

CLIMATE PUBLIC EXPENDITURE AND INVESTMENT REVIEW (CPEIR) – PERIOD 2010-2020 - AN GIANG PROVINCE

1. Climate change in An Giang

General introduction

An Giang has the 4th largest area out of 13 Mekong Delta provinces. It neighbours Dong Thap, Can Tho, Kien Giang and has a border of nearly 104 km with Cambodia.

In 2019, An Giang's population was 1.91 million people. The total product in the area (GRDP) per capita reached VND 46.014 million (~ USD 1,954), and the total value of GRDP in the province was VND 112.83 trillion (USD 4.85 billion). The GRDP growth rate reached 7.02% in 2019.

Favorable natural conditions help An Giang to have a thriving agriculture with the highest yield of rice and freshwater seafood in the country. In addition, with both plain and mountainous terrain, with many famous landscapes and beautiful natural landscapes, An Giang has great potential for tourism development.



Impacts of climate change on An Giang

An Giang is an upstream province of the Mekong Delta, with an interlaced system of rivers and canals. The effects of climate change are reflected in phenomena such as increasing drought, unseasonal rain, erratic floods, which is also caused by upstream dam development. An Giang is also affected by river and canal bank erosion:

- Landslide of ring dikes and canals has a great impact on agricultural production, rural infrastructure and daily life of the people. Up to now, the province has 27 canal slope landslides, especially in dry season, such as those at Xang Tan An canal, Than Nong canal, Ong Chuong canal, Cai San canal, Cai San canal etc.
- Drought also affects the lives and production of people, causing lack of water for production and interruption in daily activities in the dry season in Tri Ton and Tinh Bien districts, which are in hilly areas where many ethnic Khmer live.

According to government statistics, the total economic loss caused by natural disasters (floods, droughts, landslides, storms etc) in the province in the period 2011-2016 is more than VND 1,463 billion. In addition, climate change especially affects agricultural activities, transport infrastructure, business activities and health

and life. Since 1996, there have been more than 450 landslides affecting 170km, with more than 200 ha of land lost and 7,350 households relocated ¹.

Activities to respond to climate change in An Giang²

An Giang has implemented many solutions to cope with climate change, especially to limit and overcome bank erosion hotspots and protect ring dikes. Including the implementation of the project of flow control on Hau River in My Hoa Hung area - Long Xuyen city, regulating the water flow in Chau Phong commune, Tan Chau town.

Improving embankments has been undertaken to prevent landslides and protect important infrastructure and architecture, such as embankments of Tan Chau, Vinh Xuong, Nguyen Du, Binh Duc, Binh Khanh. Regular reinforcement of the ring dikes is required to ensure the height of the dyke exceeds flood height and to protect production when floods come back. Strengthen inspection and protection of ring dykes in the rainy season is also necessary. At the same time, strengthen monitoring, warning and forecasting of floods and river and canal erosion is necessary.

To cope with drought in some localities, the province has taken advantage of investment projects in upland irrigation systems, such as electric pumping stations, water reservoirs to store water and carry water for agriculture production and domestic use, such as: O Thum, Soai So, O Ta Soc reservoirs, the 3/2 pumping station, Chau Lang and Le Tri pumping stations and construction of regulating culverts. At the same time, measurement, monitoring, warning information, drought and salt prediction has been carried out in the area (8 monitoring stations of which 4 stations in Thoai Son district and the remaining in Tri Ton district).

In order to gradually adapt to climate change, An Giang has actively implemented several tasks as mentioned above. At the same time, reviewing and building projects in the province have been delivered such as: Sustainable development association for the Long Xuyen Quadrangle; Project of Linking production of high quality 3-level pangasius for the Mekong Delta; Embankment against landslide of Hau river, section passing Chau Phong commune, Tan Chau town; Investment project to build residential clusters for emergency relocation of households in areas with severe landslide in the province.

To proactively prevent, combat, respond to natural disasters and adapt to climate change, reduce human and property damage, stabilize people's lives and production, especially the Khmer, the province An Giang has recommendations such as: Proposing the Central Government to support from capital sources to respond to climate change, disaster prevention, and drought. It should have mechanisms and policies to support investment in climate projects such as building residential clusters for urgent relocation of households in areas with severe landslides in An Giang province. Support is needed for investment in flood water retention projects, in areas that do not produce autumn and winter crops, in order to store water in the flood season for use in dry season and to contribute to ecological water regulation. There is additional need to support investment in dredging large canals connecting major rivers such as Tien river and Hau river to increase water supply flow to the inner field of Long Xuyen Quadrangle.

