policies on climate change adaptation, particularly in climate risk-based coastal planning, early warning systems, ecosystem-based coastal protection, and strengthening climate-resilient in highly vulnerable areas. Accordingly, I am pleased to endorse the above Concept Note for submission to the Adaptation Fund. If approved, the project will be implemented by the International Fund for Agricultural Development (IFAD) as a Multilateral Implementing Entity and executed by the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia. Thank you for your attention and further cooperation.  Sincerely yours, Ary Sudijanto Deputy Minister for Climate Change and Carbon Governance As National Designated Authority for Adaptation Fund Indonesia	Date: August, 14, 2026
--	--------------------------------------

B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

⁶. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.	
Mr. Pierre Yves, Lead Climate and Environment Funds, ECG Division  Implementing Entity coordinator:	
Date: 13 August 2026	e-mail: p.guedez@ifad.org
Mr Juan Carlos Mendoza Casadiegos Director, Environment, Climate, Gender and Social Inclusion Division	e-mail: juancarlos.mendoza@ifad.org
Project contact persons:	
Ms Anupa, Rimal Lamichhane Regional Technical Lead	e-mail: a.rimallamichhane@ifad.org
Mr Hani Abdelkader Elsadani Salem, IFAD Indonesia Country Director	e-mail: h.elsadani@ifad.org



MINISTRY OF ENVIRONMENT/
ENVIRONMENTAL PROTECTION AGENCY

DEPUTY OF CLIMATE CHANGE AND CARBON GOVERNANCE

Plaza Kuningan, South Tower 3rd floor, H. R. Rasuna Said St., Karet Kuningan, South Jakarta 12920
website : <https://kemenlh.go.id/> e-mail : tudirektoratadaptasi@gmail.com

Our Ref. : B-164/H/PPL.4-1/08/2026

Jakarta, 14 August 2026

Subject : Endorsement to concept note of the
"Integrating Climate Adaptation into
Coastal and Marine Spatial Planning for
Resilient Coastal Livelihoods in Indonesia
(Blue Coast-RZ)"

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

In my capacity as the designated authority for the Adaptation Fund in Indonesia, I am writing to you in conjunction with the project concept note entitled "**Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast-RZ)**". The concept note has been reviewed, and I confirm that the above concept note is in accordance with Indonesia's national priorities and policies on climate change adaptation, particularly in climate risk-based coastal planning, early warning systems, ecosystem-based coastal protection, and strengthening climate-resilient in highly vulnerable areas.

Accordingly, I am pleased to endorse the above Concept Note for submission to the Adaptation Fund. If approved, the project will be implemented by the International Fund for Agricultural Development (IFAD) as a Multilateral Implementing Entity and executed by the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia.

Thank you for your attention and further cooperation.

Sincerely yours,



Ary Sudijanto
Deputy Minister for Climate Change and Carbon Governance
As National Designated Authority
for Adaptation Fund Indonesia



Revised PFG Submission Form¹
Project Formulation Grant (PFG)

Submission Date: [to be completed on submission]

Adaptation Fund Project ID: [to be assigned by the Adaptation Fund Secretariat]

Country/ies: Indonesia

Title of Project/Programme: Integrating Climate Adaptation into Coastal and Marine Spatial Planning for Resilient Coastal Livelihoods in Indonesia (Blue Coast–RZ)

Type of IE (NIE/RIE/MIE): MIE

Implementing Entity: International Fund for Agricultural Development (IFAD)

Executing Entity/ies: International Fund for Agricultural Development (IFAD) for the PFG; Ministry of Marine Affairs and Fisheries (MMAF), Directorate General of Marine Spatial Planning (DGMSPP) for the project.

