

CLIMATE CHANGE EXPENDITURE AND INVESTMENT REVIEW (CPEIR) –

PERIOD 2010-2020 – MINISTRY OF CONSTRUCTION (MOC)

1. General introduction

The Ministry of Construction (MOC) is a governmental agency which performs the function of state management of construction planning; architecture, construction activities; urban development; technical infrastructure housing, office buildings; real estate business; and construction materials and performs the state management of public services in the domains falling under its state management in accordance with law.

The major mandates have been defined in Decree No. 81/2017/ND-CP dated July 17, 2017. As a ministerial agency, the MOC is responsible for: (1) submitting the Government drafted laws, resolutions of National Assembly and/or Standing Committees of the National Assembly, ordinances, the Government's decrees in accordance with its approved annual plans on legal document formulation, and other resolutions, schemes, and plans and programs as delegated by the Government and the Prime Minister, submitting to the Government and the Prime Minister strategies, master plans, long-term, medium-term and annual plans, and nationally important projects and works falling under the MOC's management; (2) issuing guiding circulars and other policies within its competent authority, (3) communicating with the public to disseminate information on relevant legal framework; (4) implementing and monitoring law compliance nationwide in delegated sectors and areas, directing implementation of strategies, masterplans, and plans in delegated sectors and areas; and (5) implementing MOC's assigned specific state administration responsibilities on different aspects relevant to its legally binding mandates as mentioned above.

Regarding environmental protection, the MOC is responsible to

- direct and guide the integration of environmental protection planning, plans and programs into development strategies, planning, plans and programs in the domains falling under its responsibilities;
- develop and issue legal documents on environmental protection in the domains falling under its responsibilities;
- direct and guide the elaboration of strategic environmental assessment reports and environmental impact assessment reports; to evaluate those reports according to its competence, observe environmental impacts of activities in various branches and domains and elaborate reports on environmental impacts exerted by various branches and domains; to , make reports on environmental protection efforts in the domains falling under its state management in accordance with laws;
- design and undertake actions for environmental protection and adaption to climate changes in the domains falling under its state management;
- undertake actions for energy economic and efficient consumption in green construction works in the domains falling under its state management.

Within the framework of the Targeted Program of Response to Climate Change and Green Growth in 2016-2020 period, the MOC has completed the following key activities:

1. Implementing the Prime Minister's Decision 2623 dated 31/12/2013 on approval of the Scheme on Vietnam Urban Development to Respond to Climate Change in 2013-2020 period.
2. Undertaking tasks and assignments assigned to the MOC by the Prime Minister's Decision 1670/QD-BXD dated 31/10/2017 on approval of the Target Program of Response to Climate Change and Green Growth in 2016-2020 period.
3. Issuing the MOC's Action Plan to Implement Paris Agreement on Climate Change in 2021-2030 period as attachment of the Decision 967/QD-BXD dated 24, 07/2020.

4. Coordinately developing and updating the Action Plan on Response to Climate Change 2021-2030, with a vision towards 2050;
5. Reviewing and updating the Nationally Determined Contributions (NDC) under the MOC's scope of work .

2. Sources of total climate change budget

a) Total climate budget 2010 – 2020.