2. Review of climate public investment and recurrent expenditure in An Giang

2.1 Sources of total climate change budget

a) Total climate budget 2010 – 2020

¹ <https://baoangiang.com.vn/thich-ung-voi-bien-doi-khi-hau-a237888.html>

² Theo: <http://dangcongsan.vn/khuyen-nong-huong-toi-su-phat-trien-ben-vung/tin-tuc/an-giang-no-luc-ung-pho-voi-bien-doi-khi-hau-478367.html>

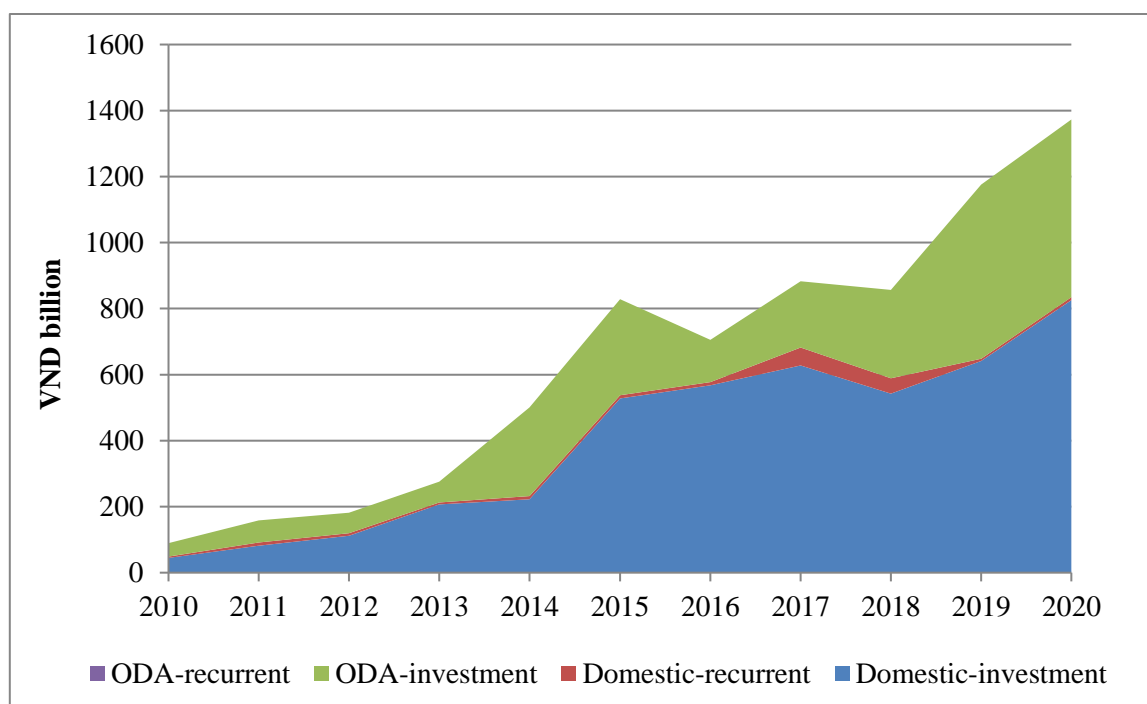


Figure 1: Total climate change budget expenditure in An Giang - includes investment expenditure, recurrent expenditure; from domestic sources and ODA (at 2020's constant prices)

Table 1: Data on climate change budget expenditure in An Giang by year (2010 to 2020)

| Year | Domestic investment (VND billion) | ODA investment (VND billion) | Domestic recurrent (VND billion) | ODA recurrent (VND billion) | Total (VND billion) |
|------|-----------------------------------|------------------------------|----------------------------------|-----------------------------|---------------------|
| 2010 | 44.7 | 41.1 | 4.1 | - | 89.9 |
| 2011 | 81.8 | 66.8 | 9.4 | - | 158.0 |
| 2012 | 112.2 | 61.8 | 7.3 | - | 181.3 |
| 2013 | 206.4 | 62.7 | 6.2 | - | 275.3 |
| 2014 | 222.8 | 268.1 | 9.7 | - | 500.6 |
| 2015 | 527.9 | 290.7 | 9.7 | - | 828.3 |
| 2016 | 567.5 | 127.4 | 10.2 | - | 705.1 |
| 2017 | 627.5 | 201.0 | 54.4 | - | 882.9 |
| 2018 | 542.1 | 268.1 | 46.7 | - | 856.9 |
| 2019 | 641.8 | 526.8 | 6.7 | - | 1,175.3 |
| 2020 | 825.5 | 538.2 | 9.2 | - | 1,372.9 |

- The total climate budget expenditure, including investment and recurrent expenditures, for 11 years from 2010 to 2020 in An Giang province averaged VND 640 billion/year. Of note, there is an increasing upward trend on climate expenditure over the past half decade (2016- 2020), nearly 1.6 times higher than the decade long average, at about VND 1,000 billion/year. The highest recorded budget was for 2020 (VND 1,373 billion) and the lowest was in 2010 (about VND 90 billion), an increase of over 15 times in size.

