CLIMATE PUBLIC EXPENDITURE AND INVESTMENT REVIEW (CPEIR) – PERIOD 2016-2020 - TIEN GIANG PROVINCE

1. Climate change in Tien Giang

General introduction

Tien Giang, a coastal province in the Mekong River Delta, is in the Southern Key Economic Region. Tien Giang has a coastline of 32 km with relatively flat topography.

In 2020, Tien Giang's population was about 1.77 million people. The total Gross Regional Domestic Product in the province (GRDP) per capita was 56.2 million VND (~ USD 2,400 USD), while the total GRDP of Tien Giang reached 99.5 trillion VND (USD 4.25 billion). Over the 2016-2020 period, the GRDP growth rate was 5.7%.

Agriculture and fisheries are still account for the highest proportion of the provincial economy. Still, Tien Giang is industrialising considering an increasing proportion of industry, construction, and services, reducing the role of agriculture. In 2020, the agriculture, forestry and fishery sector accounted for 38.9%, the industry and construction sector accounted for 26.2%, and the service and product tax sector accounted for 34.9%, of which product tax accounted for 6.0%.

Tien Giang has three key economic regions. The Eastern districts possess great potential in developing its marine economy, shipbuilding, seaport, shipping industries, seafood processing, and fishery logistics. The western districts possess potential in agricultural production. boasting the largest fruit trees in the province as well as industrialising its agricultural product processing and services along the National highway 1 economic axis. In addition, the region has great potentials for tourism development, because it is where three ecological regions converge. Saltwater and freshwater ecosystems associated with river ecology, fruit trees and floodplain ecology of Dong Thap Muoi. The area of My Tho city - Chau Thanh is a driving force to promote socio-economic development and proactive integration and economic cooperation with the Southern key economic region and the city urban area of Ho Chi Minh City and the Mekong Delta.

The impact of climate change on Tien Giang

Located in the downstream of Tien River, bordering the East Sea, Tien Giang is one of the provinces along the South Coast markedly affected by climate change. The province often faces impacts from sea level rise, flooding, saltwater intrusion, river and canal erosion, coastal erosion, loss of protective forest, lack of water for livelihoods, and agricultural production. The most affected areas are the east coast districts.[1]

Activities to respond to climate change in Tien Giang

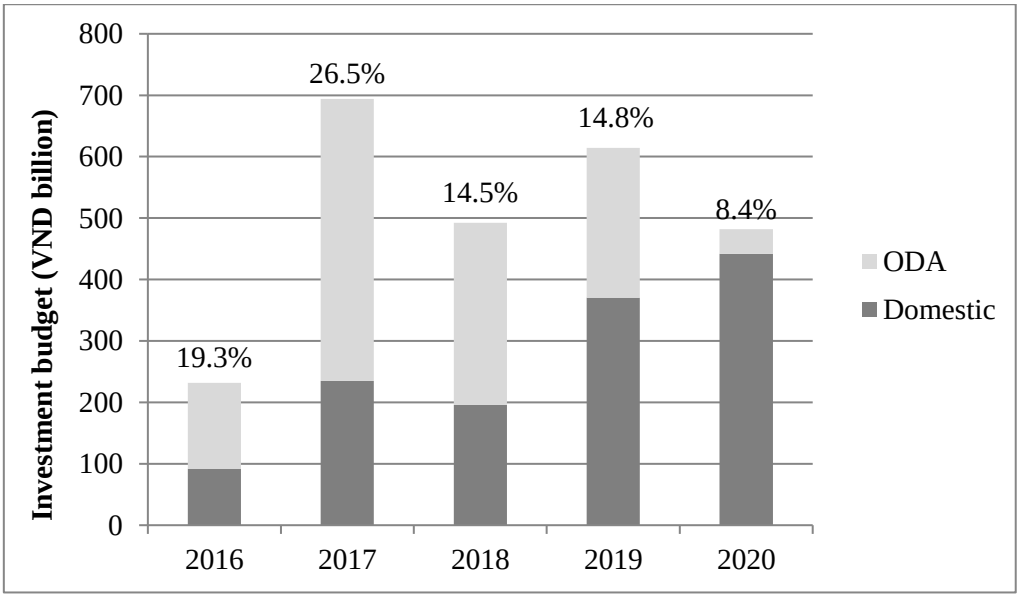
Many climate change response activities have been implemented in Tien Giang province. Typical activities such as:

[1] Action plan to respond to climate change in Tien Giang province.

