FISCAL POLICY AGENCY
MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

UNDP
Empowered lives.
Resilient nations.

POLICY BRIEF

Public Finance for Climate Change in Indonesia 2016 - 2018

FISCAL POLICY AGENCY
MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

UNDP
Empowered lives.
Resilient nations.

Policy Brief

PUBLIC FINANCE FOR CLIMATE CHANGE IN INDONESIA 2016-2018

HIGHLIGHTS

In achieving the national target to reduce GHG emissions, the significant amount of climate change funding in order to implement climate change mitigation and adaptation programs is required. The funding needs are steadily increasing due to the high level of vulnerability of Indonesia towards the potential for ecological disasters that are caused by climate change.

The dependence of climate change funding on public budget results in a high finance gap between annual needs and the availability of public budget by the government. The current allocation of public finance for climate change is still inadequate to fund climate change mitigation and adaptation activities, then strategies to mobilize other funding sources are needed.

Optimizing the utilization and efforts to increase climate change funds can be implemented with the following policy strategies:
1. Sharpen the role of government in funding climate change.
2. Develop the Climate Change Fiscal Framework (CCFF).
3. Optimizing the utilization of climate change budget tagging to support performance-based budget.
4. Building an awareness of the importance of mainstreaming climate change.

The Demands and Needs of Indonesia's Role in Climate Change

As reported by the Global Climate Risk Index (CRI), in the last two decades, Indonesia has experienced an increased level of vulnerability to the effects of climate change such as flooding, droughts and storm surges. The ecological disaster will certainly harm the national economy, where the impact is estimated to be equivalent to 1.4 percent of the current value of GDP in 2050.

Therefore, to minimize the impact of losses from climate change and respond to global demands, the Government of Indonesia continues to actively contribute to global negotiation and strive to realize its commitment to managing climate change at the national level. As a contribution in support the global targets are realized by establishment of the National Action Plan for Reducing GHG Emissions (RAN GRK) which includes a target of reducing emissions by 26% of business as usual (BAU) in 2020 and 41% with international support, as well as National Action Plan for Climate Change Adaptation (RAN-API). In 2016, the Government of Indonesia has published the Nationally Determined Contribution (NDC) document that sets a more ambitious emission reduction target of 29% (with national effort) and up to 41% (with international support) from the BAU scenario in 2030. Therefore, in order to meet these targets, funding

needs for mitigation and adaptation activities are not small and are estimated at USD247.2 billion or around IDR3.461 trillion as stated in the Second Biennial Update Report (BUR) that was published in 2018.

This policy brief aims to analyze the current climate change funding management policies through mapping the roles of key actors, identifying funding instruments used and assessing their adequacy, analyzing the utilization in mitigation and adaptation efforts, evaluating outputs and formulating policy recommendations for optimizing the utilization and improvement of climate change funding in Indonesia.

Climate Finance Actors and Instruments

The three key actors in climate change funding in Indonesia are the **central and regional governments, the financial services sector, and private sectors, etc.** Three central government institutions that have an important role in budgeting and coordination in financing climate change which includes:

- **Ministry of Finance (MoF)**
  Which is responsible for ensuring the availability of adequate funding for climate change programs and activities, including monitoring the results of the implementation of these programs and activities to see their effectiveness. To support this, the Ministry of Finance tracks the current existing funding, develop fiscal policies relating to climate change management, including the development of potential fiscal transfer instruments - Ecological Fiscal Transfer (EFT), which could be implemented both from the center to the regions and provinces to districts/city.

- **National Development Planning Agency (Bappenas)**
  In accordance with their mandate on RAN-GRK and RAN-API, Bappenas has authorization to coordinate with all institutions at the central and regional levels, as well as monitor the implementation of the activities contained in the action plan. Bappenas together with the Ministry of Finance has the responsibility to be able to mainstream climate change policies into the work and budget plan of the ministries and institutions.

- **Ministry of Environment and Forestry (MoEF)**
  As a sectoral and implementing institution, MoEF carries out the functions of coordination, synergy, integration and leadership, including monitoring, reporting, verification (MRV), both at the national (central and regional) and international level, as the National Focal Point (NFP) for the UNFCCC. MoEF together with the Ministry of Finance has formed a Public Service Agency (BLU) for the environmental fund's management called the Environmental Fund Management Agency (BPDLH)[1].