- In An Giang, the climate change budget expenditure is mainly focused on investment spending, (VND 6,853 billion total 2010 - 2020), while recurrent expenditure accounts for a modest proportion of 2.5% of total budget expenditure on change climate (VND 174 billion).
- In the period 2010-2020, the average annual domestic investment expenditure on climate change is 400 VND billion, accounting for 64.2% of the total investment expenditure, the ODA capital contribution is about VND 223 billion, accounting for 35.8%. The proportion of investments from ODA changes irregularly, with the lowest rate of 18% in 2016 and the highest of 55% in 2014.
- Recurrent expenditures related to climate change averaged a relatively small 16 VND billion/year, with most in years 2017 and 2018; this source of capital for recurrent expenditure is 100% domestically. Data received from this province has not recorded any ODA allocated to recurrent climate change expenditure.

b) The total climate change budget as a percentage of the total Provincial budget (2010 – 2020)

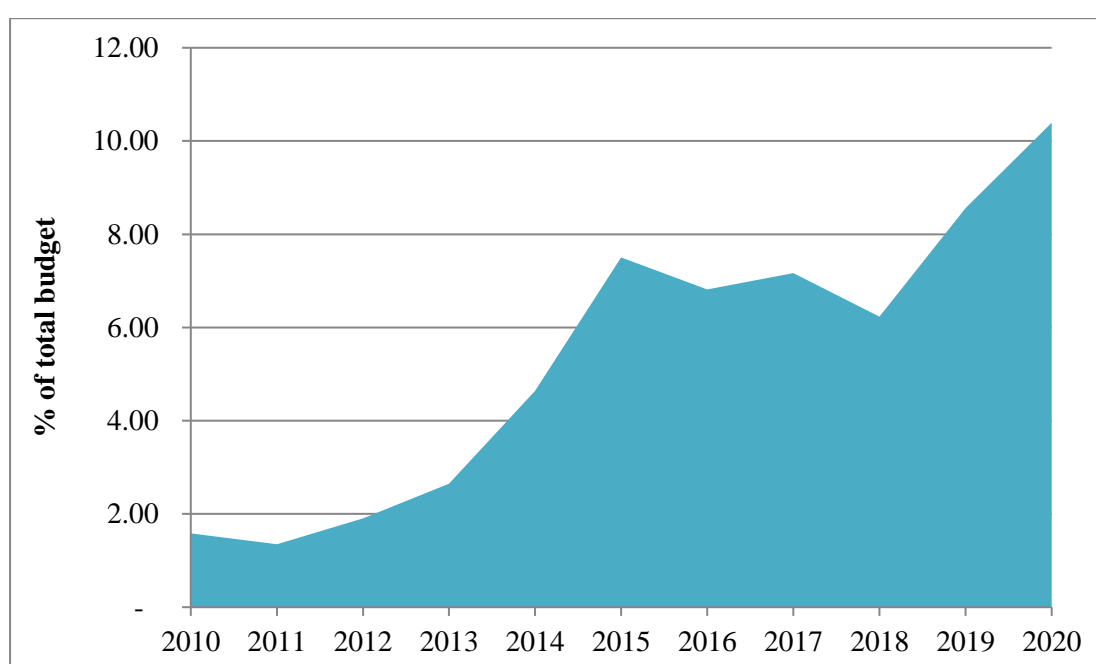


Figure 2.1: Ratio of budget expenditure on climate change to the total provincial budget for the period 2010-2020 (unit: %)

Figure 2.1 above shows the 11 - year value chain, the proportion of total budget spending on climate change, i.e., climate expenditures for both investment and recurrent to the total provincial budget, the average value for the period (2010 to 2020) is about 5.7%, and has been fluctuated from 1.4% in 2010 to 10.4% in 2020. The climate change expenditure ratio mentioned above is relatively small, because the total local budget includes both recurrent and investment expenditures, while that the local recurrent expenditures account for about 70% of the total provincial budget (see Table below), but spending on climate change is mainly from investment budget.