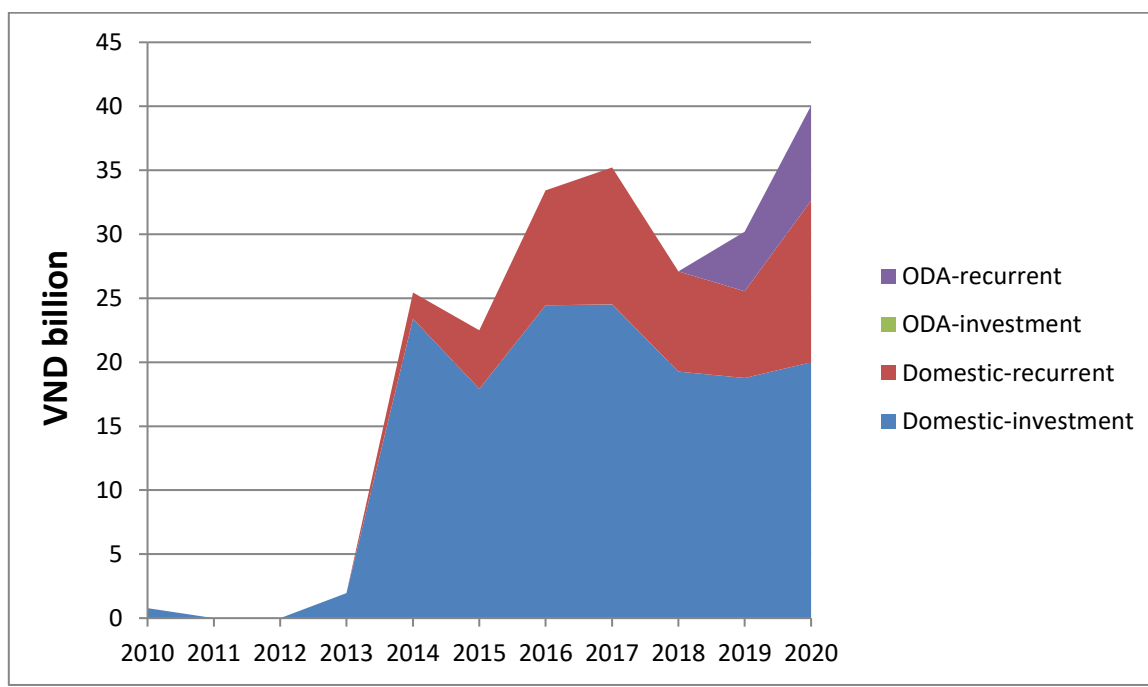


Figure 1: Total climate change budget expenditure in MOC - includes investment expenditure, recurrent expenditure; from domestic sources and ODA (at 2020's constant prices)

Data limitation: The dataset for MOC has been consolidated from the previous dataset collected for the last CPEIR report (2010-2013) and the current one (as collected in response to the Ministry of Planning and Investment' official letter No. 8425/BKHDT-KHGDTNMT dated 12/11/2019). Caution should be taken in analysing the data because:

- Both capital and recurrent expenditure data are selectively collected by the authorised agencies from the bulk of the capital and recurrent activities. Thus, other activities, which may be relevant to climate change in some extent may be left out if the agencies' perceived them as irrelevant during the selection process.
- The dataset for capital expenditure in 2010-2013 showed only few relevant projects in 2010 and 2013 only. Capital expenditures in 2011 and 2012 are missing without note. Similarly, there is absence of recurrent expenditure dataset for this period.
- Total capital and recurrent expenditure in each year is just a sum of total funding amounts of projects and activities being already listed, rather than the actual ministry's yearly total spending.

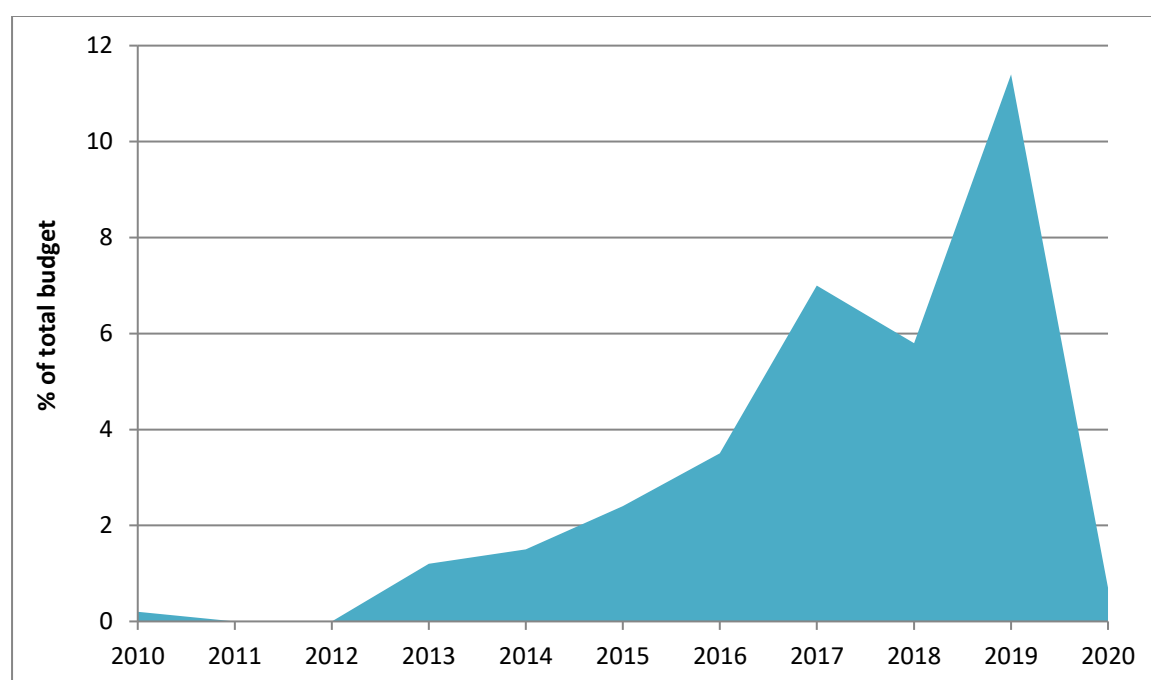
From the available dataset, the following observation can be made:

