REQUEST FOR PROJECT/PROGRAMME FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat
1818 H Street NW
MSN P4-400
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org

ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	REGULAR-SIZED Project Concept
Country/ies:	INDONESIA
Title of Project/Programme:	*Building Coastal City Resilience to Climate Change Impacts and Natural Disasters in Pekalongan City, Central Java Province*
Type of Implementing Entity:	National Implementing Entity
Implementing Entity:	Kemitraan (The Partnership for Governance Reform)
Executing Entity/ies:	Kemitraan (The Partnership for Governance Reform)
Amount of Financing Requested:	4,127,009 (in U.S Dollars Equivalent)

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.

Indonesia and Climate Change Impact

Indonesia is among the largest archipelago in the world which constituted of over 18,000 islands (both populated and not populated islands) with around 230 million populations. Its vast coastline that stretches over 18,000 km (in total) is the home for almost 60% of Indonesian population[1]. Scientists had observed changes in climate indicators in Indonesia over the past several decades, and concurrently made projection using AR-4 IPCC model to assess the future changes with results as below[2]:

- Average surface temperature increases will reach 0.8°C-1°C until 2020-2050 relative to the final climate period in the 20th century.
- Sea surface temperature increases will reach 1-1.2°C by 2050 relative to 2000.
- In the period of 2001-2100, there will be significant changes (especially in 2080s period) with a tendency of rainfall increase in wet season and a decrease in transition months.

[1] Akhmadi et.al., 2012, *Impact of Climate Change on Households in the Indonesia CBMS Area*, SMERU Research Institute

[2] Bappenas, 2010, *Indonesia Climate Change Sectoral Roadmap*

- Sea level rise (SLR) is projected to reach 35-40 cm in 2050 relative to the value of 2000. The maximum SLR may reach 175 cm in 2100.

Considering its geographic traits as an archipelagic country that consists of not only large but also great numbers of small islands, changes in the above indicators could potentially bring a significant impact and affect diverse development sectors in Indonesia, and consequently affecting the area's sustainability. The risks are deemed as higher for coastal area and population as a result of close exposure to coastal-related climate change impacts in the forms of climate-related disaster events, coupled with their low socio-economic capacity. In March 2015, Indonesian poverty rate reaches 11.22%[3]. Poverty is claimed as rural phenomenon considering that 60% of the poor are living in rural areas; where most of the poor were identified as living in Java Island[4]. Research conducted by the Ministry of Marine and Fishery shows that from a total of around 41 million poor population of Indonesia, over 13.5% of them are living in coastal area; they live in poverty level with minimum services to basic infrastructure[5]. Exposed to sea level rise, high tide, extreme weather and also the subsequent impact such as salt water intrusion; the coastal population often does not have adequate resources to face those risks, leaving them highly vulnerable to climate change impacts.

Climate Change Impact Affects the Economic Sustainability of North Coast of Java

North Coast of Java is one region that have repeatedly affected by climate change impact. Sea level in this region is rising between 6-10 mm/year[6]. Despite SLR projection in this region is not the highest in Indonesia, but its high population density and rapid urban development in comparison to other coastal area has placed North Coast of Java as highly vulnerable to climate change impact. As the major and busiest corridor for human and logistics mobilization in Java as well as one of the largest rice producer regions in Indonesia, disruption to this region will hinder economic activity in the island. For instance, flash flood and coastal flooding in 2014 (in Central and East Java region of North Coast Java) had inundated over 40,000 Ha of paddy field and damaging thousands of hectares of brackish water fish pond, causing failed harvesting in those land; imposing significant economic cost to the farmers and fishermen[7]. Another coastal flooding in mid-2016 (in Central Java area of North Coast Java) have caused 50-120 cm inundation in the major road access, leads to a significant delay in logistics distribution to several industrial area in central and eastern Java; crippling the industrial activity[8].

This program will focus on building resilience to climate change impacts in Pekalongan City, one of the coastal cities in Central Java Province (in North Coast of Java region), by employing interventions in the form of not only hard structure but also soft structure; touching not only physical interventions but also building their socio-economic and institutional capacity.

[3] Indonesia Central Bureau of Statistics, 2015

[4] Akhmadi et.al., 2012

[5] Secretariat of Republic of Indonesia Vice President, 2011, *Presentation on Inventory on Poor Household in Coastal Area/Fishermen*

[6] Suhelmi, 2012, *Assessment on the Vulnerability of Semarang Coastal Area to Sea Level Rise by Utilizing Composite Vulnerability Index*

[7] Kompas, 2014, *Food Production is At Risk (online-reading)*

[8] Kompas, 2016, *When Nature Responds to Human Greed (online-reading)*

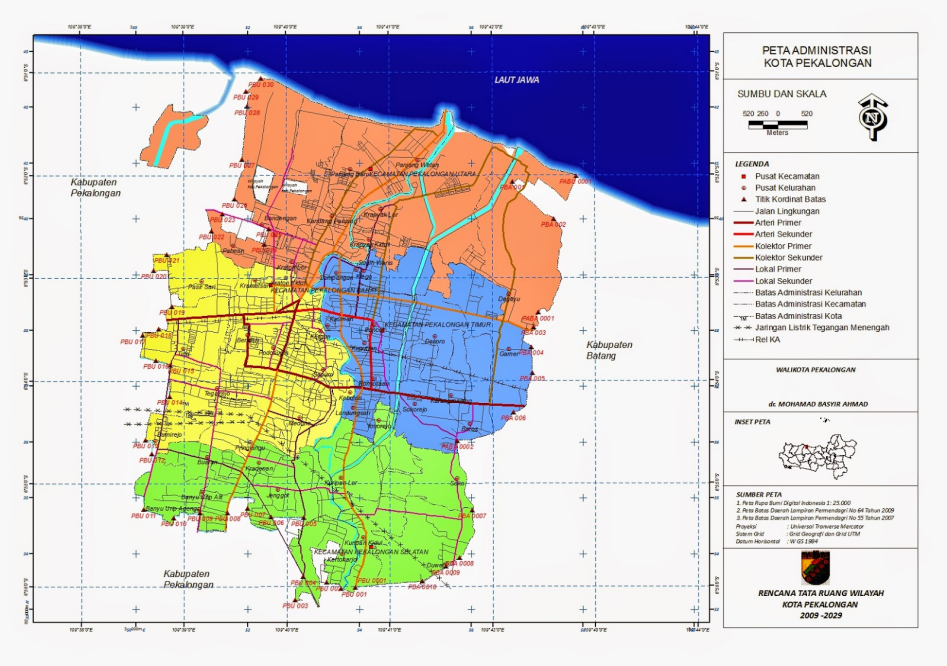

Figure 1. Administrative Map of Pekalongan City

Geographical, Social and Economic Condition of Pekalongan City

The City of Pekalongan is comprises of 4 sub-districts with a total administrative area of 45.25 km^2 and a total population of 296,533 people, where 31.3% of the population lives in Pekalongan Barat sub-district[9]. In 2015, 8.09% of Pekalongan population lives below poverty level, which in this particular city is set at Rp. 352,717 (27.13 USD)/capita/month. This is a slight increase in comparison to 2014, where the poor population was accounted for 8.02% of the population[10]. Geographically, the city is located in lowland plain with an average height of 1 m above sea level (a.s.l) and highest point within the city at 6.5 m a.s.l.

Seven rivers flow through the city and reaches Java Sea as the estuary, with Pekalongan River as the main river. There are several rivers that often overflow during high intensity rain event, namely Pekalongan River, Bremi River and Bangger River; causing 50-100cm inundation in many villages, and at times forcing the population to be evacuated for several days. This flash flood is considered as a recurring disaster in Pekalongan City.

Its economic state in 2014 shows that Manufacturing Industry, Trading and Retail, and Construction are three economic sectors with the highest contribution for the city's Gross Regional Domestic Product (GRDP), with GRDP growth for each sector ranging between 4-6% from 2013. Looking at the GDRP contributor, it is suitable to see that 38.46% and 28.14% of the population works in Industrial and Trade sector respectively. This also attributed to the fact that Pekalongan City is one of the main 'Batik' producers in Indonesia that not only supply national but also international market. As part of the largest rice producer region, Agriculture, Forestry and Fisheries sector is also one of the main economic sectors in Pekalongan City; ranks 6th on

[9] Pekalongan Bureau of Statistics, 2015
[10] Pekalongan Bureau of Statistics, 2015

the GDRP contribution in 2014 with over IDR 400 million of income, and attracts 4.65% of the population to work in the said sector[11].

Changes in Climate Change Indicators in Pekalongan City

Over the past several decades, assessment shows that there have been changes to climate indicators in Pekalongan City, especially those related to sea level, precipitation level and frequency, as well as temperature. These changes were also felt by the city population, particularly in the form of increasing frequency and intensity of climate-disaster events.

Historical trend shows that there is a 0.6-0.8 cm rise in sea level annually. In 2030, this number is projected to increase up to 22.5±1.5 cm annually; and in 2100, sea level rise in Pekalongan City is projected to reach 0.8 m and consequently affect 913.8 Ha area within 1.63-2.01 km distance from the city coastline. According to Pekalongan City Marine and Fisheries Agency, the city coastal vulnerability index is at 2.4 from a maximum scale of 3[12]. The impact of coastal flooding will not only affect coastal-related sector such as fishery and tourism, but could also create domino effect to other development sectors; posing an imminent threat to the sustainability of the city.

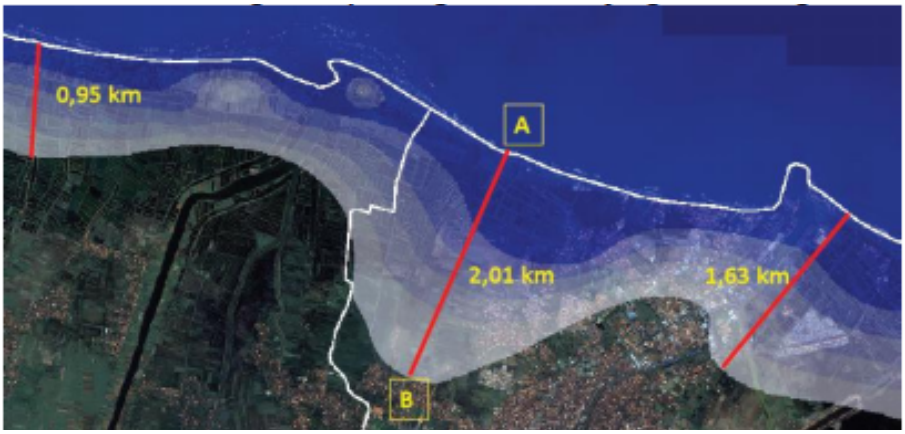

Figure 2. Projected Inundation in Pekalongan City Coastal Area in 100 Years Period (Pekalongan City Government, 2011)

The same study also shows how the precipitation pattern and level in Pekalongan City have change in 40 years period. The peak rainy season is shifting and occuring in a shorter period but with an increasing intensity. In future time, the peak rainy period is projected as will become shorter and occuring in November-January period, which could potentially leads to an increase in flooding intensity and frequency. Meanwhile dry season will occur in a longer period with a lower precipitation intensity that could cause prolong drought and water scarcity subsequently[13].

Other changes that was assessed is surface and sea surface temperature in North Coast of Java. Historically, there is only slight increase in the surface temperature, with 0.004-0.04ºC increase annually. Yet projection shows that in the next 100 years, there will be 0.4-4 ºC increases in surface temperature. This believed as will then affect the sea surface temperature

[11] Pekalongan Bureau of Statistics, 2015
[12] DKP, 2008 in Pekalongan City Government, 2011, *Pekalongan City Risk Profile*
[13] DKP, 2008 in Pekalongan City Government, 2011, *Pekalongan City Risk Profile*

at coastal area in a rate of 0.05-0.1ºC annually, prompting changes in the surrounding ecosystem[14].

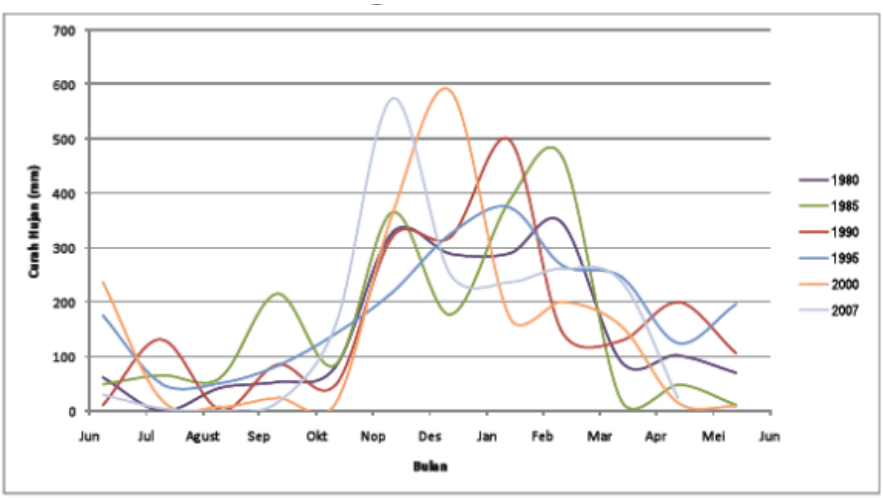

Figure 3. Precipitation Pattern in Pekalongan City in 1980-2007 Period (Pekalongan City Government, 2011)

Pekalongan City is at Risks from Climate Change Impact

Considering its geographical and hydrological attributes, Pekalongan City is no stranger to climate change impact in the forms of climate-disaster events. Changes in the aforementioned climate indicators are believed to increase the severity of the impacts. The city has a history of recurring events of coastal flooding and flash flood. Added with extreme weather events and prolonged drought, Pekalongan population have suffered significant damage from this climate-disaster events that goes beyond physical structure damage and inundated productive land in the coastal area, but they also imposed by socio-economic cost.