A. Project Preparation Timeframe

Start date of PFG	November 2026
Completion date of PFG	October 2027

B. Proposed Project Preparation Activities (\$)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget note²
Consultancies and contracts to develop the full proposal, including technical, institutional, economic and financial design work and the preparation of all Adaptation Fund annexes	Full proposal of the Blue Coast–RZ project, with all required annexes, submitted to the Adaptation Fund	57,250	Consultancy fees: USD 44,250 Travel and mission costs: USD 13,000
Coastal technical feasibility and site-suitability assessment for ecosystem-based coastal protection in the five pre-	Coastal feasibility and site-suitability report, including georeferenced maps and preliminary technical designs for	40,000	Consultancy fees: USD 32,000 Field survey and travel costs: USD 8,000

¹ As presented in AFB/PPRC.33/40 Annex 1.

² The proposal should include a detailed budget with budget notes indicating the break-down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

selected villages, based on coastal dynamics, subsidence, hydrological and sediment analysis, mangrove-suitability modelling, GIS mapping and remote sensing, to confirm final village and site selection	ecosystem-based coastal protection measures		
Environmental and social risk analysis and gender assessment, including village-level consultations and verification of the presence of Indigenous Peoples or customary marine resource users, assessment of labour and working-conditions risks prior to the application of mitigation measures, and formulation of the Environmental and Social Climate Management Framework (ESCMF), Gender Action Plan and Stakeholder Engagement Plan. These documents are required as part of the submission of the full proposal.	Environmental and Social Climate Management Framework, Gender Action Plan, Stakeholder Engagement Plan and consultation matrix formulated and annexed to the full proposal; Blue Coast–RZ-specific SECAP screening tool completed; Labour Management Plan (LAMP), or terms of reference for its preparation; and, where triggered by the screening, FPIC process documentation and an Indigenous Peoples Plan (IPP) or terms of reference	40,000	Consultancy fees: USD 30,000 Fieldwork and consultation costs: USD 10,000
IE Fee (8.5% of total)	-	12,750	-
Total Project Formulation Grant	-	150,000	-

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

The PFG activities requested for the Blue Coast–RZ project will support the formulation of the full proposal at technical, safeguards and community levels, so that the Executing Entity is provided with a complete and site-verified design package that can be implemented without delay. The concept note identifies three areas where further work is required before the full proposal can be submitted: site-specific technical feasibility for ecosystem-based coastal protection; confirmation of final village and site selection; and completion of the environmental, social and gender assessments and associated management instruments. The activities proposed below respond directly to these gaps and are detailed as follows:

1. Consultancies and contracts to develop the full proposal

IFAD is requesting additional funds to top up the budget it allocates for the design of Adaptation Fund projects. The funds will be used to prepare the full proposal to the standard required by the Adaptation Fund and to address the issues raised during the review of the project concept note. IFAD proposes to hire a design team of national and international consultants covering coastal adaptation and marine spatial planning, fisheries and aquaculture livelihoods, disaster risk reduction and early warning, and economic and financial analysis. The team will elaborate the results framework and its alignment with the Adaptation Fund Results Framework, the detailed budget and budget notes, the cost-effectiveness and sustainability analysis, the implementation and procurement arrangements with MMAF and DGMSP, and the M&E and knowledge-management arrangements. The proposed cost amounts to USD 57,250, covering consultancy fees and travel and mission costs to Jakarta, Central Java and Demak.

2. Coastal technical feasibility and site-suitability assessment for ecosystem-based coastal protection in the five pre-selected villages

The concept note establishes that, in the high-energy and rapidly subsiding conditions of the Demak coastline, mangrove restoration cannot rely on planting alone and requires hydrological rehabilitation, sediment management and, where appropriate, permeable or hybrid structures. The field visits undertaken at concept note stage informed problem analysis and design only; they did not constitute feasibility studies or detailed technical designs. This activity will therefore establish the technical basis for the concrete adaptation investments under Component 2, which account for the bulk of the Adaptation Fund request. The assessment will analyse coastal dynamics, shoreline change, subsidence rates, tidal flooding extent, hydrology and sediment availability, and mangrove suitability across the five pre-selected villages, drawing on bathymetric and topographic data, GIS mapping and remote sensing, and on the Morodemak Masterplan and related field evidence. It will confirm final village and site selection, produce georeferenced maps and preliminary technical designs, and identify sites where restoration is unlikely to succeed, thereby reducing the risk of maladaptive investment and ensuring that no unidentified sub-projects remain at full proposal stage. The assessment will be carried out by a coastal engineering and GIS/remote-sensing team. The total cost of the study will be USD 40,000, covering consultancy fees of USD 32,000 and field survey and travel costs of USD 8,000.