- The average investment spending on climate change is about 20 billion VND/year and the recurrent expenditure is about 8.2 VND/year¹. The investment budget for climate is highest in 2017 (VND 24,511 billion), while the lowest in 2018 (VND 10 billion). The recurrent budget for climate is small, but not necessary always smaller than that of investment budget in the same year. The largest budget is in 2020 (VND 20 billion), and the lowest in 2014 (VND 2 billion).
- Capital expenditure in the whole period is only from the domestic budget, not from ODA. The annual average domestic capital expenditure on climate change is just VND 20 billion VND.
- The annual average domestic expenditure on climate change recurrent is VND 7.6 billion, accounting for 82% of the total recurrent spending, while ODA contributes to VND 1.7 billion per year in average accounting for 18%. The proportion of ODA recurrent varies across the years, the lowest is 8% in 2014 (excluding years where ODA data is not available), but 50% in 2020.

Table 1. Total climate change expenditure in MOC (2020's price)

	Domestic investment	ODA investment	Domestic recurrent	ODA recurrent
2010	0.780	0	0	0
2011	-	-	-	-
2012	-	-	-	-
2013	1.945	0	0	0
2014	23.403	0	2.034	0
2015	17.906	0	4.586	0
2016	24.454	0	8.979	0
2017	24.511	0	10.710	0
2018	10.265	0	7.828	0
2019	18.764	0	6.786	4.643
2020	20.000	0	12.616	7.432

b) The total climate change budget as a percentage of the total Ministry budget from 2010 – 2020.



¹ To limit biasness, the average figures here are calculated for only 7 years, from 2014-2020, when both capital and recurrent expenditure data are available.

Figure 2: Ratio of budget expenditure on climate change to the total ministerial budget for the period 2010-2020 (unit: %)

- The graph shows that the climate budget varies substantially across years, ranging from almost negligible share of 0.2% in 2010 to significant one of 11.4% of the total recurrent budget in 2019, averaging 4.2% for the whole study period (after leaving out years when data is not available).
- There is a dramatic fall in 2020 of the contribution of the climate budget to the overall ministerial budget (to <1%). As climate-related expenditures are increasing (see Figure 1), this suggests a dramatic increase in non-climate related expenditures in MOC.

Table 2: Share of climate budget expenditure in total ministry's annual budget

	Total CC budget	Total Ministerial Budget	% of total budget
2010	0.78	485.417	0.2
2011	-	-	-
2012	-	-	-
2013	1.945	98.648	1.2
2014	25.437	1649.71	1.5
2015	22.492	942.92	2.4
2016	33.433	968.338	3.5
2017	35.221	506.134	7.0
2018	18.093	310.923	5.8
2019	30.193	265.307	11.4
2020	40.048	5,832.457	0.7

3. Purpose of total climate change budget

Allocation of total climate change budget to adaptation and mitigation:

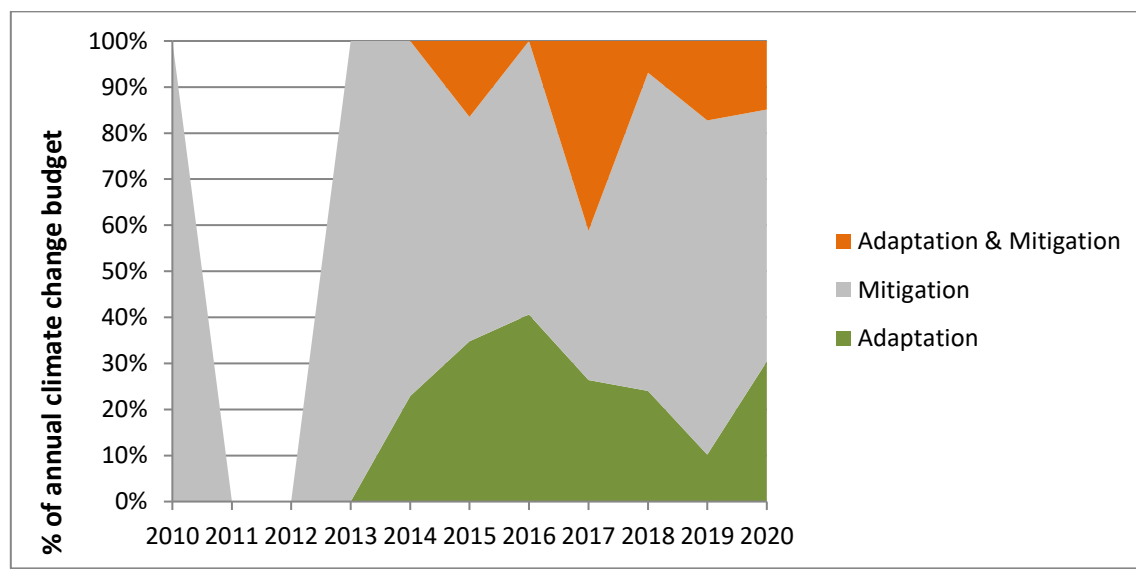


Figure 3: Conceptual distribution of public spending on climate change (i.e. categories: adaptation, mitigation, adaptation + mitigation)

