# Recommendations for parliamentary climate action in Indonesia

## Annex 1: Research Methodology

**Objectives**

This study is aimed at improving the understanding of the Indonesian Parliament (DPR RI) understanding of climate change and making concrete recommendations for Members of the Parliament (MPs) on how to best engage the government in enhancing the level of ambitions in Indonesia's climate action goals.

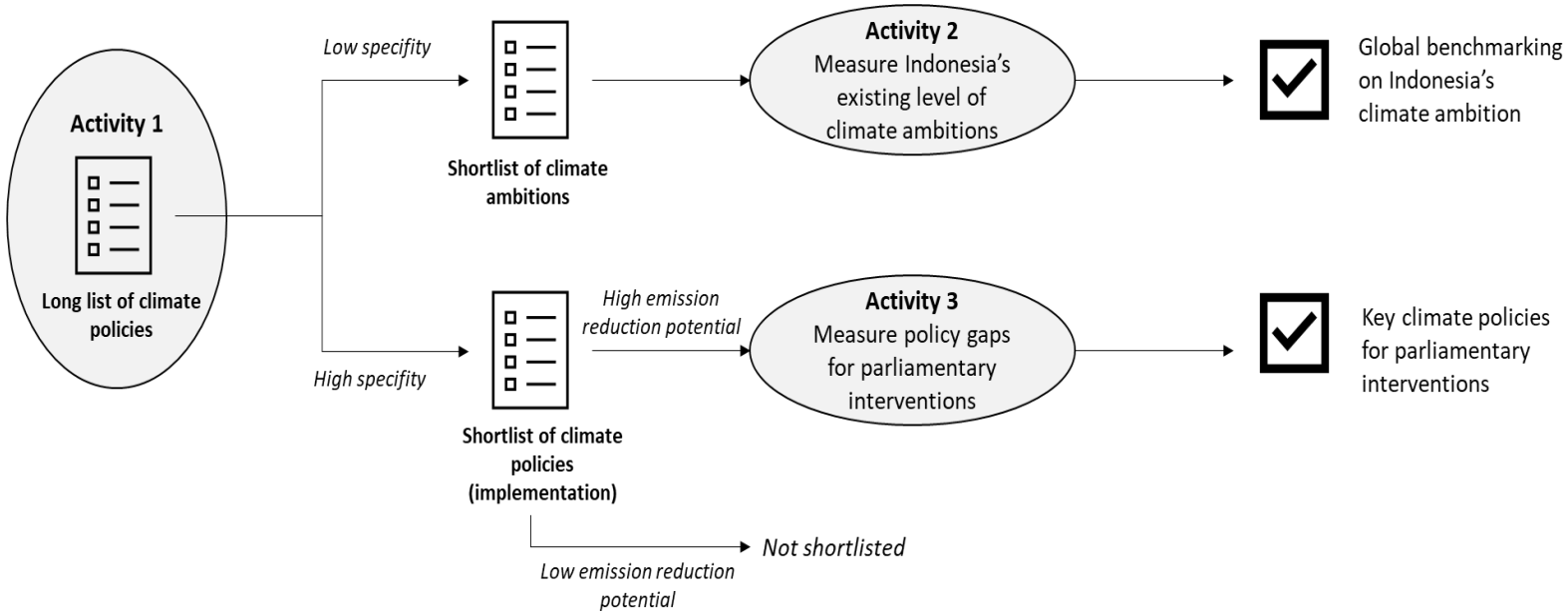
**Analytical Approach**

**Step 1: Develop a long list of Indonesia's climate policies.** We developed a long list of existing climate policies in Indonesia, from the overarching directive level down to the technical implementation level. The list then becomes our main reference on the landscape of climate ambitions and implementation in Indonesia. Specifically, it contains quantitative analysis on each prominent climate policy in Indonesia. Results from this step underpinned steps 2 and 3.

**Table 1.1.** Indonesia's climate policies long-list framework

| Sector | Policy | Hierarchy | Time horizon | Openness for discussion | Specificity |
|---|---|---|---|---|---|
| Cross-sectoral | Policy A<br>*Description and scope of the policy* | *Law*<br>*Government*<br>*President*<br>*Minister* | *Whether a policy is expected to become effective soon or later and whether it is a short-term or a long-term policy.* | *The political status of policy, i.e., deadlock/large agreement but details to be decided/postponed, etc.* | *High-level ambition vs specific targets; rough policy direction vs. specific policy design.* |
| Sector 1 | Policy B | .. | .. | .. | .. |
| Sector n | .. | .. | .. | .. | .. |

**Figure 1.1.** Climate policies assessment process




**Step 2: Measure**

**Indonesia's existing level of climate ambition.** In this step, we shortlisted a selection of climate policies tagged as high-level ambitions or overarching targets. Then, we measured the relative performances and gaps in these climate ambitions compared to other countries, based on peer-reviewed climate models.