In addition to the role of the Central Government, the Regional Government also has a very important role in implementing national policies and planning, such as the mandate of Presidential Regulation Number 61 Year 2011 concerning RAN-GRK, where the Provincial Government is required to prepare Sub-national Action Plan for Reducing GHG Emissions (RAD-GRK) that is in line with RAN-GRK, and Sub-national Long Term Development Plan (RPJPD) and District/Province Spatial Zoning Plan (RTRWP/K). In the RAD-GRK, the Regional Government needs to prepare a baseline for GHG emissions, a proposed mitigation action plan and its priority scale (including estimated funding needed), and determine the implementing agencies and funding sources to support the implementation of activities/ programs. The Regional Government also has a role in allocating Sub-National State Budget for the implementation of activities that focus on controlling the largest GHG emitters or sectors that play a role in reducing GHG emissions. In addition, the Regional Government has the authority to implement policies related to regional revenues (such as land permits, taxes and user charges, etc) that can support climate change management.

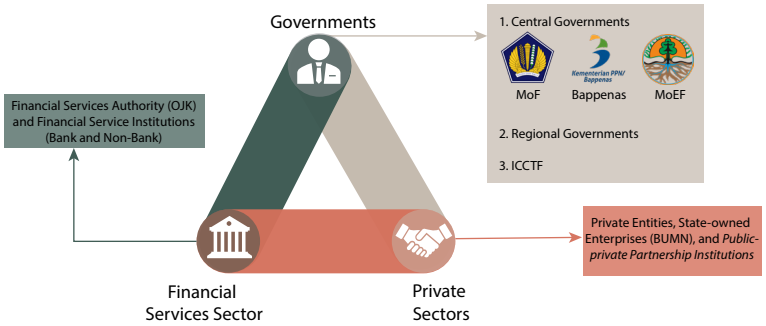

Figure 1 Climate Finance Actors and Instruments

The Climate change funding can come from various sources, namely public, private, and mixed funds. Public funds can come from government budget as well as foreign state grants and loans. Funds from international sources can be channeled through government budget, private parties, and NGOs acting as intermediaries. Based on the BKF and CPI report (2014), climate change funding in Indonesia is domi-

[1]Government Regulation Nomor 46 Year 2017 dan Presidential Regulation Nomor 77 Year 2018

is dominated by domestic funding from government budget, namely: 66% and 34% sourced from international public funding.

Existing public funding instruments in Indonesia include: public budgets obtained from tax and non-tax revenues, fund management through trust funds, Green Bonds, and Green Sukuk, as well as multilateral funding and non-public funding, allocated by the central and regional governments in sectors related to climate change mitigation and adaptation policies. Fund management through trust funds has been managed by the Indonesia Climate Change Trust Fund (ICCTF) under BAPPENAS and the Environmental Fund Management Agency (BPDLH) which has just been established under the Ministry of Finance. In addition, the Government of Indonesia has also issued Green Bonds and Green Sukuk that have received Medium Green assessment from the Center for International Climate and Environmental Research (CICERO). Meanwhile, multilateral funding sources have been pursued through the Adaptation Fund (AF), Global Environment Facility (GEF), and Green Climate Fund (GCF) schemes.

To increase participation of non-public funding for climate change, in 2014, the Government of Indonesia issued a Sustainable Finance Roadmap in Indonesia which was followed up through Financial Services Authority Regulation (POJK) Number 51 Year 2017 concerning the Application of Sustainable Finance for Financial Services Institutions, Issuers, and Companies Public. This non-public funding has been implemented through the issuance of Green Bonds by PT Sarana Multi Infrastruktur (PT SMI) and OCBC NISP Bank.

