CLIMATE PUBLIC EXPENDITURE AND INVESTMENT REVIEW (CPEIR) – PERIOD 2016-2020 - TUYÊN QUANG PROVINCE

1. Climate change in Tuyên Quang

General introduction

Tuyen Quang is a mountainous province located in the north of Vietnam, about 165 km from the capital, Hanoi . The province's hills and mountains account for more than 73% of the area which is 5,868 km^2. In 2019, the population stood at 784,811. With the goal of sustainable development on all three pillars: economy, society, and environment; by 2020, Tuyen Quang has become a developed province in the northern mountainous provinces with average growth reaching 6.45% / year for the whole period 2016-2020. Outstanding economic results in the same period were attributed to restructuring of the agricultural sector, developing commodity production in association with market demand, and ensuring food security associated with the construction of a new [countryside?]. The province maintains a forest coverage rate of more than 65%, among the highest forest coverage rates in the country. Tuyen Quang's forest economy has grown rapidly and steadily, with 27,700 ha of forest certified under sustainable forest management according to international FSC standards. The mobilization, management, and efficient use of investment capital as well as infrastructure systems, particularly transport infrastructure, in Tuyen Quang has led to prosperity. Total social investment capital over the past 5 years is estimated at over 42,000 billion VND. The province has completed the construction of several important works and projects such as the Binh Ca bridge, Tinh Huc bridge. The Tuyen Quang - Phu Tho expressway project connecting with Noi Bai - Lao Cai expressway has been approved by the Prime Minister for an investment policy to be implemented.

The impact of climate change on Tuyên Quang

Area	Impacts of climate change	Branches and fields affected by climate change	Vulnerable object
Highland	- Increased floods and landslides; -Increased extreme weather phenomena; - Rising temperatures and drought	- Geological accident and natural disaster prevention; - Land resources, water, irrigation systems; - Forest resources, biodiversity. - Rural economic sectors such as agriculture, forestry and fisheries; - Health, community health; - Immigration, resettlement and livelihoods; -Culture, tourism and services; - Transportation.	- People in mountainous areas, especially ethnic minorities - Elderly people, women, children - Farmers, working poor.

Urban area	- Increasing storms and tropical depressions; - Increased flooding and inundation; - Rising temperatures	- Water resources, irrigation systems - Construction, infrastructure, urban development; - Transportation; - Energy industry; - Health, public health - Livelihoods; Culture, tourism and services;	- The poor, low income, workers; - The elderly, women, children; - Employees.

Source: Climate assessment report of Department of Natural Resources and Environment

Activities to respond to climate change in Tuyên Quang

In 2019, the Department of Natural Resources and Environment completed the report of the project "Climate assessment of Tuyen Quang province" and the project "Development and update of action plans to respond to climate change of Tuyen Quang province [2021. -2030 vision to 2050?] ". On that basis, the Provincial People's Committee issued Decision No. 417 / QD-UBND dated October 14, 2020 on the action plan to respond to climate change of Tuyen Quang province for the period 2021-2030, vision 2050.

The plan aims to identify the challenges and opportunities of climate change for the development of local sectors and fields; priority solutions to adapt to climate change and mitigate greenhouse gases for the period 2021 to 2030, with a vision to 2050;review and adjust climate change factors in strategies and programs, development plans and plans of branches, domains and localities. The plan includes:

- Training on climate change and disaster prevention for the Chairmen of the Women's Union of communes, wards, and towns in the province. At the same time, completing the installation and subscribing to 18 automatic rain gauging stations serving the disaster prevention and moving 100 households out of dangerous disaster areas.

- Activities in response to the "Say no to disposable plastic products" movement launched by the Natural Resources and Environment sector in the 2016-2020 period have also received a positive response from the community.

- Youth participation in the forum "Youth consultation for climate action" held for the first time. This is an activity in the “Climate Promise — Youth in Action for Climate” initiative initiated by the United Nations Development Program (UNDP).

