

Indonesia National Scoping Study

September 2017



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List of Acronyms

| | |
|----------|---|
| AFD | French Agency for Development |
| BAPPENAS | Ministry of National Development Planning |
| BAU | Business as Usual |
| BKF | Badan Kebijakan Fiskal (Fiscal Policy Agency) |
| BKPM | Badan Koordinasi Penanaman Modal (Investment Coordination Agency) |
| BLU REDD | Badan Layanan Umum (Public Service Agency) for Reduction Emission from Deforestation and forest Degradation |
| CO | Carbon Monoxide |
| CSO | Civil Society Organisation |
| CSR | Corporate Social Responsibility |
| GCF | Global Climate Fund |
| GHG | Greenhouse Gas |
| GoI | Government of Indonesia |
| GoN | Government of Norway |
| ICCSR | Indonesian Climate Change Sectoral Roadmap |
| ICCTF | Indonesia Climate Change Trust Fund |
| IDR | Indonesian Rupiah |
| LJK | Lembaga Jasa Keuangan (Financial Services Institution) |
| LoI | Letter of Interest |
| MCAI | Millennium Challenge Account – Indonesia |
| MCC | Millennium Challenge Corporation |
| MFF | Mitigation Fiscal Framework |
| MoEF | Ministry of Environment and Forestry |
| MoF | Ministry of Finance |
| NAMA | Nationally Appropriate Mitigation Action |
| NAP-CC | National Action Plan on Climate Change |
| NDC | National Determined Contribution |
| NGO | Non-governmental Organisation |
| OJK | Indonesian Financial Services Authority |
| PKPPIM | Center for Climate Change and Multilateral Policy |
| POJK | Peraturan Otoritas Jasa Keuangan (Financial Services Authority Regulation) |
| RAN-API | Rencana Aksi Nasional Adaptasi Perubahan Iklim (National Action Plan on Climate Change Adaptation) |
| RAN-GRK | Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca (National Action Plan on GHG Reduction) |
| RPJMN | Rencana Pembangunan Jangka Menengah Nasional (National Mid-term Development Plan) |
| SBN | Sustainable Banking Network |
| SDG | Sustainable Development Goals |
| SEZ | Special Economic Zone |
| TFA | Tropical Forest Action |
| UN | United Nations |
| UN ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| UNFCCC | United Nations Framework Convention on Climate Change |
| USD | United States Dollars |
| WWF | World Wide Fund for Nature |

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1. Introduction

The Indonesian National Scoping Study on Climate Finance has been conducted in close consultation with ESCAP team and following guidance from the senior climate finance expert between April and June 2017.

This scoping study is a major component of a regional project developed by UN ESCAP on *Innovative climate finance mechanism for financial institutions in the Asia-Pacific region*, which early activities in Indonesia was implemented in partnership with Kemitraan. The main objective of the National Scoping Study is to identify areas for further capacity development support required for financial institutions in Indonesia in terms of developing an enabling policy environment that promotes private investments in low carbon and climate resilient development, and in climate change mitigation and adaptation initiatives.

Scope of activities in the development of the scoping study within the above-mentioned time frame consisted of:

1. Interviews
2. Identify priority strategic areas for intervention and institutional arrangements at the policy level
3. Identification of national champions

Interviews for the scoping study have been carried out involving over 30 respondents from banking and private sectors, as well as representatives of international initiatives related to climate finance and other stakeholders ranging from government institutions to national/international NGOs and research institutions. The main objectives of the scoping study include:

- Mapping of climate finance related initiatives by other UN agencies, multilateral development banks, bilateral donors etc.;
- Mapping of the role and actions taken by civil society and other stakeholders in the field of climate finance for the past 2/3 years;
- Exploring the landscape of climate finance in Indonesia based on the current institutional infrastructure and a future vision of desired outcomes;
- Mapping the existing incentives for low carbon development, also through taxation, incl. municipal and provincial government levels;
- Identify priority strategic areas for intervention, entry points and institutional arrangements at the policy level;
- Identify a national “champion” among those participating in the interviews to serve at national and regional level.

Based on the preliminary result of the scoping study, the 1st National Workshop was organised on 12 and 13 June 2017 in Jakarta as part of series of two workshops to be organised in Indonesia. The national champion will then host the 2nd National Workshop in Jakarta, the date of which will be scheduled in collaboration with UN ESCAP.

The objective of the interviews was to identify potential participants of the workshop, who were to share experience and lessons learnt from previously implemented initiatives and activities related to climate finance, either as implementing or as financing body, as well as to provide recommendations on possible best practices and on direction-changing interventions in on-going initiatives and/or activities.

The following document provides a list of interviewees and a summary of the findings from the scoping survey.

2. Summary of findings

2.1 Identification of the identified/proposed national champion

Based on the interviews and mapping of existing financial institutions during the scoping study, the Indonesian Financial Services Authority or OJK was identified as the most potential national champion, since OJK is the main institution in Indonesia performing regulatory and supervisory duties on:

1. Financial services activities in banking and non-banking sector;
2. Financial services activities in the capital market sector; and
3. Financial services activities in the insurance sector, pension funds, financing institutions, and other financial services institutions.

In addition, OJK is also established in order to ensure that all activities within the financial services sector can be:

1. Organised regularly, fairly, transparently and accountably;
2. Able to realize a sustainable and stable financial system, and;
3. Able to protect the interests of consumers and society.

A rapid assessment performed to determine the potential national champions has confirmed OJK to have met the criteria for national champion, such as having the technical capacity to lead in policy drafting and advocacy, the ability to set up a national network of climate finance experts (formation of inter-ministerial working group on climate finance) and to conduct regular meetings and capacity development activities, and most importantly the ability to create an enabling policy environment to promote private investments in climate change mitigation and/or adaptation projects.

Supporting OJK's ability and capacity are a number of policy products and activity related to climate finance, among others the Roadmap for Sustainable Finance 2015 – 2019 focusing on (a) increased provision of funding from Financial Service Institution (LJK) for green projects, (b) increased demand for green financial products and services and, (c) improved supervision and coordination of sustainable financial implementation.