Current Developments in Public Finance: Budget Mitigation and Adaptation

To strengthen the transparency of climate change funding, especially public finance management, the Ministry of Finance has initiated budget tagging for climate change mitigation and adaptation activities since 2016. The marking mechanism aims to identify and monitor the development of mitigation and adaptation budget managed by six line ministries according to the mandate of RAN-GRK and adaptation have been carried out by eight line ministries according to the mandate of RAN-API[2]. Budget tagging is carried out on the ministries/institutions work plan using the Budget and Information Collaboration System (KRISNA) under BAPPENAS. The results of budget tagging are expected to be used as an evaluation material for mitigation and adaptation activities by internal line ministries and strengthen Performance-based Budgeting. In addition, budget tagging can also be used as a source of information for reporting at the national and international levels, such as the National Communication Report, as well as references in the preparation of innovative financing Green Bond/Sukuk.

Table 1 The Indonesia Climate Change Mitigation and Adaptation Budget 2016-2018

Year	Climate Change Mitigation Budget (IDR trillion)	Climate Change Adaptation Budget (IDR trillion)	Portion of the Climate Change Budget in APBN (State Budget)
2016*	72.4	NA	3.6%
2017*	95.6	NA	4.7%
2018	72.2	37.5	4.9%

According to the climate change budget tagging in Indonesia, nominally it has grown by 51.6% from IDR72.4 trillion in 2016 to IDR109.7 trillion in 2018. The majority of Indonesia's climate change management budget in 2018 was allocated for mitigation activities (55%), followed by adaptation and mitigation activities which served as a co-benefit to the adaptation budget.

The largest climate change budget, both in the form of mitigation and adaptation, is managed by the Ministry of Public Works and Housing (MoPWH) which has the task on building physical infrastructure in several fields. Directorate General of Bina Marga is the unit that has the largest mitigation budget for financing road maintenance and municipal solid waste management system. In fact, the budget is also greater than the budget for conservation and rehabilitation of degraded forest areas issued by the Directorate General of Conservation of Natural Resources and Ecosystems - MoEF. As for climate change mitigation activities, the realization value has increased from IDR52.45 trillion in 2016 to IDR85 trillion in 2017. The Ministry of Agriculture succeeded in realizing 96% of its mitigation budget in 2017, the highest compared to other line ministries.

From a sectoral perspective, climate change mitigation activities in Indonesia are still concentrated in the energy and transportation sectors. Based on the results of budget tagging, around 77% of the mitigation budget in 2018 is dominated by energy and transportation-based activities with a value of IDR55.33 trillion. In addition, amounting up to 98.81% of the IDR0.44 trillion of the Ministry of Agriculture's budget in 2018 has a direct

[2]In 2018, out of 16 Ministries/Institutions only 8 have carried out the adaptation activities which mandated in the RAN-API

impact on reducing GHG emissions. The percentage is the highest in comparison to other line ministries.

Furthermore, in accordance with the RAN-API mandate, adaptation activities are focused on five main areas namely economic resilience, livelihood resilience, ecosystem resilience, special area resilience and it's supporting systems. Livelihood resilience and economic resilience are two priority areas in adaptation activities that contributed to more than 80% of the adaptation budget in 2018. More than half of the adaptation budget in 2018 was supported by livelihood resilience with a value of IDR27.17 trillion, which was followed by the field of economic resilience with a proportion reaching 26%. The majority of adaptation budgets are in the MoPWH with activities covering four of the five adaptation areas, while the Ministry of Environment and Forestry has the largest budget in the ecosystem sector.

Mitigation and Adaptation Output with the Highest Funding Allocation

Based on the output, the mitigation budget allocation in 2018 is the largest channel for the procurement of railroad infrastructure (which is also a national priority) by the Ministry of Transportation with a budget value of IDR13.7 trillion. Railroad is mass public transportation which if used optimally will reduce carbon emissions released by private vehicles. Furthermore, outputs with the second to fifth highest budget values are output from the MoPWH, namely road reconstruction, road construction, road rehabilitation maintenance, and routine road maintenance. The comparison can be seen in the diagram below.

