CLIMATE PUBLIC EXPENDITURE AND INVESTMENT REVIEW (CPEIR) – PERIOD 2016-2020 – CA MAU PROVINCE

1. Climate change in Ca Mau

General introduction

Ca Mau is a coastal province in the southernmost part of the country with nearly 254 km of coastline, including 107 km of the East Sea coast and 147 km of the West Sea coast. Ca Mau is a lowland area, often flooded, the province has 05 main soil groups, including: acid sulphate soil, peat soil, alluvial soil, saline soil, and canal soil.

In 2018, Ca Mau's population was recorded at 1.23 million, a Gross Domestic Regional Product (GRDP) per capita of VND 43.3 million (USD 1,880), and a GRDP of VND 53.2 trillion (USD 2.31 billion) and the GRDP growth rate in recent years is about 7.0%/year, higher than the GDP growth of the whole country.

Following recovery efforts after Typhoon Linda in 1997, per capita income quintupled in the 20 years since. In 1997, agriculture accounted for 63%, industry for 16%, and services for 19% of the province's economy. By 2018, agriculture accounted for only 8%, industry increased to 43%, and services increased to 49%. Industrial diversification commercial activities such as sugar, fishery, fertilizer, gas, electricity, and nitrogen are taking place. The services sector, particularly tourism, continues to grow.

The impact of climate change on Cà Mau

The Mekong Delta is heavily affected by climate change, of which Ca Mau is the most dangerous area, the only province affected by two tidal regimes in the East and West Sea and it has the longest coastline.

The impacts of climate change in Ca Mau mainly come from *sea level rise* causing coastal erosion and landslides in estuaries and coastal areas. In addition, saline intrusion, urban inundation, and prolonged drought are significant impacts of climate change on Ca Mau province.

Activities to respond to climate change in Ca Mau

The provincial action plan to respond to climate change, identified: flood prevention for urban and industrial areas, water resource planning, transportation, reserve conservation, ecosystem restoration, and protection of mangrove forests.

Over the past years, with the support of the Government, local government and international organizations, Ca Mau has made efforts to overcome landslides of many key locations with solid embankments and underground embankments to create yards and planting essential protective forests with a length of nearly 12 thousand meters. However, there are still many crucial locations that need investment to prevent landslides.

The Prime Minister has approved investment in the development of the East Sea dyke construction project located in Ca Mau province to adapt to climate change and sea level rise. The East Sea dike project in Ca

Mau province has a length of more than 100 km, protecting 130,000 hectares of productive land and 260,000 households. The project attained a total investment of VND 1,300 billion. Implemented in 2016, it will receive regular capital every year until the completion of the sea dykes; planting protective forests; relocation and resettlement assistance for people in affected areas.

Ca Mau has had many practical solutions to proactively adapt to drought, saltwater intrusion and sea level rise to protect production and people's daily life. To develop sustainable production, in the direction of adapting to climate change and sea level rise, the province is proposing 14 important solutions, including strengthening media dissemination with news on climate change and sea level rise; Raising awareness of the community about economic and sustainable use of water resources adapting to climate change conditions.

In agriculture, Ca Mau province plans to ease adaptation of local flora and fauna; enhances research and development of farming technical solutions; to build a closed irrigation system to prevent salinity in the northern region of the province; planting and restoring protective forests; as well as strengthening regional and international cooperation with a large budget.