- In the western districts, investment in upgrading and expanding flood drainage canals, dredging canals, combined with upgrading dykes to control floods to protect rice, crops and fruit trees production (i.e., Sustainable Agriculture Transformation project - VnSAT, Infrastructure project for the development and protection of fruit trees in Thuoc Nhieu - My Long, sub-project for controlling and reducing flood risks in Ba Rai - Phu An, etc.). Besides, Tien Giang province implements hydraulic works to handle river bank erosion such as structures for controlling Tien River bank erosion in Tan Phong Island area, Cai Lay district; West embankment of Ba Rai River; Handling landslides in canal 28, Cai Be district; Treating dyke erosion along Tien River in 3 communes Hoa Hung, An Huu, Tan Thanh, Cai Be district.).
- In the central districts and cities: implementing works to handle riverbank erosion such as erosion prevention, stabilization of Tien riverbank in Tan Long Island area; managing landslides on the banks of the Tien River at Cu Lao Tan Long; Tien River embankment project in My Tho city area; Landslide treatment project on the north bank of Bao Dinh canal, My Tho city; Construction of climate change adaptation works and projects to protect socio-economic infrastructure such as the Urban Upgrading Project in the Mekong Delta - My Tho City Subproject.
- In the eastern districts: To consolidate and upgrade the systems of sea, river and estuarine dykes (building embankments to protect Go Cong Dong Sea dikes, Xuan Hoa - Cau Ngang canal project; Go Cong Dong Coastal Erosion Project; Landslide treatment project in Con Cong area, Tan Phu Dong district, etc.). Study and step-by-step measures to restore and develop coastal protection forests to break waves, protect dykes, protect agricultural production, and protect aquatic species. Examples of projects include planting mangrove trees to protect Go Cong Dong Sea dyke as well as the upgrade of the saltwater intrusion control system in Go Cong area. Construct works to combat, avoid, and shelter from storms, works to protect densely populated areas in townlets, towns, and the city to protect centralized socio-economic infrastructure (such as the project of storm shelter for fishing boats at Soai Rap estuary combined with Vam Lang fishing wharf, etc.)[2].

2. Summary of Data on Climate Change Investment in Tien Giang

2.1 Budget sources for climate change investment



[2] DONRE Tien Giang: http://stnmt.tiengiang.gov.vn/thong-tin-tuyen-truyen/-/asset_publisher/dHBw2JJnQE5g/content/tinh-hinh-bien-oi-khi-hau-o-nhiem-moi-truong-giai-phap-khac-phuc

Figure 1: The total investment budget for climate change at Tien Giang *– 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 Tien Giang 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 (%)
2016	91.5	140.4	231.8	39.4	60.6	2,721	8.5
2017	234.7	459.5	694.2	33.8	66.2	3,133.3	22.2
2018	196.0	296.3	492.3	39.8	60.2	3,719.4	13.2
2019	370.2	244.2	614.4	60.3	39.7	4,158.9	14.8
2020	618.0	6.7	624.7	98.9	1.1	5,501.0	8.4