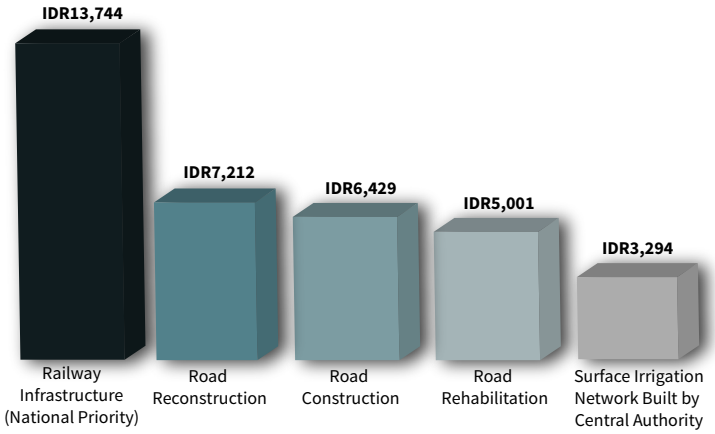

Figure 2 Five Mitigation Output with the Highest Funding Allocation (IDR million)

Whilst for adaptation budget allocation, in 2018, the biggest budget allocation by MoPWH to finance the outputs in the form of dam construction, construction of flats, normalized rivers and embankments built/enhanced, raw water units built and construction of self-help housing quality improvement facilities. The construction of raw water units and dams is a supportive output in the area of food sovereignty which is one of the goals under the current administration's Nawacita. The following is a comparison of the budget for adaptation based on output.

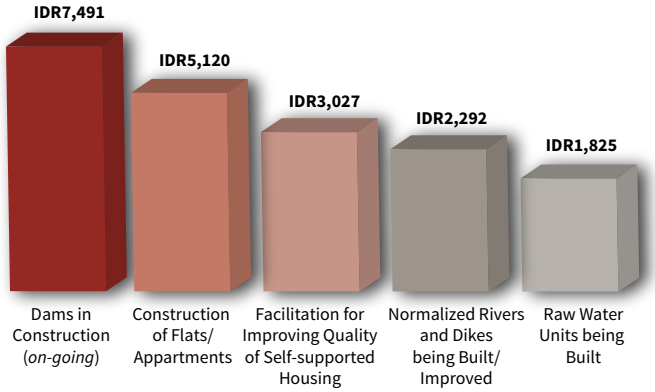

Figure 3 Five Adaptation Output with the Highest Funding Allocation (IDR million)

Although physical projects have a direct impact on emission reductions, it does not mean non-physical projects do not have an impact on achieving these targets. For example, the drafting of regulations in the field of New and Renewable Energy (NRE) issued by the Directorate General of Renewable Energy and Energy Conservation – MEMR, requires a much lower budget compared to the construction of the NRE power plant itself. However, the impact of the regulation can be more massive if the regulation can encourage Independent Power Producers (IPPs) to switch and enter the NRE energy market. Thus, although the impact is difficult to measure, non-physical projects can also have an impact on reducing emissions.

Is current funding sufficient?

As mentioned earlier, total funding of around IDR3,307.2 trillion is needed to achieve the NDC target for 2018-2030 (estimation based on BUR, 2018) or around IDR288.4 trillion per year. The budget allocation for climate change in 2018 grew positively by 14.7% from the previous year and 51.1% compared to 2016. Although the total budget allocated for climate change activities has increased over the past three years, the allocation of mitigation activities has decreased.

When compared with the average annual estimated climate change funding needs that mentioned in BUR 2018 (i.e. around IDR288.4 trillion per year), the size of the climate change budget currently allocated for mitigation and adaptation of around IDR110 trillion is still below the estimated needs climate change

funding, or about 38% of the estimated annual needs. However, if it only takes into account climate change mitigation activities, the value will get smaller, which is only around 25% of the estimated annual needs. **This data shows that the current allocation of public funding for climate change is not enough to fund climate change mitigation and adaptation activities,** especially for adaptation activities, which require very large funding.

Several strategies need to be taken to be able to mobilize funding, both public and non-public funds. By looking at the opportunities and potential funds from non-public parties, the government can reposition funding by evaluating which activities should be funded by the government and which activities can be funded by other parties. The results of the climate change budget tagging analysis can be utilized in the process of identifying potential projects to obtain funding from Green Sukuk. The results of the analysis can also be used to mobilize other public funding through various instruments including through a transfer scheme from the national to the sub-national such as the balance fund (Public Allocation Fund (DAU) or Special Allocation Funds (DAK)), village funds, regional incentive funds; and through the provincial to district/ city transfer scheme through the Ecological Fiscal Transfer instrument.