**Table 1.2.** Climate ambition gaps measurement framework[1]

| Voluntary climate ambition compatibility with global target | Voluntary Ambition Benchmarks | | | Ambition gaps | References |
|---|---|---|---|---|---|
| | Relative to top 10 tropical forest countries[2] | Relative to ASEAN countries[3] | Relative to top 10 emerging market countries[4] | | |
| Medium-term ambitions: 2030 Nationally Determined Contributions (NDCs)[5] | | | | | |
| *5-degrees Likert (1–5; 1 is critically incompatible, 5 is Paris-compatible)* | *5-degrees Likert (1–5; 1 is critically underperforming, 5 is highly performing)* | *5-degrees Likert (1–5, 1 is critically underperforming, 5 is highly performing)* | *5-degrees Likert (1–5, 1 is critically underperforming, 5 is highly performing)* | *Analysis on the level of ambitions, based on Paris 1.5 degrees target and relative performance against other relatively similar countries* | Climate Action Tracker↗<br>Climate Watch Data ↗<br>Climate Analytics ↗<br>NDC Roadmap↗ |
| Long-term ambitions: 2050 Long-term Strategy on Low Carbon and Climate Resilience (LTS-LCCR) | | | | | |
| 5-degrees Likert (1–5, 1 is critically incompatible, 5 is mid-century Net Zero compatible) | *5-degrees Likert (1–5, 1 is critically underperforming, 5 is highly performing)* | *5-degrees Likert (1–5, 1 is critically underperforming, 5 is highly performing)* | *5-degrees Likert (1–5, 1 is critically underperforming, 5 is highly performing)* | *Analysis on the level of ambitions, based on the mid-century net-zero target and relative performance against other relatively similar countries* | Climate Action Tracker↗<br>Climate Watch Data ↗<br>Climate Analytics ↗ |
| Ambition X | | | | | |
| … | … | … | … | … | … |

[1] Note that examples used in this table are not exhaustive.
[2] Top 10 tropical forest countries are Brazil, Congo, Indonesia, Peru, Colombia, Bolivia, Cameroon, Central African Republic, Ecuador, and Gabon.
[3] ASEAN countries comprise Indonesia, Malaysia, Singapore, Vietnam, Thailand, Laos, Myanmar, Brunei Darussalam, Cambodia, and the Philippines.
[4] Top 10 emerging markets are Argentina, Brazil, China, India, Indonesia, Mexico, Poland, South Africa, South Korea, and Türkiye.
[5] This includes NDC updates and reports submitted biannually to the UNFCCC as of June 2022.

**Step 3: Measure climate policy gaps to select critical areas for parliamentary intervention.** In the third step, we selected policies with specific targets and designs from the long list for a multi-criteria analysis which provides us gaps on the ability of policies in a specific NDC sector to achieve climate ambitions, and how to further exercise parliamentary intervention.

**Table 1.3.** Framework of multi-criteria analysis[6]

| Selected Climate Policies | Status of Policy | Emission Reduction Potential | Fiscal Implications | Political Barriers | Overall Gaps | Scope for Parliamentary Interventions |
|---|---|---|---|---|---|---|
| Mitigation: Forestry and Land Use | | | | | | |
| Policy A | In place/ Not in place/ Drafted | Significant/ Insignificant | High cost/ limited cost/ no cost | Significant/ Neutral/ Unclear | Satisfactory/ Unclear/ Not Satisfactory | **YES/NO** *Rationale for interventions* |
| Policy B | .. | .. | .. | .. | .. | .. |
| Policy n | .. | .. | .. | .. | .. | .. |
| Mitigation: Energy | | | | | | |
| Policy n | .. | .. | .. | .. | .. | .. |
| Mitigation: Industrial Processes and Production Use | | | | | | |
| Policy n | .. | .. | .. | .. | .. | .. |
| Mitigation: Waste | | | | | | |
| Policy n | .. | .. | .. | .. | .. | .. |
| Mitigation: Agriculture | | | | | | |
| Policy n | .. | .. | .. | .. | .. | .. |
| Adaptation | | | | | | |
| Policy n | .. | .. | .. | .. | .. | .. |

**Step 4: Assess the coordination of government and parliament on climate and suggest improvements.** In the fourth step, we mapped relevant climate change topics and the functions of the legislative committees to identify the strategies for improving legislative and executive coordination mechanisms within the corridor of the three parliamentary functions. We conducted interviews with parliamentarians and their expert staff to assess their current understanding on climate issues and ground-truth the strategies to increase their support on climate change, **focusing on three most relevant legislative committees (LCs) on climate change: LC IV (Agriculture, Environment, Ocean), LC VII (Energy, Research and Innovation, Industry), and LC XI (Finance, Development, Banking).**

[6] Additional criteria may be added.