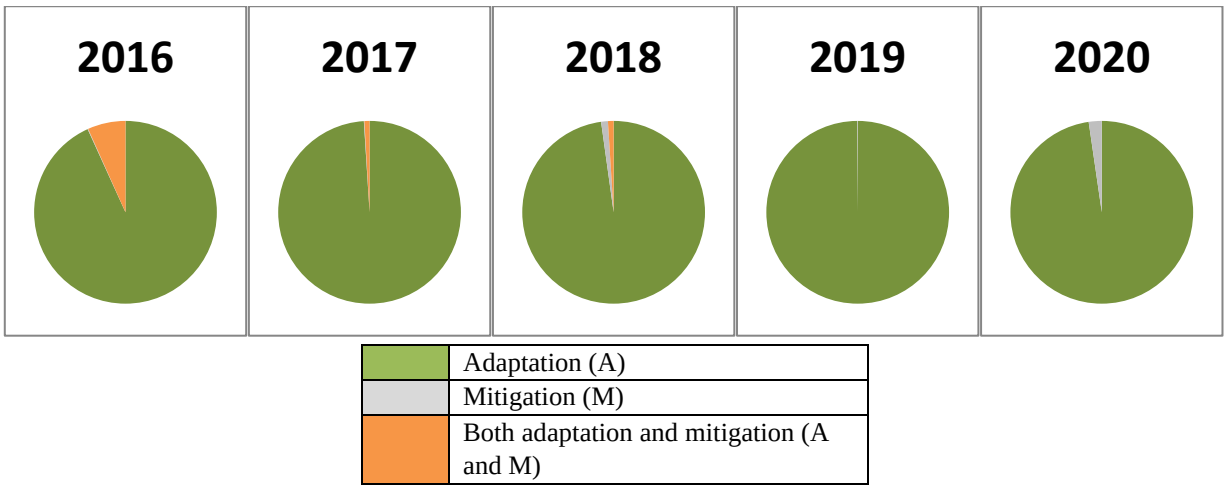
Average investment spending on climate change for the 2016-2020 period averaged VND 532 billion/year. The climate investment budget was highest in 2017 (VND 694.2 billion), while the lowest was in 2016 (VND 232 billion). In 2020, total investment in climate change was VND 624.7 billion , mainly due to a significant decline in foreign investment (ODA) for climate change.

In the 2016-2020, the annual average domestic investment on climate change was VND 302 billion, accounting for 57% of the total investment expenditure. ODA on climate change was VND 229 billion, accounting for 43.2%. The overall proportion of ODA has decreased over time, from over 60.6% in 2016 and 2017 to 1.1% in 2020.

Investment spending on climate change accounts for between 11.4% to 22.2% (average 16.8%) of the total investment and development expenditure of the province. The highest rate was in 2017, accounting for 22.2% and the lowest was in 2020 with 8.5%.