3. Environmental and social risk analysis and gender assessment, and formulation of the Environmental and Social Climate Management Framework, Gender Action Plan and Stakeholder Engagement Plan

The Adaptation Fund requires a robust and evidence-based environmental, social and gender risk analysis based on the confirmed list of sites for project interventions. Blue Coast-RZ will be subject to a project-specific SECAP screening at full proposal stage: the moderate-risk / Category B classification referenced in the concept note derives from the screening of the sovereign Blue Coast project and cannot be confirmed for Blue Coast-RZ, and a substantial risk rating is considered the more likely outcome. This activity is scoped accordingly and will update the environmental and social risk table at full proposal stage on the basis of final village selection, technical designs, consultations and screening results. For the full proposal, IFAD and MMAF propose to carry out thorough data collection and analysis covering gender, women-headed households, informal women fish workers, youth, persons with disabilities and other vulnerable or marginalized groups, as well as the assessment of environmental and social risks associated with small coastal works, hydrological works, pond rehabilitation, silvofishery, livelihood equipment and early-warning installations. The activity will include village-level consultations in the five target villages, including women-only discussions and accessible formats, and will verify whether Indigenous Peoples, customary marine resource users or traditional institutions are present in the target area, so that an Indigenous Peoples Plan and FPIC arrangements can be prepared if required. Where Indigenous Peoples, customary marine resource users or traditional institutions are identified, a comprehensive assessment of the related risks and impacts will be undertaken. The analysis will also rate labour and working-conditions risks arising from contracted and voluntary community labour in coastal works, restoration, pond rehabilitation, small-scale infrastructure and post-harvest activities, with the risk determined before any mitigation measures are

applied, so that a Blue Coast–RZ-specific Labour Management Plan, or terms of reference for its preparation, is produced where the rating requires it. The analysis will inform the formulation of the Environmental and Social Climate Management Framework, the project-specific Gender Action Plan and the Stakeholder Engagement Plan, together with the consultation matrix to be annexed to the full proposal. IFAD will engage an international environmental and social safeguards specialist and a national gender specialist working jointly with local facilitators. The cost of USD 40,000 includes consultancy fees of USD 30,000 and fieldwork and consultation costs of USD 10,000. Should the screening confirm a substantial rather than moderate risk rating, the full proposal will specify and adequately budget the Environmental and Climate Expert position within the project implementation arrangements.

For LLA Projects only:

If requesting additional funding for LLA projects to enable devolving decision making to the local level, please specify the activities that would directly serve to enable devolving decision making to the lowest appropriate level and enable local actors to make informed decisions on how adaptation actions are defined, prioritized, designed, and implemented:

Please provide justifications for their need and for the amount of additional funding required:

C. Implementing Entity

IFAD will be the Implementing Entity, with fiduciary and technical oversight of the project. IFAD will also be the Executing Entity for the PFG, while the Ministry of Marine Affairs and Fisheries (MMAF), through the Directorate General of Marine Spatial Planning (DGMSP), will be the Executing Entity of the project.

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Pierre Yves Guedez Lead Multilateral Climate & Environmental Funds (AF, GCF, GEF), IFAD			[to be completed]	[to be completed]	[to be completed]