2. Summary of Data on Climate Change Investment in Ca Mau

2.1 Budget sources for climate change investment

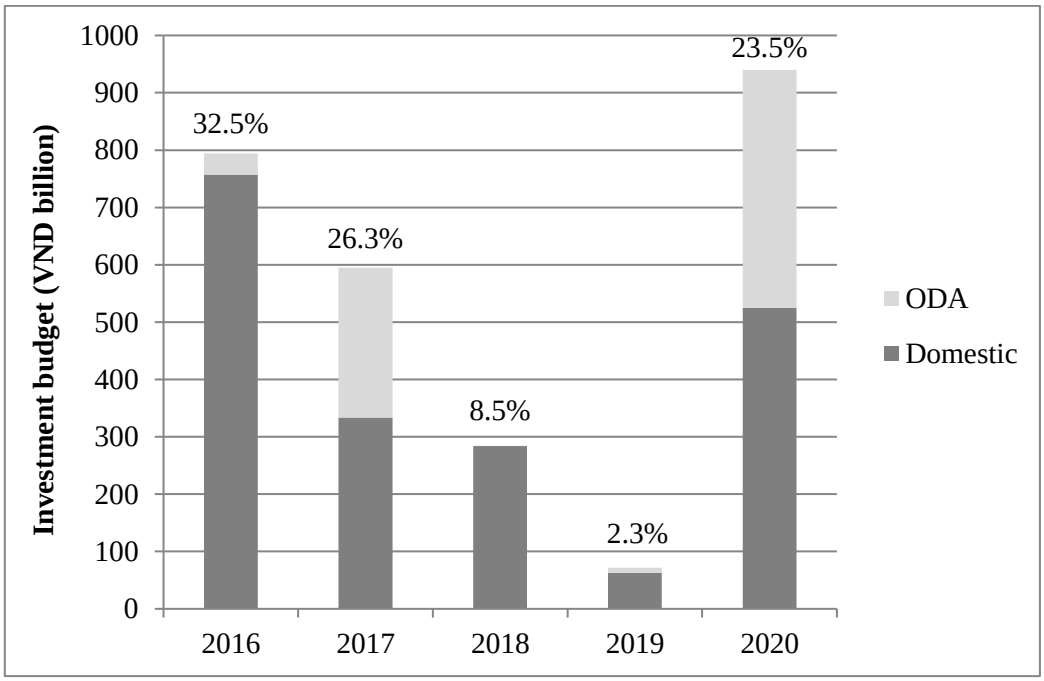

Figure 1: The total investment budget for climate change at Ca Mau *– the percentage that the climate change budget represents of the total Provincial development investment budget is shown as a % on the top of each bar.*

Table 1: Investment for climate change in Ca Mau by year from 2016 to 2020 and by capital source

Year	Domes. Invest. in climate change (billion VND)	Foreign investment in climate change (billion VND)	Total invest. in climate change (domes. + foreign capital) (billion VND)	Rate of domest. Invest. in climate change (%)	Rate of ODA Invest. in climate change (%)	Total public invest. of the province (billion VND)	Ratio of investment in climate change to total public investment of the province (%)

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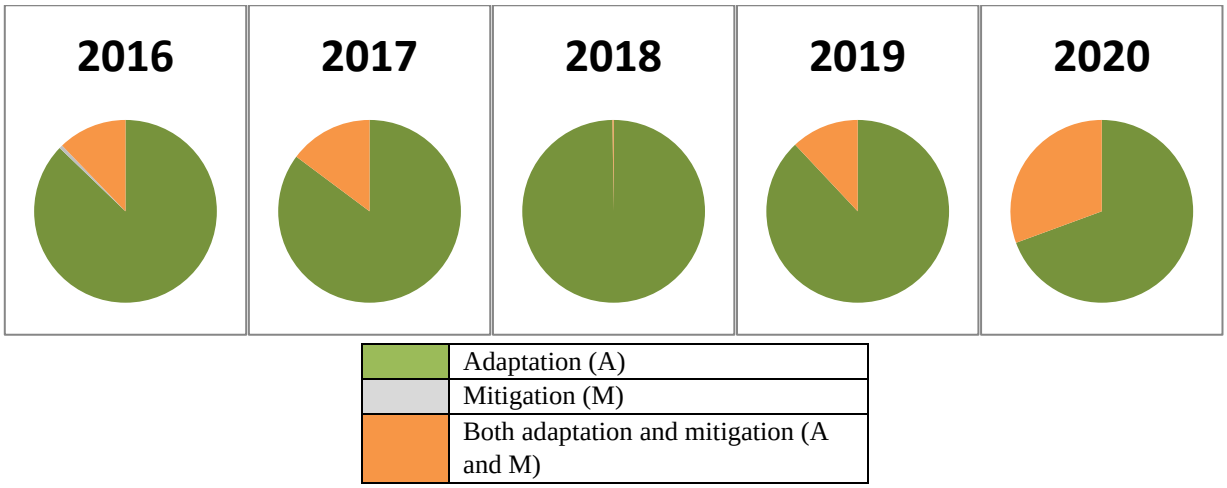
2016	757.2	37.1	794.3	95.3	4.7	2,443.2	32.5
2017	333.6	261.3	594.9	56.1	43.9	2,262.0	26.3
2018	284.1	0.5	284.6	99.8	0.2	3,356.6	8.5
2019	62.9	8.6	71.5	88.0	12.0	3,167.2	2.3
2020	524.9	414.9	939.8	55.9	44.1	3,999.7	23.5