- Total budget in climate change in the 2014-2020 period mostly focuses on mitigation. Mitigation represented 77% of climate budget in 2014 and then over 53% for the entire 2014-2020 period years.
- Adaptation and Mix of Adaptation and Mitigation account for equal shares (23-24%) in the climate budget in the same period. In the category of adaptation, most of relevant projects were spent on

construction of water supply and wastewater treatment systems for different organizations under MOC's management.

- Projects/activities that have both adaptive and mitigative aspects are mostly paid by recurrent budget. In the whole period 2010-2020, expenditure in this category accounts for 23% of the Ministry's total climate budget.

Table 3: Distribution of climate change spending by categories of adaptation, mitigation and mixed

	Adaptation		Mitigation		Adaptation & Mitigation	
	Count	%	Count	%	Count	%
2010	0	0	0.78	100	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	1.945	100	0	0
2014	5.833	22.9	19.604	77.1	0	0
2015	7.824	34.8	10.954	48.7	3.714	16.5
2016	9.921	40.6	14.533	59.4	0	0.0
2017	9.292	26.4	11.413	32.4	14.515	41.2
2018	4.344	24.0	12.501	69.1	1.248	6.9
2019	3.09	10.2	21.899	72.5	5.204	17.2
2020	12.163	30.4	21.923	54.7	5.962	14.9

4. Allocation of total climate budget to climate change themes

a) Allocation of total climate change budget to pillars:

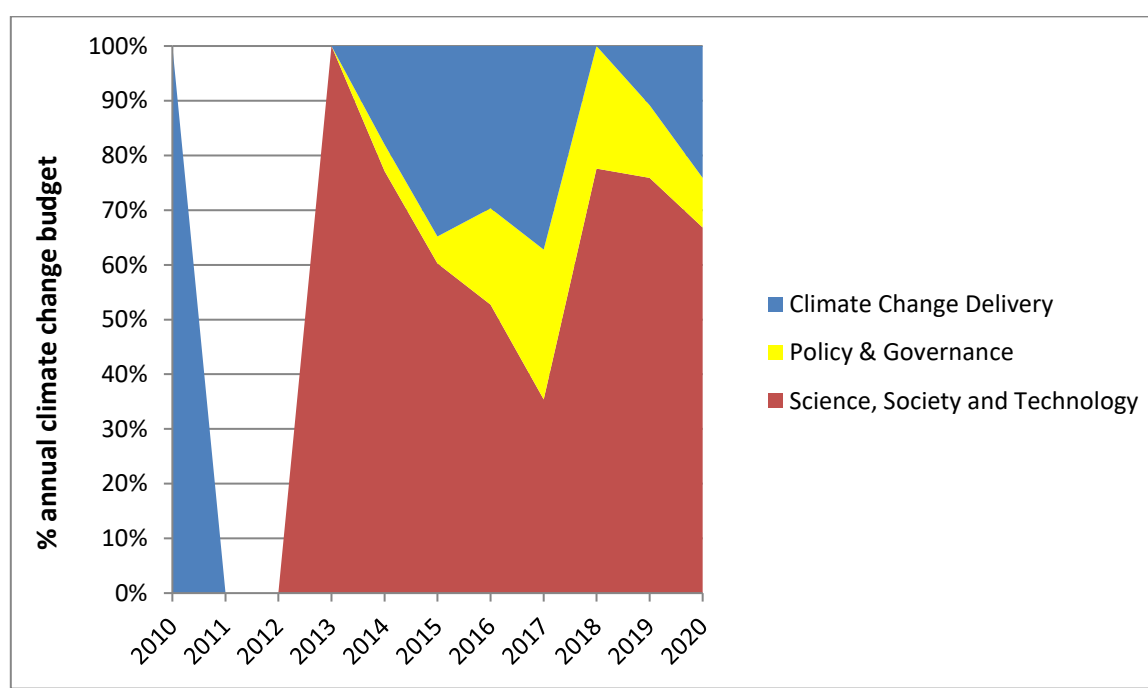


Figure 4: Distribution of public expenditure on climate change – grouped into Investment expenditure (Climate change delivery) and Recurrent expenditure (classified into Science, Society and Technology and Policy & governance)

- The climate change budget 2014-2020 focuses predominantly on ST. ST was almost 78% of climate budget in 2018 (when there were three ST projects focusing on research capacity building including human, laboratory and equipment for green growth and environmentally friendly consumption) and then over 62% for the remaining years.