Provincial budget statistics (An Giang) for the period 2010-2020, billion VND

| Capital source | 2010 | 2011-2015 | 2016-2020 | 2010-2020 | 2010-2020, (%) |
|-------------------|---------|-----------|-----------|-----------|----------------|
| Investment budget | 799.7 | 9,020.8 | 21,184.3 | 31,004.8 | 28% |
| Recurrent budget | 2,832.7 | 34,994.8 | 40,182.4 | 78,009.9 | 72% |
| Provincial budget | 3,632.5 | 44,015.6 | 61,366.6 | 109,014.7 | 100% |

However, the review results indicate, recurrent expenditures on climate change account for a very small proportion of investment expenditures on climate change. In order to get a more accurate view of the level of investment related to climate change, **Figure 2.2** only shows the percentage between climate change investment expenditure and total provincial investment budget, completely ignoring recurrent expenditure for analysis.

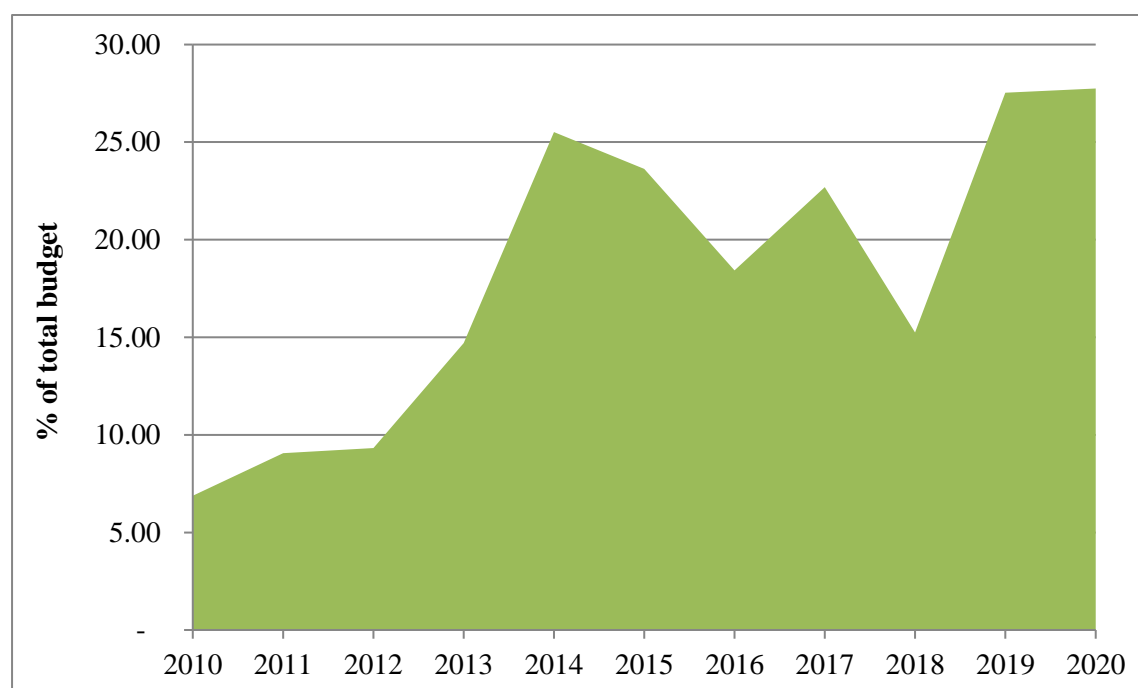


Figure 2.2: Ratio of budget investment expenditure on climate change to the total provincial investment budget for the period 2010-2020 (unit: %)

It can be observed from the **Figure 2.2** that, the proportion of climate change investment expenditure to the total development investment budget of the province, the average value for the period 2010-2020 is 20.7%, fluctuates significantly over years depending on the rate of disbursement for projects, the start or end of an investment project etc. It can be seen that this ratio has been changed from 7.2% in 2010 to 27.9% in 2020.