1. Blue Coast-RZ has been prepared through a two-level consultative process. First, it draws on the wider Blue Coast design consultations carried out in 2025 with national agencies, provincial and district authorities, technical partners, civil society organizations, community representatives and local livelihood groups. Second, it has been refined through targeted discussions among MMAF, IFAD and the National Designated Authority on the Adaptation Fund scope, geographic focus and budget envelope. These discussions confirmed the need to concentrate the AF grant in Demak, where the adaptation rationale is strongest and where a focused package of ecosystem-based coastal protection, early warning, disaster preparedness and climate-resilient livelihoods can be delivered with sufficient depth.
2. The consultation record available at concept note stage is strongest at national level and across the broader Blue Coast programme geography. It includes documented meetings from 18-25 November 2025 with MMAF, Bappenas, the GEF Operational Focal Point, the Ministry of Environment, IFAD, technical and civil society partners, and province/district/village-level stakeholders in Riau Islands, East Nusa Tenggara and Central Sulawesi. These consultations are relevant to Blue Coast-RZ because they shaped the broader Blue Coast approach to marine spatial planning, community stewardship, OECM, blue carbon, ecosystem restoration, sustainable fisheries and community livelihoods. The record also includes Demak-specific engagement documented in the table below, comprising district-level focus group discussions and field visits in Demak (including Purworejo and Tambakbulsan) with the district Marine and Fisheries Agency and community stakeholders. This Demak-specific record will be further strengthened during Full Proposal preparation through village-level consultations in the pre-selected villages and a dedicated consultation annex; at this stage these field visits informed problem analysis and design and did not constitute feasibility studies, safeguards assessments or detailed technical designs.
3. The stakeholder engagement process has already influenced the AF design in several ways. It supported the decision to keep the AF project geographically focused; to avoid duplication with the wider Blue Coast programme and other funding sources; to prioritize concrete adaptation rather than broad policy or finance activities; to avoid mangrove planting-only approaches; to strengthen community-based stewardship and safeguards; and to include women, youth and vulnerable households in livelihood, early-warning and monitoring activities.
4. The table below summarizes the consultations documented to date and explains how they informed the current AF concept. Where consultations were undertaken outside Demak as part of the wider Blue Coast design, their relevance is treated as programmatic learning rather than direct consultation with AF beneficiaries. This distinction is important and will be made explicit in the Full Proposal.

Table 1: Stakeholders consulted, issues raised/information gathered, and how inputs informed design

Date / period	Location / modality	Stakeholders consulted	Issues raised / information gathered	How inputs informed Blue Coast-RZ
18-19 Nov 2025	National level / Blue Coast Kick-off Mission (Jakarta)	Ministry of Marine Affairs and Fisheries (MMAF) and Bappenas (National Planning Agency).	Formal support was secured from key national agencies to proceed with the development of the Project Identification Form and ensure alignment with the proposed investment project.	Confirmed national ownership of the broader Blue Coast programme and provided the institutional basis for developing the AF window through MMAF/DGMSP and IFAD.
24 Nov 2025	Technical consultation (online)	CIFOR-ICRAF.	Importance of mangrove and seagrass ecosystems for biodiversity, blue carbon storage, fisheries productivity, shoreline protection and climate mitigation. Emphasis on community participation, OECM, equitable benefit-sharing and long-term local stewardship. CIFOR has been conducting research on the north coast of Java, particularly in Demak related to the mangrove restoration and blue carbon, called ReCLAIM.	Informed the AF focus on community-based mangrove stewardship, equitable benefit-sharing, monitoring and avoidance of simple planting-only restoration. It also supports use of Demak's Blue Carbon Location designation as an institutional entry point.
24 November 2025	Technical Discussion (online)	National Research and Innovation Agency (BRIN)	Biodiversity conservation and the protection of marine ecosystems are fundamental to advancing Indonesia's Blue Economy by sustaining fisheries, strengthening coastal resilience, and supporting sustainable livelihoods. Conserving mangroves and seagrass	Meaningful engagement of local communities is essential for effective coastal and marine conservation. Their