Coastal flooding is one of the most frequent risks faced by Pekalongan City. The coastal community experiences daily coastal flooding for the past 10 years. During high tide, the affected villages will be inundated for a period of 2-4 hours. Houses, public facilities, roads and also paddy field are all overflowed by the flood. The flood intensity is deemed as increasing each year. In 2012, coastal flooding inundated 8 villages and causing significant damages to ports and settlement area (and the infrastructure within) with water level reaches 110 cm, while also affecting 100 Ha of paddy field; whilst in 2016 the affected area is increasing to 10 villages and 197,5 Ha of paddy fields. Historical record shows that the height of coastal flooding in 2016 is considerably higher compared to the previous years; prompted the Mayor to declare Pekalongan City as in emergency state to coastal flooding[15].

Climate Change Vulnerability Index of Pekalongan City

To validate and further emphasize the correlation between the aforementioned risks to climate change impact, a study was conducted in 2012 on Pekalongan City Climate Vulnerability by SMERU Research Institute. The study assesses the exposure of Pekalongan City to three types

[14] DKP, 2008 in Pekalongan City Government, 2011, *Pekalongan City Risk Profile*

[15] Marfai et.al., 2013, *Spatial Modelling of Coastal Flooding Inundation Based on Climate Scenario and Its Impact on Pekalongan Coastal Area*

of climate-related disasters frequently occurred in the city (flash flood, coastal flooding and landslides), the area's human and ecological sensitivity, and their adaptive capacity.

The result shows that more than 25% and 10% of Pekalongan City population are exposed to flash flood and coastal flooding due to SLR in that order. With respective climate exposure index to flash flood and coastal flooding of 0.39 and 0.31, Pekalongan Utara sub-district is assessed as the most exposed area to both climate-related disaster events; putting them at a total Climate Change Exposure Index of 1[16].

Table 1. Climate Change Exposure Index of Pekalongan City (SMERU, 2012)

Sub-district	Flash Flood	Coastal Flooding from SLR	Landslide	Exposure Index
Pekalongan Barat	0.2365	0.0067	0.0994	0.3426
Pekalongan Timur	0.0851	0.0303	0	0.1154
Pekalongan Selatan	0	0	0.2812	0.2812
Pekalongan Utara	0.3900	0.3100	0.300	1

For Sensitivity Index, livelihood, ecology and population are three aspects that being considered. Based on the sensitivity assessment, Pekalongan Selatan is the most sensitive sub-district with 0.60 sensitivity index, due to the fact that the area is the center for batik industry and agricultural land in the city. As one of the major industries in Pekalongan, disruption to the sustainability of Batik industry could affect the economic condition of batik workers in particular and the city's income in general. Climate-related disaster could affect batik industry either by flooding the industrial area or contamination of immersion water from flood water. Meanwhile inundation from flash flood in agricultural area could leads to a severe failed harvesting. The second most sensitive sub-district is Pekalongan Utara with 0.48 sensitivity index attributed to the fact that majority of the sub-district's population works in fisheries sector, which at risk of economic losses from the loss of brackish water fish pond, damage to their house as well as changing fishing pattern and location[17].

Table 2. Climate Change Sensitivity Index of Pekalongan City (SMERU, 2012)

Sub-district	Livelihood at Risk	Ecology at Risk	Population at Risk	Sensitivity Index
Pekalongan Barat	0.06	0.00	0.16	0.21
Pekalongan Timur	0.02	0.14	0.22	0.38
Pekalongan Selatan	0.23	0.13	0.24	0.60
Pekalongan Utara	0.18	0.05	0.25	0.48

For adaptive capacity index, the calculation take account of aspects that are deemed as most needed for facing and recovering from climate-related disaster events, comprising of infrastructure, technology, health facilities, institutions and economic conditions. Pekalongan

[16] Akhmadi et.al., 2012
[17] Akhmadi et.al., 2012

Barat has the lowest Adaptive Capacity Index of 0.0010 which indicates the area is the most adaptive amongst other sub-districts[18].

Table 3. Climate Change Adaptive Capacity Index of Pekalongan City (SMERU, 2012)

Sub-district	Infrastructure	Technological Information	Health	Institution	Economic	Adaptive Capacity Index
Pekalongan Barat	0.2600	0.1389	0.1900	0.2000	0.2100	0.0010
Pekalongan Timur	0	0.0883	0.0382	0.0363	0.0946	0.7426
Pekalongan Selatan	0.0469	0.0073	0	0.0557	0.1409	0.7492
Pekalongan Utara	0.2414	0.0315	0.0331	0.669	0	0.6270

Having aggregated the exposure, sensitivity and adaptive capacity index, **Pekalongan Utara** is assessed as being the **most vulnerable sub-district** to climate change with 0.72 index. The high vulnerability of Pekalongan Utara is due to the fact that the area is highly exposed to climate change impact, particularly coastal flooding; while also has a relatively high sensitivity and low adaptive capacity. Meanwhile its high sensitivity and low adaptive capacity is the major factor for Pekalongan Selatan's vulnerability, despite the fact that the area has a relatively low exposure index.

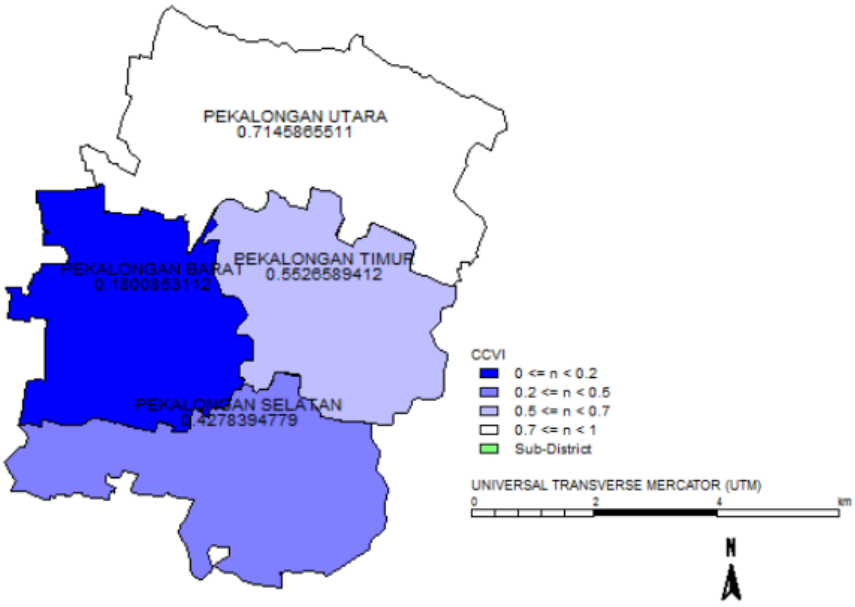

Figure 4. Climate Change Vulnerability Index of Pekalongan City (SMERU, 2012)

Climate Risks are Detrimental to Socio-Economic-Ecological State of Pekalongan City

It was projected that in 2050, the maximum inundation water level could reach 135 cm that could cover up to 1,295 Ha of residential area, 507 Ha of paddy field and 230 Ha of wetland and

[18] Akhmadi et.al., 2012

fish pond; covering 51% of the Pekalongan administrative area[19], where Pekalongan Utara will experience the most severe impact from this event because of its geographical location in the coastline of Pekalongan City. The previously mentioned sea level rise projection in 2100 that would affect area up to 2.01 km from the city coastline further highlights the vulnerability of Pekalongan Utara[20].

Pekalongan Utara population that predominantly works in fishing industries will be highly affected economically from this; forcing them to alter their fishing practices (both those who fishes in the sea and cultivating fish pond) and adapting to recurring inundation in their neighbourhood. For a city where fisheries became one of the major economic sectors such as Pekalongan (6th GDRP contributor), a recurring coastal flooding would potentially hurting its economic condition. Not to mention impact to the surrounding ecosystem. Inundation in the herding area leaves the livestock without proper feed; several fruit plantations cannot grow due to changes in water salinity after flooding. Overexploitation of groundwater further exacerbated the flood intensity and impacts by causing land subsidence in the coastal area. Salt water intrusion have been experienced by those who rely on ground water for their daily needs, for instance in Panjang Wetan village (Pekalongan Utara Sub-district)[21].

As mentioned above, these climate-related risks will not only damaging the settlement and infrastructure but also pose a severe threat to the area's food security, as well as other area that depends on Pekalongan for their staple food supply. Losses from the inundation of the paddy field are predicted to extend between IDR 19.33 and 24.10 billion (USD 1.486.923 – 1.853.846) for a range of affected paddy field area between 945-1,339 Ha[22]. Another study conducted on loss and damage due to coastal flooding in Bandengan Village (Pekalongan Utara Sub-district) shows that the said village experience over IDR 188 billion (USD 14.461.5380 loss and damage over the period of 2000-2016. This number encompasses the loss of agricultural land productivity, infrastructure damage as well as loss of income and increasing household expenses due to the flooding events[23].

Pekalongan City Efforts to Address Climate Risks

Considering the above climate-related risks and their domino effect faced by Pekalongan, addressing the risks become of importance to the city. Diverse measures have been taken by local government of Pekalongan City to address this issue; both conducted self-sufficiently as well as with the assistance from third party. Self-sufficiently, the local government has developed evacuation plan annually for the purpose of community mobilization during flooding. They have also implemented short-term measures by providing economic assistance in the form of fish seed and fish nets, as well as physical assistance such as raising embankments and build productive roads in the embankments area. The local community have also implementing voluntary adaptive measures, albeit a simple one due to economic restraints; such as: raising

[19] Marfai et.al., 2013, *Spatial Modelling of Coastal Flooding Inundation Based on Climate Scenario and Its Impact on Pekalongan Coastal Area*

[20] DKP, 2008 in Pekalongan City Government, 2011, *Pekalongan City Risk Profile*

[21] Akhmadi et.al., 2012

[22] Kasbullah&Marfai, 2014, *Spatial Modelling of Coastal Flooding Inundation and Assessment on Potential Loss on Paddy Field Agricultural Land, Case Study: Coastal Area of Pekalongan District*

[23] Bintari, 2016, *Loss and Damage – Climate Change Impact in Coastal Area of Pekalongan City*

their floor levels, changing livelihood, river cleaning etc. Yet these measures were conducted partially, without a comprehensive planning that could relate the root cause of the issue to the implemented activities, so that the results are slightly ineffective, especially when considering long-term perspective.

Pekalongan City had also cooperated with different local and international NGOs as well as development partners in this climate change issue. PAKLIM-GIZ had assisted the city in developing their GHG Emission Profile, Risk Profile and also deriving the relevant Integrated Climate Change Strategy (ICCS); in which the latter is claimed as successfully integrated to the existing Mid-Term Development Plan of Pekalongan City. However in actual, the integration is limited to inserting the actions into development plan matrix, without consideration of climate change as the strategic development issue for the city; losing the actual meaning of mainstreaming process. ACCCRN Indonesia (a program under Mercy Corps Indonesia) further assist the city in managing the issue by providing capacity building for both the community and local government to enhanced their awareness and knowledge on this matter. By doing so, the program expected that the city could develop the corresponding adaptation activities.

How will the Program assist the City of Pekalongan in Effectively Addressing Climate Risks

Despite these diverse measures and partnership, when talking about the effectiveness of the measures to reduce climate-related risk in the city, there is lack of evidence that can be offered. There is no study on how the measures assist in reducing the city's risk level or was it really reducing at all; no assessment that can relate the implemented measures to the initial and post-intervention risk level. Nonetheless, the community and local government have been exposed to climate change issue in the past few years, so that many can be said about their increasing level of awareness.

From the above narration, it can be said that adaptation measures taken in Pekalongan City to address climate change issue are somewhat lacking in evaluation, in which derives from the non-existent of a comprehensive climate risk assessment. A such-complex issue as climate change needs across-the-board measures to be able to address the issue effectively, and from its roots. Considering that most of the risks are deriving from changes in climate indicators, hence it is of importance to develop climate risk assessment prior to intervening with different projects, so that the projects results can be tracked back to the initial level of risk.

It is this gap that this proposed program tries to bridge, by implementing comprehensive approach encompassing technical assessment, planning, intervention, and also monitoring and evaluation; which will be supported by framework and measures to fortify institutional mechanism on climate adaptation and resilience issue. In practical the program components will be started with identifying the roots of the problem (climate risk assessment) and followed by developing and implementing the adaptation plan (in the form of intervention projects) which results can be track back to the problem; while simultaneously building stakeholders' capacity and advocating climate resilience policy along the course of the program.

This approach will be taken at 4 governance level; starting from village (community) level, city level, provincial level up to the national level; to ensure the interlink of plan and actions across

those different level. Capacity building and developing adaptation plan as well as implementing the corresponding plan will be the fundamental of the approach at village and city level. Meanwhile at provincial and national level, mainstreaming and advocacy will be the primary component. Synchronization of adaptation plan will be at the core of the approach at every level.

Climate risk assessment process will be done at village and city level. At city level, the assessment will utilize Vulnerability Index Data Information System (Sistem Informasi Data Indeks Kerentanan/SIDIK), a vulnerability assessment tool developed by the Ministry of Environment and Forestry. SIDIK is a web-based data and information system that can be used to assess the vulnerability level of an area and/or sector to climate change impact. SIDIK has a standardized data and methodology which enable the user to compare vulnerability level across different areas in Indonesia. Despite its standardized character, SIDIK acknowledge that every region has different level of data, type and accuracy; and thus the system provides space for adjustment. SIDIK user could use a more accurate data and indicator for the system that is available in their region.

For the purpose of this program, given that the system is initially built for land-based region, adjustment will be made to SIDIK. To be able to capture the vulnerability of Pekalongan City with its coastal characteristics, vulnerability indicator within SIDIK system need to incorporate coastal-related data. The adjustment will then provide input for SIDIK developer to improve their system by including coastal attributes. This future improvement will be essential seeing how coastal cities/districts are spread out across Indonesian coastline.