- CCD was the second largest category, accounting for 24% of total climate budget in the study period. While ST projects came from both investment and recurrent budget, CCD projects were mostly from capital budget.

Table 4: Distribution of public expenditure on climate change by categories of Science, and Technology, Policy and Governance and Climate Change Delivery

	ST		PG		CCD	
	Count	%	Count	%	Count	%
2010	0	0	0	0	0.78	100
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	1.945	100	0	0	0	0
2014	19.604	77.1	1.243	4.9	4.59	18.0
2015	13.57	60.3	1.098	4.9	7.824	34.8
2016	17.636	52.8	5.876	17.6	9.921	29.7
2017	12.463	35.4	9.66	27.4	13.097	37.2
2018	14.037	77.6	4.056	22.4	0	0.0
2019	22.899	75.8	4.029	13.3	3.266	10.8
2020	26.777	66.9	3.639	9.1	9.632	24.1

b) Allocation of Climate Change Delivery tasks (annual mean expenditure VND billion, 2014 – 2020):

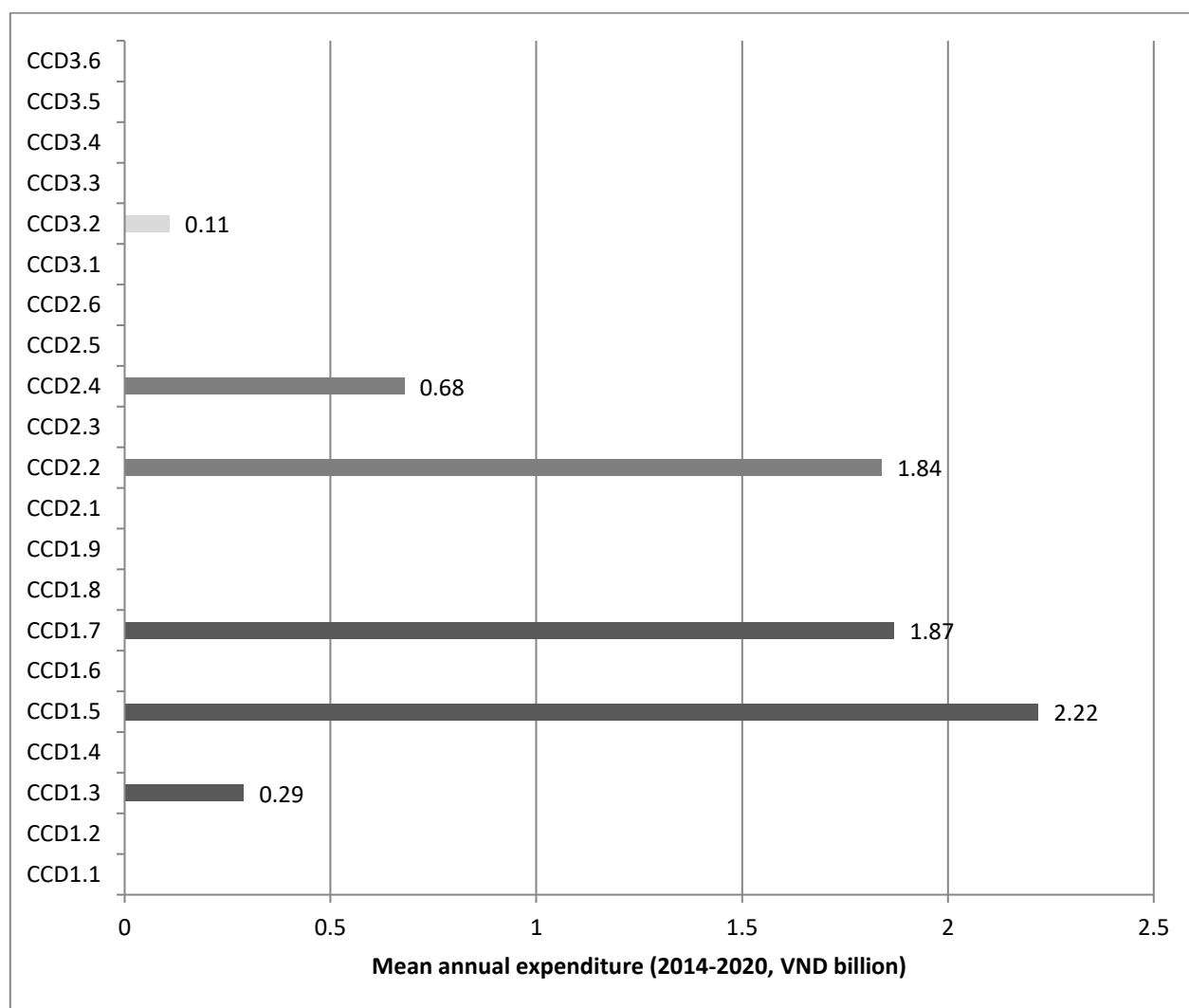


Figure 5: Distribution of public expenditure on climate change within the (Climate change delivery (CCD) category