**Table 1.4.** Assessment of potential improvements on parliamentary functions in 3 most climate-relevant committees

| Committee | Law Making Function | Budgeting Function | Oversight Function |
|---|---|---|---|
| LC IV<br>Agriculture, Environment, Ocean | *What regulations to be issued/revoked/change to improve Indonesia's climate change ambition and actions in the agriculture, forestry, and marine sectors?* | *What specific budget allocation in agriculture, forestry, and marine sectors to be supported/ advocated to increase the climate ambition and actions?* | *What specific policy, program, and budget in these sectors to be monitored and evaluated during the budget implementation?* |
| LC VII<br>Energy, Research and Development, Industry | *What regulations to be issued/revoked/change to improve Indonesia's climate change ambition and actions in the energy sectors and climate science?* | *What specific budget allocation in energy sectors to be supported/ advocated to increase the climate ambition and actions?* | *What specific policy, program, and budget in energy sector to be monitored and evaluated during the budget implementation?* |
| LC XI<br>Finance, Development, Banking | *What regulations to be issued/revoked/change to increase climate finance to improve Indonesia's climate change ambition and actions?* | *What specific fiscal policy framework to be supported/ advocated to increase the national climate finance?* | *What specific policy tools or mechanisms to be develop and utilised to increase climate finance transparency and accountability?* |

Where possible, the specific recommendations for the three committees above were adjusted and generalised to other committees that carry relevant climate objectives in the parliament (all committees expect LC III).

**Table 1.5.** Assessment of possible coordination strategies for all committees

| Committee | Relevant Climate Policies | Relevant Government Ministries/Agencies | Existing Committee-Government Coordination | Possible strategies to improve coordination |
|---|---|---|---|---|
| LC I | International climate negotiations | Ministry of Foreign Affairs | 1. Meeting with head of governments.<br>2. Consultation with the Regional Representative Council (DPD RI). | *Strategy for LC I* |
| LC II | Subnational climate policies | Ministry of Home Affairs | | *Strategy for LC II* |
| LC III | Not relevant | Not relevant | | Not relevant |
| LC IV | National and sectoral climate policies on agriculture, forestry, and marine | Ministry of Agriculture, Ministry of Environment and Forestry, Ministry of Marine and Fisheries, Peatland, and Mangrove Restoration Agency | | *Strategy for LC IV* |

| | | | | |
|---|---|---|---|---|
| LC V | Infrastructures, transportation, and climate information | Ministry of Public Works, Ministry of Transportation, Meteorology Agency | 3. Hearings with government representations.<br>4. Public hearing either at the request of the committee or other parties.<br>5. Meetings with ministers and/or government officials that are not within the scope of the committee's scope if necessary.<br>6. Fieldwork visits.<br>7. Joint committee meeting.<br>8. Joint fieldwork visits.<br>9. Technical/special committee. | *Strategy for LC V* |
| LC VI | Green trades and investments | Ministry of Trade, Investment Coordination Agency | | *Strategy for LC VI* |
| LC VII | Energy supply and demand, green industries, climate sciences | Ministry of Energy and Mineral Resources, Ministry of Industry, National Energy Council, National Research and Innovation, Geospatial Information Agency | | *Strategy for LC VII* |
| LC VIII | Climate adaptation: disaster management | National Disaster Management Agency | | *Strategy for LC VIII* |
| LC IX | Climate adaptation: public health | Ministry of Health | | *Strategy for LC IX* |
| LC X | Climate adaptation: education | Ministry of Education | | *Strategy for LC X* |
| LC XI | Climate change fiscal policies and financing framework | Ministry of Finance, National Development Agency, Financial Service Agency, Central Bank | | *Strategy for LC XI* |

**Step 5: Synthesise recommendations.** Based on the results from steps 1–4, we provided concise recommendations which elucidate the concrete steps for advancing parliamentary engagement on climate change policies in Indonesia.