At village level, a Participatory Climate Risk Assessment will be the chosen approach. The initial step of the program at this level will be establishing village working group, and delivering a series of training to build their knowledge on climate change adaptation and coastal resilience. This is expected to assist them in developing much sounder climate risk assessment. This two-tier risk assessment at community and city level will be done to ensure a synchronized adaptation planning at both level, which does not happen often in the past; the city government project at times did not fully serve the actual community needs.

Having taken into account the existing Climate Change Vulnerability Index, climate risks faced by the area, as well as losses imposed to the respective community, hence the geographical scope of this program at village level will focus on the coastal part of Pekalongan City which historically imposed by climate-related risk in the form of coastal flooding and abrasion. The coastal area falls under the administrative area of Pekalongan Utara sub-district. Pekalongan Utara is the largest sub-district in Pekalongan City with a total administrative area of 14.88 km^2 that inhabited by 78,470 population (in 2014), the second highest population number amongst sub-districts in Pekalongan City. From that number, 50.2% are women[24]. The sub-district is located in the northern part of Pekalongan City, directly interfacing the Java Sea which subsequently placing them vulnerable to coastal flooding with intensity that could potentially higher from sea level rise. Pekalongan Utara constitutes of 7 villages; in which Panjang Wetan village is the most vulnerable to flash flood, while Krapyak Lor is the most vulnerable to coastal

[24] Pekalongan Bureau of Statistics, 2014

flooding[25]. In addition to 7 villages within Pekalongan Utara Sub-district, the village level scope for this program will also include 2 villages in Pekalongan Barat Sub-district that assessed as prone to coastal flooding, which are Pasirkratonkramat and Tirto Village. The significance of addressing coastal flooding risks in these villages further underlined by the city government publication of Pekalongan City Coastal Flooding-prone Map 2016 which shows how the all of the villages targeted in this particular program are categorized as highly prone to coastal flooding.

Figure 5. Pekalongan City Coastal Flooding-prone Map Year 2016 (Pekalongan City Government, 2017)

Historical data shows that between the period of 2007 and 2016, the total inundated area in those 9 villages keeps increasing; from 70 Ha in 2007 to 247 Ha in 2016. The 2016 event was recorded as affecting a total of 9,301 households in those villages. The severity of this flood event further highlighted by the loss of land over the past 10 years period. Since 2007, over 73% of paddy fields within the 9 villages are permanently inundated, where some of the area can be salvaged into brackish water pond whilst the other became unproductive land; leaving only 119 Ha of productive paddy field in 3 villages, which are Degayu, Krapyak and Tirto village.

[25] Akhmadi et.al., 2012

Figure 6. Permanently Inundated Agricultural Land in Pekalongan Utara (Site Observation, 2017)

Figure 7. Inundated Settlement Area in Pekalongan Utara (before Rainfall) (Site Observation, 2017)

Pertinent to institutional mechanism and framework that are trying to be instilled within this program, designing en effective mainstreaming mechanism will be among the basics. This program is intending to mainstream the risk assessment results and the subsequent adaptation plan to local government development plan, as well as synchronize it with local spatial plan, to ensure that activities taken in the coastal area are consistent with its legal designation. Adaptation plan at village level will be mainstreamed to the village development plan, and subsequently submitted and advocated during development plan meeting at sub-district level. This plan will continue to be advocated during the succeeding development meeting at city level. The results will also be synchronized with adaptation and development plan at provincial and national level. This vertical synchronization is believed as will be able to inform and foster a better climate adaptation policy.

In 2014, the Government of Indonesia had published their National Action Plan on Climate Change Adaptation (RAN-API), a document outlining adaptation strategy and program that will be implemented nationally by the country for a 5-year period. RAN API is expected to be mainstreamed into provincial and local level, in which adaptation plan made at both level should reflect and in harmony with the content of RAN API, while at the same time aiming to address climate-related risks in the respective area.

At this moment, the RAN API Secretariat is in the process of tagging adaptation activities at national level, whereas the locus area for the said activities will be at city/district level. Ensuring a synchronize local-provincial-national adaptation plan would potentially assist the city in tapping adaptation-related funding that budgeted at the national level. Not to mention the fact that a synchronize activities will assist the national government in assessing the effectiveness of RAN API implementation. Planning can be made at national level, but the implementation would almost always be at local level, as the party that directly facing the risks. Hence developing an effective adaptation activity at local level is essential here.

In relation to RAN API, Pekalongan City also has the benefit being chosen as one among 15 pilot locations of RAN API; putting them at the forefront for adaptation-related activities. Pertinent to this matter, mainstreaming process that will be conducted under this program is expected as will set an example on how to synchronize adaptation plan and program at four government levels, as well as mainstream the said plan to the local development plan. Lessons learned from the mainstreaming process can be disseminated to other pilot locations.

Managing climate change impact in coastal area is already a complex issue, which intricacy can be amplified seeing how nature and physical resources are interconnected in a manner where changes in one area could affect the other. Examples on this interconnection are displayed at Pekalongan City. Around 70% of paddy fields were inundated from coastal flooding, forcing the farmers to change their livelihood and alter the inundated land into brackish water pond, whereas this livelihood shift had somewhat assist the community from losing their economic income completely, but on the other hand this alteration could lead to environmental pollution if the conventional fish farming practices employed at the moment did not consider or mitigate potential soil and water contamination. Furthermore the loss of this agricultural land has caused a decrease in rice production, tipping the food supply balance in the particular area and other dependent area. Another example is how the dense coastal settlement area is not serviced by water piping from the state-owned water company, prompting the community to rely heavily on groundwater. Land subsidence from significant coastal land use change over the years, coupled with this groundwater exploitation, topped by frequent coastal flooding; all those combined and have caused salt water intrusion in the settlement area, leaving the community susceptible to health issue from daily consumption of water that has salinity above standard.

Seeing these risks faced by the area, resilience building process in this proposed program will be focusing its work in strengthening food security, enhancing community livelihood while simultaneously preserving the environment; touching not only practical aspect but also promoting policy. Sustainable development principle will be held at core here to ensure efforts being done at one sector will not create negative impact and incremental losses in the other.

In view of this multifaceted issue, the proposed program framework will be instilled by multidisciplinary and iterative process, with a series of assessment, study and activities to be derived from. Accordingly, the program will not only emphasizing on building hard structure, but also strengthen soft structure (institutional realms, including capacity building) in addressing the issue; creating a paradigm shift from the conventional approach that mostly revolving around building infrastructure that could only serve short-term purposes to newer perspective that allow for continual development and evaluation. This approach will try to simultaneously address the issue of physical structure for coastal protection and adaptation, preserving and developing community livelihood in addition to developing and promoting local tourism in coastal area; balancing the objectives in the above sectors without jeopardizing the sustainability of the others. At the core of this framework is collaborative approach by fostering multi-stakeholder involvement, to bring about different interest on the issue and resolve it amicably to achieve common goals.

Project / Programme Objectives:
List the main objectives of the project/programme.

Goal
This project is specifically designed to *Building Coastal City Resilience to Climate Change Impacts and Natural Disasters*, with a particular focus on pro-poor adaptation actions that involve and benefit the most vulnerable communities in the city.

Objective:

The program will be conducted at 4 governance level, with the main objectives at each level are as follows:

1. **Village Level**
   (i). Enhancing coastal community capacity in developing the village profile by implementing participatory climate risk assessment and implementing the ensuing climate change adaptation actions and initiatives
   (ii). Enhancing local community adaptive capacity, including developing livelihood strategies, by also taking into account relevant local wisdom

2. **City Level:**
   (i). Enhancing local government and other city stakeholders' capacity in developing climate risk assessment and utilizing the results to develop local climate change adaptation action plan (RAD API), as well as mainstreaming the plan into local development plan
   (ii). Implementing innovative adaptation measures, including those fostering sustainable utilization of natural resources, with implementation and financing scheme that can be replicated and disseminated to broader audience
   (iii). Establishing city-level knowledge management platform

3. **Provincial Level:**

(i). Strengthening vertical coordination by enhancing provincial government's capacity in mainstreaming climate change adaptation and resilience into Central Java Province development plan, which in turn could foster better climate-related policy on climate financing and bottom-up planning.

4. **National Level**
   (i). Strengthening vertical coordination and collaboration between national and local government in climate adaptation context
   (ii). Policy advocacy at national level with materials built based on local experience

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.

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
1. Village Level a. Strengthening Capacity	1.1 Village climate working group established and functioning in each of the 9 villages 1.2 Workshop on climate adaptation action and coastal resilience conducted 1.3 Documentation of Pekalongan City RAD API dissemination at village level 1.4 Training on participatory climate risk assessment (PCRA) conducted 1.5 Village profiles and village information system developed 1.6 Village development plan that incorporate	1.1 Enhanced capacity of local actors in identifying, initiating, strengthening, and escalating community-based actions to address climate risk and natural disaster; including capacity in integrating the actions to village development plan	**304.327**

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
	community-based adaptation action plan in place		
b. Stimulate adaptation action based on community-based action plan priority	1.7 Scoping study and feasibility study documents on prioritized community-based adaptation actions in each village 1.8 Agreed adaptation action in each village implemented (i.e. mangrove restoration and ecotourism, supporting farmers group in cultivating rice and fish varieties that tolerant to high salinity, rain water harvesting construction etc.)	1.2 Individual and community livelihood strategies strengthened to face climate change impacts, including variability 1.3 Increase adaptive capacity of local community, by also taking into account local wisdom	**603.846**
2. City Level a. Strengthening capacity	2.1 City climate working group reactivated 2.2 Risk assessment and adaptation workshop related to coastal resilience conducted 2.3 Vulnerability and risk assessment Training using SIDIK tools conducted 2.4 Verification meeting conducted 2.5 Training on the use of vulnerability and climate risk assessment in developing Climate change adaptation action plan (RAD) conducted 2.6 A model approach to assess the risk and	2.1 Enhanced local government capacity in using climate risk assessment to develop local climate change adaptation action plan (RAD API), and to mainstream the plan into local development planning	**234.085**

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
	impact of climate change to household that located in selected villages with high climate risk developed 2.7 Technical assistant for risk assessment, RAD development and integration into RPJMD/RKP conducted 2.8 Collaborative CCA action across villages in managing climate risk implemented 2.9 Workshop on Collaborative Climate Change Adaptation action conducted with representatives from each village within Pekalongan City as the participant		
b. Coastal city resilience actions	2.10 Consultation meeting to identify and select coastal resilience actions conducted 2.11 Scoping study and feasibility study documents on the selected coastal resilience actions 2.12 Pilot innovative adaptation measures are implemented in collaboration with private sector, Government bodies and NGO (i.e. technology for main productive sectors,	2.2 Enhanced resilience of coastal community from the implementation of innovative adaptation measures at different scale, including actions that foster sustainable natural resources utilization	**2.086.477**

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
	model on collaborative CCA program across coastal villages/ upstream and downstream villages); and also evaluated for future reference 2.13 Implementation, evaluation and financing scheme for the pilot is in place, enable the actions to be shared, replicated and expanded		
c. Knowledge Management	2.14 Climate change training and knowledge sharing conducted 2.15 Knowledge product (i.e. lessons learned, research paper, newsletter) published and shared 2.16 Advocacy materials (i.e. policy brief, policy analysis, gap analysis) developed and communicated 2.17 Local knowledge sharing platform established	2.3 A fully transparent project implementation, where all stakeholders are informed on and have accessed to the progress, results, and lessons learned from the program; as a reference future replication and expansion	**150.000**
3. Province Level a. Strengthening Capacity	3.1 Training and workshop on risk assessment and adaptation actions conducted 3.2 Climate risk assessment of Central Java Province with village level as the	3.1 Enhanced provincial government's capacity in mainstreaming climate change adaptation and resilience into Central Java	**31.081**

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
	smallest assessment scale is developed 3.3 Provincial Action Plan for Climate Change Adaptation (RAD API) is developed based on the preceding risk assessment	Province development plan, which fostering better climate-related policy on climate financing and bottom-up planning; and in turn driving cities and districts (particularly Pekalongan City) towards a more climate-resilient development	
4. National Level a. Improvement of SIDIK for coastal resilience based on local experience	4.1 Knowledge product in the form of Handbook on how to use SIDIK for risk assessment at coastal city is published and shared. This handbook is targeted to be used by local government, NGOs and civil society organizations.	4.1 Coastal city/district able to utilize SIDIK to assess their region climate risk	**11.923**
b. National and local adaptation linkage	4.2 National dialogue that involved local and national government is conducted in order to support the activity of RAN API Secretariat 4.3 Matrix that map out coastal resilience policy, fund allocation scheme and adaptation action plan of every ministry developed 4.4 Policy papers regarding gaps in national policy, fiscal, regulatory and legal framework to build a	4.2 Strengthened vertical coordination and collaboration between national and local government (provincial, district/city) in climate adaptation context 4.3 Coordination and collaboration as a means for policy advocacy with materials that also incorporate local experience	**58.338**

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
	resilient coastal city are developed and communicated 4.5 Communication with national knowledge platform is built and maintained		
5.Total Project/Programme Cost			**3.480.077**
6.Project/Programme Execution cost and ME cost			**327.128**
7.Project/Programme Cycle Management Fee charged by the Implementing Entity			**319.805**
Amount of Financing Requested			**4.127.009**

Projected Calendar:

Project Duration: *3 years (36 months)*

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

Milestones	Expected Dates
Start of Project/Programme Implementation	November 2017
Mid-term Review (if planned)	Juni 2019
Project/Programme Closing	September 2020
Terminal Evaluation	October 2020

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.

Climate change has led to the rise of sea level and changes in rainfall patterns in Pekalongan City. The rainfall pattern in recent years has become more intense and occurs in a shorter period, which then leads to flooding. Flooding in northern part of Pekalongan City, either those caused by increased rainfall or sea level rise, have contributed to many interconnected problems. Extreme climate events like heavy rains, combined with sea-level rise have resulted in more frequent and more unpredictable floods that threaten populations' security and goods.