In the period 2016-2020, Tuyen Quang focuses on building synchronous, step-by-step modern infrastructure to serve the province's socio-economic development in the context of climate change such as:

- Regarding transport infrastructure development: Implement the Project to concretize intra-field roads and commodity production areas in the period 2016-2020. Deploying the investment project to build the Tuyen Quang - Phu Tho expressway connecting with the Noi Bai - Lao Cai expressway; to complete the works of linking bridges and Binh Ca bridges on Ho Chi Minh road; to build Tinh Huc bridge over Lo river; upgrade and expand national highways, provincial roads, district roads, urban roads, inter-commune roads ...
- Regarding power supply infrastructure: Complete the electricity development plan of Tuyen Quang province for the period 2016-2025. Nearly constructed, the Yen Son and Song Lo hydroelectric plants are expected to be completed and put into operation in 2021. Focusing on implementing the

rural electricity supply project from the national grid of Tuyen Quang province in the period 2013-2020 …

- Regarding irrigation infrastructure and response to climate change: In the 2016-2020 period, 248 irrigation works have been invested, repaired, upgraded and built; solidification of canals and canals 2,871.2km (including structural and rigid construction), projects of dikes and embankments to protect riverbanks, 3,628km have been invested and built. Installed 44 automatic rain gauge stations (the Provincial Hydrometeorological Station manages 6 stations, the Commanding Committee for Disaster Prevention and Search and Rescue subscribes to 28 stations, hires to manage 10 stations) to serve the prevention and control disaster.
- Regarding forestry: Forestry development project in Tuyen Quang province: 500 hectares of protection and special-use forests have been planted; taking care of 3,179 ha of protective and special-use plantation forests, supporting the planting of 500 ha of production forests with acacia hybrids; completed the construction of 17.86 km/30 km plan for the forest road category. The project to improve the capacity of forest fire prevention and fighting in Tuyen Quang province has supported loudspeakers, computers, and fireproof clothing; equipment for measuring temperature and humidity; 1,830 types of forest fire signs; training and drills on forest fire prevention and fighting.
- Regarding irrigation infrastructure and response to climate change: invest, repair, upgrade and build 248 new irrigation works; to solidify canals, dike projects, riverbank protection embankments.
- Regarding urban infrastructure: Focus on implementing the Urban Development Program of Tuyen Quang province to 2020, with an orientation to 2030. Attract capital sources to implement construction investment programs and projects. technical infrastructure, urban embellishment, water supply and drainage systems, trees, electricity and lighting in districts and cities.
- Development of infrastructure of Long Binh An industrial park and industrial clusters, including Khuon Phon, An Thinh and Tan Thanh.