OJK has also been conducting research to promote low carbon development, setting up a national network of climate finance experts through the initiation of inter-ministerial working group on climate finance, becoming member of Sustainable Banking Network (SBN), and with relevant stakeholders published several guidebooks that can be used as a reference for the Financial Services Industry in implementing sustainable finance. Some of these guidebooks include:

1. Energy Handbook for Financial Services Institutions;
2. Guidelines on Financing of Green Building Projects for Financial Services Institutions;
3. Guidelines for Understanding the Document of Clean Energy and Environmental Sector for Financial Services Institutions;
4. Guidelines on Financing of Energy Efficiency in Industry for Financial Services Institutions;
5. Integration of Social Environment and Governance for Banks, Getting Started in the Implementation.

In terms of promoting sustainable finance, OJK and WWF Indonesia have initiated an 18-months Pilot Project on Sustainable Banking involving eight commercial banks known as the First Movers, and during the compilation of this report, OJK has launched the Bali Centre for Sustainable Finance in collaboration with the Bali University of Udayana providing training and capacity building for related stakeholders, as well as serving as a research centre related to all aspects of sustainable finance.

2.2 Past and on-going external support provided to banks for low carbon, climate resilient development

In 2010 the French Agency for Development (AFD) supported the Indonesian state-owned Bank Mandiri with a long-term loan (7 to 10 years, incl. grace periods) to finance projects related to climate change and energy efficiency. AFD extended its commitment through a new agreement with Bank Mandiri with the same amount of loan and scope of supported projects. Through the first initiation in 2010, the project has achieved to contribute in the reduction of CO emission up to an annual amount of 534,000 tons.

Another initiative was launch by the Indonesian Financial Services Authority (OJK) in collaboration with the WWF Indonesia through a Pilot Project of Sustainable Banking, delivering capacity building and technical assistance related to sustainable finance. Eight state and private commercial banks participated in the 1.5 years project as the First Movers, which started in 1 January 2016 and ends in July 2017.

OJK's Head of Commissioner declared that this project will not only be limited to banking sectors, but will also involve other financial institutions, such as insurance, investment companies and other non-bank financial institutions.

2.3 Current and proposed institutional arrangements for mobilising domestic/national private sector climate finance.

Current Institutional Arrangements

Diagrams 1, 2 and 3 below describe the current existing scheme of climate finance accessible private sector. While MoE and MoEF are coordinating international fund for climate finance accessible by different parties, incl. private sector, the OJK is supervising and setting up regulation to support green growth through state owned and private commercial finance institutions to increase accessible capital to be accessed by private sectors committed to low carbon business activities. To support this, the OJK is currently finalising the OJK Regulation (POJK) to Sustainable Finance. In terms of capacity building for its stakeholders at provincial and district level, OJK has just launched the Bali Centre for Sustainable Finance on 12 July 2017.

Diagram 1: Funding scheme under the coordination of the Ministry of National Development Planning

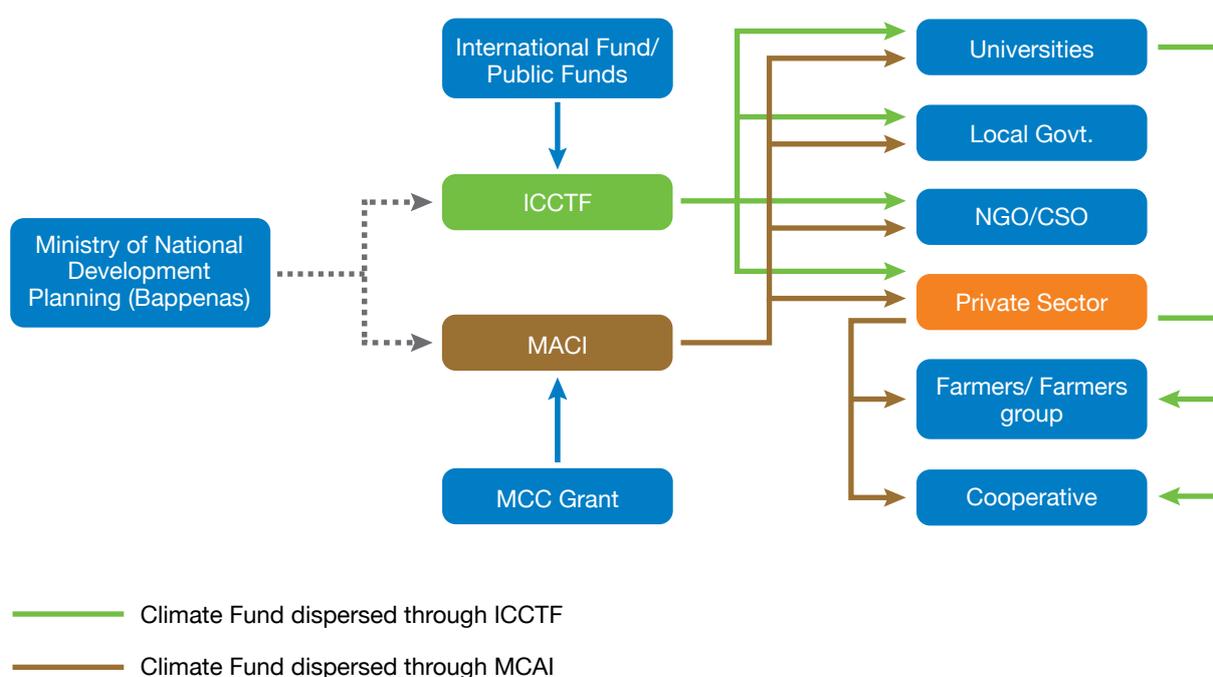


Diagram 2: Private fund distribution scheme for private sector under supervision of OJK