Climate change is thus impeding Pekalongan City development. One example of this impediment is the decrease of agricultural land area in nine villages of Pekalongan city that reaches 73% between the period 2007-2016 due to the land being submerged in sea water and also high salinity level of the irrigation water. This condition has threatened Pekalongan City food security by reducing rice and other agricultural production.

This program is specifically designed to *Building Coastal City Resilience to Climate Change Impacts and Natural Disasters*, with a particular focus economic/livelihood, food security and environmental issues. The development of local climate change adaptation plans required scientific basis to corroborate and better understand the pattern of current and future of climate risk. This information is essential to create and develop an effective adaptation. Effective adaptation action should also be built on existing actions; adjusting and leveraging practices that are socially- and environmentally-friendly, while leaving practices that potentially cause adverse impact.

Another key to effective adaptation is it needs to be locally driven and to involve those most at risk. This notion thus highlights the importance of two key actors, the local government and community based organizations (Satterthwaite, 2010). The development of local adaptation actions then should not only consider the national policies but also local condition and characteristics. Having considered the above, employing a combined bottom-up and top-down approach, while simultaneously taking into account the current and future climate risk pattern, is considered as important for this program in developing an effective local adaptation action plan.

Bottom-up approach means that the development of local action plan should meet local needs and involve diverse actors by taking into account the local condition (human capacity, resource availability, local knowledge and practices, etc.). Top-down approach means that national actors play role in providing direction, guidance and resources for supporting local government in developing adaptation action plan that is in line with national development goals. This program will combine two approaches and facilitate interaction between national and local actors, in order to achieve better overall results. Combined approach is expected to become best practice and set out example on how to synergize national policies (RAN API) into all level of government (Province, City and Village). Following this approach, activities under this project will then be designed and implemented at four governance level (National, Province, City and Village).

This proposed program will be focusing its work on economic/livelihood, food security and environmental issues. From legal perspective, these 3 issues are in line with resilience sectors in RAN API (specifically Cluster 1, 2 and 3) and with direction for improvement of communities' resilience in 2015-2019 National Mid-Term Development Plan (RPJMN). In addition to that, the combined approach at four governance level is in line with Law Number 23 year 2014 on Regional Government. Indicative activities at each level are explained below. More detailed explanation on activities will be developed during program preparation stage.

Village Level

The main focus at village level is to strengthen the capacity of coastal community in developing village profile/village information system and adaptation action plan, on top of implementing the

derived climate change adaptation action. The profile itself will be built upon participatory climate risk assessment conducted by the community. The project in village level will also stimulate the implementation of community-based adaptation actions that will be focusing mostly on livelihood context; how the community can adjust their conventional livelihood practices to be able to face climate change impact. The other focus will be on impact from climate-related disaster faced by the community, namely coastal flooding and erosion and sea level rise. Prior to implementing the actions, scoping and feasibility study will be undertaken for each prioritized actions to ensure its feasibility and potential effectiveness. Among the activities are: (i) Strengthening marine-farming practices by emphasizing on the improvement of aquaculture (fish, crab, seaweed) technology and methods, (ii) integration of mangroves into fish pond design and development in order to increase the physical resilience of the coastline with natural and local-based structure intervention (iii) promoting individual/communal household-scale rain water harvesting design to reduce pressure on declining water resources.

City Level

At city level, more emphasis is placed on increasing the capacity of local government bodies, universities and local NGOs in order for them to have the ability to develop local climate change adaptation action plan (RAD API). The development process will be facilitated by the Project Management Unit (PMU). The core steps in developing RAD API document will be translation and adjustment of RAN API content into local context. To provide scientific ground to the document, training on utilizing SIDIK to assess climate vulnerability and risk of the city will be conducted. The assessment result will then be a part of local context in RAD API and among the key considerations to develop the list of adaptation actions. Training will also be given on mainstreaming process of adaptation plan to local development plan. The training participants at city level will also involve village representative. This is to ensure that all stakeholders would have the ability to evaluate and find synergy between RAD API and other relevant regional/local development plans. Furthermore, approach at city level would not only encourage community, but also private sector participation in implementing adaptation action, by exploring the potential of private sector cooperation in supporting local adaptation action. Promoting collaborative climate change adaptation actions, not only within program timeframe, but also in future time.

The collaborative adaptation actions that will be implemented in city level will be designed with implementation and financing scheme that will allow for replication and wider implementation, so that benefit derived from the program can be can be further spread out after the program is ended, not only relying from program funding. Adaptation actions that will be implemented at city level will be focusing on:

(1). Enhancing the resilience of main productive sectors through (i) aquaculture development (shrimp, fish, crab, seaweed) by introducing new technology and cooperate with financial institution in developing aquaculture scheme (ii) construction of coastal embankment with sediment/sand trap system
(2). Introducing innovative latrine in flood prone area to reduce impact from water-borne disease

Additionally, knowledge management platform will be established at city level; enabling information sharing between stakeholders and creating a transparent program implementation.

Among knowledge product that will be produced are documentation of lessons learned, training materials, research paper, and advocacy materials.

Provincial Level

Activities at the provincial level are more focus in assisting the provincial team to develop climate risk assessment with village level as the smallest level of analysis, in which the assessment results will be the basis to develop RAD API. The provincial will undergo a series of training to equip them with the following technical skill and knowledge: SIDIK utilization, RAD API development by considering RAN API and city adaptation plan, translate RAD API into provincial development plan. These will be the basis to build a synchronize adaptation action between city, province and national. RAD API at province level that developed by taking into account the context of City's RAD API is believed as will promote the notion of climate-resilient development in city/district under their administrative region, by showcasing bottom-up planning and providing climate financing potential.

National Level

At national level, the team will be focusing in strengthening vertical coordination and advocacy process by working closely with 2 national government bodies and secretariats in issue that will be elaborated as follows:

(1). The Ministry of Environment and Foresty (MoEF) has developed a free web-based tool to calculate climate risk index known as SIDIK. This tool is highly beneficial for local government to assess their area risk index in an easy and user friendly manner. Yet the tool has a drawback in its inability to accurately calculating climate risks in coastal areas. Therefore, this program will support MoEF in refining the tool in order to improve its effectiveness and accuracy of its utilisation in coastal area. Building upon experience of using SIDIK at city level, a handbook will be developed on how to use SIDIK for risk assessment at coastal city area. This handbook will be communicated to MoEF and made available for local government, NGOs and civil society organizations.

(2). Secretariat of RAN API had developed gap analysis of RAN API document. Building upon experience in translating RAN API at provincial and city level, the team will provide input to the secretariat on gaps identified during the translation process. This input will be beneficial for RAN API review process that is planned to be conducted in 2017-2018. Cooperation with Secretariat of RAN API will also be done to explore potential synergy between the national (RAN API) and regional adaptation actions (RAD API), that could prompt vertical collaboration between line ministries/government agencies and local governments for implementing adaptation actions that can be implemented at the provincial, city or village level. Seeing Pekalongan City position as one of the pilot areas of RAN API, this such synergy and collaboration is seen as highly potential to be implemented.

In order to explore the potential vertical collaboration in implementing adaptation action, there will be a series of national dialogue as a consultative meeting/forum among national, province and city representatives. To further strengthen the need for collaboration as well as highlighting the role of local level in climate adaptation context, a set of policy advocacy materials (i.e. policy paper on gaps in national policy, fiscal, regulatory and legal framework that built upon

experience and findings at local level; lessons learned documentation, research paper) will be developed and communicated to relevant stakeholders. Engagement with national platform that advocating the same interest is believed as will provide an assistance to this advocacy process, and thus the team will actively engage and communicate with Indonesia Climate Alliance (ICA); a national platform comprises of different national institutions, research institutes and NGOs with interest on climate resilience issue.

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 of the Adaptation Fund.

The proposed program will generate economic, social and environmental benefits. It will bring about and promote a set of innovations that will help improve the lives of the most vulnerable communities. Specific benefits are expected to include protection of the livelihoods assets of coastal communities, sustainability of ecotourism, assisting to increase access to financial institution and reducing impact from water-borne disease. Moreover, the program's focus in strengthening local government's capacity in developing climate change adaptation plan and in mainstreaming the plan to local development plan and spatial plan will generate valuable lessons in building coastal resilience. The benefit will not only be acquired by Pekalongan City but also other local government facing similar climate change-related threats.

Vulnerable groups that will gain benefits from this program are encompassing:

(i) Flood-prone household

Data recorded in 2016 shows that 9300 households located in the targeted 9 villages are categorized as prone to coastal flooding. These households will receive direct socio-economic and environmental benefit from the program since they will be the core subject for project interventions; not to mention how they will receive knowledge enhancement from their involvement in series of trainings and workshops.

(ii) Fishermen, farmers and fishpond farmers

In 2014, 4.65% Pekalongan City population works in Agriculture, Forestry and Fishery sector. This percentage represents over 13,700 people. For these people whose works are highly influenced by climate variability, this program will assist them in creating a livelihood strategy that is more resilient and sustainable; fostering a potential economic benefit for them

(iii) Women-headed household, women, children and elderly

From approximately 87,000 population of 9 villages that become the geographical scope of the program, around 50% of the population are women, including women who act as the head of their household. This program will assist this specific women group by providing alternative livelihood to increase their income as well as possible adaptation actions they are able to implement themselves. Meanwhile

children and elderly are accounted for around 29% of the total population of Pekalongan City. As vulnerable group with limited capacity, children and elderly will be benefited by the creation of a coastal resilient environment that takes account of their needs during the development process.

Aside from the abovementioned vulnerable groups, this project will also provide technical benefit to the local government by assisting them in improving public services to vulnerable people and enhancing their capacity to develop a participatory and sustainable local development plan that incorporate climate change context; creating a ripple effect in a more resilient coastal city. Furthermore, community-based organizations will also gain social benefit from this program since they will receive technical training that will be useful for their future operational activity.

Capacity development activities being conducted throughout the program will provide social, economic and environmental benefits for the vulnerable communities in particular, and the city in general. Training and awareness building will introduce new knowledge that intending to stimulate behaviour changes, where for the local environment this would mean less adverse environmental impact from anthropogenic activity as well as an opportunity for promoting new ecosystem services (e.g. coastal conservation activity) and increasing social capital.

The planted mangrove during conservation activity and the constructed coastal embankment will contribute in reducing wind erosion and increasing populations' income in the medium term. In addition to its contribution to regulate flooding, mangrove also offers other opportunities in the socio-economic context, namely allowing the diversification of income (eco-tourism, mangrove honey production, etc.).

To avoid, mitigate and reduce the potential negative impacts resulting from the program activities, an environmental impact study (or assessment depending on the project scale) will be conducted early in the project preparation stage as part of scoping and feasibility study.

Program Benefits		
Type of Benefit	**Baseline**	**With/at the project completion**
Social	• Poor adaptive capacities • Lack of mechanism for disseminating proven strategies to adapt to risks has led to relatively high fatality rates, disease incidence and food security, especially for vulnerable people (child, elderly and women-headed household) • High exposure to hazards can be considered as co-drivers of poverty and compounded social	• New capacities acquired by populations on coastal protection and aquaculture • Improved food security • Leverage on lessons learnt on coastal management and adaptation to climate change • Improved adaptive capacity through a greater awareness of climate risks and adaptation options at the community and city level. • Strengthening social capital and capacity development to

Program Benefits		
Type of Benefit	**Baseline**	**With/at the project completion**
	problems such as, disease, sanitation, food security issues, etc • Slow onset event such as sea level rise and droughts have affected the social well-being and cohesion of local communities and reduce their ability to cope	protect the community and surrounding area from disasters, fatality rates, diseases and food security threat • Increased resilience of coastal city and its communities, ecosystems and livelihood • Coastal city resilient planning, infrastructure and services contribute to social well-being
Economic	• Economic losses, physical infrastructure loss and also loss or disruption to livelihood options • Low cost-effectiveness of investments in the main productive sectors • Continuous decline in populations' revenue	• Improved institutional framework and aspect, improved communities and physical and natural assets, and also more resilient ecosystems and livelihoods • Revival of the economic activity • Improved food security and promotion of urban agriculture, changes to resource management, and identification of alternative livelihoods. • Capacity development of urban poor / women to gain new skills and employment opportunities.
Environment	• Abrasion/ coastal erosion • Mangrove degradation • Degradation of the vegetation • Land salinization/salt water intrusion • Ecosystem degradation and increased waste production lead to health issues especially in poor urban communities	• Decreases in climate-induced environmental degradation and losses, and improved planning and preparation for disasters • Promotion of ecosystem-based adaptation in the urban environment, leading to environmental benefits • Rebuilding of coastal belt and protection against coastal erosion by sediment trap method • Rebuilding the vegetation

Program Benefits		
Type of Benefit	**Baseline**	**With/at the project completion**
		• Protection of fishpond fields against salinity and flood by sediment trap method • Reduced adverse impact from anthropogenic activity through changes to coastal zoning and waste management e.g. community-based waste reduction and recycling schemes and energy efficient building construction techniques. • Enhanced resilience of urban poor communities

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

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
1 Village Level 1.1 Enhanced capacity of local actors in identifying, initiating, strengthening, and escalating community-based actions to address climate risk and natural disaster; including capacity in integrating the actions to village development plan	1.1 Village climate working group established and functioning in each of the 9 villages 1.2 Workshop on climate adaptation action and coastal resilience conducted 1.3 Documentation of Pekalongan City RAD API dissemination at village level 1.4 Training on participatory climate risk assessment (PCRA) conducted 1.5 Village profiles and village information system	Alternatively, if actions are implemented without calculating risk assessment and the implementer is not equipped with training, the end result can be more costly; unnecessary actions may be implemented which may not assist in addressing the targeted risk In addition to increasing awareness, facilitate training and technical assistant; drawing community support and involvement in arranging village adaptation plan and development plan will reduce the costs. Aside from ensuring the selected actions are on-