- Public expenditure on CCD in MOC is concentrated in only a few sub-categories of projects.
- The dominant target of climate change from 2010 - 2020 was Water quality and supply (CCD1.5), accounting for 32%, thank for a large investment on installation of water supply facilities in the MOC's affiliates. Other CCD expenditures were equally distributed to Forest development (CCD1.7) for 27% %, and Residential and city area resilience (CCD2.2) accounts for 26%. Remaining CCD budget was spent on Waste management and treatment (CCD 2.4) accounting for 10%, Irrigation (CCD 1.3) for 4% and Energy Efficiency (CCD2.2), accounting for 2%.

Table 5: Public expenditure on climate change within the CCD category

CCD1.1	0	CCD1.8	0	CCD2.6	0
CCD1.2	0	CCD1.9	0	CCD3.1	0
CCD1.3	0.29	CCD2.1	0	CCD3.2	0.11
CCD1.4	0	CCD2.2	1.84	CCD3.3	0
CCD1.5	2.22	CCD2.3	0	CCD3.4	0
CCD1.6	0	CCD2.4	0.68	CCD3.5	0
CCD1.7	1.87	CCD2.5	0	CCD3.6	0

Note: There was the lack of recurrent expenditures in 2010-2013, so this average was calculated for the period 7 years 2014-2010. There were some tiny values because the project was only be implemented for one or a few years, not the whole 7-year period.

c) Allocation to Science, Society and Technology and to Policy and Governance tasks (annual mean expenditure VND billion, 2014 – 2020):