## Annex 2: Long list of Indonesia's climate policies

**Table 2.1.** Climate policy long list

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| Cross-sectoral | Climate Finance | Government Regulation (PP) No. 46/2017; Presidential Regulation (Perpres) No. 77/2017; Finance Ministerial Regulation (PMK) No. 137/2019 | Outline the economic instruments of climate change | Outline the framework of environmental economic instruments such as:<br>1. Development planning and economic activities.<br>2. Environmental funding–most notably the Environmental Trust Fund (BPDLH).<br>3. Incentives and/or disincentives.<br>4. Government financing. | President, Ministry of Environment and Forestry (KLHK), Ministry of Finance (Kemenkeu), Ministry of National Development Planning (Bappenas) | By 2017 | Low | High |
| Cross-sectoral | Carbon Economic Value | Perpres No. 98/2021 | Outline the policy instruments for carbon emissions in Indonesia | To achieve Indonesia's NDC targets, Indonesia shall:<br>1. Establish policies and measures, as well as implementing activities in accordance with the government's commitment to reduce GHG by between 29% and 41% by 2030 in comparison with baseline GHG emissions.<br>2. Develop national, regional, and community climate resilience. | President, KLHK, Kemenkeu, Bappenas | By 2021 | Low | High |

[7] Benchmarked to NDC data.