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
	developed 1.6 Village development plan that incorporate community-based adaptation action plan in place	target, it will also ensure program ownership and consequently the maintenance of the interventions after the program ended.
1.2 Individual and community livelihood strategies strengthened to face climate change impacts, including variability 1.3 Increase adaptive capacity of local community, by also taking local wisdom into account	1.7 Scoping study and feasibility study documents on prioritized community-based adaptation actions in each village 1.8 Agreed adaptation action in each village implemented (i.e. mangrove restoration and ecotourism, supporting farmers group in cultivating rice and fish varieties that tolerant to high salinity, rain water harvesting construction etc.)	Alternatively, actions that based solely on local climate wisdom or typical development may be selected and implemented as the actions, however it will not target the most vulnerable areas and people. Not to mention that the particular action will not be sustainable . This proposed program will select the implemented actions based on scenario, scoping study and feasibility study. This process will result in better and appropriate climate adaptation actions. Technical support will ensure that options with the highest impact will be selected Communities will be involved in the budgeting to ensure cost-effective options are selected.
2 City Level		
2.1 Enhanced local government capacity in using climate risk assessment to develop local climate change adaptation action plan (RAD API), and to	2.1 City climate working group reactivated 2.2 Risk assessment and adaptation workshop related to coastal resilience conducted 2.3 Vulnerability and risk	Alternatively, climate change adaptation and DRR planning activity can be implemented but in an unsustainable way and with a limited vulnerable target group (where the activity may not be suitable in

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
mainstream the plan into local development planning	assessment training using SIDIK tools conducted 2.4 Verification meeting conducted 2.5 Training on the use of vulnerability and climate risk assessment in developing Climate Change Adaptation Action Plan (RAD) conducted 2.6 A model approach to assess the risk of climate change to household that located in selected villages with high climate risk developed 2.7 Technical assistant for risk assessment, RAD development and integration into RPJMD/RKP conducted 2.8 Collaborative CCA action across villages in managing climate risk implemented 2.9 Workshop on Collaborative Climate Change Adaptation action conducted with representatives from each village within Pekalongan City as the participant	future time since calculation will only be made on current risk) The project pursues a participatory and integrated approach where community, local government, university, NGO, and private sector work together to develop adaptation action plan (RAD API) and integrate it into local development. This approach reflects a more sustainable way and will be more cost-effective especially if considering long-term time scale. From their experience and acquired knowledge and skill during developing risk assessment, the officials can use this approach for periodical M&E activity of the city development City-level engagement will ensure that local adaptation action will be adequately supported.
2.2 Enhanced resilience of coastal community from the implementation of innovative adaptation measures at different scale, including actions	2.10 Consultation meeting to identify and select coastal resilience actions conducted 2.11 Scoping study and feasibility study documents on the selected coastal	This proposed program will select the implemented actions based on scenario, scoping study and feasibility study. This process is will result in better and

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
that foster sustainable natural resources utilization	resilience actions 2.12 Pilot innovative adaptation measures are implemented in collaboration with private sector, Government bodies and NGO (i.e. technology for main productive sectors, model on collaborative CCA program across coastal villages/ upstream and downstream villages); and also evaluated for future reference 2.13 Implementation, evaluation and financing scheme for the pilot is in place, enable the actions to be shared, replicated and expanded 2.14 Climate change training and knowledge sharing conducted 2.15 Knowledge product (i.e. lessons learned, research paper, newsletter) published and shared 2.16 Advocacy materials (i.e. policy brief, policy analysis, gap analysis) developed and communicated 2.17 Local knowledge sharing platform established	appropriate climate adaptation actions. Technical support will ensure that options with the highest resilience impact will be selected, as well as options that foster sustainable utilization of natural resources. The selected options should be complemented with implementation and financing scheme that can be replicated and disseminated to broader audience
2.3 A fully transparent project implementation, where all stakeholders are informed on and have accessed to the progress, results, and lessons learned from the program; as a reference future replication and expansion		
3 Province Level Enhanced provincial	3.1 Training and workshop on	Alternatively, climate change

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
government's capacity in mainstreaming climate change adaptation and resilience into Central Java Province development plan, which fosters better climate-related policy on climate financing and bottom-up planning; and in turn driving cities and districts (particularly Pekalongan City) towards a more climate-resilient development	risk assessment and adaptation actions conducted 3.2 Climate risk assessment of Central Java Province with village level as the smallest assessment scale is developed 3.3 Provincial Action Plan for Climate Change Adaptation (RAD API) is developed based on the preceding risk assessment	adaptation and DRR planning can be implemented without considering the city's/district's characteristics and needs, however the results will be most likely unsustainable Mainstreaming climate change adaptation and resilience into Central Java Province development plan could in turn foster better climate-related policy at provincial level and bottom-up planning
4 National 4.1 Coastal city/district able to utilize SIDIK to assess their region climate risk 4.2 Strengthened vertical coordination and	4.1 Knowledge product in the form of Handbook on how to use SIDIK for risk assessment at coastal city is published and shared. This handbook is targeted to be used by local government, NGOs and civil society organizations 4.2 National dialogue that involved local and national government is conducted in order to support the activity of RAN API Secretariat 4.3 Matrix that map out	Alternatively, SIDIK has significantly help cities and regencies in developing climate risk assessment. However SIDIK has drawbacks when being used to asses coastal city, resulting in an inaccurate assessment, which could consequently leads to the implementation of action that considered as maladaptation Since SIDIK cannot accurately assess the vulnerability and risk area with coastal characteristics, hence adjustment is needed when using SIDIK in Pekalongan City so as appropriate coastal resilience/adaptation actions are developed Every level of governments implement adaptation action in

Expected result	Output	Cost-effectiveness (assessment of alternative approaches)
collaboration between national and local government (provincial, district/city) in climate adaptation context 4.3 Coordination and collaboration as a means for policy advocacy with materials that also incorporate local experience	coastal resilience policy, fund allocation scheme and adaptation action plan of every ministry developed 4.4 Policy papers regarding gaps in national policy, fiscal, regulatory and legal framework to build a resilient coastal city are developed and communicated 4.5 Communication with national knowledge platform is built and maintained	silo, so that the adaptation action is not synchronized. The project aiming a stronger vertical coordination and collaboration between national and local government in climate adaptation context to make the local adaptation action synchronized with adaptation plan at the higher level of government

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

I. This proposed program is consistent with the following institutional and policy framework and commitment at National Level:

1. First Nationally Determined Contributions (NDC) Republic of Indonesia

The document stated how the Government of Indonesia (GoI) will implement enhanced actions to study and map regional vulnerabilities as the basis of adaptation information system, and to strengthen institutional capacity and promulgation of climate change sensitive policies and regulations. It further emphasized the need for local capacity strengthening, improved knowledge management, convergent policy on climate change adaptation and disaster risks reduction, and also application of adaptive technology; in order to achieve the medium-term goal of Indonesia's climate change adaptation strategy which aiming to reduce risks on all development sectors. The proposed approach of this program is in line with the NDC document by focusing on mapping area vulnerability and risk, fostering public and institutional capacity building and also advocating relevant policy.

2. National Action Plan for Climate Change Adaptation (RAN-API)

Action Plan in RAN API is divided into 5 sectors with Resilience of Special Areas as one of the sectors. This particular sector is further divided into 2 sub-sectors, one of which is Sub-

sector of Coastal Area and Small Islands. There are 5 strategies developed for this sub-sector, which are:

- Life stability of coastal and small islands communities against climate change threat;
- Improvement of environmental quality of coastal areas and small islands;
- Development of adaptation structures in coastal areas and small islands;
- Adjustment of urban spatial plan by taking into account the risk of climate change;
- Development and optimization of research and information system on climate change in coastal areas and small islands.

This proposed program have tried to deliver the abovementioned strategies in the form of different project components and outputs, including developing and implementing adaptation plan, mainstreaming process into local development plan and spatial plan, and also developing knowledge management platform.

3. **Law No. 32 Year 2009 on Environmental Protection and Management**

Climate change issue was taken into account in 2 articles in Chapter 3 on The Development of Environmental Protection and Management Plan (RPPLH), which are:

- Article 10 clause (2); which stating that climate change is one of the factors that need to be considered during the development of RPPLH
- Article 10 clause (4); which stating that climate change adaptation and mitigation plan is among the contents of RPPLH

Considering that city and provincial level is obligated to be developed by city and provincial government, hence the proposed program will assist the development process by providing and advocating climate risk assessment results and the corresponding adaptation plan.

4. Law No. 16 Year 2016 on Ratification of Paris Agreement to The United Nations Framework Convention On Climate Change

The ratification shows GOI commitment to its people as well as international community to address climate change issue as a vulnerable archipelago to climate change impact. This proposed program support the ratification by aiming to address climate change issue at local level while at the same time aiming to foster a better institutional framework for climate change realm.

5. Government Regulation No. 2 Year 2015 on The National Midterm Development Plan (RPJMN) 2015 – 2019

In section 1.2.2-Climate Change and sub-section 1.2.2.1-Problems and strategic issues of the RPJMN, the decrease of Greenhouse Gas (GHG) emission (climate change mitigation) and improvement of communities' resilience (climate change adaptation) were stated. The development of resilience coastal villages that are aiming to be done by this program is in line with the RPJMN content.

6. **Presidential Decree No. 60 Year 2015 on Government Work Plan Year 2016**

The general objective for the 2016 Work Plan is to "Accelerate Infrastructure Development to Strengthen the Qualitative Development" by focusing on 6 leading sectors, which are: food sovereignty, energy and electrical sovereignty, maritime, industry, tourism, and also

innovation and technology. Hard and soft structures will be amongst the contents of adaptation plan that will be developed during this program. This plan thus will surely contribute in the acceleration of infrastructure development in the area that is aiming to increase the quality of life of the population.

7. Ministry of Environment and Forestry Regulation No. 33 Year 2016 on Guidance for the Development of Climate Change Adaptation Action

This regulation is the reference for national and local government to develop their climate change adaptation action plan and subsequently mainstreaming the plan into the corresponding development plan. The regulation states that identification of area/sector that will be the subject should be followed by climate vulnerability and risk assessment, prior to developing climate change adaptation actions and its implementation priorities. The actions then should be mainstreamed to the corresponding development plan, program and policy. General approach taken by this particular proposed program is referring to the abovementioned steps.

8. Ministry of Marine and Fisheries Regulation No. 23 Year 2016 on Management Plan of Coastal Area and Small Islands

This particular regulation was developed as a means to foster cross-level and cross-sector synergy in managing coastal area and small islands. The regulation states that the relevant strategic plan should consist of cross-sector policy directive for the dedicated development plan area through the development of objectives, targets, and broader strategy, as well as implementation targets that equipped with appropriate indicators to monitor the plan. It further states that the management plan should contain policy framework, procedure and responsibilities in the event of decision-making process among stakeholders regarding agreement on resource use or development activity in the designated zone. The proposed program supports the regulation by also fostering cross-level and cross-sector coordination in its approach; involving not only government actors but also non-government institutions including lay public, driving multi-stakeholder involvement and coordination at any steps possible.

9. **Vulnerability Index Data Information System (2015) developed by Adaptation Directorate, Directorate General of Climate Change Control, Ministry of Environment and Forestry**

Preliminary assessment by utilizing standardized data in SIDIK shows that there are 15 vulnerable villages located in the coastal area of Central Java Province (including Pekalongan City); where some of them are severely affected by sea level rise. The selection of Pekalongan City coastal area as the geographical scope is in line with this preliminary assessment.

II. This proposed program is also consistent with the following institutional and policy framework and commitment at Provincial and City Level:

1. Central Java Province Local Regulation No. 9 Year 2009 on Management of Coastal Area and Small Islands

2. **Central Java Province Local Regulation No. 4 Year 2014 on 2014-2034 Zoning Plan of Central Java Province Coastal Area and Small Islands (RZWP3K)**
3. **Central Java Province Local Regulation No. 5 Year 2014 on 2013-2018 Mid-term Development Plan (RPJMD) of Central Java Province**
4. **Central Java Governor Regulation No. 1 Year 2011 on Strategic Plan of Central Java Province Coastal Area and Small Islands**

The four abovementioned provincial regulation contains issues related to development plan on coastal and small islands areas of Central Java Province which includes Pekalongan City. The Central Java Province RPJMD further emphasizes significant threat posed by climate change phenomena to the area from increasing sea temperature and sea level. The document further categorized Pekalongan City as an area that is prone to climate-related disaster, including flood, drought, tidal wave and abrasion. Furthermore, the RZWP3K document assigns Pekalongan City as one of the centre of activity at regional scale as well as the minapolitan area (fishery centre). Measures taken within this proposed program is aiming to address the aforementioned climate-related issues in Pekalongan City coastal area by employing hard and soft structure interventions to ensure its effective role as one of the regional centre of activity and minapolitan area.

5. **Pekalongan City Local Regulation No. 4 Year 2010 on Zoning Plan of Pekalongan City Coastal Area (RZWP)**

RZWP document is a long-term planning document that is aiming to create a balance between development needs and conservation efforts by creating a sound planning, management and development of coastal area. Capacity building and community-based planning are amongst fundamental principle for this document. The geographical scope of this RZWP is 6 villages located within Pekalongan Utara sub-district that directly interfacing Java Sea or affected by activities conducted at coastal area and the sea. These 6 villages are among 9 villages that are selected as the geographical scope for this proposed program, and thus the program is consistent with the aforementioned Local Regulation.

6. **Pekalongan City Local Regulation No. 4 Year 2016 on 2016-2021 Mid-Term Development Plan (RPJMD) of Pekalongan City**

Improvement of environmental carrying capacity and infrastructure is among strategic issues stated in the RPJMD document, in which flash flood and coastal flood were acknowledged as issues that driven the need for the improvement. The local government is targeting a reduction of inundated area to 37.57% in 2018 by building and strengthening flood (both flash and coastal flood) prevention and control infrastructure. In the same year, the government is also targeting 37% of the generated solid waste to be managed at 3R facilities; reducing the volume that being disposed at drainage channel and/or river. The proposed program will support this target by developing flood prevention and control plan, as well as build the chosen and feasible infrastructure that deemed as suitable to reduce inundation area.