			meadows also enhances Indonesia's blue carbon potential, contributing to climate change mitigation while generating long-term socio-economic benefits. Equally important is strengthening community participation through citizen science, enabling local communities to play an active role in biodiversity monitoring, ecosystem stewardship, and evidence-based marine resource management.	knowledge, stewardship, and active participation enhance biodiversity protection, strengthen ecosystem resilience, and deliver lasting environmental and socio-economic benefits for coastal areas.
25 Nov 2025	Technical and civil society consultation (online)	Yayasan Pesisir Lestari, MMAF, MPA and OECM Vision Consortium, including WWF Indonesia, Rare, Coral Triangle Center, Rekam Nusantara Foundation, Konservasi Indonesia and Pesisir Lestari; participants from government, civil society, academia and the financial sector.	OECM information, community-driven conservation models, innovative financing mechanisms, blue carbon credits, ecological fiscal transfers and blended finance. Strong message that marine conservation requires policy, investment and local stewardship.	Informed the broader Blue Coast approach to community-based conservation and stewardship. For the AF CN, the lesson is used cautiously: AF will not finance broad blue finance mechanisms, but will support practical community stewardship, restoration monitoring and knowledge products.
27 November 2025	Offline meeting with key Stakeholders at Province Level, in Semarang, Central Java	Key stakeholders include the Provincial Government Secretariat, Advisors for Environment and Economic Affairs, the Marine and Fisheries Agency, the Provincial Development Planning Agency, the Public Works Agency, and other relevant provincial government agencies.	The discussion focused on economic development supported by the marine and fisheries sector, as well as the challenges posed by climate change and its impacts on coastal ecosystems and local livelihoods. It also covered the existing regulatory framework for spatial planning at national, provincial, and local levels, the Provincial Government's commitment to coastal ecosystem restoration and community development, and the need for continued support from development partners to strengthen implementation and scale up sustainable interventions.	The Provincial Government welcomed the initiative of the Ministry of Marine Affairs and Fisheries (MMAF) and IFAD to support integrated coastal management, particularly along the northern coast of Java. The Government expressed its commitment to collaborating on efforts to strengthen coastal ecosystem restoration, enhance community resilience, and promote sustainable coastal development.
27 November 2025	Focus group discussion (FGD), Semarang, Central Java.	Marine & Fisheries Agency at Province Level, in Semarang	Conducted group discussions to identify potential partnerships with ongoing projects in Central Java, avoid duplication with the proposed MMAF-IFAD project, and collect information to support project concept development in line with national priorities.	Data/information collected to improve the concept note Blue Coast.
28 November	Focus group discussion (FGD), Demak, Central Java.	Marine & Fisheries Agency at District Level, Demak	Conducted discussions on district-level priorities in the marine and fisheries sector, mapped ongoing programmes and activities, identified key partners engaged in coastal restoration, and documented feedback and recommendations from relevant government agencies.	Collected data and information to strengthen and refine the Blue Coast Concept Note.
28 November	Key Stakeholders meeting at District Level, Demak, Central Java.	District Advisor; representatives from the Marine and Fisheries Agency, Regional Development Planning Agency (Bappeda), Environment and Forestry Agency, village heads, and non-governmental organizations (NGOs).	Collected, consolidated, and synthesized data and information provided by district-level stakeholders to inform the baseline assessment, including climate-related conditions, key challenges, and opportunities for coastal restoration and sustainable economic development. The consultations also identified priority project locations based on stakeholders' recommendations to support project design and implementation planning.	Collected data and information to strengthen and refine the Blue Coast Concept Note.' Taken their suggestion for the field visit relevant with climate adaptation.
28	Focus	Discussion with	Discussions focused on relevant regulations, national	Collected data and