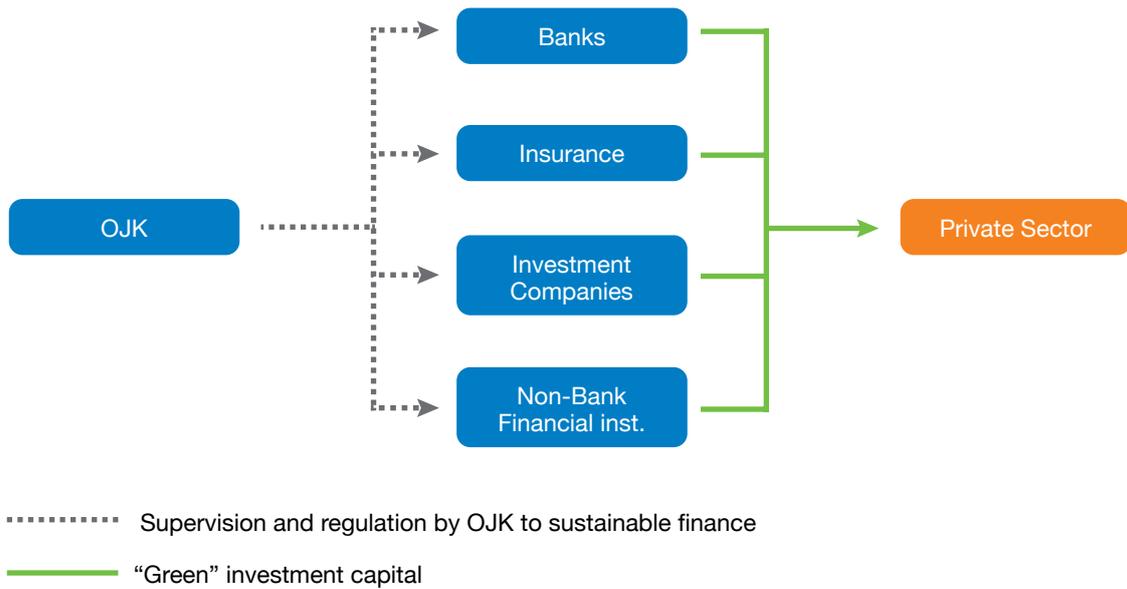


Diagram 3: Climate fund under the coordination of the Fiscal Policy Office of Ministry of Finance (MoF)

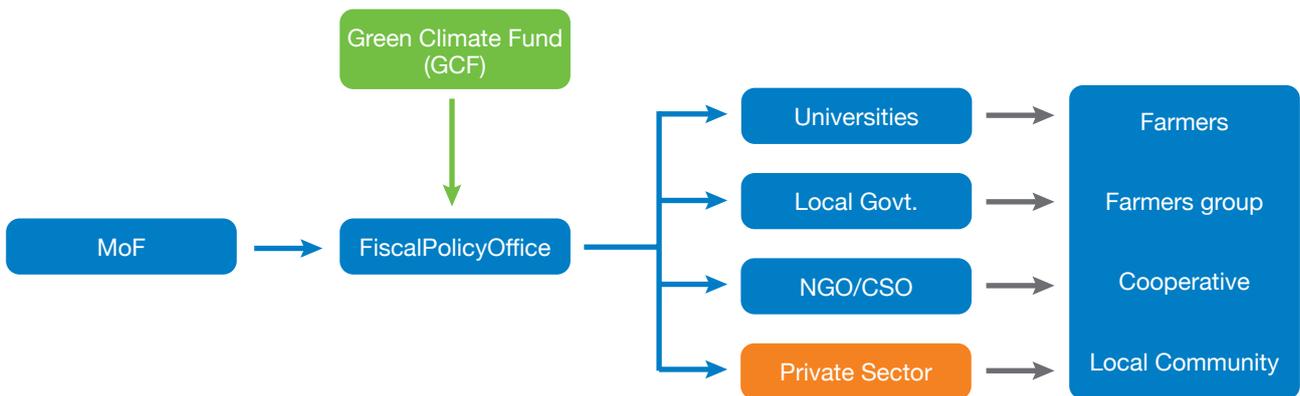
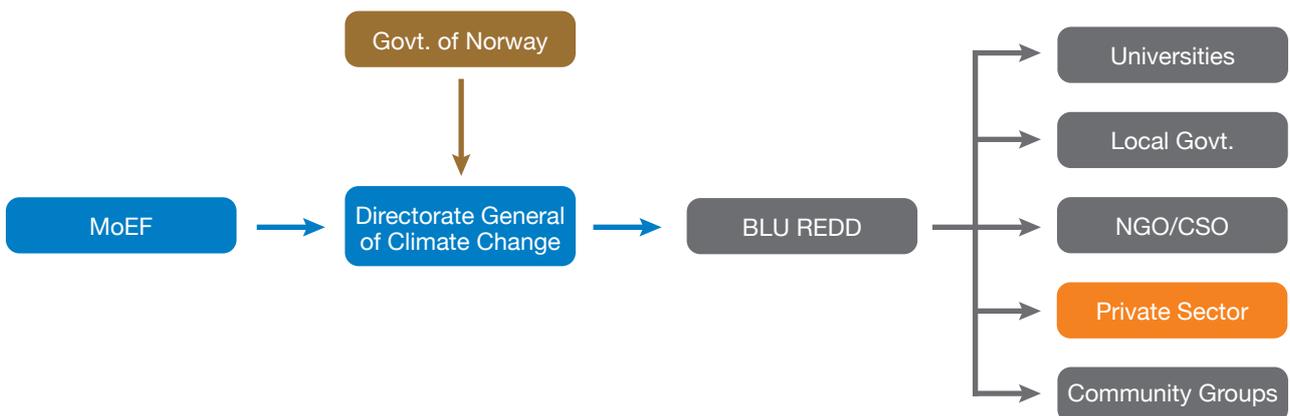


Diagram 4 provided below, reflects a new climate financing scheme which is being developed by the MoEF, which will establish a Public Service Agency (BLU) with the mandate to channel funds for climate change committed by the Government of Norway, which is a part of the Letter of Intent (LoI) signed in 2010 between the GoI and the Government of Norway.

Diagram 4: Climate financing scheme under the coordination of the Directorate General of Climate Change, Ministry of Environment and Forestry (MoEF; currently under development)



2.4 Existing Low carbon, climate resilient financial products/schemes

So far, the majority of funding commitments to low carbon development in Indonesia have come from international donors and public fund that has been pledged since 2006 and committed to 2018.

Indeed, between 2012 and 2015, a total of approx. USD 511.3 million has been committed to private sectors through credit and loan mechanism through private or state commercial banks and collaboration between banks and international donors. The majority of the funds is invested in the development of renewable energy, while only a small part goes to green infrastructure.