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.

1. Presidential Regulation No. 38 Year 2015 on Public Private Partnership (PPP)

Issued on 20 March 2015, the regulation revokes and replaces the Presidential Regulation No. 67 Year 2005. This regulation strengthens the role of GoI in providing Infrastructure Guarantee, and thus increasing the creditworthiness/bankability of PPP infrastructure; developing sound procedures for granting security over project finance; reducing financial risk for both investor and project proponent. GoI is continually driving the PPP scheme as the backbone for infrastructure financing.

Among infrastructure that can use PPP scheme are water resource and irrigation infrastructure and also waste management infrastructure. For the proposed program, construction of water resource and waste management infrastructure are potentially among the adaptation options. Private sector involvement is urged in this proposed program, which will be initiated by exploring the potential contribution of private sector to climate change adaptation actions. This will be followed by a series of multi-stakeholder discussion to assess and reach an agreement on innovative adaptation measures for coastal area. Financing scheme for these measures will take account of the content of the abovementioned Presidential Regulation.

2. Ministry of Environment and Forestry Regulation No. 33 Year 2016 on Guidance for the Development of Climate Change Adaptation Action

Approach for the proposed program is designed by following steps elaborated in the particular regulation; from area and sector identification, developing climate risk assessment up to developing the corresponding adaptation plan and mainstreaming process to the relevant development and spatial plan, program and policy. Adjustment will be done during the development process, by considering local characteristics that has not been included in the regulation.

3. Ministry of Marine and Fisheries Regulation No. 16 Year 2008 on Management Plan of Coastal Area and Small Islands

According to Chapter 2 Article 2 of the regulation, this particular regulation is the norm, standard, and guidance for local governments (provincial and district levels) to develop their areas management plan of coastal area and small islands. Steps taken in this proposed program have considered and been in line with the planning principle elaborated in the regulation, including:

- In accordance with and/or complementing the local development plan system
- Integrate different activities of diverse stakeholders, including private sector and community; as well as activities relevant to both land and sea ecosystem
- Undertaken in accordance with the area's characteristics and potential
- Involvement of local community and other stakeholders

The approach and methodology for this proposed program are also designed by taking into consideration the abovementioned principles. Activities and planning process will be undertaken in line with the applied development planning system at local, provincial and national level; with multi-stakeholders involvement at the core by involving lay public in the

planning process and private sector in the future stage to create public-private partnership in implementing adaptation actions.

4. Strategic Environmental Assessment as Compulsory Assessment in Spatial Plan and Development Plan

Climate vulnerability and risk assessment is one of 6 analysis options needed for the development of Strategic Environmental Assessment (SEA); in which the SEA itself is a compulsory assessment in the development and/or evaluation process of Spatial Plan and Development Plan. To date, there is no standardized step in specific manner (only general approach available) to develop the SEA; the proponent could use only the CRA result to develop SEA and subsequently benchmark the contents of the proposed plan with the CRA. In advocating the CRA result to be taken into consideration in SEA, the proposed program will follow the nationally standardized steps of SEA, from issue identification to adjustment recommendation for the benchmarked plan.

Meanwhile for Environmental Impact Assessment (EIA), the particular assessment will be done if the selected adaptation option (in form of hard structure) falls under the category of project that needs EIA; otherwise EIA is not compulsory to be undertaken. Each of the selected adaptation options will be screened utilizing EIA project list. Environmental Rehabilitation will be required if the activities contaminate the area.

The development of climate risk assessment, SEA and EIA within the program will ensure that environmental and social impacts and risks are being considered, assessed and addressed throughout the project. As an initial assessment, this proposal document also contains initial findings on environmental and social risks from the program, which elaborated on Part II - Section K.

5. Ministry of Public Works and Housing Construction and Development Standard, and Indonesia Building Codes

Hard structure that will be constructed as part of the proposed program in future time will be ensure to conform with building codes, especially since conformity to the codes is the primary requirements for granting the building license. For hard structure that serve as public facility, the construction and development will be ensured to follow infrastructure construction and development standard from Ministry of Public Works and Housing.

6. Water Supply Regulatory Framework

Water supply regulatory framework is also the compliance standard to be fulfilled. Urban water supply is a highly regulated business in Indonesia; a multitude of regulations on urban water supply are issued by different governmental institutions at different levels. Any intervention project under the proposed program will be ensured to meet the regulatory framework, both applied at national and local level.

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

Pekalongan City had collaborated with external parties in climate change issue. In 2010, this city was among 8 pilot cities in Central and East Java Province that implement Integrated

Climate Action approach that was developed by PAKLIM GIZ and ICLEI Oceania. Based on this approach, the city was able to develop Climate Risk and Greenhouse Gas Emission Profile; in which the risk profile methodology employs a more qualitative approach, with participants perception became the basis for the profile. Following the profile, the city with assistance from PAKLIM GIZ thus developed Integrated City Climate Strategy which outlining climate mitigation and adaptation strategy that detailed into corresponding actions. Several actions in ICCS had been inserted into RPJMD of Pekalongan City, receiving funding from local government budget. PAKLIM GIZ does not provide further funding assistance for the city after ICCS development.

Other external party that works closely in Pekalongan City is Mercy Corps Indonesia (MCI), where one of the organization's programs is run in the said city, which is Asian Cities Climate Change Resilience Network (ACCCRN). This program is aiming to build climate change resilience knowledge in the city. Pekalongan City was selected as ACCCRN Replication City, and the program was commenced in 2013. ACCCRN in Pekalongan City was focusing on capacity building for community and local government on climate change issue. This capacity building process includes not only series of training and discussion in the city, but also involving Pekalongan City local officials and practitioners in different knowledge sharing event outside Pekalongan. Yet the trainings and discussions conducted were none on the topic of quantitative climate risk assessment. Starting last year, ACCCRN is in its closing phase, hence there is no more funding assistance given to the city.

Furthermore, at a higher government level, Central Java Province had work closely with Japan International Cooperation Agency (JICA), specifically in implementing Project of Capacity Development for Climate Change Strategies in Indonesia (2010-2015). The main activity from the collaboration was mainstreaming adaptation/mitigation of climate change in National Development Planning, with Central Java as part of the scope. JICA had also developed study on Integrating Climate Change Adaptation into Spatial Planning Policies at 2 pilot sites which are 1) Java Island and 2) South Sulawesi (West & South coastal area, Selayar). Among the output of the study is recommendation on integration mechanism of adaptation plan into spatial planning. The program is completed in 2015, hence the proposed will not overlap with JICA funding.

The proposed program will fill the gaps that have not been addressed by external parties that had been working in Pekalongan City, as well as utilizing and leveraging the existing knowledge built by those parties to build a resilience coastal area. Similar approach will be taken for the case with Central Java Province, where this proposed program will fill the gaps from the previous project to create sound plan, program, and policy on climate adaptation and climate resilience issue in coastal area. Further assessment on the gaps will be done early on the program preparation stage.

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

Documentation and dissemination of information and knowledge is of essential within this proposed program, not only information on climate change and coastal resilience material,

but also approach taken as part of the program. This latter information become important in the event of other area would like to replicate the program in future time. Accordingly, knowledge management became one of the components of this proposed program.

The knowledge management component will contain activities that capture and disseminate both tacit and intrinsic knowledge. For tacit knowledge, climate change training and knowledge exchange activities will serve as information and experience sharing media. These such forums will facilitate learning and co-creation of opportunities for various stakeholders. The intrinsic knowledge will be captured through more traditional methods, by conducting research that can be disseminated to government, practitioners, academic community and also general public. The output of the research could be both in form of knowledge product or advocacy material.

One knowledge product that will be the output for the proposed program is Handbook on SIDIK for Coastal Risk Assessment that can be used by local government, NGOs and Civil Society Organizations. The handbook development will be based on climate risk assessment process conducted at city level. Related to advocacy material, the research will be the basis for developing policy briefs that highlight the shortcomings in national policy, fiscal and other institutional framework in developing a resilience coastal city.

The program's knowledge management product will be disseminated not only to local Pekalongan City and Central Java Province area, but also broader community. For Pekalongan City dissemination, the project management team will collaborate with the existing knowledge sharing platform, the Mangrove Information Centre (Pusat Informasi Mangrove/PIM). At the moment, PIM is focusing only on mangrove issue, however preliminary discussion with PIM shows that the organization is highly willing to broaden their scope to incorporate climate change resilience issue.

Knowledge dissemination tools that will be utilized in the proposed program encompassing regular newsletter, social media platform and knowledge board (contain information on climate-related issue as well as program progress) in community centre or village office.

While for wider area dissemination, particularly at national level, the project management team will actively engage with the existing national climate change platform, the Indonesia Climate Alliance (ICA). ICA member consists of different national level organizations that share the same interest in climate change issue. This collaboration will assist the team to share experience from local context and elevate the issue at national level, as well as advocating the developed policy brief.

Additionally, the proposed program also has Monitoring and Evaluation Unit as part of the project management team. This unit responsible for knowledge management and sharing within project team member, organizing knowledge sharing event and outreach, and conducting pre and post-test survey on given interventions for evaluation purpose. All those activities will be documented, reported and made available.

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 of the Adaptation Fund

Stakeholder consulted and outcomes

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
A	**National Level**			
1	**ICCTF** (Indonesia Climate Change Trust Fund); **RAN-API** (National Action Plan –Climate Change Adaptation) **Secretariate**; **Thamrin School**; **WALHI** (Friends of the Earth – Indonesia); **IESR** (Institute for Essential Services Reform); **ICA** (Indonesia Climate Alliance) – 20/04/16 and 02/05/16	•To get input from institutions and CSOs who have been heavily involved in the climate change issues and the development of climate change strategies in Indonesia, what type of climate change adaptation proposal concept that Kemitraan should be building. •To gain more knowledge of the vast working area and referring to the RAN-API framework from the government of Indonesia, which cluster of climate change adaptation should make the priority for work in Indonesia. •To identify the thematic and locations area(s) to focus on for climate change adaptation.	•RAN-API is undergoing second review and its monitoring and evaluation framework is in development. •Suggests that the climate change adaptation activities that should be proposed through AF funding, should be directed towards small islands areas. •Food security is also a crucial issue, especially for certain parts in Indonesia namely the Eastern parts. •Activites should not be only directed towards agriculture but also fishing, especially providing training of correct fishing for fishermen communities.	•Based on the consultations, Kemitraan will build the proposal concept under the Small Islands and Coastal Climate Resilience thematic area . •Will urgently request audience with MoEF and MoF in order to receive statement on who holds the NDA status.
2	**Director for Climate Change Adaptation** of the Directorate General of Climate Change	•To gain input from the MoEF on the type of climate change adaptation proposal concept that	•Issues of Health can also be raised in the Coastal areas. •There are 15 areas that are considered as	•Should focus in one of the 15 areas/locations priorities in RAN API •Use Sidik for climate risk assessment

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
	Control at the **Ministry of Environment and Forestry** – 27/04/16:	Kemitraan should be building. •To receive information on who holds the Adaptation Fund NDA status in Indonesia.	priority for high climate risk (stated in RAN API, if Kemitraan can help in building the climate change adaptation plan in those areas that would be a welcomed initiative. •Use SIDDIK for data collection. •Received info that WFP has been deemed as fail to perform their Adaptation Fund program in Lombok, West Nusa Tenggara, Indonesia.	
3	**Deputy Director for International Cooperation and Climate Finance** at the **Ministry of Finance** – 31/05/16:	•To inform MoF about the Adaptation Fund NIE accreditated status received by Kemitraan, and the consultation process for proposal concept writing. •To receive information on who holds the Adaptation Fund NDA status in Indonesia.	•MoF seems to think that the NDA should be with them however.	•MoF will later confirm about the NDA status with MoEF.
4	**Director-General** for Directorate General of Climate Change Control at the **Ministry of Environment and Forestry** -29/07/16:	•To receive endorsement letter from the Director-General for Directorate General of Climate Change Control at the Ministry of Environment and Forestry, as the Adaptation Fund NDA in Indonesia.	•Ms. Masripatin has read the brief of the then proposal concept for the project Kemitraan intends to propose to Adaptation Fund, and she gave her approval.	•Director-General for Directorate General of Climate Change Control at the Ministry of Environment and Forestry gave the endorsement letter to Kemitraan to be submitted along with the proposal concept to Adaptation Fund.
5	**Research Associate** for Marine Research Center, Agency for Marine	•To gain input from MoMF on the climate change adaptation	•MoMF Research Center is currently working together with	•In creating or implementing adaptation programs, it

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
	& Fisheries Research & Human Resource at the **Ministry of Marine & Fisheries** – 24/02/17:	proposal concept that Kemitraan is currently writing, especially on the program currently developed, adaptation strategies, and problem solutions. •To receive information on MoMF related activities in the areas of climate change adaptation.	BAPPENAS to create Indonesian Marine Health Index. •In the coastal areas might be important to focus into skills and other initiatives development for Fishermen; Sea products cultivator; and Salt cultivation as income source and livelihood improvement. •When conducting feasibility study, is important to invite local religious leaders/institutions, because they have strong influence in mobilizing the community. •	is important to include the geographical condition of the project location, especially when the program conducted has a lot to do with using local natural resources in improving the local livelihood. •The program that is to be implemented should be based on accountable field survey and directed towards generating alternative income and economic improvement for the local community in the coastal areas.
B	**Province Level**			
1	**BAPPEDA** (Local Development Planning Agency) of Central Java Province - 24/03/17:	•Gain information on Provincial plan in resolving the serious condition in Pekalongan, notably with the river infrastructure since the authority regarding river diversion etc., falls under the provincial geovernment. •To get data and information about coastal zone management areas in Central Java and Pekalongan. •To have a mutual	•Confirmation on reclamation plan to be implemented. •The coastal zoning plan has just finished, a result of work by Marine and Fishery Agency and BAPPEDA of Central Java. •Hope for up-scaling the Kemitraan project in Pekalongan in other parts surrounding it.	•Kemitraan received substantial data from BAPPEDA of Semarang Province and commitmet to support Coastal resilience action in Pekalongan City