November	group discussion (FGD), Jakarta	representative from National Planning Agency (Bappenas)	development priorities, and medium- and long-term plans to ensure that coastal management and restoration interventions are aligned with the Blue Economy agenda and climate change mitigation and adaptation priorities.	information to strengthen and refine the Blue Coast Concept Note.
28 November	Field Visits and Technical Discussions, Demak, Central Java.	Conducted focus group discussions (FGDs) and field visits in Purworejo, Tambakbulusan, and Timbulsloko villages, engaging village heads, community groups, women's groups, and fisher groups	Conducted group discussions on coastal village development, the impacts of climate change on local livelihoods and the environment, and community priorities for coastal restoration. The mission included field verification visits, collection of feedback from community groups, and a review of village regulations supporting coastal management and climate change adaptation.	Collected data and information to strengthen and refine the Blue Coast Concept Note.
3 December 2025	In person Meeting, Jakarta	Potential collaboration meeting with AFD (France)	Engaged with AFD to explore potential collaboration on coastal management, climate change adaptation, and the blue economy. AFD expressed strong interest in supporting climate change adaptation initiatives related to sustainable aquaculture, which could be integrated with coastal management efforts to strengthen local economic development and enhance community resilience.	The collected data and information were systematically compiled and tabulated to support the refinement of the Concept Note.
3 December 2025	Online meeting	Project Management Unit (PMU) of LAUTRA Project – World Bank	Exchanged lessons learned and good practices from the World Bank's LAUTRA Project, with a focus on coastal restoration, community engagement, and sustainable coastal management.	Input for the institutional arrangement and project management
15 December 2025	In person meeting, Jakarta	The meeting explored opportunities for potential collaboration with the UK Coast Project, implemented by the British Embassy Jakarta, to identify areas of synergy and strengthen coordination on coastal resilience, ecosystem restoration, and sustainable coastal management initiatives.	The British Embassy Jakarta is currently supporting the UK COAST Programme and several other grant-funded initiatives in Central Java, focusing on community-based coastal management and resilience. The meeting identified potential areas for collaboration and coordination to maximize synergies, complement ongoing interventions, and avoid duplication of efforts.	Mitigate duplication or overlap activity in the same locations.
22 December 2025	Coordination Meeting, Offline in Jakarta.	Coordination meeting between IFAD and National Designated Authority (NDA)	A coordination meeting was held with Mr. Franky, Director of Climate Adaptation, during which the initial Concept Note was presented. He provided constructive feedback and recommended strengthening the Concept Note by aligning it with Indonesia's National Adaptation Plan (NAP) and the Climate Village Program (ProKlim) to ensure consistency with national priorities and enhance its strategic relevance.	The Concept Note was reformulated to incorporate the inputs and recommendations provided by the National Designated Authority (NDA), ensuring stronger alignment with national priorities and strategic objectives.

5. The consultations to date show strong national and programmatic ownership but also identify one important gap for Full Proposal preparation: the Demak village-level consultation record must be completed and annexed. The Full Proposal will therefore include focused consultations in the five pre-selected villages - Betahwalang, Purworejo, Morodemak, Surodadi and Timbulsloko - or in the final target villages if these are adjusted after technical screening.
6. Particular attention will be given to vulnerable groups. The project will prioritize poor and low-income fishing and aquaculture households, women, women-headed households, fish processors and traders, youth, informal fish workers, persons with disabilities and other groups that may face barriers to participating in project benefits. Consultation methods during Full Proposal preparation will include separate discussions with women and vulnerable groups where appropriate, accessible venues,

meeting times adapted to women's and fishers' schedules, local-language explanations of project eligibility and risks, and documentation of how stakeholder inputs affect final activity selection.

7. Gender considerations will be integrated into the consultation process, not treated as a separate add-on. Women's roles in fish processing, trading, aquaculture support, mangrove nurseries, household nutrition and informal enterprises will be discussed by activity type, so that the Full Proposal can translate women's priorities and constraints into targets, budget tagging, safeguards measures and M&E indicators. The consultation process will also check whether proposed meeting times, training locations, early-warning arrangements, livelihood support and grievance channels are accessible and safe for women and girls.
8. Consultations undertaken at concept note stage have not identified Indigenous Peoples in the Demak project area. Broader consultations during Full Proposal design will further verify whether Indigenous Peoples, customary marine resource users, customary institutions or traditional resource-use rights are present. If any activity may affect customary access, cultural heritage, traditional livelihoods or collective rights, the project will apply the Blue Coast Indigenous Peoples Plan and FPIC Implementation Plan before implementation.
9. Consultations will continue during Full Proposal preparation and implementation. The next phase will include: confirmation of final villages; village-level climate-risk and vulnerability diagnostics; participatory mapping of exposed settlements, ponds, access routes, landing sites, drainage constraints and restoration areas; women-only and youth-focused discussions; validation of early-warning needs and evacuation arrangements; screening of restoration and small infrastructure sites; consultation on land/use arrangements and community stewardship; disclosure of safeguards instruments; and explanation of the grievance redress mechanism.
10. The Full Proposal will annex a consultation matrix including date, location, stakeholder group, institutions represented, participant numbers, sex- and age-disaggregated attendance, issues raised, responses provided and design changes made. This annex will also distinguish clearly between broader Blue Coast consultations and Demak-specific AF consultations. This will help demonstrate compliance with the Adaptation Fund Environmental and Social Policy and Gender Policy and ensure that the final AF-financed activities are technically sound, socially inclusive and gender-responsive.
11. Stakeholder engagement will remain an ongoing process throughout implementation. The Blue Coast Stakeholder Engagement Plan will guide information disclosure, consultation, feedback and grievance management. The Environmental, Social and Climate Management Plan, Labour Management Plan, Indigenous Peoples Plan, FPIC procedures and Grievance Redress Mechanism will be used to ensure that affected communities and vulnerable groups are informed, consulted and able to raise concerns throughout the project cycle.