2. Summary of Data on Climate Change Investment in Tuyên Quang

2.1 Budget sources for climate change investment

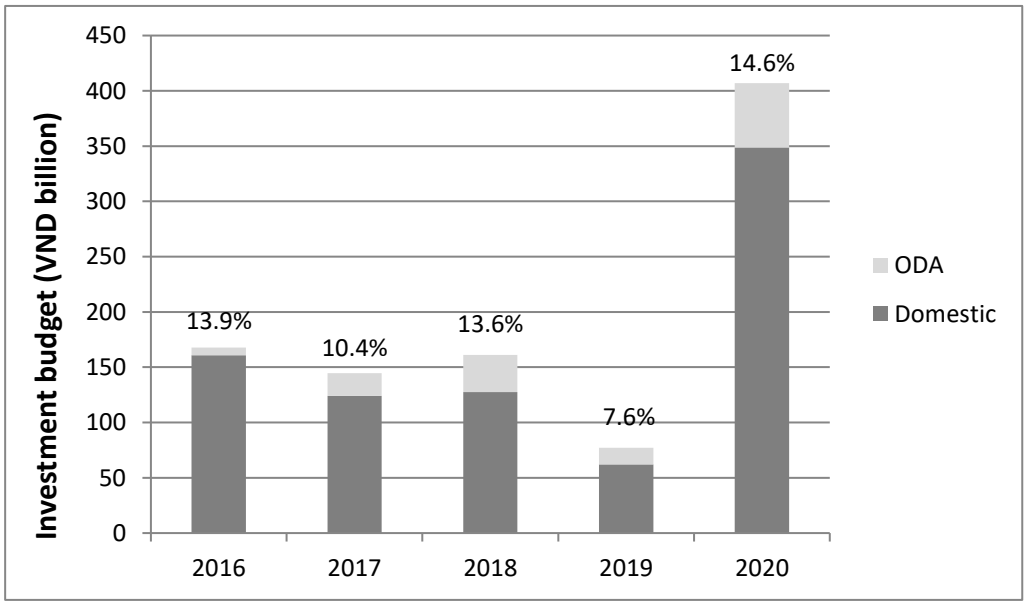


Figure 1: The total investment budget for climate change at Tuyên Quang *– the percentage that the climate change budget represents of the total Provincial development investment budget is shown as a % on the top of each bar.*

The mean annual climate change investment budget for 2016 – 2020 is 192 VND billion. The highest climate investment budget was in 2020 (407 VND billion), whereas the lowest was in 2019 (77 VND billion).

Domestic investment contributed to 86% of the total climate budget 2016 – 2020 (165 VND billion per year), with ODA contributing the remaining 14% (27 VND billion). The proportion of ODA is not stable varying between 4.1% in 2016 and 20.8% in 2018, 19.4% in 2019.

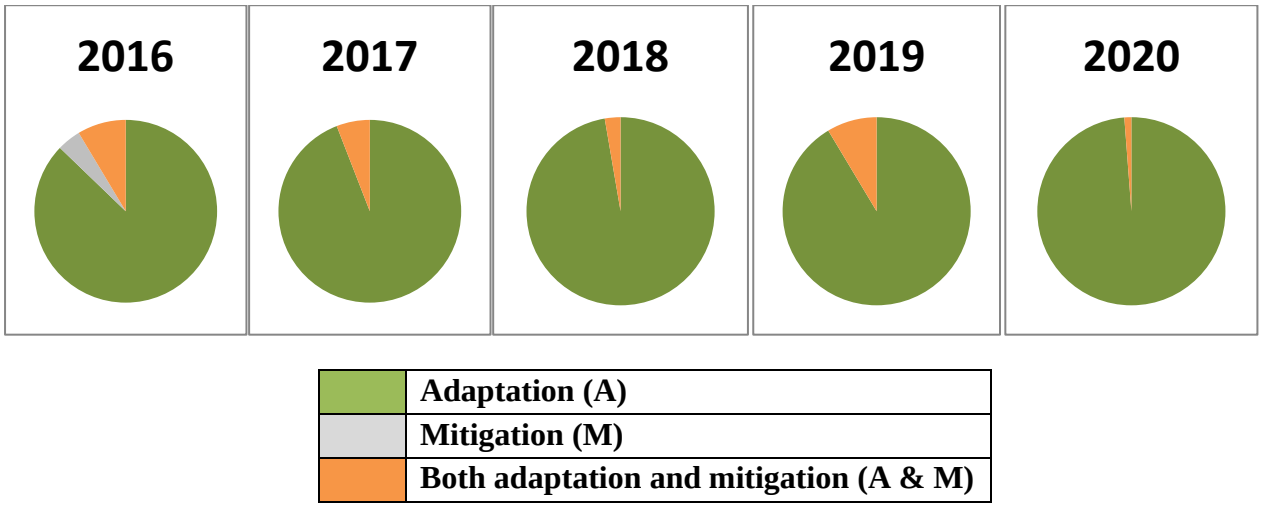
In most of the years analysed the climate investment budget represents between 7.6 – 14.6 % of the total investment budget. In 2020, the climate investment budget was the highest proportion of the provincial investment budget at 14.6%, whereas it was lowest at 7.6% in 2019.