A year earlier in 2011, the Government of Indonesia (GoI) signed an agreement with the Government of USA allowing the Indonesian Government to develop its own programme involving community, local government and private sector under a programme called Green Prosperity. Funding provided for the (GoI) are designated among others for the development of community based management of natural resources and renewable energy with an amount of USD 308.35 million out of a total of USD 600 million for 5 implementation years.

The OJK has carried through a study on the implementation of Green Bond that was finalised during the first quarter of 2017. The study aimed to find the appropriate model and structure of Green Bond to be applied and adjusted with Indonesian condition. OJK plans to develop regulation of Green Bond based on this study.

Indonesia's National Determined Contribution (NDC)

Indonesia's NDC sets out a target of 26% emission reduction by 2020 and 29% emission reduction by 2030 based on a 2010 projected BAU scenario. Indonesia is willing to increase its conditional contribution up to 41%, subject to provision in the global agreement including through bilateral cooperation, covering technology development and transfer, capacity building, payment for performance mechanisms, technical cooperation, and access to financial resources.

The Assumptions used for projected BAU and emission reduction for all sector categories (Energy, Waste, IPPU, Agriculture, and Forestry) are as follows:

| SECTOR : ENERGY | | | |
|--|--|---|--------------------------------------|
| | BAU | Mitigation Scenario 1 (CM 1) | Mitigation Scenario (CM 2) |
| 1. Efficiency in final energy consumption. | In-efficiency in final energy consumption. | 75% | 100% |
| 2. Implementation of clean coal technology in power plant. | 0% | | |
| 3. Renewable energy in electricity production. | Coal power plant | 19,6% (Committed 7,4 GW based on RUPTL) | Electricity production of 132,74 TWh |
| 4. Implementation of biofuel in transportation sector (Mandatory B30). | 0% | 90% | 100% |
| 5. Additional gas distribution lines. | 0% | 100% | 100% |
| 6. Additional compressed-natural gas fuel station (SPBG). | 0% | 100% | 100% |

SECTOR : AFOLU

A. Deforestation rate

- Deforestation rate under BAU scenario for 2013-2020 is in line with the FREL for REDD+, which is about 0.920 Mha/year, and consist of planned and unplanned deforestation. The rate for planned deforestation was calculated under existing development scenario.
- For both CM1 and CM2 scenarios, it is assumed that the rate of unplanned deforestation is low and the total of planned and unplanned deforestation would not exceed 0.450 Mha.
- Rate of deforestation for BAU 2021-2030 assumed to be 0.820 Mha/year, with scenario of CM1 and CM2 comes into 0.325 Mha, respectively.

| | BAU | CM1 | CM2 | Note |
|---|---|---|---|--|
| Total (000 ha) | 2013-'20: 920 2020-'30: 820 2030-'50: result from model | 2013-'20: 450 2020-'30: 325 2030-'50: result from model | 2013-'20: 450 2020-'30: 325 2030-'50: result from model | It is assumed that unplanned deforestation would not occur post 2030. Meaning the rate of deforestation completely comes from planned deforestation (model). |
| 1. Unplanned Deforestation | 2013-'20: 500 2020-'30: 409 2030-'50: 0 | 2013-'20: 175 2020-'30: 92 2030-'50: 0 | 2013-'20: 175 2021-'30: 66 2030-'50: 0 | |
| 2. Planned Deforestation (from the model) | 2011-'50: result from model | 2011-'50: result from model | 2011-'50: result from model | |

B. Assumption for wood production:

1. Some literatures recorded that the rate of wood extraction from sustainable natural forest ranges from 20 to 35 m³/ha. This work take an assumption of 50 m³/ha for wood extraction in 2010 (the difference between literature and assumption taken is from illegal logging. Illegal logging was assumed zero in 2050, and rate of wood extraction would reach 30m³ (rate of sustainable extraction).
2. Target for wood production from natural forest under CM1 and CM2 scenarios follow National Forestry Planning (*Rencana Kehutanan Tingkat Nasional/RKTN*) (MoF, 2011), while the BAU is higher, using data from the Association for Indonesian Forest Concessionaire (APHI).
3. The rate for establishing forest estate (plantation) under BAU follows the historical data, with the percentage of feasible areas for planting is about 63% (Assumption from APHI, 2007)
4. It is assumed that all forests cleared would leave zero waste, and all woods from these areas would be useable.
5. Utilization of wood from oil palm and rubber trees at the end of its cycle is at medium rate or about a half of total.

C. Assumption for growth rate:

1. Growth rate of plants in ton C/ha/year for natural forest was calculated based on the growth in m³/ha/year with conversion factor of :
 - a. Biomass Expansion Factor (BEF): 1.4 (Ruhayat, 1990)
 - b. Wood density for natural forest: 0.7 t/m³
2. The rate of Industrial Plantation (HTI) in ton C/ha/year was calculated based on data of measurable wood production volume in m³/ha, with BAU, CM1 and CM 2 in 2010 about 120 and has been increased respectively to 140, 160 and 200 m³/ha in 2050 with the role of technology intervention. The escalation is in every 10 year and correction factors:
 - a. BEF: 1.4 (IPCC Default)
 - b. Wood density for HTI: 0.4 t/m³
3. 6 years rotation.

D. CM2 calculation used a very ambitious targets (38%), and some adjustment to the above assumption (CM1) are as follows:

1. Peat restoration achieves 90% survival rate and the area of peat restoration reaches 2 Mha by 2030
2. Land rehabilitation achieves 90% survival rate and almost all unproductive lands have to be rehabilitated (about 12 Mha in total), so that up to 2030 the rate of plantation would be 800 thousand ha/year (the baseline under historical data is about 270 thousand ha).

| SECTOR: AGRICULTURE | | | |
|---|------------------------|--|--|
| | BAU | CM1 | CM2 |
| 1. The use of low-emission crops. | No mitigation actions. | In total, the use of land for low emission crops is up to 926,000 hectares in 2030*. | In total, the use of land for low emission crops is up to 908,000 hectares in 2030*. |
| 2. Implementation of water-efficient concept in water management. | No mitigation actions. | Implementation of water efficiency is up to 820,000 hectares in 2030*. | Implementation of water efficiency is up to 820,000 hectares in 2030*. |
| 3. Manure management for biogas. | No mitigation actions. | Up to 0.06% of the total cattle in 2030**. | Up to 0.06% of the total cattle in 2030**. |
| 4. Feed supplement for cattle. | No mitigation actions. | Up to 2.5% of the cattle population in 2030**. | Up to 2.5% of the cattle population in 2030**. |