2.2 Purpose of total climate change budget

Allocation of total climate change budget to adaptation and mitigation

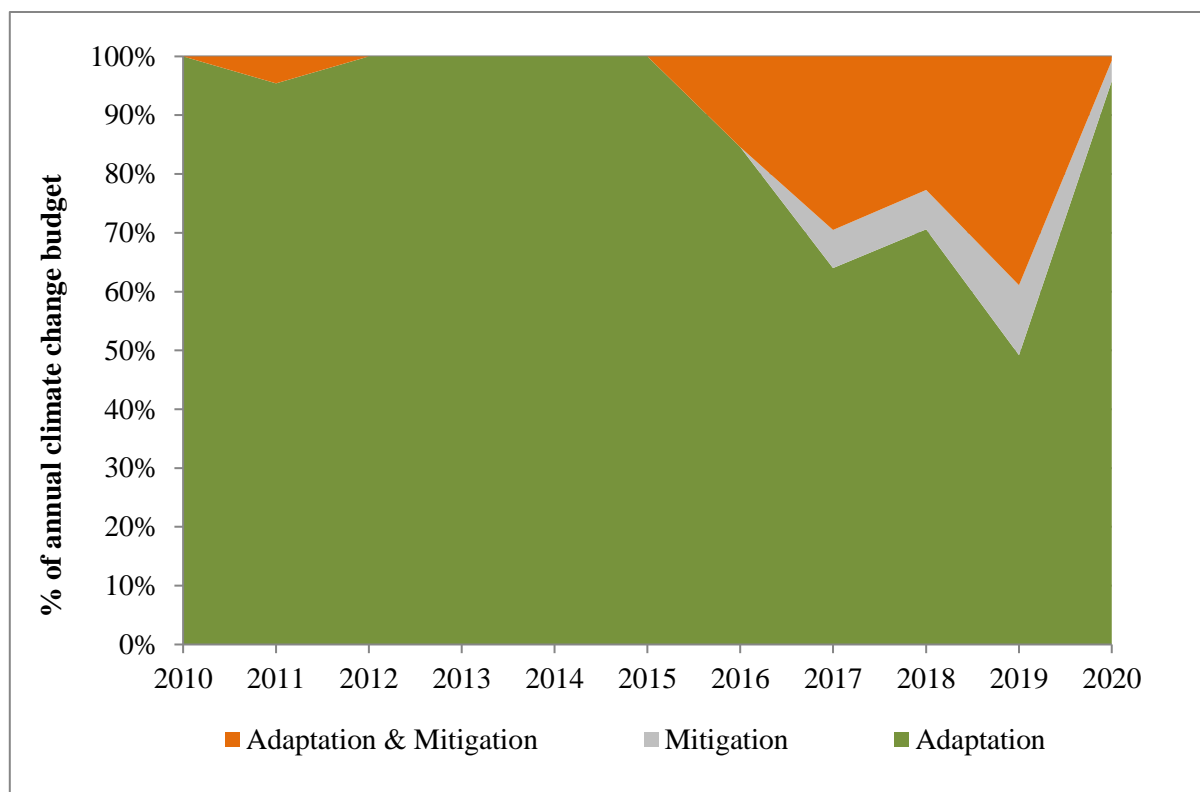


Figure 3: Conceptual distribution of public spending on climate change (i.e. categories: Adaptation, mitigation, adaptation + reduction)

- The entire period 2010-2020, climate budget spending on adaptation accounts for up to 86%, the field of mitigation accounts for a low proportion of about 3.1%. The remainder in An Giang are mixed investment activities linked to both adaptation and mitigation of greenhouse gas emissions, and account for up to 11% of total spending on climate change.
- The period 2010-2015, most of the budget expenditure related to climate change was in the field of adaptation, accounting for more than 99.5%, except for a small amount in 2011 when there was an combined project of both mitigation and adaptation related to forest protection and development.
- In the 2016-2020 period, there is a growing diversity of projects in the field of mitigation and mixed adaptation and mitigation projects. During this period, the proportion of adaptation projects accounted for 79%, the mitigation sector was 4.7% and mixed projects account for 16.3%.
- In the most recent 2016-2020 period, typical local mitigation projects include domestic waste incinerator and rural electricity supply from An Giang national electricity grid etc. The total investment for mitigation is about VND 190 billion. The adaptation and mitigation projects include the construction of drainage and wastewater treatment systems in Long Xuyen, Chau Doc, and a project on sustainable forest protection and development in An Giang province in the period of 2016-2020 with total investment is estimated at more than VND 660 billion.

2.3 Allocation of total climate budget to climate change themes

i) Allocation of total climate change budget to pillars:

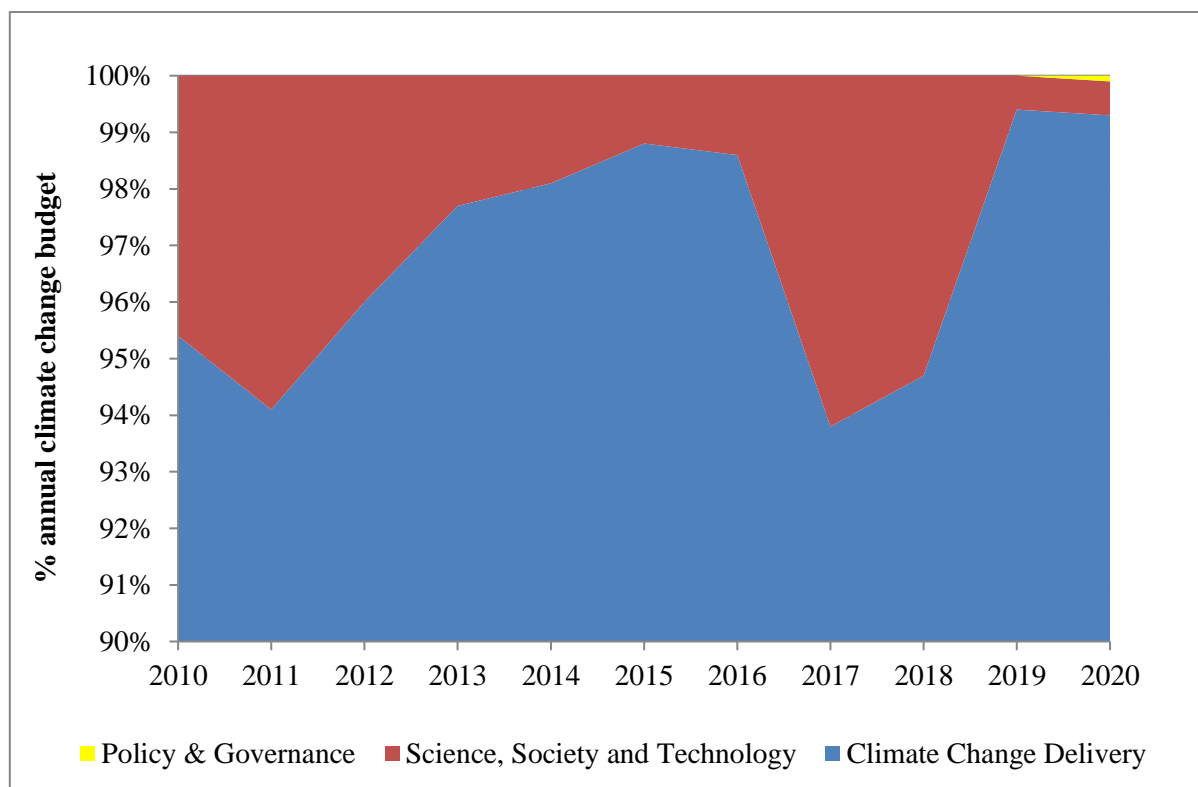
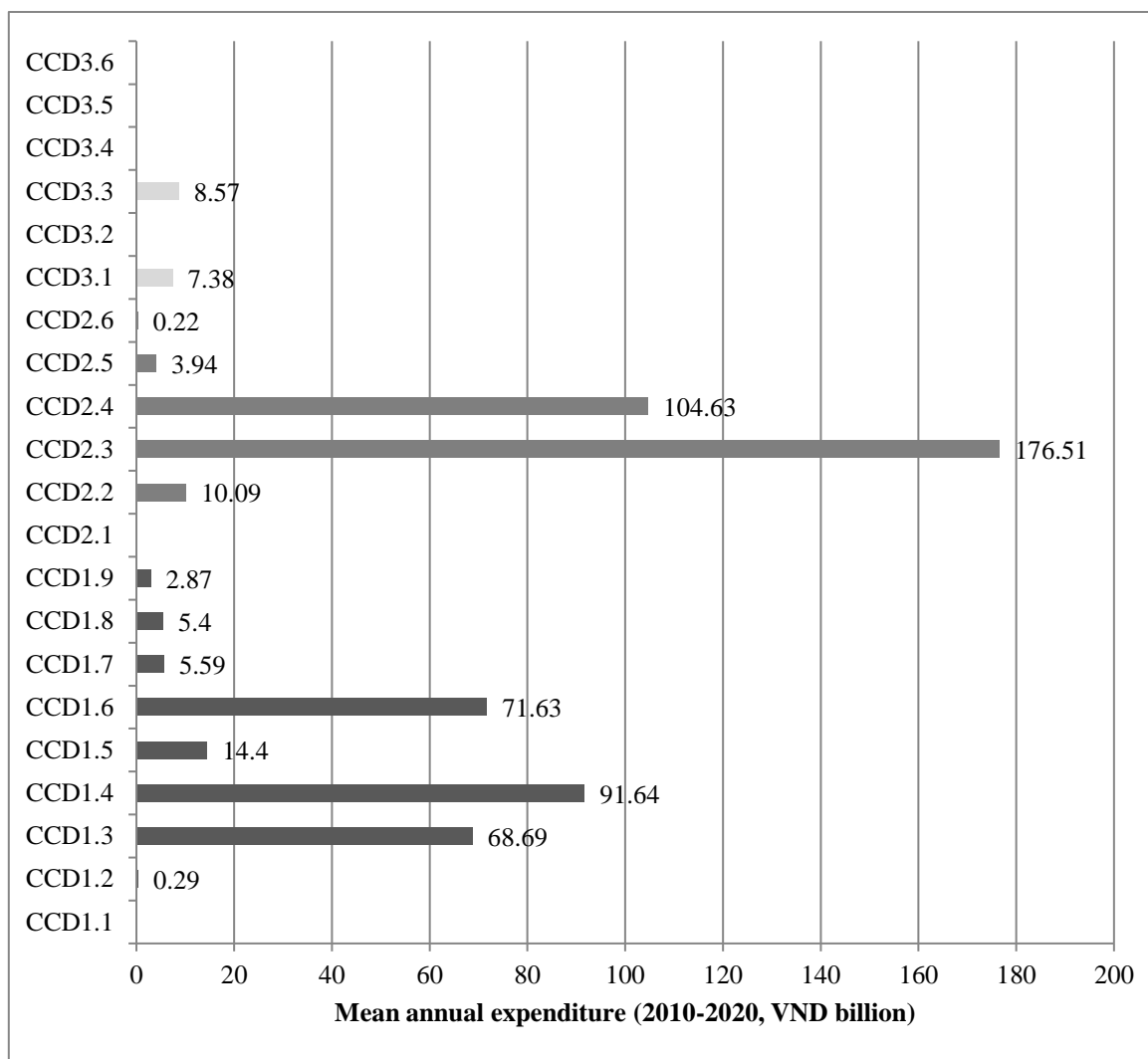