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| FOLU | Land Use | LTS LCCR 2050 | Reduce deforestation and forest degradation rates | 1. Reduce deforestation from 166,000 to 114,000 ha.<br>2. Implement sustainable forest management with IUPHH-RE licensing to restore production forest. | KLHK | By 2050 | Low | High |
| | | FOLU Net Sink 2030 | | Under LTS-LCCR 2050, limit natural forest degradation to 6.8 million ha. | | By 2050 | High | High |
| | | | | Set upper limit for primary forest degradation at 2.28 million ha. | | By 2030 | High | Medium |
| FOLU | Land Use | FOLU Net Sink 2030 | Plantation forest development | Accelerate the development of 4.07 million ha of industrial forest plantations to reduce dependence on natural forests. | KLHK | By 2030 | High | Medium |
| | | | Sustainable forest management | Set a 2.2 million ha target for concession areas implementing sustainable forest management. | | | High | Medium |
| | | | Forest and land rehabilitation | Increase carbon stocks with 2.79 million ha rotational rehabilitation and 2.51 million ha non-rotational rehabilitation targets. | | | High | High |
| | | | Peatland management | Good water management system; 0.95 million ha net sink and 1,887 million ha restoration targets. | | | High | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | | Biodiversity conservation | 1.51 million ha high-risk areas to be protected from conversion. | | | High | Low |
| | | LTS LCCR 2050 | Land rehabilitation | Increase the rate of afforestation and reforestation to reach 10,335–13.045 million ha. | | By 2050 | Low | High |
| | | | Peatland restoration | Increase peatland restoration from 4.1 million ha in 2011–2050 (90% success rate) to 4.65 million ha in 2011–2060 (93%). | KLHK | | Low | High |
| FOLU | Carbon Pricing | Perpres No. 98/2021 | Result-based payment for forest carbon offset | Government aims to create a national system for carbon trading platform while facilitating domestic and international carbon sales; including from RBP. | President, KLHK | 2021 onward | Medium | Medium |
| Energy | Transport | LTS LCCR 2050 | Macro-level transport system vision | Achieve energy used in transport system is 46% on biofuel, 30% on electricity, 20% on oil fuels, and 4% on natural gas. | KLHK | By 2050 | Low | Medium |
| Energy | Transport | Perpres No. 55/2019; Energy and Mineral Resources Ministerial Regulation (Permen ESDM) No. 12/2015 | Cleaner combustion: biofuel | 1. Biodiesel mandatory blending gradually increase from 20% to 30% for PSO transport.<br>2. Biodiesel mandatory blending gradually increase from 20% to 30% for non-PSO transport.<br>3. Bio-oil mandatory blending at 20% for sea transport. | President, Ministry of Energy and Mineral Resources (ESDM) | By 2035 | Medium | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | | | 4. Bio-oil mandatory blending at 5% for air transport. | | | | |
| Energy | Transport | Industry Ministerial Regulation (Permenperin) No. 27/2020 | Cleaner combustion: emission threshold standards | Emission threshold of vehicles to comply with Euro-4 standard, gradually improving toward Euro 5/6 Standard. | Ministry of Industry (Kemenperin) | 5-year period starting 2020 | High | Medium |
| | | | Electrification of 4-wheeled road land transport | National production share of low-carbon emission vehicle (LCEV) of vehicles with 4-wheels should be at least 10%, gradually increasing to 20%, 25%, and 35%. | | | High | Medium |
| | | | Electrification of 2-wheeled road land transport | National production share of electric vehicles with 2-wheels should be at 10%, increasing to 20%, 25%, and 30% (biodiesel). | | 2025–2030 | High | Medium |
| | | Perpres No. 55/2019 | Electrification to expand road transport charging station | Achieve 3,000 charging stations to 67,000 nationwide to be built by PLN. | President | 2019-2027 | Medium | Medium |
| | | | | Prohibit raw nickel export. Grow the nickel downstream industry, especially to manufacture battery for electric vehicles. | | Since 2020 | Medium | Med |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | | Electrification of 4-wheeled road land transport | Local content in battery electric vehicle (BEV) with 4-wheels should be at least 35%, increasing gradually to 80%; while for 2-wheels should be at least 40%, increasing gradually to 80%. | President | 2019–2026 | Medium | Medium |
| Energy | Transport | National Railways Masterplan 2018 | Electrification of rail land transport | Electrify the Serpong-Maja-Rangkasbitung-Merak, Manggarai-Jatinegara-Bekasi-Cikarang, Padalarang-Bandung-Cicalengka, Kutoarjo-Yogyakarta-Solo, Duri-Tangerang, Medan-Araskabu-Kualanamu, and Cikampek-Cirebon railways. | Ministry of Transportation (Kemenhub) | 2018–2030 | Low | Medium |
| | | National Medium-Term Development Plan (RPJMN) 2020–2024 | | Electrify the railways in Surabaya metropolitan area, Cikarang-Cikampek, Cirebon-Semarang-Surabaya, and Kiara Condong-Cicalengka. | Bappenas | 2020–2024 | Low | Medium |