SECTOR : WASTE

SUB-SECTOR: SOLID WASTE

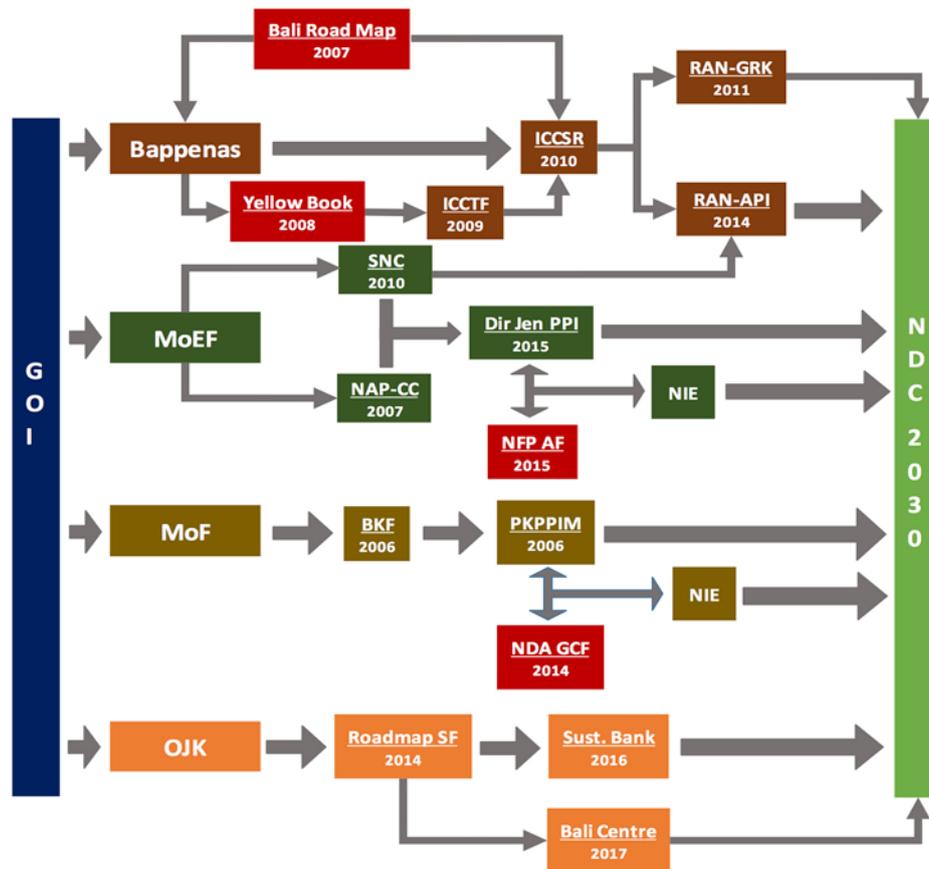
| | BAU | CM1 | CM2 |
|---|------------------------|--|---|
| 1. Enhancement of LFG recovery from 2010 to 2030. | No mitigation actions. | LFG recovery reduces CH ₄ from 0.65% to 10%. | LFG recovery reduces CH ₄ from 0.65% to 10%. |
| 2. Enhancement of the percentage of waste utilization by composting and 3R (paper). | No mitigation actions. | 22% in 2020, 30% in 2030*. | 22% in 2020, 30% in 2030*. |
| 3. Enhancement of the percent-age of PLTSa/RDF (<i>Refuse Derived Fuel</i>) implementation, compare to total waste. | No mitigation actions. | <ul style="list-style-type: none"> - Up to 3% in 2020 and increase up to 5% in 2030**. - PLTSa implementation in 7 cities. | <ul style="list-style-type: none"> - Up to 3% in 2020 and increase up to 5% in 2030**. - PLTSa implementation in 12 cities (additional)***. |

Note: PLTSa = Pembangkit Listrik Tenaga Sampah

SECTOR : IPPU

| | BAU | CM1 | CM2 |
|--|------------------------|---|---|
| Industrial processing and product use in major large scale industries. | No mitigation actions. | Cement industry implements "clinker to cement ratio" (blended cement) from 80% in 2010 to 75% in 2030. | Cement industry implements "clinker to cement ratio" (blended cement) from 80% in 2010 to 75% in 2030. |
| | | Enhancing efficiency by feedstock utilization and CO ₂ recovery in Primary Reformer in petrochemical industry (in particular ammonia production). | Enhancing efficiency by feedstock utilization and CO ₂ recovery in Primary Reformer in petrochemical industry (in particular ammonia production). |
| | | Other actions: <ul style="list-style-type: none"> - Steel industry implements: CO₂ recovery, improvement process in smelter and scrap utilization. - Remains of claim PFCs from CDM-activities (aluminum smelter). | Other actions: <ul style="list-style-type: none"> - Steel industry implements: CO₂ recovery, improvement process in smelter and scrap utilization. - Remains of claim PFCs from CDM-activities (aluminum smelter). |
| | | Note: A quantitative target to be defined by the Min. of Industry. | Note: A quantitative target to be defined by the Min. of Industry. |

NDC Implementation linkages with other climate change policies/instruments



The “Bali Roadmap”

At the United Nations Climate Change Conference in Bali in December 2007, governments from around the world – both developed and developing countries – agreed to step up their efforts to combat climate change and adopted the “Bali Road Map”, which consists of several forward-looking decisions that represent the various tracks that are essential to reaching a secure climate future. The Bali Road Map includes the Bali Action Plan, which charts the course for a new negotiating process under the UNFCCC, with the aim of completing this by 2009.

The Bali Roadmap, that includes Bali Action Plan, became the reference for the development of ICCSR (Indonesian Climate Change Sectoral Roadmap).