1. Initial gender assessment and gender-responsive design

1. An initial gender assessment has been undertaken at concept note stage in line with the Adaptation Fund's requirements for gender-responsive project design. The assessment confirms that women and men in Demak's coastal communities are differently positioned in relation to climate risk, fisheries livelihoods and decision-making. Men tend to dominate capture fisheries, offshore activities, formal fisher organizations and local leadership structures. Women play a central but less visible role in fish selling, fish processing, trading, small-scale aquaculture support, household nutrition, home-based enterprises and mangrove-related activities. At national level, women represent about **42% of the fisheries labour force** and dominate fish-selling roles, including **72% of fish sellers in ports**, while only about 4% of formally recognized fishers are women.¹
2. The project design data confirm the relevance of these national gender patterns for the project area. The design mission notes that the targeted areas are predominantly dependent on capture fisheries, with about **84% of fishery households relying on capture fisheries as their primary source of income** and only about **16% engaged in aquaculture**. Women dominate fish selling at ports, at around **72%**, although this work remains largely informal and low paid. It also notes that women are heavily involved in pond preparation, feeding, harvesting, processing and marketing in aquaculture, but are often recorded as "helpers" rather than workers.²
3. These gender gaps increase women's climate vulnerability. Tidal flooding, coastal erosion, salinity intrusion, extreme weather and declining ecosystem productivity affect fish landings, aquaculture ponds, access routes, processing, trading and local markets. Women's income and household food security are therefore directly affected by climate shocks, even when women are not formally recognized as fisheries actors. At the same time, women often have less access than men to productive assets, capital, formal finance, training, mobility, climate information, formal fisher registration and decision-making spaces. The design identifies gender inequality and labour risks in coastal communities, including lower pay, limited recognition and reduced access to government benefits due to gender bias in occupational definitions.³
4. Formal recognition remains a specific constraint for women in fisheries. External evidence for Indonesia confirms that fisherwomen have faced barriers to official registration as fishers and therefore to accessing fisher identification cards and related benefits.⁴ Other gender-and-fisheries analysis reports that women are often legally registered as wives of fishers rather than fishers themselves, even when they contribute to fishing and local fisheries economies.⁵ This matters because the KUSUKA card, established under MMAF Regulation No. 39/PERMEN-KP/2017⁶, is the formal identification instrument for marine and fisheries business actors, including fishers, fish farmers, processors and traders.
5. The assessment also identifies gender-related labour, safety and protection risks.⁷ The AF project will involve community workers, contractors, local groups and livelihood enterprises in mangrove restoration, permeable structures, pond rehabilitation, small-scale infrastructure, aquaculture, processing and monitoring. It identifies risks related to occupational health and safety in coastal and marine activities, informal labour arrangements, unequal access to employment, unequal pay, exclusion of women from decision-making, child labour, forced labour, harassment and SEA/SH risks in mixed-gender work settings. It also requires gender-equal recruitment and employment practices, voluntary and non-coercive community labour, PPE suitable for women and men, codes of conduct, confidential grievance channels and gender-disaggregated monitoring.
6. Gender-based violence and SEA/SH are relevant contextual risks for project design and grievance arrangements. Indonesia has a lifetime physical and/or sexual intimate-partner violence

¹ World Resources Institute Indonesia. 2020. 3 Reasons Why Women in Fisheries Matter for an Inclusive Economic Recovery

² Ministry of Marine Affairs and Fisheries Strategic Plan 2025–2029, p. 57, for the processing workforce data.