Average investment spending on climate change in Ca Mau was VND 537 billion /year in the 2016-2020 period. The climate investment budget was highest in 2020 (about VND 940 billion), while the lowest in 2019 (VND 72 billion) highlighting the highly variable nature of climate investment for the region. In the 2016-2020 period, the average annual domestic expenditure on climate change investment is VND 393 billion, accounting for more than 73% of the total investment in climate change. ODA contributed the remaining VND 144 billion, accounting for nearly 27%. The proportion of investment from ODA sources varies from year to year, reaching the highest rate of 44% by 2020.

The proportion of investment spending on climate change compared to total development investment expenditure of the province has shifted year to year, averaging about 17.6%.

2.2 Purpose of the investment budget for climate change

a) The "adaptation" or/and "mitigation" project type distribution:

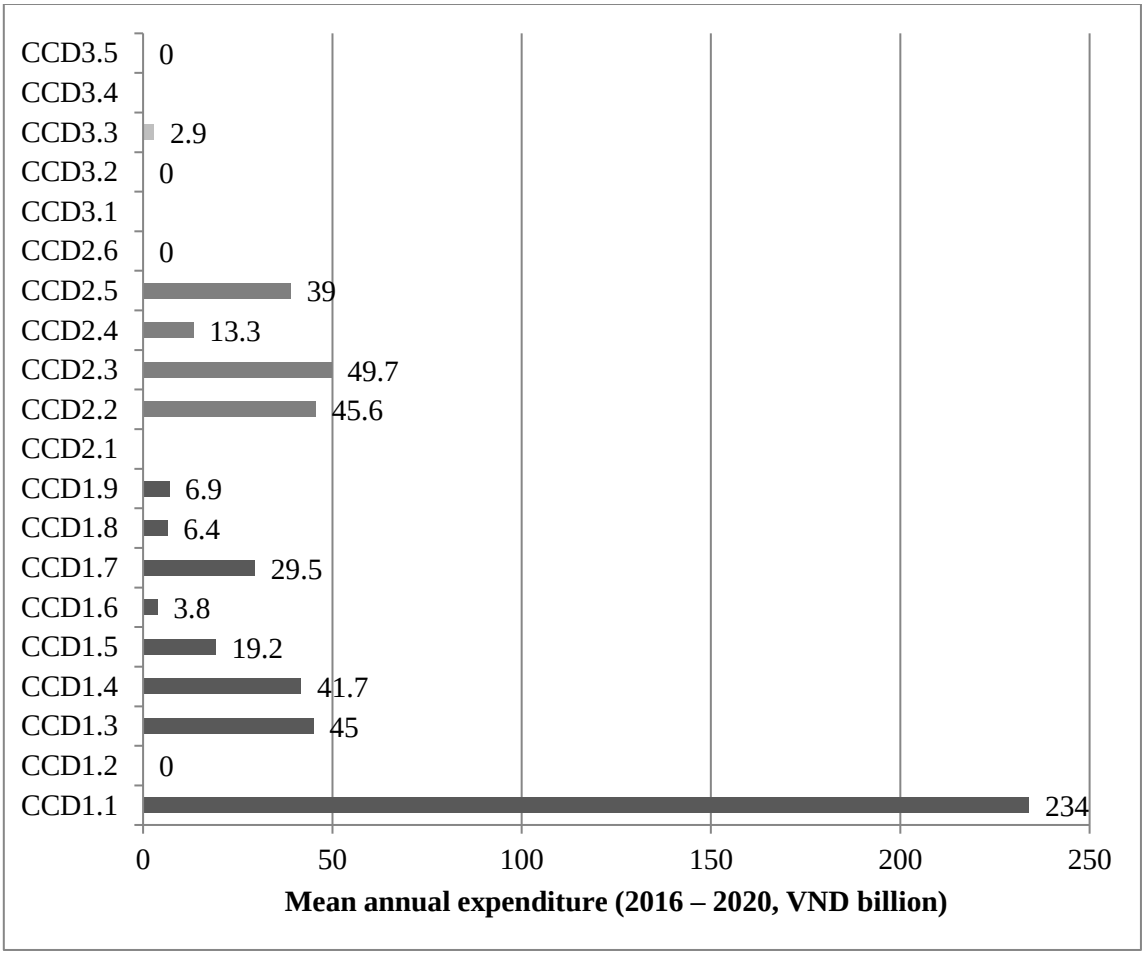


Detailed investment data for climate change adaptation and mitigation

Billion Dong	2016		2017		2018		2019		2020	
Adaptation (A)	692.1	87.1%	506.7	85.2%	284.1	99.8%	62.9	88.0%	652.5	69.4%
Mitigation (M)	5.1	0.6%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Both adaptation and mitigation (A and M)	97.1	12.2%	88.2	14.8%	0.5	0.2%	8.6	12.0%	287.3	30.6%

The majority of investments related to climate change are in the adaptation sector, which accounts for about 82%. In the 2016-2020 period, the locality has implemented several projects related to both climate change adaptation and mitigation, specifically: mangrove protection, restoration and development, protective afforestation, and creation of coastal estuaries.

b) Allocate investments in response to climate change (CCD) according to specific tasks (Average annual spending in the 2016-2020 period; Unit: billion dong)



In the area of investment projects to respond to climate change locally, investment in CCD 1.1, Coastal protection and coastal dyke accounts for the highest proportion with an investment of over VND 230 billion/year, accounting or 44%. 12 other investment areas, include:

- CCD 2.3 (Transportation; investment VND 49.7 billion/year, accounting for 9.3%),
- CCD 2.2 (Improving resilience of urban and residential areas; VND 45.6 billion/year accounting for 8.5%),
- CCD 1.3 (Irrigation; investment VND 45 billion/year, accounting for 8.4%),