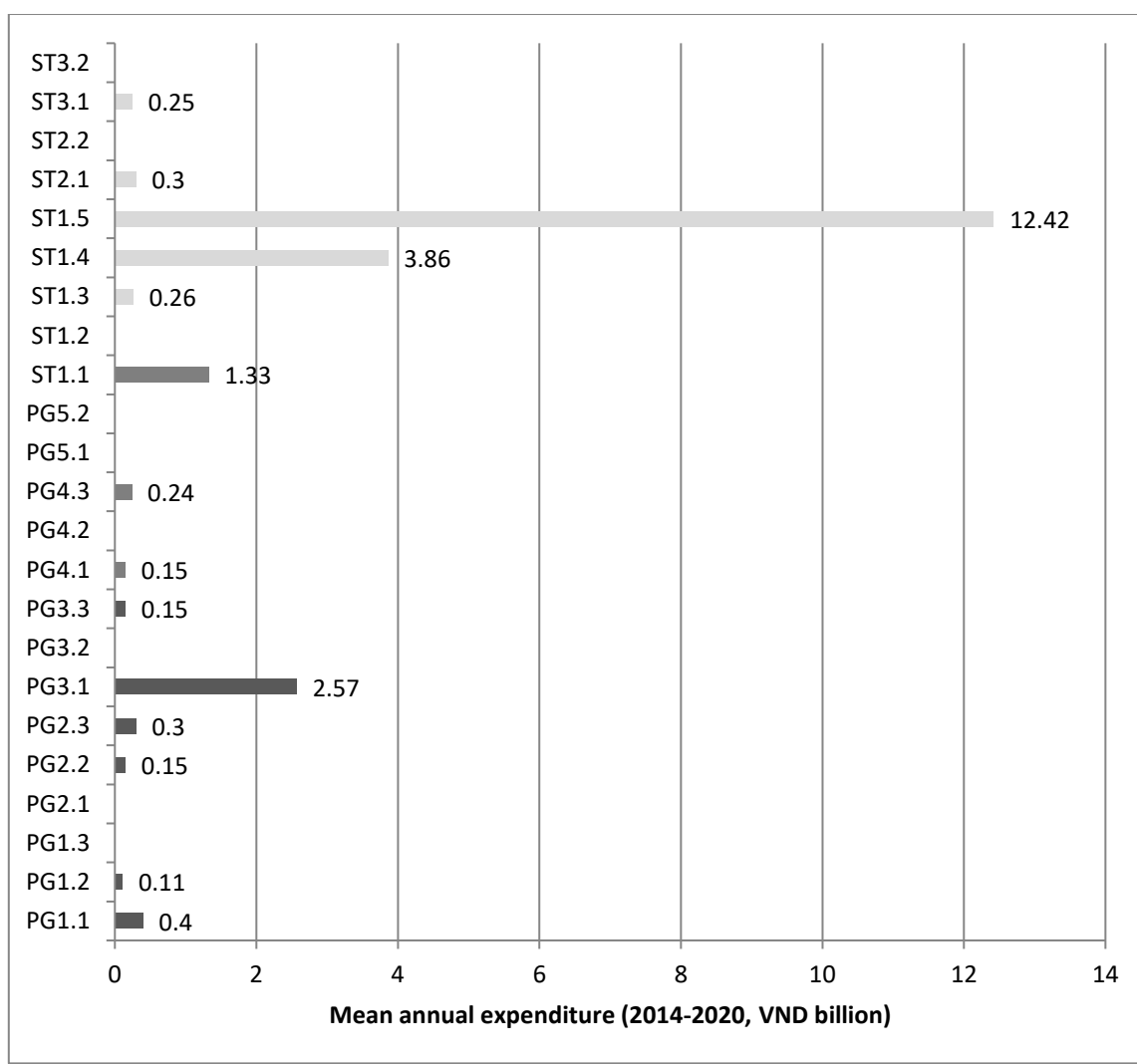


Figure 6: Distribution of public expenditure on climate change within the ST and PG categories

- The main targets of budget in climate change for ST and PG task from 2010 - 2020 has been in Technology for energy efficiency and low GHG emission (ST1.5) accounting for 55% of total budget for ST and PG. Survey and assessment on CC impacts (ST1.4) for 17%, Information and database development (ST1.1) accounts for 17%, Action and Sector Plans (PG 3.1) accounts for 11%, and Survey and evaluate the impact of CC (ST1.4) accounts for 6%.
- Smaller amounts of budget (less than VND 0.5 billion per project in average) have been allocated to Develop CC adaptation guidelines and technical regulations (PG 1.1), Climate change awareness building in curriculums of primary to higher education establishments (ST 2.1), Manage and monitor implementation of Adaptation policies (ST3.1), Biological & genetic resource strengthening (ST1.3), and Mitigation and Adaptation Instruments (PG 4.3) among others. Putting together, all small projects and activities accounts for 11% of the total ST and PG budget of the MOC.

Table 6: Public expenditure on climate change within the ST and PG categories

PG1.1	0.40	PG3.3	0.15	ST1.3	0.26
PG1.2	0.11	PG4.1	0.15	ST1.4	3.86
PG1.3	0	PG4.2	0	ST1.5	12.42
PG2.1	0	PG4.3	0.24	ST2.1	0.30
PG2.2	0.15	PG5.1	0	ST2.2	0
PG2.3	0.30	PG5.2	0	ST3.1	0.25
PG3.1	2.57	ST1.1	1.33	ST3.2	0
PG3.2	0	ST1.2	0		

Note: There was the lack of recurrent expenditures in 2010-2013, so this average was calculated for the period 7 years 2014-2010. There were some tiny values because the project was only be implemented for one or a few years, not the whole 7-year period

5. Overseas Development Assistance climate programmes

Contribution of ODA to total climate change budget (average 2010 –2020):	5.3 %
<p>Five largest ODA allocations in terms of climate budget:</p> <ol style="list-style-type: none"> 1. Project Component 1- Support for Building Flood and Storm Resilient Houses under the Project: "Increasing resilience to the impacts of climate change for vulnerable coastal communities in Vietnam" (2020, 67.8%) 2. Project on drainage and flooding prevention infrastructure in medium cities to adapt to climate change (2019-2020, 14.4%) 3. Project on developing adaptive and sustainable urban infrastructure project (2019-2020, 12.7%) 4. Technical assistance to AFD project on urban development in the context of climate change response and green growth (2019, 2.6%) 5. Project to support Vietnam to develop legal framework and national capacity to implement Paris Agreement on climate change (VN-SIPA) (2019-2020, 2.3%) 	

Note: Including data on the 2010 project, the 2013 project and the rest from 2014-2020 dataset.

- ODA projects had focused mainly on increasing the resilience of urban and rural communities against negative impacts of climate change. Also, improvement of Vietnam legal framework to ensure its alignment with international commitments is an ODA priority.
- All the ODA was registered as recurrent and not investment

6. Policy and planning instruments

Instrument	Yes (√) or No (X)
Climate Change Action Plan	√
Green Growth Action Plan	√
Plan for Implementation of Paris Agreement	X
Others: none	

Climate Change Action Plan (ministry) (see [table 5 in chapter 1])

- Review and supplement technical regulations, standards on construction and legislative documents related to climate change and sea level rise issued by construction authorities
- Introduce measures for climate resilience to construction industry; research on e.g., anti-corrosion and heat-resistant building materials; infrastructure for dealing with heavy rain, high tide and sea level rise, water supply; survey of urban ground elevation and sea level rise adaptation options
- Study mitigation measures in construction, of green cities, infrastructure; energy-efficient solutions and renewable energy; reduction emissions from cement manufacturing and solid waste; re-use of rainwater
- Establish policies on training in climate change and sea level rise adaptation, including training documents for construction officials, syllabi of universities, architecture and the construction industry.