³ IFAD, 2025. Indonesia Blue Economy for Coastal Livelihoods Project: SECAP Review Note, Annex 5.1, December 2025

⁴ UNDP Indonesia, 2021. Fisherwomen in the Fisherman's World? Improving Access for Women in Indonesian Fisheries.

⁵ Transnational Institute, 2020. Gender and Fisheries in Indonesia.

⁶ Ministry of Marine Affairs and Fisheries, 2017. Regulation No. 39/PERMEN-KP/2017 on the Marine and Fisheries Business Actor Card.

⁷ IFAD, 2025. Indonesia Blue Economy for Coastal Livelihoods Project: Labour Management Plan, Annex 5.5

rate of **24.1%**⁸, and the fisheries sector has documented risks related to forced labour, informal work and unsafe working conditions.⁹

7. Given that the AF project will introduce workers, assets, training, community labour, livelihood support and possible changes in resource-use arrangements, the project will apply SEA/SH-sensitive consultation, codes of conduct, confidential grievance channels and referral information where available.

8. The assessment applies an intersectional lens. Women are not a homogeneous group. Women-headed households, informal processors and traders, poor fish workers, wives of small-scale fishers, women supporting aquaculture ponds, young women, elderly women, women with disabilities and women from customary or marginalized groups may face different constraints. The assessment identifies women, women-headed households, youth, persons with disabilities and other vulnerable groups as stakeholders requiring early and continuing meaningful engagement, opportunities to raise concerns and measures to ensure access to project benefits.¹⁰

9. At concept note stage, no confirmed Indigenous Peoples-specific issue has been identified in the Demak AF target area. This will be verified during Full Proposal preparation; if Indigenous Peoples, customary marine resource users or traditional institutions are identified, the project will apply the Indigenous Peoples Plan and FPIC-IP Implementation Plan, including specific attention to Indigenous women, youth and vulnerable members of those communities.

10. The initial gender assessment has directly informed project design. Women will be actively engaged in village consultations, coastal planning forums, mangrove nurseries, silvofishery and aquaculture support, post-harvest processing, livelihood groups, community monitoring, early-warning arrangements and grievance mechanisms. Practical measures will include flexible meeting schedules, accessible venues, women-only discussions where appropriate, female facilitators, timing adapted to women's workload where feasible, sex- and age-disaggregated monitoring, and targeted outreach to women-headed households and informal women workers. Early-warning arrangements will seek to include at least one woman operator per target village where feasible. At least **50% of participants in livelihood-related activities will be women**, and women's participation and benefit levels will be tracked through the M&E system.

11. During Full Proposal preparation, the preliminary assessment will be converted into a project-specific Gender Action Plan. The Gender Action Plan will include activity-specific gender targets; sex- and age-disaggregated indicators; gender-responsive budget tagging; measures to reduce women's time, mobility, safety and information barriers; SEA/SH prevention and response measures; gender-sensitive grievance procedures; and monitoring responsibilities for the NPMU, PIUs, SECAP staff, Gender/GESI focal points and implementing partners. The final Gender Action Plan will be based on Demak village-level consultations and will be integrated into the project results framework, Environmental, Social and Climate Management Plan, Stakeholder Engagement Plan, Labour Management Plan, Grievance Redress Mechanism and annual work planning.

8 UN Women Global Database on Violence against Women, Indonesia country data, accessed July 2025; UNFPA/BPS. 2025. *The Indonesian National Women's Life Experience Survey / SPHPN 2024*.

9 ILO. 2025. *Understanding working conditions of fishers in Indonesia: Evidence from the 2024 Survey on Decent Work in Marine Fishing*.

10 IFAD. 2025. Indonesia Blue Economy for Coastal Livelihoods Project: Stakeholder Engagement Plan, Annex 5.2