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
		understanding on what activities that Kemitraan should conduct in order to compliment the activities done by BAPPEDA Semarang province in Pekalongan.		
2	**Head of Environment Agency** of Central Java Province - 24/03/17:	•To inform about Kemitraan's intention in having Pekalongan as the project location for Kemitraan's climate change adaptation project, funded by Adaptation fund.	•Briefing on the consultation process done in Pekalongan with the Mayor of Pekalongan and multi-stakeholders; with the BAPPEDA of Semarang province. •A description on the type of project that is planned to be implemented in Pekalongan, as a result of multi-stakeholders consultation.	•Head of Environment Agency of Semarang province is well informed and support Kemitraan's climate change adaptation proposal concept to Adaptation Fund on focusing coastal city resilience in Pekalongan City
C	**City Level**			
1	**Head of BAPPEDA** (Local Development Planning Agency) **in Pekalongan** – 20/03/17	•To inform the government of Pekalongan about Kemitraan's intention in having the town as the project location for Kemitraan's climate change adaptation project, funded by Adaptation fund. •To gain the government of Pekalongan's support and approval for Kemitraan contacting as well as visiting multi-stakeholders in Pekalongan for data collection.	•Government of Pekalongan understands the Kemitraan's climate change adaptation concept proposal and provides official support for submitting the proposal to the Adaptation Fund. •The BAPPEDA Pekalongan aided Kemitraan in contacting and inviting the multi-stakeholders to attend the FGD.	•Government of Pekalongan's endorsement for Kemitraan's concept proposal and their support for the project development and implementation. •Bappeda suggest kemitraan can focusing on nine climate vulnerables villages in Pekalongan City

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
		•To get a formal endorsement from the government of Pekalongan for Kemitraan's concept proposal.		
2	**Former Mayor of Pekalongan** (period of 2005-2010 and 2010-2015) – 20/03/17:	•To inform about Kemitraan's intention in having the town as the project location for Kemitraan's climate change adaptation project, funded by Adaptation fund. •To gain information on the past initiatives done in mitigating the climate change related in Pekalongan.	•Past initiatives avoided any nature reconstruction activities (reclamation), tend to sort for building geotube, mangrove restoration (with the intention to also develop alternative income from the habitat through crab, Panami shrimp cultivation). •Other activities involved creating rivers to collect the water from the flood; also by channelling the flow of the floods into the selected rivers; relocation of 40 – 60 households who used to live in the riverbanks;	•For mangrove restoration, there are some issues related to land ownership by community as well as the Pekalongan District. •Even though building embankments are needed but not exactly required. Aids should be directed mostly towards geotube construction, ponds revitalization programs. •Mr. Ahmad (former mayor) assisted in notifying Mayor of Pekalongan about Kemitraan's project concept intention, as well as other officials in the different institutions.
3	**Multi-stakeholders Focus Group Discussion** for Adaptation Fund in Pekalongan District – 21/03/17	•To inform the multi-stakeholders in Pekalongan about Kemitraan's intention in having the town as the project location for Kemitraan's climate change adaptation project, funded by Adaptation fund. •To get necessary contacts in order to gain access for data collection.	•Gained information on past and current programs undertaken by different institutions: Pekalongan was the first town issued a local regulation on coastal area management but the content was more directed towards natural disaster risk management. •Gained comments and inputs on the current	•The FGD had succeded in giving Kemitraan contacts to gain access to various data of Pekalongan. •The acknowledgement of Kemitraan's climate change adaptation project concept development in Pekalongan by the Mayor of Pekalongan at the FGD, has given additional boost in

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
			conditions faced by Pekalongan, for instance: the national program of "Cities Without Slums" that was not making so much success; one of the causes of tidal floods and the high floodwaters was also due to poor infrastructure, and lack of initiatives from the ponds farmers to build water tunnels; the whole drainage system of Pekalongan was designed as irrigation system and not as water tunnels. •Towards the end of the FGD, the Mayor of Pekalongan stated the importance of bottom-up approach in his administration in order to get all the neighborhoods in Pekalongan to understand the local government vision and mission through 2021. He mentions the importance for geographical area mapping and finding solution to the tidal flood spectre problem. In 2017 the government has allocated 30 Million rupiahs to tackle the problem, which 20 Million allocation comes from local government budget, and the	gaining support from the multi-stakeholders.

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
			remaining 10 Million comes from provincial government budget.	
4	**Mayor of Pekalongan** (period of 2015-2020) – 21/03/17:	•To gain a formal endorsement from the Mayor of Pekalongan for Kemitraan's concept proposal.	•Mayor of Pekalongan understands the Kemitraan's climate change adaptation concept proposal and provides official support for submitting the proposal to the Adaptation Fund.	•Mayor of Pekalongan's endorsement for Kemitraan's concept proposal and his support for the project development and implementation.
5	**Regional Secretary of Pekalongan** – 21/03/17:	•To gain information of the past and current programs related to the climate change adaptation activities in Pekalongan. •To get feedback on priority locations and types of climate change adaptation activities for Kemitraan's concept proposal development.	•Received information about the climate change adaptation and mitigation programs and activities that have been and will be held by, or with support, of the government of Pekalongan. •Received substantial information and geographic priorities for the project;	•Activities to be proposed in Kemitraan's concept proposal should be synergized with programs and activities that are to be implemented by the local government of Pekalongan.
6	**BINTARI** (Bina Karta Lestari) **Foundation** – **CSO** – 20/03/17: **Amalia**	•To gain information on the impact of climate change in Pekalongan; the activities already carried out, both by the government and CSOs; the mitigation activities; the condition of the effected community in Pekalongan; the nature of cooperation with the local and provincial government.	•Based on observation, from 2000 – 2016, with the worst being 2008 onwards, the water from the sea has penetrated deep into the living areas of some heavily effected villages. •Using Bandengan village, as the worst effected village as an example, starting from 2000 the water from the wells were no longer drinkeable. •There are houses which are permanently	•Many more in the community actually have the desire to learn how to cultivate seawed and fish but request initial fund and continous guidance from any able institutions. •It is imperative to get contacts from the FGD, in order to get access to collect various of required data. •Very important to document the real-life condition in

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
			flooded; houses that had to make additional higher modification to the based of the building which then resulted in the shorter and smaller doors and windows; toilets in the house which could no longer be used; •They did not have many alternatives to move due to the fact that many of the men in the community cannot abandon their livelihood. As a consequence, those who did not move and have the inside of their houses flooded had to adapt by wearing boots while inside the house and even sleep in the flood. •The health effect on the condition is the increase in diarrhea and dermatitis related illnesses. •Those who used to be rice farmers now switched to *wareng* seawed and fish pond. There were those who used to own lands for farming now had to revert on being paid workers for fish ponds and as construction workers, pedicab drivers, factory workers, fishermen.	Bandengan and other effected villages. •The community in Bandengan village should have received aid from the government for relocation but no such assistance ever been done.
7	**Local Disaster**	•To gain information of	•Received information	•A clearer wholesome

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
	Management Agency of Pekalongan - 22/03/17	the disaster vulnerability of Pekalongan.	about the condition and history of disaster in Pekalongan based on Disaster Risk Map.	image of existing and potential climate and development related catastrophe in Pekalongan.
8	**Head of Environment Agency of Pekalongan** - 22/03/17	•To gain information on the status of Pekalongan's working group on climate change and adaptation strategies and mitigation implementation in Pekalongan.	•The understanding of importance to enable the working group of climate change in Pekalongan. •Proposed some adaptation activities to be included in the Kemitraan concept proposal.	•The Environment Agency's support for Kemitraan to submit the concept proposal to the Adaptation Fund.
9	**Public Work Agency of Pekalongan** – 23/03/17	•To gain information of the past and current programs carried out related to the climate change adaptation activities, in particular tidal flood problem mitigation, in Pekalongan.	•In attempt to resolve the tidal flood issues, the PWA in Pekalongan mainly focused their activities in bettering infrastructure by building drainage system. •For Bandengan they are planning on building a dam that hopefully can start in 2018. •The Northern areas of Pekalongan are the ones heavily effected by the tidal floods. •They are looking into solving the problem of tidal floods without having to cause other environmental damage resulted from taking boulders from the sea banks. •There has been talk about implementing reclamation as a	•Public works Agency ask kemitraan project concept will work at the activity level, concrete actions and the policy level. •Kemitraan received substantial data.

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
			strategy. •PWA of Pekalongan has cooperated with the research unit of LIPI (Indonesia Institute of Science) for trying mitigate the tidal floods problem.	
D	**Village Level**			
1	**Leader of Farmers Group "Tani Makmur"** in Bandengan Village - 21/03/17	•To gain information on the condition of social, cultural and community institutions as well as the impact of a tidal flood disaster in the village.	•The clearer picture of the condition of the village areas effected by tidal flood. •Gathered information on village profiles, groups and community conditions, of which the stories told by the farmer pretty much corroborated the earlier information received from BINTARI. •Information on community activities plan in adapting to the tidal flood disaster.	•Direct observation on the areas of Bandengan village effected by tidal flood disaster. •Was shown a business development proposal written by the farmers group for fish and seawed cultivation in Bandengan village. •Bandengan community's support for Kemitraan's planned activities for the village.
2	**Community group of Degayu Village** - 22/03/17	•To gain information on the condition of social, cultural and community institutions as well as the impact of a tidal flood disaster in the village.	•The clearer picture of the condition of the village areas effected by tidal flood. •Gathered information on village profiles, groups and community conditions. •Information on community activities plan in adapting to the tidal flood disaster.	•Direct observation on the areas of Degayu village effected by tidal flood disaster. •Degayu community's support for Kemitraan's planned activities for the village.
3	**Head of Tirto Village and the Community group** - 23/03/17:	•To gain information on the condition of social, cultural and community institutions	•The community income mainly come from Batik (Batik artists) which are mostly home industry,	•Direct observation on the areas of Tirto Village effected by tidal flood disaster.

No.	Stakeholder	Consultation Objective	Outcome	Conclusion
		as well as the impact of a tidal flood disaster in the village.	and factory workers. •Like Bandengan, they lost their rice farming to tidal floods. •Whenever the tidal floods occur they cannot continue with their livelihood, they had to wait until it subsided, which could take up to weeks. •One of the source of tidal floods was the river Bremi that goes through the village, and the shallow structure of the river also cause the puddles however, pumping out the water has not always been effective, especially when water hyacinth populate the river too much.	•Tirto community's support for Kemitraan's planned activities for the village.

Consultative meeting with "Tani Makmur" Farmer's group

Consultative meeting with Bappeda Pekalongan City

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

Component	Baseline	Additional (with AF)
Village Level	• Local actors have limited capacity to prepare for and respond to climate change and natural hazards • The most vulnerable areas and groups receive limited infrastructure support and no targeted object to receive resilience building support because of limited capacity and resources.	• Local actors and communities are enabled to prepare for and respond to climate change and natural hazards • The vulnerable groups in coastal areas are targeted and appropriate resilience measures
City Level	• Lack of capacity of the local governments officer and related stakeholders to lead climate change adaptation and disaster risk reduction plan • The most vulnerable communities are not targeted/reached	• Local governments and related stakeholders can lead climate change adaptation and disaster risk reduction plan • The most vulnerable communities are the main beneficiaries of the project
Province Level	• Lacking capacity of provincial government officer to put forward climate change adaptation issue in development plan as well as incapability to lead by example in mainstreaming the issue	• Provincial government officers have the capacity to promote climate change adaptation action plan and mainstream the said plan into development plan, setting out example and support all cities and regencies within its administrative region to do the same
National Level	• SIDIK unable to appropriately and accurately assess the	• SIDIK is improved and able to appropriately assess vulnerability and

Component	Baseline	Additional (with AF)
	vulnerability and risk of coastal region • Adaptation programs planned at ministry level (national level) often incompatible with the needs of adaptation actions at city/local level	risk of area that has coastal characteristics • Ministries and local government collaborate and cooperate to implement the appropriate adaptation actions

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

As mentioned in the previous section of this proposal, this program is aiming to address multifaceted issue in coastal area, specifically those related to climate change impact; fostering coastal resilience building in the area. Seeing the considerable benefit trying to be achieved by the program, it is thus important to ensure the sustainability of the program in order to spread out the benefit to wider community. Approach taken for this program rely heavily on stakeholders involvement and collaboration, hence the derived activities for those two aspects are designed to ensure the program's sustainability. Ownership is one notion that could warrant sustainability. A sense of ownership would drive a person to maintain the continuity of something they own. For the purpose of this program, sense of ownership will be built gradually through high involvement of the stakeholders from the beginning of the program by establishing working group that is legalized, continued with providing series of trainings and workshops, and also actively involving them in risk assessment and action plan development process. Their support and commitment will not be built instantly, but in incremental manner. It is expected that with the increasing knowledge on the issue, their level of support and commitment will simultaneously increasing; especially during the implementation stage of adaptation plan, since this activity will directly affect their life in tangible manner. Once they experience the benefit of the project, their sense of ownership will be increased; driving them to maintain the continuation of the plan.

Multi-stakeholder involvement and knowledge platform engagement within the program is also designed to allow program sustainability. It enables knowledge to be disseminated to diverse actors, and not only one single entity. Allowing projects and lessons learned to be disseminated, replicated and even expanded. The more people take ownership, the more sustainable the program will be.

Other means to ensure program sustainability rely on government involvement. Aside from community, this program place government institutions as the core subject. Facilitating the government officials to properly develop and mainstream climate strategy and adaptation action into local development plan is part of the sustainability design. A successful mainstreaming process will provide the adaptation actions with budget allocation, not only funding for initial construction, but also regular maintenance. This means that the activities in the action will be able to continue even after the AF-funded program period ended.