Mainstreaming Climate Change into Development Planning “The Yellow Book” (2008)

The Yellow Book serves as a multi-sectoral guide to the GoI in integrating climate change into its overall National Development Plan by coordinating its regulatory efforts to implement both long and short-term efforts to tackle climate change. It laid the groundwork for the Indonesia Climate Change Trust Fund ICCTF and outlines a triple track strategy of pro-poor, pro-job, and pro-growth, with pro-environment principles.

Indonesian Climate Change Sectoral Roadmap (ICCSR)

Launched in March 2010 and developed by BAPPENAS and became an important reference to the establishment of RAN-GRK, the Indonesian Climate Change Sectoral Roadmap 21 (ICCSR) guides policy instruments and regulations, programmes and projects, funding schemes and capacity building for investments in clean energy, improved forestry and improved resilience. To this end, the ICCSR serves as a policy guide for mainstreaming and implementing national adaptation and mitigation responses to climate change into national mid-term development plans (RPJMN, 2010 – 2014 and until 2030). The ICCTF is one of the Roadmap ‘s primary financial mechanisms. Additional functions include:

- Laying the groundwork for the primary policy guide for the Presidential RAN-GRK goal of decreasing greenhouse gas emissions;
- Outlines nine priority sectors for adaptation and mitigation activities and three activity categories for actions, corresponding to timelines outlined in the RPJMN.

National Action Plan for Reducing Greenhouse Gas Emissions (2011)

Indonesia finalized its Presidential Regulation for the National Action Plan for Reducing Greenhouse Gas Emissions RAN-GRK (Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca) in September 2011 (Presidential Regulation of the Republic of Indonesia Number 61 Year 2011), which serves as the foundation for relevant Ministries/Institutions, as well as the Regional Governments, to implement greenhouse gas (GHG) emission reduction activities. Since local and regional reduction measures will count towards emission reductions, the Local Action Plan for GHG Emissions (RAD-GRK) will be the primary implementation vehicle for the RAN-GRK. The RAN-GRK is expected to become an integrated, concrete, measurable and practical action plan for the period between 2010 and 2020 for seven identified mitigation sectors, and is constitutes the Indonesia's NAMA (Nationally Appropriate Mitigation Action).

RAN-API (National Action Plan on Adaptation to Climate Change)

RAN-API, which refers to the ICCSR and the Second National Communication of 2010, is an enhancement of the National Action Plan on Climate Change (NAP-CC) developed by the Ministry of Environment in 2007 (before being merged with the Ministry of Forestry) that aimed to build guidelines for various state institutions and/or agencies to implement a coordinated and integrated efforts in the mitigation of and adaptation to climate change. The plan strongly emphasises inter-ministerial/inter-agencies coordination that needs continuous evaluation and improvement by related stakeholders.

Directorate General of Climate Change (Dirjen PPI) of MoEF

Established in 2015 after the merger of Ministry of Forestry and Ministry of Environment (became the Ministry of Environment and Forestry – MoEF), the Directorate General of Climate Change (Dirjen PPI) was appointed as National Focal Point for Adaptation Fund, channelling fund for climate change adaptation activities that is accessible by NGOs and CSOs to be implemented with local government.

Center for Climate Change and Multilateral Policy (PKPPIM), Ministry of Finance (MoF)

Established in 2006 under the MoF's Fiscal Policy Agency (BKF), the PKPPIM support the Government of Indonesia in the achievement of its NDC through climate finance budgeting and coordination. Later on, the BKF became the National Designated Agency for the Global Climate Fund (GCF).

2.5 Existing incentives for low carbon, climate resilient development

In terms of supporting green growth, the government has provided fiscal and non-fiscal facilities. The government is offering a variety of incentives, which include a tax holiday of between five and 10 years for several pioneer industries such as biofuel and renewable resources as well as a recently issued regulation on incentives in the form of a tax allowance for 143 business sectors (up from 129 sectors) (Decree No. 18 of 2015).

Non-fiscal incentives are also available, such as fast track processing and the removal of a minimum investment threshold as a prerequisite to qualify for such incentives. For non-fiscal incentives, policies such as one-stop service for licensing under the BKPM, ease of immigration permits for expatriates and the establishment of a special economic zone (SEZ) in 11 new locations have been introduced (the development of SEZ is meant to attract more foreign investment and promoting green growth through policy and regulation, therefore the establishment of SEZ and ease of immigration permits for expatriate involved in business activities particularly within SEZ, bringing added skill and knowledge, also enabling technology transfer in green industry).

| Incentive | Mechanism | Administrative Level | Date Introduced | Regulating Authority | Outcome/ Impacts |
|---------------|--|---|--------------------------------|---|--|
| Tax allowance | 30% of the total investment for 5 consecutive years | Government Regulation (national level) | 21 December 2015 | President of the Republic of Indonesia | The regulation is under implementation and 11 Special Economic Zones are currently being established, which are expected to give impetus to green Investments. |
| Tax holiday | Between 5 to 10 years for pioneer industries such as renewable energy and biofuel industry | Government Regulation/ Finance Minister Regulation (national level) | 21 December 2015; 27 June 2016 | President of the Republic of Indonesia; Ministry of Finance | |

Indeed, whether the government has distributed the incentives for the “right” industry or the industry sectors in SEZ apply practices in compliance with green growth policy are still debatable. This also applied to tax-holiday distributed by the government. Critics and request for evaluation have been addressed, yet the follow up seemed to be lagging.

3. Additional findings

Supporting the National Determined Contribution, a Presidential Regulation on National Action Plan for the Reduction of GHG Emissions (RAN-GRK) was released in 2011, setting out 50 mitigation actions across 5 broad sectors between 2011 and 2020, targeting 767 million tonnes of Carbon Dioxide (mtCO₂) reduction in 2020.

Support for RAN-GRK comes among others from the Ministry of Finance (MoF), through its Fiscal Policy Agency (FPA) and with participation from key ministries, which has developed the first “Mitigation Fiscal Framework” (MFF) in 2012.

Although there has been provision of fiscal and non-fiscal facilities to support green growth, carbon tax is yet not on agenda and Indonesia does not have much policy that incentivizes SMEs. Currently, it is hard for Indonesian to comply with green requirements, therefore it is difficult for sustainability projects to compete with conventional projects.