| Energy | Transport | RPJMN 2020–2024 | Increasing public transportation usage | Build Jakarta-Bandung and Jakarta-Surabaya high-speed trains. | Bappenas | 2016–2022 (JKT-BDG); 2017–2030 (JKT-SUB) | Low | Low |
| | | | | Build mass public transport system (either BRT/LRT/MRT) in Medan, | Bappenas | 2021–2024 | Low | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | | | Bandung, Semarang, Surabaya, and Makassar. | | | | |
| Energy | Renewable | Permen ESDM (Draft) | Replacing PLN owned diesel power plants with renewable energy | PLN to replace diesel-based energy generation with renewable-based. There will be several different replacement options, while some still containing diesel as an option. | ESDM | N/A | High | High |
| | | National Dedieselisation Program | | | | At least 2021–2030 | Low | High |
| | | RUPTL 2021–2030 | | | PLN | At least 2021–2030 | High | High |
| Energy | Energy Transition | New and Renewable Energy Draft Bill | Prioritisation of under-developed regions | New energy (nuclear and other sources) development prioritisation for underdeveloped regions in Indonesia. | House of Representatives (DPR RI), President, ESDM | N/A | Low | High |
| | | | Local contents | Prioritisation of local contents for new and renewable development | | | Low | High |
| | Renewable Energy Pricing | | Pricing mechanisms | The price of new energy (nuclear) and renewable energy are determined by tariffs, market index, and reverse auction. | | | Low | High |
| | Renewable Energy Incentives | | Incentive mechanism | Fiscal and non-fiscal incentives will be given to enterprises in the new and renewable energy. | | | Low | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | Fund Agency | | Establishment of New and Renewable Energy Fund | The fund will be sourced from state budget (APBN), subnational budgets (APBD), export levy, carbon tax, energy certificate, and other sources for all renewable energy financing needs. | | | Low | High |
| Energy | Energy Transition | ESDM Roadmap | Blending co-firing for coal-fired power plants | Blend renewable energy sources in coal plants. | ESDM | N/A | Medium | High |
| Energy | Energy | RUPTL 2021–2030 | Develop integrated transmission and the smart grid | Outline the 10-year masterplan for state electrification. | ESDM | 2021–2030 | High | Low |
| Energy | Energy Efficiency | Permen ESDM No. 14/2012; PP No. 70/2009 | Energy efficiency and conservation for energy-intensive companies | Mandatory implementation of energy management for energy-intensive companies i.e., users > 6000 TOE annually. | ESDM | Since 2012 | High | Medium |
| | | | | Standardisation of the efficiency of electrical equipment (minimum energy performance standard or MEPS) and labelling in the residential sector. | | | High | Medium |
| Energy | Energy Transition | Draft Presidential Regulation for Coal Phase-Out | Moratorium on new coal power plants and coal phase-out | No new coal plants after 2025. | President, ESDM, Coordinating Ministry for Maritime Affairs and Investment (Kemenko Marves) | 2025–2045 | Low | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| Cross-sectoral; Energy | Carbon Pricing | Law No. 7/2021 | Introduce carbon tax for coal fired plants | Enforce carbon tax for coal power plants. Part of the overall carbon pricing scheme. | DPR RI, Kemenkeu | 2021 onward | Low | Medium |
| | | Perpres No. 98/2021 | | | President, Kemenkeu | | Low | Medium |
| Energy | Incentives | PMK No. 176/2009; PMK No. 188/2015; PMK No. 66/2015; Investment Coordination Agency Regulation (PBKPM) No. 13/2017 | Increase the appetite for renewable energy industries in the country | Exemption of import duties on machinery and equipment, goods, and raw materials for production. | Kemenkeu | Since 2009 | High | Low |
| Energy | Renewable | PMK No. 35/2018; PBKPM No. 1/2019 | Introduce tax holidays for clean energy | Tax relief facilities for a specific amount of investments on clean energy. | Ministry of Investment (BKPM) | Effective since 2018 | High | Low |
| Energy | Renewable | PP No. 18/2015; PP No. 9/2016; Permen ESDM No. 16/2015 | Renewable energy tax allowance | Income tax reduction for renewable energy business. | ESDM | Since 2016 | Low | Medium |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | PBKPM No. 6/2018 | Renewable energy tax allowance | | BKPM | Since 2018 | High | Medium |
| Agriculture | Renewable, Biofuel | Law No. 11/2020; PP No. 5/2021 | Ease of investment for palm oil investment | Strengthen both the upstream and downstream of the palm oil value chains to create a sustainable palm oil industry. | Government | N/A | Low | High |
| Agriculture | Renewable, Biofuel | LTS LCCR 2050; National Industry Development Masterplan (RIPIN); National Energy Plan (RUEN) | Increasing palm oil productivity | 1. Boost land productivity to prevent aggressive deforestation for agricultural lands.<br>2. Diversify palm oil plantation with other agricultural products.<br>3. Increase palm oil land productivity by 10% per year. | KLHK, Kemenperin, ESDM | By 2050 | Low | High |
| | | | Promote CPO-based fuel | Increase biofuel content and reduce fossil fuel consumption. | | | Low | High |