Policy Implications and Future Agenda

Seeing the urgency and funding needs of climate change in Indonesia, the strategies that can be carried out by the government are as follows:

1. **Sharpening the Government's Role in Climate Change Funding.** As a follow-up to the various climate change action plans that have been prepared, the government needs to estimate more accurately and in detail the existing funding gaps, by looking at the difference between the needs and current funding capabilities. Furthermore, it is necessary to identify the relevant stakeholders and clear division of roles, for example identifying which activities need to be funded by the Central Government and Regional Government, and which can be funded by the non-public sector. After that, the government can identify other potential sources of funding from the public, non-public or a combination of both, including designing a strategy of funding mobilization. Recommendation on the activities needed to mobilize climate funding can be described as follows.

Identification and Review on the Entire Landscape of Climate Funding that Exists Today.
The Ministry of Finance is currently conducting a study on climate funding up to the year 2018 and making an inventory of the international funding sources that still have a commitment to support the climate change control activities.

Compilation of All Financing Needs Required in Order to Achieve the INDC.
The Ministry of Energy and Mineral Resources is one of the ministries/institutions that have already made an estimation of the funds that will be needed for the energy sector to conduct climate change mitigation activities.

Identification of the Gap Between the Total Need of Funds and the Amount of Funds Already Available Now.

Assesment of the Potential Alternative Funding Sources from the Either the Public or Private Sectors or the Combination of Both
Currently, the government has initiated a couple of initiatives in blended financing, among which the Ministry of Finance through the One Indonesia SDG program by PT SMI and the establishment of BPDLH.

Institutional Organization in Order to Coordinate Climate Financing Activities and Programs.
Optimalization of the roles and synergy between key actors, such as the Ministry of Finance (MoF), Bappenas, Ministry of Environment and Forestry (MoEF), and the Financial Services Authority is vital.

Figure 4 The Activities Needed to Mobilize Climate Funding

2. **Preparation of Climate Change Fiscal Framework (CCFF).** CCFF will be a good tool to guide the government in developing a fiscal mechanism that accommodates national priorities for climate change action. This framework will encourage harmonization between public and non-public funding, improve accountability in the management of climate funds, and encourage the effectiveness of climate change actions at the national and sub-national levels.

3. **Optimizing the Utilization of Climate Change Budget Tagging.** Budget tagging is useful in supporting an optimal and accountable public climate finance management. Some of the main agendas that must be immediately carried out, includes: optimization in the mainstreaming of climate change issues into the planning and budgeting at the line ministries level through increasing the capacity of implementing human resources on the budget tagging in each line ministry, as well as the need for clear mechanisms to reduce action plan into line ministries activities.

   In addition to that, the development of measurement instruments that related to the effectiveness of the climate change budget is

needed. Currently, the Directorate of Greenhouse Gas Inventory and Monitoring, Reporting and Verification (MRV) - the Directorate General of Climate Change - Ministry of Environment and Forestry, has the authority to carry out the MRV function to reduce emissions from line ministries' activities as mandated in the RAN-GRK. But, the system is not integrated yet with climate change budget tagging. For this reason, it is necessary to develop appropriate indicators to measure the achievements of the climate change activities that have carried out. Furthermore, improvements in climate change budget tagging procedures are needed, and system integration and synergy that can be used to support the budget tagging process, including the Integrated Performance Monitoring System (SMART), RAN-GRK and RAD-GRK Monitoring and Evaluation and Reporting System (PEP), as well as the National Registry System (SRN); and strong coordination is needed between the line ministries that manage it.

4. **Development of Climate Change Awareness Ecosystems.** In addition to investing in physical projects, the government needs to encourage activities that are enabling the environment, such as in the form of capacity building, subsidies or tax-cut for activities that are environmentally friendly, standardization or regulation itself. These activities can mobilize the flow of climate change financing sources, especially from the private sector. This becomes very important for the achievement of the NDC, RAN GRK and RAN API targets because basically the government budget will not be able to meet the needs for achieving these targets.