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

Year	Domestic	ODA	domestic + ODA	% domestic	% ODA	Total Province Data	(ODA+domestic / total province domestic) x 100
2016	160,821	6,906	167,727	95.9	4.1	1,208,493	13.9
2017	124,183	20,507	144,690	85.8	14.2	1392,59	10.4
2018	127,637	33,499	161,136	79.2	20.8	1,185,335	13.6
2019	62,218	14,952	77,170	80.6	19.4	1,021,046	7.6
2020	348,890	58,152	407,042	85.7	14.3	2,786,464	14.6

2.2 Purpose of the investment budget for climate change

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



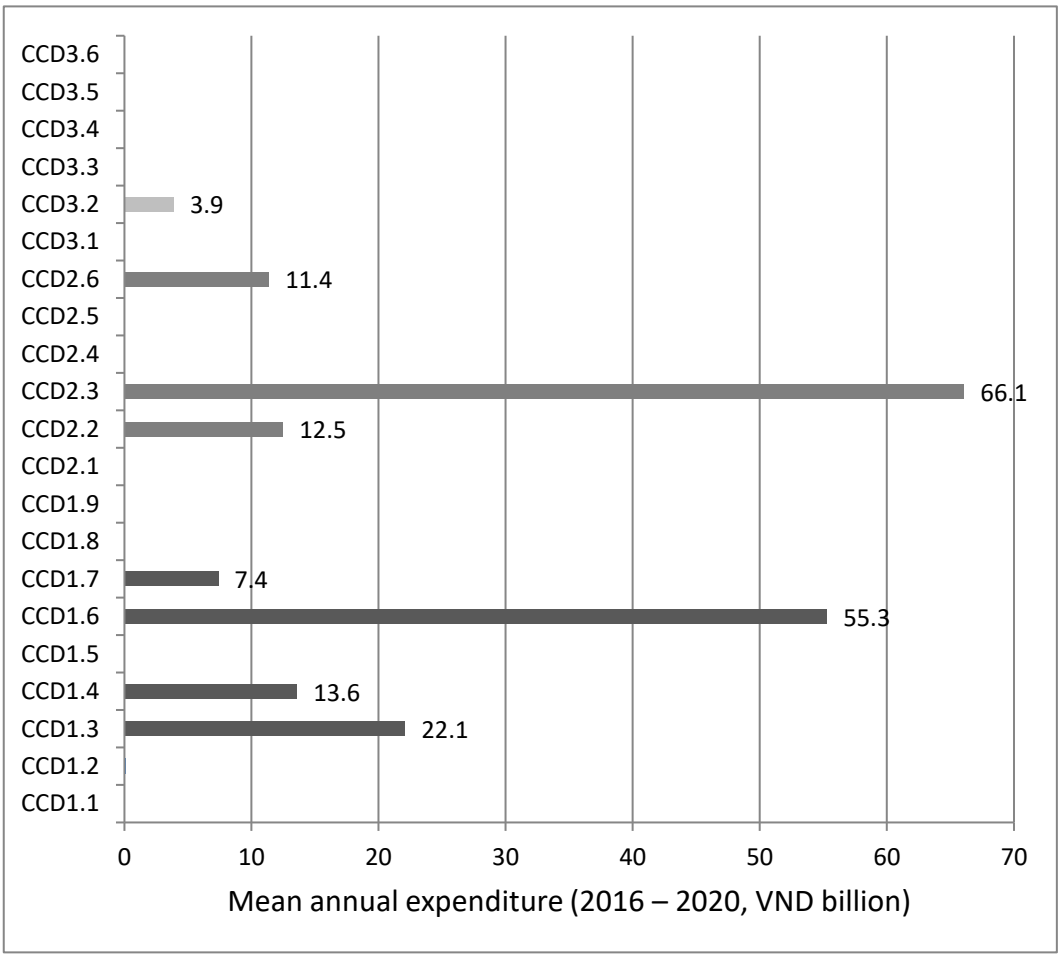
Total investment in climate change in the 2016-2020 period mostly focuses on adaptation. Adaptation funds were 87% of climate investments in 2016 and then over 91% for 2017 – 2020.
The remaining allocation is spent on forestry development projects in Tuyen Quang province that are both adaptation and mitigation. In the whole period 2016-2020, there is only one mitigation project that is to

improve forest fire prevention and fighting capacity for Tuyen Quang forest, which was implemented at VND 10 billion in 2016.