- CCD 1.4 (dyke and river protection embankment; investment VND 41.7 billion; accounting for 7.8%) and
- CCD 2.5 (Special disaster resilient infrastructure; VND 39 billion/year; accounting for 7.3%) and

The remaining allotment areas are sparse with investment from VND 3 billion to 30 billion/year.

Regarding local policies on responding to climate change and green growth, the People's Committee of Ca Mau province has issued and implemented: National Target Program to Respond to Climate Change (NTP-RCC) for the province, Climate Change Action Plan (CCAP), Green Growth Action Plan (GGAP), and the Plan for Implementation of Paris Agreement (PIPA) Below are some comments when comparing the above public investment activities with priorities in policy outlined in Local Action Plans:

- Despite the most investment, however CCD 1.1, the localized CCAP and GGAP, or the reported achievements of the NTP-RCC do not mention coastal protection as a CC response. The local PIPA only does so indirectly when referring to overall programs.

- Other investments, such as those in transport, irrigation, dyke and river protection embankment or special disaster resilient infrastructure; for example, are important activities adapted to Climate change in Ca Mau but have not been mentioned clearly in the above Action Plans.

2.3 Budget expenditure from ODA

Here are the 05 (five) biggest ODA projects for climate change (Project name, funding source, investment period, share of total ODA investment):

1. Ca Mau City Reciprocal Urban Upgrading Project (NUUP) (2016-2020, 29.2%)
2. Counterpart Subproject 8: Investing in infrastructure to prevent and combat coastal erosion, supply fresh water and serve shrimp - forests in coastal areas of Ca Mau province under the Integrated Climate Resilience Project and sustainable livelihoods in the Mekong River Delta (2016-2020, 27.5%)
3. Construction of embankments to create mangrove planting grounds in the West Coast (2016-2020, 17.4%)
4. Project on ripening protection forests along rivers to cause sedimentation of coastal estuarine forestation areas (2016-2020, 11.6%)
5. Mangrove protection, restoration and development project in Ca Mau province, period 2015-2020 (2016-2020, 6.8%)

2.4 Policy and planning instruments

Instrument	Yes (√) or No (X)
Local NTP-RCC, report period to 2015	√
Climate Change Action Plan	√
Green Growth Action Plan	√
Plan for Implementation of Paris Agreement	√
Others: none	