2.2 Purpose of the investment budget for climate change

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

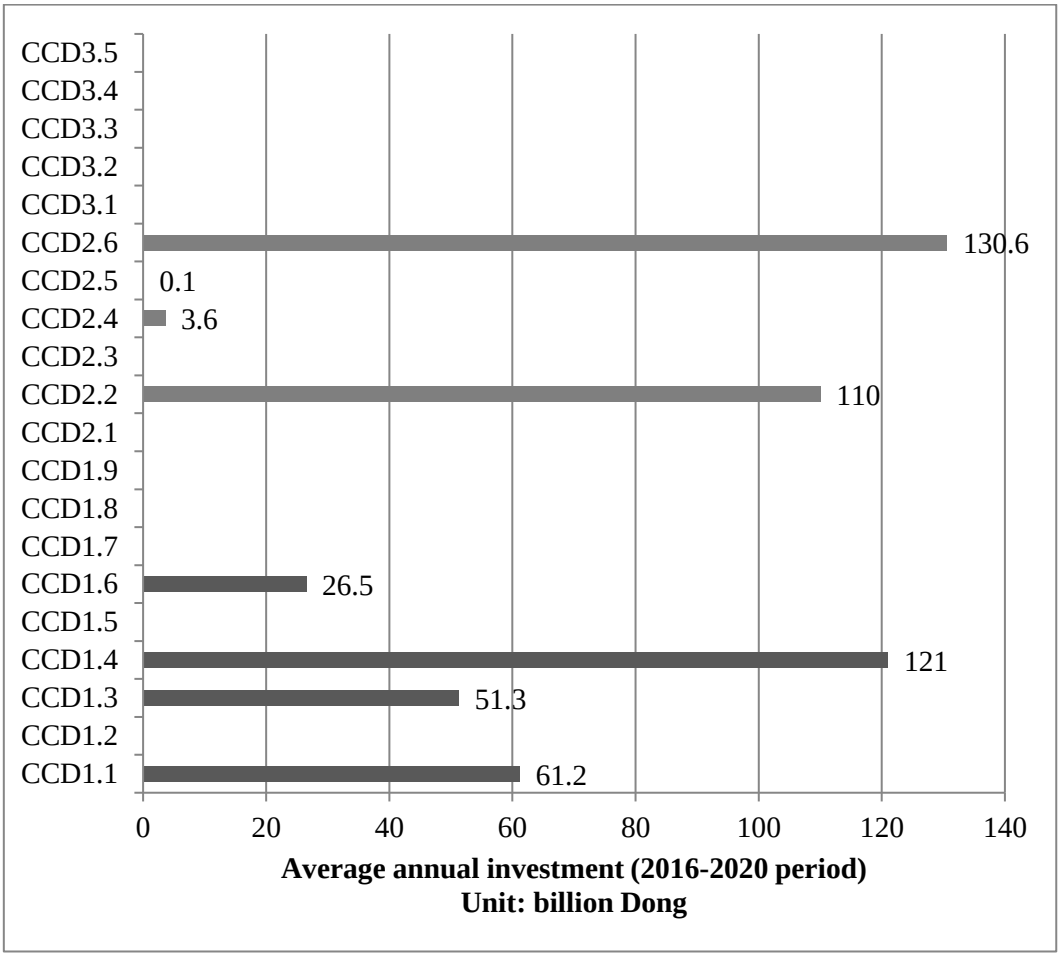


Detailed investment data for climate change adaptation and mitigation

Billion VND/%	2016		2017		2018		2019		2020	
Adaptation (A)	216.1	93.2%	687.4	99.0%	481.4	97.8%	620.7	99.9%	471.1	97.7%
Mitigation (M)	0.3	0.1%	0.9	0.1%	5.6	1.2%	0.7	0.1%	10.9	2.3%
Adaptation and mitigation (A and M)	15.5	6.7%	5.9	0.9%	5.3	1.0%	-	0.0%	-	0.0%

The vast majority of investment related to climate change is adaptation, which accounts for about 98%. In 2016-2018, several projects related to both adaptation and mitigation took place, namely local reforestation, sedimentation, planting mangrove trees, and dyke protection in rural districts, principally Go Cong Dong, improving quality and safety of agricultural products, and developing a biogas program (QSEAP). Several projects in the mitigation sector are related to wastewater treatment, research on the production of probiotics to treat COD, nitrogen and dissolved phosphorus in organic waste in the province. The mitigation projects are relatively small.

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



Considering investment projects to respond to climate change locally, investment is split into 03 areas: CCD 2.6 (enhanced disaster risk reduction, investment of VND 131 billion/year, accounting for 26%); CCD 1.4 (river dyke and embankment protection, VND 121 billion/year, 24%); and CCD 2.2 (improving resilience of urban and residential areas, VND 110 billion/year, 22%) account for the largest investment tasks. Together, they represent more than 70% of total climate change investment in the province.

The remaining investments are allocated to CCD 1.1 (Coastal protection and coastal dyke, VND 61.2 billion/year), CCD 1.3 (Irrigation, VND 51.3 billion/year), CCD 1.6 (Rural development and food security, VND 26.5 billion/year) etc.

Since the local climate change related policy documents such as the Green Growth Action Plan (GGAP) and Plan for Implementation of Paris Agreement (PIPA) are not yet available. Accordingly, t only the linkage between actual investment activities with the Climate Change Action Plan (CCAP) could be considered to confirm whether the above investment areas were in line with the province's policy orientation.

Some projects mentioned in CCAP have been implemented in the period 2016-2020 such as: High quality rice production model to adapt to climate change, Study the scientific basis to propose small and medium electric pumping stations in agricultural production areas, Research on the production of bio-products for the treatment of COD, nitrogen and dissolved phosphorus in organic wastewater in the province. However, several sectors with large investment expenditure in the period 2016-2020 are not mentioned in the CCAP such as River dyke and embankment (CCD1.4), residential and city area resilience (CCD2.2) and Irrigation (CCD1.3). There may be projects in these investment fields being invested due to urgent requirements in practice after having CCAP.

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. The Ba Lai-Phu An Flood Risk Control and Mitigation Subproject (ADB-GMS1) (2016-2020, 19.7%)
1. Mekong River Delta Urban Upgrading Project - My Tho City Sub-Project (2016-2020, 56.8%)
2. Subproject on Upgrading Saline Intrusion Control System in Go Cong Region (ADB-GMS1) (2016-2020, 16.5%)
3. Sustainable Agriculture Transformation Project (WB-VnSAT) (2016-2020, 4.9%)
4. Create alluvial grounds, plant mangroves to protect the sea dyke of Go Cong Dong (SP-RCC) (2016-2020, 2.1%)

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	X
Plan for Implementation of Paris Agreement	X
Others: none	