Detailed investment data for climate change adaptation and mitigation

Unit: VNDb	2016		2017		2018		2019		2020	
A	128,631	87,2	136,442	94,1	156,786	97,3	70,535	91,4	402,126	98.8
M	6,168	4.2	0	0.0	0	0.0	0	0.0	0	0
A/M	12,728	8.6	8,607	5.9	4,35	2.7	6,603	8.6	4,915	1.2

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



The main targets of investment in climate change from 2016 - 2020 has been in Transportation (CCD2.3) accounting for 34.4% of the climate change delivery, Rural development and food security (CCD1.6) for 28.7%, dyke and embankment river (CCD1.4) accounts for 29,2%, irrigation (CCD1.3) accounting for 11.5%, strengthening city resilience (CCD2.2) accounts for 6.5%, forest development (CCD1.7) accounts for 3.8% and disaster risk reduction (CCD2.6) accounts for 5.9%. Smaller amount of investments have been made in Economical and efficient use of energy (CCD3.2) accounts for 2%.

Detailed investment in climate change by sector (for reference)

	count	%		count	%		count	%

CCD1.1	0.0	0.0	CCD1.8	0.0	0.0	CCD2.6	11.4	5.9
CCD1.2	0.1	0.1	CCD1.9	0.0	0.0	CCD3.1	0.0	0.0
CCD1.3	22.1	11.5	CCD2.1	0.0	0.0	CCD3.2	3.9	2.0
CCD1.4	13.6	7.1	CCD2.2	12.5	6.5	CCD3.3	0.0	0.0
CCD1.5	0.0	0.0	CCD2.3	66.1	34.4	CCD3.4	0.0	0.0
CCD1.6	55.3	28.7	CCD2.4	0.0	0.0	CCD3.5	0.0	0.0
CCD1.7	7.4	3.8	CCD2.5	0.0	0.0	CCD3.6	0.0	0.0

2.3 Budget expenditure from ODA

The five biggest ODA projects for climate change:
1. Dam Safety Improvement and Repair Project (WB8) (2018-2020, 42.6%)
2. Urban Northern Mountain Program - Tuyen Quang City (2017-2020, 35.9%)
3. Project on rural electricity supply from the national grid of Tuyen Quang province for the period 2013-2020 (2016-2020, 7.8%)
4. The project of agriculture, farmers and rural areas in Tuyen Quang province (2016-2017, 2019-2020, 5.1%).
5. Construction of roads in northern mountainous provinces (ADB) (2017-2020, 3.9%)

Over 78% of the ODA in the climate change budget for investment in the 2016-2020 period comes from two projects: the Northern Mountains Urban Program - Tuyen Quang City and the Dam Safety Improvement and Repair Project. Both of these projects are supported by World Bank funds in the period 2016 - 2020.

2.4 Policy and planning instruments

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

Achievements of the NTP-RCC until 2015:

- A provincial steering committee has been established to implement the national target program.
- Action plan to implement the National Target Program had a budget of 1 billion VND
- Provincial Command for Flood and Storm Control and Search and Rescue was consolidated

- Awareness was raised, propaganda about the national target program delivered: training to improve capacity of officials at all levels to implement communication activities on climate change; communication materials produced on environmental protection and climate change, and in newspapers and on radio
- Formulated the masterplan for forest protection and development for the period 2011-2020
- Provincial biodiversity conservation plan for the period 2013-2020 approved
- Constructed irrigation works for upland and industrial crops
- Integrated climate change into sector development plans, programs, schemes and plans

PIPA (reduction of GHG emissions to 2020):

1. Develop organic farming
2. Develop a livestock scheme with improved animal waste management
3. Implement REDD+ action plan
4. Build a mechanism, policy to reduce energy use in transportation; stimulate public transport (bus)
5. Research, apply modern, low emissions technology in cement and brick production
6. Strengthen science and technology for low emissions in transport, implement techniques
7. Research, strengthen techniques for (biological) waste management to lower emissions in urban areas
8. Implement policies on forest management, ecosystem protection to respond to climate change and sequester carbon
9. Build low emissions agricultural models
10. Implement the national programme on energy efficiency and energy saving
11. Save energy and produce clean energy: expand, apply solar PV