| Agriculture | Renewable, Biofuel | Presidential Instruction (Inpres) No. 9/2019 | Increase the adoption of Indonesia Sustainable Palm Oil (ISPO) certification | Increase the adoption of Indonesia Sustainable Palm Oil (ISPO) certification. | President | 2019–2024 | Medium | Medium |
| Agriculture | Renewable, Biofuel | Inpres No. 8/2018 | Moratorium on new palm oil license | Moratorium (halting) of palm oil plantation within forest areas | President | Short-term horizon (3-year review) | High | High |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| Agriculture | Renewable, Biofuel | 2015–2035 Industry Roadmap | Set target for agroindustry (palm oil) development | Production capacity of the palm oil agroindustry:<br>- 42.9 M Ton/year (2015–2019)<br>- 59.5 M Ton/year (2020–2025)<br>- 75 M Ton/year (2025–2035) | Kemenperin | 2015–2035 | Medium | Medium |
| Agriculture | Renewable, biofuel | NDC 2030; LTS LCCR 2050; Agriculture Ministerial Regulation (Permentan) No. 5/2014 | Regulate manure management of biogas (palm oil plantation) | 1. Utilise 0.06% of cattle population for biogas by 2030.<br>2. Integrated farming of oil palm livestock to reach 11.70% (1.68 million ha) in 2030 and 22.72% (3.25 million ha) by 2050. | Government | 2030 (Mid-term) & 2050 (Long-term) | Low | Low |
| Agriculture | High-Intensity Crops | LTS LCCR 2050; PP No. 26/2021; Perpres No. 72/1971; Permentan No. 19/2019 | Increase low emission, high-intensity crops (non-paddy) | Increase the productivity of agricultural commodities (maize/corn, vegetables, cassava, palm oil, sugar cane, fruits and nuts, and industrial crops). | Government | By 2050 | Low | Low |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | NDC 2030; LTS LCCR 2050; PP No. 26/2021; Perpres No. 72/1971 | | Rice productivity in Java:<br>- 5.8 ton/ha (2010)<br>- 6.28 ton/ha (2050, CPOS)<br>- 6.32 ton/ha (2050, LCCP)<br><br>Rice productivity outside Java:<br>- 4.2 ton/ha (2010)<br>- 5.01 ton/ha (2050, CPOS)<br>- 5.2 ton/ha (2050, LCCP)<br><br>Increase rice productivity in 2050 targeting growth of 5-10% (2020-2030)<br>- 9–12% (2030–2050, CPOS)<br>- 6–12% (2020–2050, LCCP) | Government | 2030 (Mid-term) & 2050 (Long-term) | Low | Low |
| Agriculture | Low-Emission Crops | LTS LCCR 2050; PP No. 26/2021 | Reducing methane production from cattle farming | 1.) Shifting from high concentrate livestock feed to greenery feed, specifically in beef and dairy cattle<br>2.) The target is 3.42 million head (CPOS) and 6.58 million head (LCCP)<br>3.) The needs for land conversion for cattle is 4.47 M ha (2050) and 4.55 M ha (2060) | Government | By 2050 | Low | Low |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| Agriculture | Waste Management | LTS LCCR 2050; Permen LHK No. 75/2019 | Reducing food loss and waste | Improvements in harvest and post-harvest technology are expected to reduce food loss from 71 kg (2010) to 40 kg (2050, CPOS) and 34 Kg (2050, LCCP) per capita. However, food waste will increase from 21 kg (2010) to 97 kg (2050, CPOS) per capita and from 20 kg (2010) to 76 kg (2050, LCCP) per capita. | Government | By 2050 | Low | Low |
| Waste | Waste Management | Perpres No. 97/2017; Permen LHK No. 14/2021 | Improving waste management | 1. Strategy for handling 70% of domestic waste through sorting.<br>2. Increase the number of waste bank units to 4,085 by 2025. | President, KLHK | 2025 | Medium | Low |
| | | Perpres No. 97/2017; RPJMN 2020–2024 | Regulating waste management areas (TPS3R) | 1. Strategy for handling 70% of domestic waste through sorting.<br>2. Serve 409,078 households in 116 cities/regencies by 2024. | President, Bappenas | 2024 | Medium | Low |
| | Renewable, Waste-to-Energy | | Promoting waste-based energy | 1. Strategy for handling 70% of domestic waste through technology.<br>2. PLTSa development in 5 cities. | Bappenas | 2020–2024 | Medium | Low |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| | | Perpres No. 97/2017; Perpres No. 35/2018 | Promoting waste-to-power plant (PLTSa) through thermal technology | 1. Strategy for handling 70% of domestic waste through technology.<br>2. PLTSa development in 12 cities. | President | Since 2017 | High | Low |
| Waste | Waste Management | Ministry of Public Works and Housing (PUPR) Strategic Plan 2020–2024; Permen PUPR No. 4/2017 | Separation between domestic wastewater management system and drainage system | 1. Proper sanitation in 90% households.<br>2. Access to safe sanitation in 15% households.<br>3. Domestic waste service by SPALD-T in 3 million households. | PUPR | N/A | High | Low |
| Waste | Waste Management | Permen LHK No. 75/2019; Perpres No. 97/2017 | Waste reduction by producers | Strategy for reducing 30% of domestic waste. | President, KLHK | N/A | High | Low |
| Waste | Waste Management | KLHK PSLB3 DG Circular Letter No. SE-06/PSLB3-PS/2015; PSLB3 KLHK 2020–2024 Strategic Plan | Reducing plastic waste | Implementation of paid plastic bags in retail stores order to reduce plastic waste. | KLHK | N/A | High | Low |