All in all, this program believed that maintaining the program sustainability cannot rely solely on funding allocation, but also involving stakeholders to take part in the maintenance and dissemination stage. Pursuing funding allocation is somewhat a futile effort if not complemented by the existence of someone who protects and preserves the results.

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

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	Required	The program is designed in compliance with all applicable national, regional and local laws. Yet, additional permit and compulsory assessment still need to be obtained and undertaken for specific adaptation actions that will be implemented in future time within the program timeframe; particularly those related to large-scale infrastructure development or hard structure development at coastal area. If the chosen adaptation options categorized under the aforementioned infrastructure character, the relevant permit and assessment process will be ensured to be done accordingly. The permit and assessment needed have been stated in Part II, Section E. Risk Category C
Access and Equity	Required	In the context of participatory approach, women groups will be involved as the training and discussion forum participants, including during participatory risk assessment process. To further disseminate knowledge and other information related to the program, knowledge board will be built in community centre or village office; making it accessible to all community Further assessment needs to be done during planning stage of adaptation action implementation, in terms of role and responsibilities and also site selection; to ensure fair role and responsibilities among stakeholders (including community member), and also site location that could benefit wider community Risk Category C
Marginalized and Vulnerable Groups	Required	The proposed program will employ participatory approach, particularly at local level, by involving women groups and community representative from different socio-economic level during training, discussion forum, risk assessment process; as well as informal discussion process. Further assessment needs to be done during prioritization process for the adaptation actions, where pro-poor actions (action that could benefit those who have the least economic adaptive capacity but has a high exposure to climate risk) should be among the priority. Planning for the actions (the site location and structural design for hard structure) would also take account of elderly

PART III: IMPLEMENTATION ARRANGEMENTS

A. Adequacy of project/programme management arrangements, in compliance with gender policy

The proposed program will also have Steering Committee that is responsible in ensuring that the means and mechanisms are in place to run the program effectively to be able to achieve the desired outcomes, while also representing the voice of stakeholders that do not directly sit on the committee. Steering committee members for this particular program are encompassing National Government Institutions, District/City Government, Village Government and Civil Society Organizations. National Government Institutions that will be involved in the Steering Committee are:

1. Office of the Presidential Staff
2. Directorate of Adaptation, Directorate General of Climate Change Control, Ministry of Environment and Forestry; as the leading ministry for climate change issue
3. Directorate Maritime and Fisheries Development and Research Agency, Ministry of Maritime and Fisheries; as the leading ministry for coastal and small island issue

To implement the program, a Project Management Unit (PMU) will be established with main responsibility of implementing different component under the proposed program. Figure 8 will illustrate the Project Management Structure of the PMU. Where the PMU responsible in managing and implementing the program as a whole, the executing entity will be responsible in assisting the PMU and executing individual activity set by the PMU; including implementing the selected adaptation options.

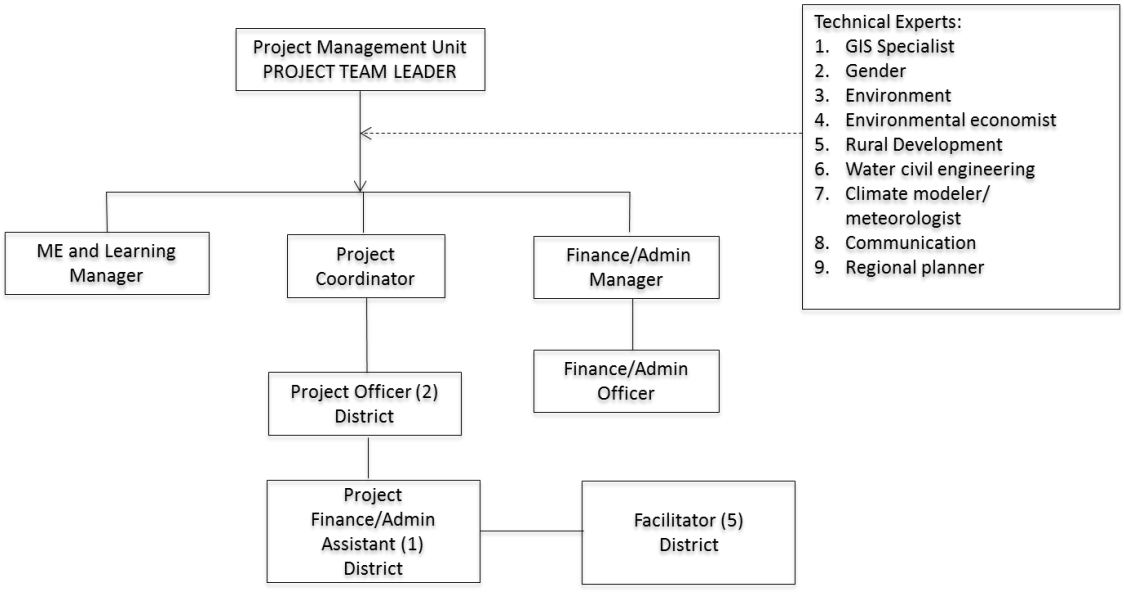

Figure 8. Project Management Structure

The PMU will be led by Project Team Leader that responsible to the NIE. In delivering the works, the Team Leader will be assisted by Monitoring, Evaluation and Learning Manager, Project Coordinator and Finance Manager. The Monitoring, Evaluation and Learning (MEL) Manager is responsible for developing mechanism for knowledge management (including management for cross-cutting information), ensuring that information collected from monitoring activity is reflected upon and utilized to continually improve the ongoing program, providing technical assistance on M&E for each programmatic sector, and also implementing internal M&E and ICT capacity building that targeting members of the PMU to promote a culture of learning and knowledge management internally.

The Project Coordinator is responsible to make sure that project activities in the targeted area are all in place. The Project Officer is responsible for the implementation of activities in each of the targeted area. The Project Officer will report to the Project Coordinator and will be assisted by Project Finance/Admin Assistants that will deal with administration- and finance-related issues in local level. The Finance Manager is responsible for finance-related matters within the overall project activities. The manager will be assisted by Finance/Admin Officer that will deal with finance-related issues at city level.

In conducting their work, PMU will receive technical assistance from a group of experts from different background and expertise that encompasses: GIS, gender, environment, environmental economy, rural development, water civil engineering, climate model/meteorology, communication and also regional planning. These experts will provide input for technical matter within the program.

B. Describe the measures for financial and project / programme risk management.

The initial identification of management and program risks is summarized under below risk matrix. A more detail and comprehensive risk assessment and its mitigation plan will be further elaborated during the full proposal development phase.

Identified Risks	Risk Level	Mitigation Measures
Institutional Risk: Potential lack of support from the national and provincial government since climate change issue is not the strategic issue and development priority at both government level at this period	Low	• Decision making mechanism of the Steering Committee will be designed as will not be dependent to a single entity • Build partnership with national platform to advocate the issue at national level by utilizing policy brief built upon practical experience at the program location • Periodic report and coordination with the provincial government officials, including involving them in issues that related to provincial government responsibilities at city scope

Identified Risks	Risk Level	Mitigation Measures
Institutional Risk: Weak horizontal coordination at national and city level, and also continually changing representatives in Steering Committee and Working Group (City and Community) could potentially delay the program time frame	Medium	• NIE to hold regular coordination meetings at national level • Reactivating city working group to foster city level coordination • Schedule a regular coordination meeting of city and community working group • Member of Steering Committee will be appointed by name (representative of the institutions), instead of only appointing the institutions • Member of City and Community Working Group will be appointed by name, and legalized by Mayor's Letter of Decree to strengthen the team's roles and responsibilities
Institutional Risk: 2019 general election momentum potentially shift the focus of key actor at national level, particularly at the end of program period	Low	Project scheduling will be made so that by the time the national level is at 'general election mode', the project is in report finalization stage, and does not need critical input and supervision from the national level. Extensive program monitoring and supervision will be undertaken to ensure the schedule is implemented in timely manner
Social Risk: Low level of support and acceptance from the community could impede participatory approach that became the core of this program, causing several of the adaptation options become ineffective or not on-target, and threatening the sustainability of the actions at post-program period	Medium	• Build a strong rapport with local community champion and leader by engaging in informal discussion early in the preparation stage • Establish village working group with member encompassing community leader, representative from different line of work, women group, CSO (if any) and youth group; in which the member will be the focal point in disseminating relevant information to other community member • Regular training / discussion forum / coordination meeting to discuss climate change knowledge and program progress, as well as to build their sense of ownership to the program • Training and discussion will be designed to be sensitive to the needs and general character of the

Identified Risks	Risk Level	Mitigation Measures
		participant, to ensure maximum participation • Utilizing knowledge board effectively to inform the wider community
Social Risk : Economic benefits from the program (adaptation actions that could produce larger economic benefits) may garner more attention from the stakeholders in comparison to its social and environmental benefits	Low	• Mainstream environmental and social safeguarding since early in the preparation stage by embedding sustainable development context • During inception training, will put emphasis on benefits on each aspect (environmental, social, economic) that could be gained by building coastal resilience; including how each aspect interlink with each other
Financial Risk: Delay in program implementation may delay in financial disbursement	Medium	• Close monitoring for project implementation and reporting, and provide immediate feed-back on problem faced by the executing institutions • Design problem-solving procedure to ensure issues are dealt in timely and effective manner

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

Identified Risks	Risk Level	Mitigation Measures
Time period for regional development planning is missed.	Low	Involve the Local Government to develop the action plan of project activities
Lack of commitment to develop coordination (both from targeted local/city government or village government or provincial government).	Medium	Involve provincial and local governments in Steering Committee
Poor commitment and consistency in applying new method and technology	Medium	Provide Supporting Regulation from Provincial and City levels
Lengthy administrative procedure from local government for improving physical environment.	Low	Involve CSO and NGO in implementing the programs.
Time period for district government to develop strategic plan is missed (before or after project period).	Medium	The Project Work Plan Preparation has to involve local government and related stakeholders

Climate scenario is not detail enough up to district level for district government to make decision.	Low	Enhance SIDIK for suitable coastal region Improve the awareness at local government
Lack commitment of the local government to integrate the Climate risk into the development plan	low	Provide supporting regulation from National level
Adaptation plan is not the priority of the ruling district government	Low	Improve awareness of local government on Sub-National
Less interest of the government official to learn the knowledge resulted from the program.	low	Conduct regular workshop on the knowledge management at local government level
Lack of commitment from communities	Medium	Improving awareness on the program by conducting training and workshop at district level.
Lack of interest of communities to improve their livelihood, culture barrier and lack of capacity	Law	Capacity building for local communities

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

Type of M&E Activities	Responsible Parties	Budgt (US$) (does not include staff time)	Time Frame
Office set-up and project staff recruitment	Team Leader and project Coordinator	500	Y1: 1st month
Inception workshop (30 participants, 5 days)	Project Coordinator	0	Y1; 2nd month
Inception report	Team Leader	0	Y1: 2nd month
Develop the performance management plan and reported quarterly	Team Leader and project Coordinator	0	Y1 (quarterly), Y2, Y3
Develop base line data (2 month, 1 team researcher)	M&E Specialist	4.500,00	2nd-3rd month Y1
Regular monitoring to the field • 2x monthly, 3 days, 3 persons	Team Leader M&E Specialist	10.000,00	Y1: bimonthly, Y2 and Y3
Spot check monitoring the measure the progress output • 1x/quartile, 4 days, 2 person	PME Unit and Internal Audit	7.500,00	Y1: quarterly Y2, Y3
Quarterly report	Team Leader and project Coordinator		Y1 (quarterly), Y2, Y3

Type of M&E Activities	Responsible Parties	Budgt (US$) (does not include staff time)	Time Frame
Coordination meeting of the project management unit with the steering committee in the national and district level • National level: 20 persons • District level: 20 persons	Team Leader and project Coordinator	5.000,00	Y1, 4th month
PMU coordination meeting including the field staff • 2x/year, 3 days, 10 persons	Team Leader	10.000,00	Y1, Y2, Y3
End line survey • Team research • 3 month • Field visit to 3 districts	Researcher	15.000,00	
Documentation of achievements from program's indicators and targets		60.000,00	
Midterm evaluation	External consultant	7.500,00	Y2 6th month
Final evaluation	External consultant	15.000,00	Y3, 3rd quartile
Grand Total		**135.000,00**	

E. Include a results framework for the project proposal, including milestones, targets and indicators**.**
Will be developed further during the proposal development stage

F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund
Will be developed further during the proposal development stage

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.
Will be developed further during the proposal development stage.

H. Include a disbursement schedule with time-bound milestones**.**
Will be developed further during the proposal development stage**.**

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

A. **Record of endorsement on behalf of the government**[26] *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:*

Dr. Ir. Nur Masripatin M.For. Sc *Director General for Control of Climate Change*	Date*: April, 7, 2017*

Achmad Alf Arslan Djunaid, S.E *Mayor of Pekalongan City*	Date*: March, 22, 2017*

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***

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 (President Decree No. 16 year 2015; P.13/Menlhk/Setjen/OTL.0/1/2016; P.33/Menlhk/Setjen/Kum.1/3/2016; Indonesia Intended Nationally Determined Contribution/INDC; COP 21 Paris Agreement signed by Government of Indonesia; Book and Map of Information System of Vulnerability Index Data (SIDIK); Permen-KP No. 2 year 2013; Climate Change Adaptation National Action Plan) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme 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/programme.	
 *Monica Tanuhandaru* *Executive Director of Partnership for Governance Reform in Indonesia (Kemitraan)* Implementing Entity Coordinator	
Date: *July, 28, 2016*	Tel. and email: +62-21-22780580; Monica.Tanuhandaru@kemitraan.or.id
Project Contact Person:	Dewi Rizki
Tel. And Email:	+62-21-22780580; Dewi.Rizki@kemitraan.or.id

[26] 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.