Figure 4: Distribution of public expenditure on climate change – grouped into Investment expenditure (Climate change delivery) and Recurrent expenditure (classified into Science, society and technology and Policy & governance)

- Expenditures on climate change are classified as investment and recurrent expenditures, in the period 2010-2020, the majority, accounting for 97.6% has been spent on investment; recurrent expenditures accounted for a negligible 2.4%.
- Recurrent expenditure, including spending for Science, society and technology (ST) and Policy & governance (PG), was estimated at about VND 169 billion which was mainly ST. Spending for PG was small with only a 600 million VND project which was the Target program to cope with climate change and green growth and Regular activities of the Steering Committee to respond to climate change implemented in 2020.

ii) Allocation of Climate Change Delivery tasks (annual mean expenditure VND billion, 2010 – 2020):



In the field of investment projects to respond to climate change locally in recent 10 years, the top 05 topics have been invested the most account for about 90% of total investment, including:

- CCD 2.3 (Traffic; investment value of VND 176.5 billion/year, accounting for 31.1%),
- CCD 2.4 (Waste management and treatment; investment of VND 104.6 billion/year, accounting for 18.4%),
- CCD 1.4 (Dyke and river protection embankment; investment of VND 91.6 billion/year, accounting for 16.1%),
- CCD 1.6 (Rural development and food security; investment of VND 71.6 billion/year; accounting for 12.6%) and
- CCD 1.3 (Irrigation; investment of VND 68.7 billion/year; accounting for 12.1%) and