In capital markets, climate projects have drawbacks: very small supply of green financial assets, no regulatory requirement and short-term investment horizons. However, when talking to firms – they are happy to invest into environmental and social practices, but regulations are needed to create an even playing field and avoid missing business opportunities.

The development of green loans also is facing various barriers, such as high concentration and little competition, high margins in traditional markets, higher standards for green finance, lack of long-term funding (majority of funding from customers’ deposits, which correspond to short-term investments) and bottlenecks in the distribution of loans. Green projects are also perceived as containing higher risks.

So far, banks are unable to address environmental risks due to lack of support. Certificates from the Ministry of Environment are obtained but not applied. There is a need for continual assessment in terms of disclosure and bank lending information, and environmental non-compliance.

Banks have short-term objectives for returns of revenues, thus they are not the most suitable institutions to issue long-term investment loans, required to support low-carbon climate resilient development. Therefore, there is a need to develop secondary capital markets. Central Bank and state-owned banks are the main regulators of the financial markets and have a critical role to play as impetus givers to the development of capital market in Indonesia. Capital market in Indonesia have the potential to create the basis for financing of sustainability and

sustainable development.

Companies that have received low carbon, climate resilient certification should be required to develop a sustainability report. They should be (continually) assessed in terms of their compliance with green business and operations criteria, such as: -access to capital, -regulation and loyalty, -stakeholder engagement, etc. Reporting will help to innovate, provide solutions and track impacts over time, and will ensure that all risks are taken into consideration in the sustainability strategy of the company. The additional economic benefits identified are: -reduction of production and operation costs due to resource efficiency, -improvement of company image and stock market ratings; -qualification for financial incentives from government authorities like OJK, - green index to attract green investors; and - increased impact of CSR compliance.

Currently, equity markets are tailored for short-term financing. Longer-term financing strategies area required to boost investments in low carbon climate resilient development. Sustainable finance for sustainable initiatives (1-2% of all banks' lending) is not significant enough to boost green economy development.

4. Overall Summary and Recommendations

4.1 Summary

There is strong will of the Gol to comply with green growth initiatives and to apply climate financing mechanisms. OJK has shown its commitment for the latter through the development of projects in green finance in collaboration with various agencies involving private banks (see Annex C and link to OJK Roadmap for Sustainable Finance, page 14) and in cooperation with other ministries, government agencies and environmental NGOs. Support also comes from the Gol through the issuance of facilitating policies as described above under Section 2.5.

In terms of funding for climate change related activities, approximately USD 382.8 million has been committed to Indonesia out of a total of USD 4.4 billion through international public finance between 2006 and 2017, the largest amount approved for climate change mitigation programmes. In addition, there is also a big opportunity to access private fund for climate finance, since 50% to 70% of private CSR fund is sourced for projects related to biodiversity.

Moreover, the total value of Indonesian stock market capitalisation in 2016 was approx. IDR 6,000 trillion (around USD 450 million). If only 1% could be invested in private low carbon initiative, this would make an additional USD 4.5 million for climate finance. Indeed, innovative enabling policy will be needed to allow such kind of investment.

Based on the interviews and the result of the 1st National Workshop, several improvements are needed to be able to appropriately apply financial mechanisms in terms of supporting green growth and low carbon development in Indonesia, especially by involving private and financial sectors. With regards to the total amount of implemented climate fund, 95% is sourced from public and donors, while only 5% from private sector. This needs to be changed.

According to OJK, the major barrier for banks to implement green investment lies in the lack of capacities and awareness on the overall impact of sustainable business practices on the welling of people and planet, and in terms of generating profit.

Coordination, enabling environment as well as lack of capacity and awareness have been amongst the issues raised during the interviews and were addressed during the discussions at the 1st National Workshop in Jakarta.

4.2 Recommendations

Cumulatively, recommendations proposed during the interviews and the workshop can be summarized as follows:

For the Government Agencies/Ministries:

- Cooperation with BAPPENAS and all relevant entities of the Government of Indonesia within the

context of inter-ministerial coordination needs to be improved, awareness of the private sector as well as of the financial and banking sector is highly required and needs to be raised and strongly promoted;

- Multi-level support should be provided to encourage green finance in Indonesia, including international dialogue;
- Green financing should be tailored to the national context and translated into national policy frameworks (sectorial policies: transport, forestry, production, etc.) applied at national, provincial, and district level. Meanwhile, there is a lack of capacity and knowledge on how to develop green lending that needs to be addressed appropriately;
- An oversight committee should be established as an authorised body to provide assurance. This will increase the confidence of a green investor when it reads the company's sustainability report.

For banks/other financial institution:

- A mechanism should be put in place by banks to also calculate environmental, social and ethical risks when assessing lenders for loans. This should also include GHG disclosure and energy management for the head office and branches. If risks are adequately assessed, and efficient strategies to mitigate risks are put in place, conventional projects can be transformed into ones that are green and socially equitable;
- Domestic financial institutions need to invest in green environmental assets, and include environmental and social risks in financial behavioural decisions. Knowledge on green investment standards will be needed.

For OJK:

- Collateral criteria for low-carbon investments or for what is classified as green finance needs to be developed;
- OJK should put in place mechanisms for assessing unsustainable investments as less-profitable and categorising these as high-risk investments. Improvement of risk management, reduction of profitability of environmentally negative lending, liability assessment, etc. could be part of a package of instruments or mechanisms to be introduced;
- There is a need to attach a risk to non-sustainable investments such as lending/extending credit to unsustainable palm oil producers. Thus, OJK should provide guidance and operational for FIs: What can be classified as green finance, and how to report this?
- OJK and other governmental agencies are urge to create the capacities for green investment facilities, including better regulations. These include regulatory drivers (through regulatory and market environment and banking associations), build market capacity (through consultants and training partners), individual financial institutions support, and building of social management systems. Regulatory bodies should develop an efficient framework for greening finance and financing the transition towards a sustainable economy.

In terms of capacity building for enhancing sustainable finance, OJK has initiated a collaboration with the University of Udayana, Bali for establishing the Center for Sustainable Finance which was launched in July 2017. The Centre is the first to be established in Indonesia in the period of 2015 – 2019 in response to the capacity development needs of banking staff to be able to identify, assess and stimulate sustainable finance projects as described within Roadmap for Sustainable Finance issued earlier by OJK.