Green Growth Action Plan (see [table 6 in chapter 1] for nationally defined responsibilities)

Decision 419 / QD-BXD by the Minister of Construction on the Action Plan of the Construction Sector on Green Growth to 2020, orientation to 2030, has the following actions in Annex:

Activity content	Time
I. Review and recommend adjustments to construction planning from a sustainable development perspective	
Reviewing and proposing adjustments to the National Urban Upgrading Program for the period 2009 to 2020 (Prime Minister Decision No. 758 / QD-TTg dated June 8, 2009)	2017-2019
Reviewing and proposing adjustments to the National Strategy on integrated solid waste management to 2025 with a vision to 2050 (Prime Minister Decision No. 2149 / QD-TTg dated December 17, 2009)	2017
Reviewing and proposing adjustments to the investment program for solid waste treatment for the period 2011-2020 (Prime Minister Decision No. 798 / QD-TTg dated May 25, 2011)	2017
Review and propose adjustments to the development orientation of urban lighting in Vietnam until 2025	2018
Reviewing and adjusting the National Housing Development Strategy to 2020 and a vision to 2030 (Prime Minister Decision No. 2127 / QD-TTg dated November 30, 2011)	2018
Study, review and adjust the program to develop non-fired building materials until 2020 (Prime Minister Decision No. 567 / QD-TTg dated April 28, 2010)	2018
Review, adjust, and develop a masterplan for the development of Vietnam's cement industry in the period 2017-2025 with an orientation to 2035 (replacing the plan 1488)	2017-2018
Review, adjust, and develop a Masterplan on exploration, exploitation and use of minerals as cement in Vietnam for the period 2017-2025 (replacing Masterplan 105 and 1065).	2017-2018
II. Review and recommend adjustments to urban planning and urban improvement planning according to sustainable urban standards	
Study and develop regulations and guidance on urban green growth assessment and recognition. Pilot application of urban green growth assessment.	2017-2020
Mobilizing financial resources for the implementation of planning programs to renovate and upgrade urban areas towards green growth in the provinces / cities.	2017-2025
Guidance on building action plans to build green cities (piloting in some cities: Sapa, Hue, Hoi An, Vung Tau, Da Lat)	2018-2020
Develop a browser and implement the Vietnam Green Growth Urban Development Plan	2017-2025
Develop a national urban policy assessment report, integrate the content of urban green growth.	2017-2020
III. Sustainable technical infrastructure improvement in selected cities	
The study to propose a number of investment solutions to improve the technical infrastructure in a sustainable direction in a typical urban area (selecting urban areas under trade hubs, tourist centers, urban areas. severely degraded).	2018-2020
Research, orient and develop technologies for wastewater treatment and urban solid waste treatment suitable to Vietnamese conditions.	2017-2019
Study, formulate and promulgate regulations, standards and instructions on urban lighting for economical and efficient use of energy.	2017-2020
Research, formulate and complete economic - technical norms related to construction investment, management and operation of wastewater treatment facilities and solid waste according to appropriate technologies in Vietnam.	2017-2019
To build a master program on renovation of old condominiums in urban centers nationwide	2017-2018
Formulate and promulgate regulations on mechanisms and policies to incentivize, encourage and support enterprises to invest in renovating old condominiums in urban areas.	2018-2019
IV. Innovating technology and construction techniques towards greening	
To study and renovate construction technologies towards modernization, save energy, natural resources, protect the environment and adapt to climate change.	2018 - 2025
V. Encourage the development of industrial building materials and green construction	
Develop mechanisms and policies to favor, support and encourage the application of cleaner production technologies in the building materials industry; support and encourage the production and use of green building materials	2018-2020

Develop investment programs and plans, innovate technology of building materials production towards cleaner, save fuel, materials, reduce environmental pollution	2017-2018
Develop and issue regulations on management, recycling and reuse of construction waste in construction works	2017-2020
Implementation of the Project of Productivity and Quality of Construction Industry.	2017-2025
VI. Using energy economically and efficiently in construction	
Implement energy efficiency programs in construction works: Research and issue regulations, criteria, and guidelines for building green buildings, works using energy efficiently; Formulating mechanisms and policies to favor, support and encourage investment in green building development; Capacity building for stakeholders	2017 - 2020

Plan for Implementation of Paris Agreement (PIPA)

See [table 8 in chapter 1] for nationally defined responsibilities of MOC for the period until 2020)