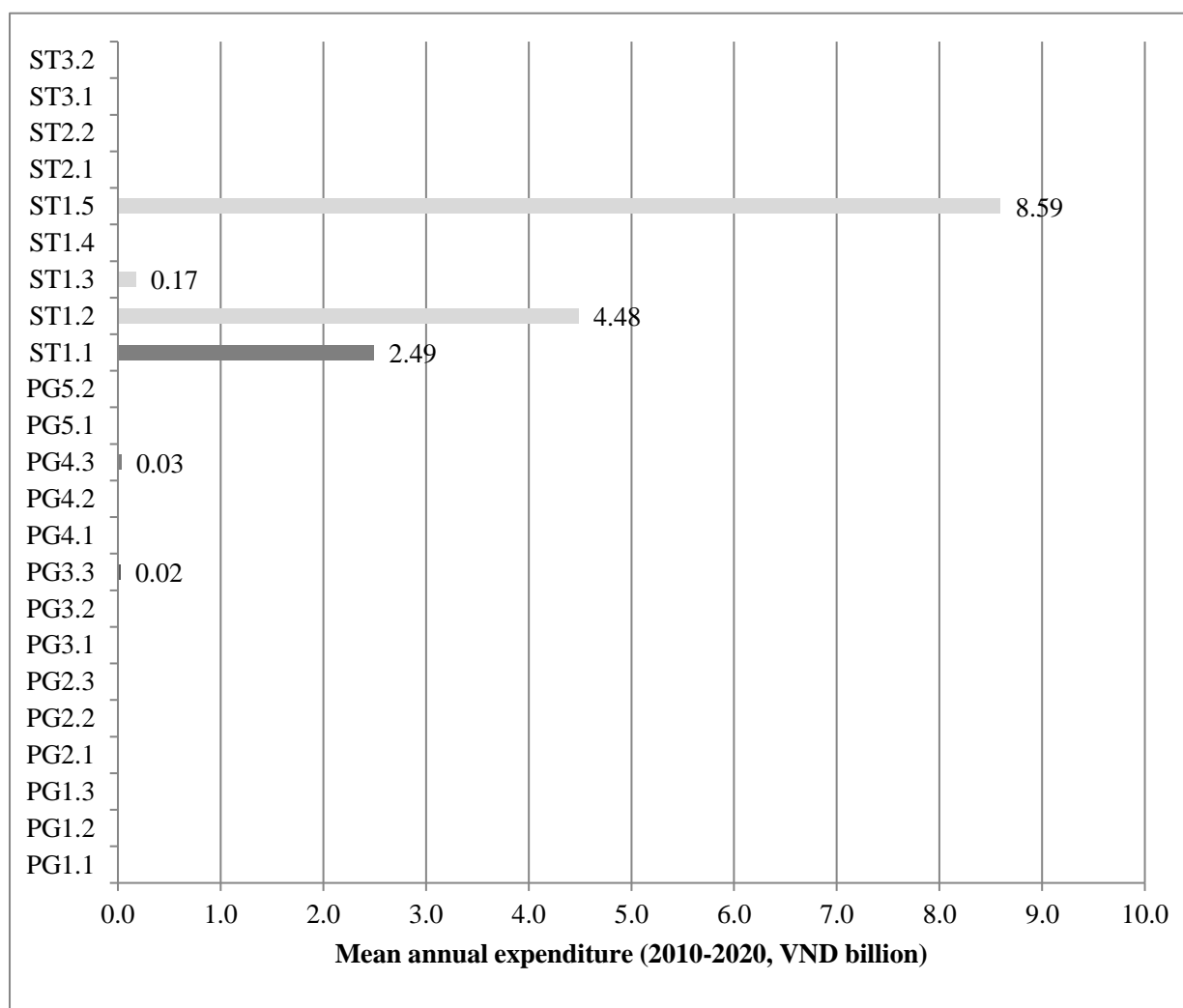
The next five investment topics were: Improving the resilience of urban and residential areas (CCD 2.2), Water quality and supply (CCD 1.5), Infrastructure and Construction (CCD 3.3), Energy Production (CCD 3.1) and Forest Development (CCD 1.7) with an investment for each topic of about VND 5.6 to 14.4 billion/year.

In addition, there are a number of investment projects in 05 other areas, with smaller investment from a VND few hundred million to 5.4 billion/year.

People's Committee of An Giang province has issued and implemented a number of policy documents related to respond to climate change such as National target program to respond to climate change (NTP-RCC) of the province 2010-2015,

Climate Change Action Plan (CCAP), Green Growth Action Plan (GGAP) and Plan for Implementation of Paris Agreement (PIPA), It can be commented that the above investment activities are consistent with the list of priority activities mentioned in these Action Plans.

iii) Allocation to Science, Society and Technology and to Policy and Governance tasks (annual mean expenditure VND billion, 2010 – 2020):



Regarding recurrent expenditures on local climate change response in the 2010-2020 period, There are 06 topics have been implemented, including:

- ST 1.5 (Technology for energy efficiency and low GHG emissions; investment value of VND 8.6 billion/year, accounting for 54.4%),
- ST 1.2 (Improving weather and meteorological risk forecasting; investment VND 4.5 billion/year, accounting for 28.4%),
- ST 1.1 (Building information and database; investment VND 2.5 billion/year, accounting for 15.8%),
- ST 1.3 (Consolidate biological resources and genetic resources; investment VND 0.2 billion/year; accounting for 1.1%)
- PG 4.3 (Legal tools for both adaptation and mitigation; investment VND 0.03 billion/year; account for 0.2%) and

- PG 3.3 (Strengthening government agencies' capacity to respond to climate change to effectively implement action plans, investment VND 0.02 billion/year; accounting for 0.1%)

2.4 Overseas Development Assistance climate programmes

| | |
|--|---------|
| Contribution of ODA to total climate change budget (average 2010 –2020): | 37.08 % |
| <p>Five largest ODA allocations in terms of climate budget:</p> <ol style="list-style-type: none"> 1. Long Xuyen city drainage and wastewater treatment system (2011-2013, 2015-2020, 26.65%) 2. The Water Adaptation and Management Enhancement of the Mekong River upstream subproject, An Phu district, belongs to the Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project (WB9) (2016- 2020, 13.59%) 3. Construction of highland irrigation systems adapting to climate change to serve the restructuring of agricultural production for people in Bay Nui, An Giang province (2016-2020, 10.75%) 4. Upgrading and expanding DT 957 in border patrol route, combining rescue and dyke to prevent floods in An Phu district (2014-2020, 9.96%) 5. Anti-landslide of Hau river, An Giang province (2019-2020, 7.27%) | |

2.5 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 | |