Annex A

List of stakeholders interviewed (in chronological order)

| Date | Organization | Names and Designation | Organization Type |
|----------------------------|--|---|-------------------------------------|
| 5 April 2017 | UNDP E-PASS Project | Gustaaf A. Lumiu Biodiversity Finance Expert | UN Agency |
| 6 April 2017 | Rainforest Alliance | Nurdiana Darus Director for Southeast Asia | International NGO |
| 7 April 2017 | WRI | Satrio Wicaksono Forest and Landscape Restoration Manager | International NGO |
| 11 April 2017 | Conservation International | Iman Santoso Senior Terrestrial Policy Advisor | International NGO |
| 18 April 2017 | GIZ Forclime | Wandojo Siswanto Strategic Area Manager, Forest Policy | International Development Agency |
| 25 April 2017 | Centre for Climate Risk and Opportunity Management in Southeast Asia Pasific (CCROM SEAP) | Rizaldi Boer Director | Research Institute |
| 25 April 2017 | Indonesian Economist Association (ISEI) | Firman Harahap Executive Secretary | Association |
| 28 April 2017 | WWF Indonesia | Rizkia Yudawinata Responsible Investment Policy | International NGO |
| 2 May 2017 | PPK BLU, Ministry of Environment and Forestry | Shelly Environmental Investment Finance | Government Agency |
| 8 May 2017 5 June 2017 | Indonesia Bussiness Council Sustainable Development (IBCSD) | Budi Santosa, Director Erwin Widodo, Regional Coordinator South East Asia | Business Organisation |
| 9 May 2017 | Indonesia Climate Change Trust Fund (ICCTF) | Joseph Viandrito Programme Director | Trust Fund |
| 10 May 2017 29 May 2017 | BRI | Sutardjo, Arief Guntoro, Heri Supriyadi | Government Bank |
| 10 May 2017 6 June 2017 | OJK | Muliaman Hadad Head of Commision Edi Setjawan Director of Sustainable Finance | Government Agency |
| 16 May 2017 | Secretariat of RAN GRK | Atjeng Kadaryana Head of the Secretariat | Government Agency |
| 17 May 2017 | PT SMI | Gan Gan Dirgantara Head of Division for Renewable Energy | State Company |
| 18 May 2017 | GIZ INFIS | Hauke Broecker Advisor | International Development Agency |
| 2 June 2017 6 June 2017 | Bank Muamalat | Iggy Achsien Independent Commissioner | Private Bank |

| | | | |
|-------------|-----------------------|--|----------------------------------|
| 6 June 2017 | Swisscontact | Ross Kenton Jaax Head of Cocoa Programme | International Cooperation Agency |
| 7 June 2017 | Greenbury Associates | Aida Greenbury | Private Company |
| | WRI | Satrio Wicaksono Forest and Landscape Restoration Manager | International Cooperation Agency |
| 8 June 2017 | BSB Statistics Office | Buyung Airlangga Director | Government Agency |
| 9 June 2017 | Bank BCA | Yayi Mustika Pudyanti Asst. Vice President | Private Bank |

Annex B

Assessment of possible national champions (list most suitable on the top)

| Type | Organization | Level and Rationale |
|-------------------------------------|--|--|
| Government Institution | Financial Services Authority (OJK) | <p>OJK is an independent state institution with tasks, functions and authority to regulate, oversee, inspect and to investigate. OJK is selected based on its progressive initiative in regards to sustainable finance in order to promote green growth and sustainable development and to support Gol Intended National Determined Contribution to reduce emission through green financing schemes.</p> <p>Since its establishment in 2011 based on Law No. 21/2011, OJK has developed a Roadmap for Sustainable Finance for the period of 2015 – 2019, initiate a pilot project on Sustainable Banking together with WWF Indonesia, involving 8 commercial and state banks, and recently launched the Bali Center for Sustainable Finance in cooperation with the University of Udayana, Bali. OJK is also in the process of finalising a OJK Regulation on Sustainable Finance.</p> |
| NGO (Established by the government) | Indonesian Climate Change Trust Fund (ICCTF) | <p>The ICCTF was established by the Gol in response to the INDC target set during the UNFCCC COP 15 in Copenhagen.</p> <p>Although it only become a national trust fund in 2015, ICCTF has been able to distribute fund for climate change programs in accordance with 2015-2019 National Mid-term Program Plan. In 2015, ICCTF received funding and commitment supports from various development partners, including USAID, United Kingdom Climate Change Unit (UKCCU), and Royal Danish Embassy, as well as funding support from State Revenues and Expenditure Budget (APBN) as a commitment of the Government of Indonesia to combat climate change. ICCTF has also been increasing its engagement with other parties, including private sector.</p> |

Annex C

List of external support provided to banks (and outcomes and impacts if any)

| Organisation | Dates | Activity | Target beneficiaries and Impact |
|---------------------------|------------------------------------|---|--|
| French Development Agency | 17 June 2010 - 16 June 2017 / 2020 | USD 100 million long-term loan (7 to 10 years) for climate change and energy efficiency | Green industries contributing to an annual carbon emission reduction of 534,000 tons (annually?) |
| | 8 Nov 2013 – 7 Nov 2023 | USD 100 million long-term loan (10 years) for renewable energy financing | Green industries. This support is aimed to finance approx. a dozen of renewable energy project, with the aim of reducing potential carbon emission of 534,000 tons annually |
| WWF and OJK | 1 Jan 2016 – Jul 2017 | Pilot Project for Sustainable Banking: First movers initiative | 8 state and private commercial banks received training, assistance and technical support. These included: Bank Mandiri, BRI, BRI Syariah, BNI, BPD Jawa Barat, BCA, Artha Graha, Bank Muamalat |

Annex D

List of existing financial products/schemes for low-carbon, climate resilient development (and outcomes and impacts if any)

| Organisation | Type of product | Date Introduced | Outcome/Impacts |
|---------------------|--|-----------------|-----------------|
| BRI | Credit for geothermal power plant facilities | 2012 | |
| Bank Mandiri | Credit for biomass power plant | 2012 - 2015 | |
| BCA | Credit for biomass power plant | 2012 | |