In order to support the achievement of the above strategy, it is necessary to carry out the stages of implementation in order to meet climate change funding which is generally described in the work plan as follows:

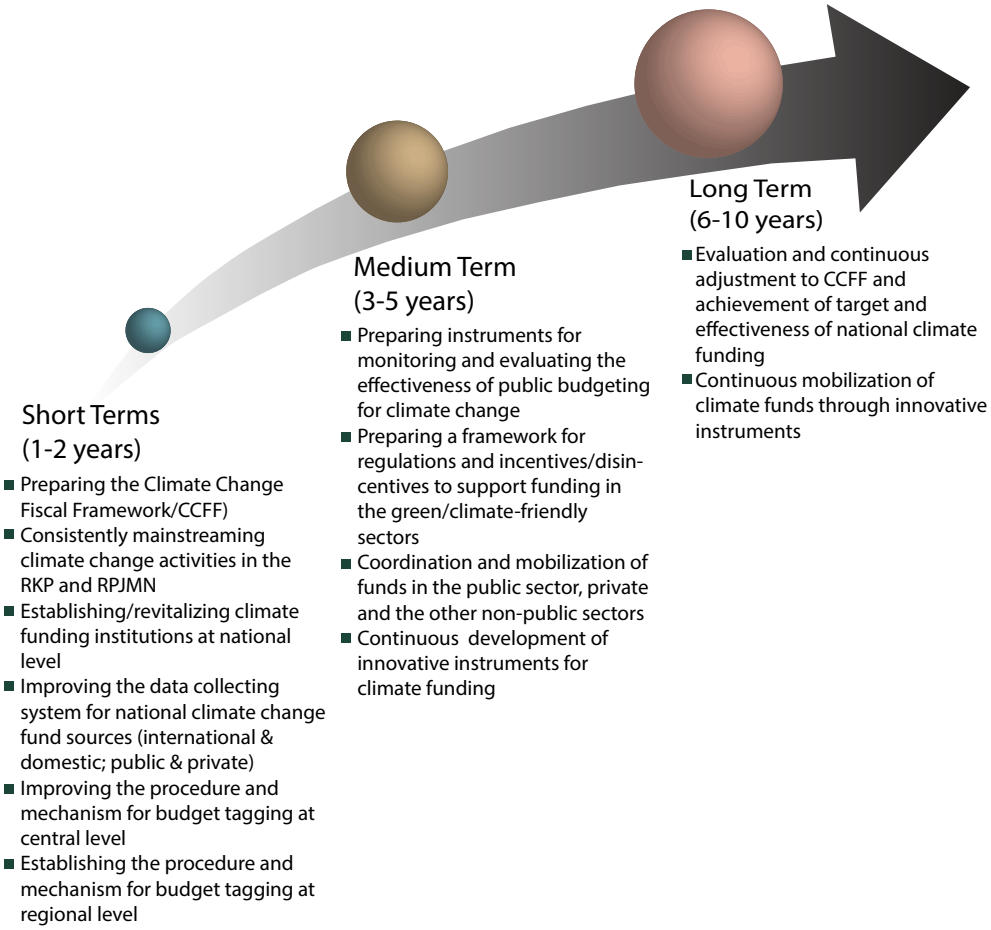

Figure 5 Agenda of climate funding in the future

For Further Information:

FISCAL POLICY AGENCY
MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

Center for Climate Finance and Multilateral Policy
Fiscal Policy Agency, Ministry of Finance, Republic of Indonesia
G.d. R.M. Notohamiprodjo Lt. 5
Jl. Dr. Wahidin Raya No.1 Jakarta, Indonesia
Tel: +62-21 3483 1676
www.fiskal.kemenkeu.go.id/pkppim/id

Empowered lives.
Resilient nations.

United Nations Development Programme
UNDP Indonesia - Sustainable Development Financing Phase 2 Project
Menara Thamrin, Lt. 8-9
Jl. M.H. Thamrin Kav. 3 Jakarta 10250, Indonesia
E-mail: muhammad.hardiana@undp.org
Tel: +62-21-29802300
www.id.undp.org

This Initiative is Supported by:

Empowered lives.
Resilient nations.

Poverty-Environment Action
for Sustainable Development Goals

UN environment
United Nations Environment Programme

Climate Finance Network

European Union

Austrian Development Agency

Norwegian Ministry of Foreign Affairs

Sweden Sverige

Swedish International Development Cooperation Agency