| NDC Sector | Sub-Sector | Policy Document(s) | Policy Objective | Description | Origin of Policy | Time Period | Specificity | Emission Reduction Potential[7] |
|---|---|---|---|---|---|---|---|---|
| Waste | Waste management | RPJMN 2020–2024; PSLB3 KLHK 2020–2024 Strategic Plan | Managing hazardous waste | 539,726,691 ton of hazardous waste managed by 2024. | Bappenas, KLHK | N/A | Medium | Low |
| Adaptation | Adaptation | Permen LHK No. 33/2016 | Setting national adaptation plan process | Guidance for local governments in planning for climate change adaptation and integrating them into local development plans. | KLHK | N/A | Low | N/A |
| | | | Introduce the vulnerability index (SIDIK) | Provide an overview of regional vulnerability. | | | High | N/A |
| | | Permen LHK No. 7/2018 | Guiding local level of national adaptation plan process | Guidance for local governments in conducting and verifying the results of vulnerability, risk, and impact assessments of climate change. | | | High | N/A |
| Dual Benefits | Adaptation; Mitigation | Permen LHK No. 84/2016 | Promoting Climate Village Program (Proklim) | Increase community engagement on climate change and encourage implementation of adaptation and mitigation actions. | | | Low | N/A |

## Annex 3: Scoring Indonesia's climate ambitions

**Table 3.1.** Indonesia's climate ambitions vs. other countries with similar characteristics

| Medium-Term: Nationally Determined Contributions for Paris 2030 | | | | | | Long Term: Net Zero Emission (NZE) Target |
|---|---|---|---|---|---|---|
| **Country** | **Climate Action Tracker** | **Climate Watch Data** | **Climate Analytics** | **Benchmark** | **Indonesia** | **Status** |
| Indonesia | 2 | Qualitative | 1 | | | Incomplete |
| Brazil | 2 | Qualitative | N/A | 2,79 | 1,5 | N/A |
| Congo | N/A | Qualitative | 1 | | | N/A |
| Peru | 3 | Qualitative | 4 | | | N/A |
| Colombia | 2 | Qualitative | 4 | | | Incomplete |
| Bolivia | N/A | Qualitative | N/A | | | N/A |
| Cameroon | N/A | Qualitative | N/A | | | N/A |
| Central African Republic | N/A | Qualitative | N/A | | | N/A |
| Ecuador | N/A | Qualitative | 4 | | | N/A |
| Gabon | N/A | Qualitative | N/A | | | N/A |
| Brunei Darussalam | N/A | Qualitative | N/A | 2,15 | 1,5 | N/A |
| Cambodia | N/A | Qualitative | N/A | | | N/A |
| Laos | N/A | Qualitative | N/A | | | N/A |
| Malaysia | N/A | Qualitative | 3 | | | N/A |
| Myanmar | N/A | Qualitative | N/A | | | N/A |
| The Philippines | 3 | Qualitative | 5 | | | N/A |
| Singapore | 1 | Qualitative | 2 | | | Assessment Yet Started |
| Thailand | 1 | Qualitative | 3 | | | N/A |
| Vietnam | 1 | Qualitative | 1 | | | Assessment Yet Started |
| Argentina | 2 | Qualitative | 4 | 2,56 | 1,5 | Incomplete |
| China | 2 | Qualitative | 2 | | | Poor |

| | | | | | | |
|---|---|---|---|---|---|---|
| India | 2 | Qualitative | 1 | | | Incomplete |
| Mexico | 2 | Qualitative | 4 | | | N/A |
| Poland | N/A | Qualitative | 4 | | | N/A |
| South Africa | 3 | Qualitative | 5 | | | N/A |
| South Korea | 2 | Qualitative | 4 | | | N/A |
| Türkiye | 1 | Qualitative | 1 | | | N/A |

## Annex 4: Short list of Indonesia's climate policies

**Table 4.1.** Climate policy short list

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| Cross-sectoral | Climate Finance | PP No. 46/2017; Perpres No. 77/2017; PMK No. 137/PMK.01/2019 | Outline the economic instruments of climate change | High | Systemic policy which implicates government's budgeting process | Regulation already in place | 1. Government interference on foreign-sourced climate financing—latest example being the end of the MoU between Indonesia and Norway.<br>2. Institutional readiness to implement some economic instruments such as incentives/disincentives, environmental funding, and carbon market. | 1. Interference on foreign-sourced climate financing.<br>2. Institutional readiness to implement economic instruments.<br>3. Improve the trust of donors on the accountability of state-led economic instruments to disburse climate finance | 1. How can the government ensure foreign-sourced climate financing will be mobilised for local-driven climate targets?<br>2. How can the government source more climate finance for NDC targets?<br>3. How will the government ensure transparent, efficient, and effective standards for climate finance management? |
| Cross-sectoral | Carbon Economic Value | Perpres No. 98/2021 | Outline the policy instruments for carbon emissions in Indonesia | High | Systemic policy which implicates government's budgeting process | Regulation already in place but technical sub-regulations are lacking (underway). | 1. Concern on the impact of carbon regulations on domestic economic competitiveness i.e., cap-and-trade, taxation.<br>2. Relatively new; lack of public trust that the | 1. Concern on the impact of carbon regulations on domestic economic competitiveness i.e., cap-and-trade, taxation.<br>2. Carbon market is a relatively new | 1. How can the government safeguard the implementation of carbon market without sacrificing domestic economic growth?<br>2. How can the domestic carbon |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | government can carry this out while transparency and accountability is everything that brings values to carbon market. | concept; a significant time of preparation and trial and errors should be expected.<br>3. There is a lack of public trust that the government can carry this out while transparency and accountability are what bring values to carbon market. | market be carried out effectively between government and the private sectors?<br>3. How to ensure that carbon market can generate revenue for local communities? |
| FOLU | Land Use | LTS-LCCR 2050 | Reducing the rate of deforestation and forest degradation | Medium | BKF (2020) estimates the forestry sector in general requires IDR 77.8 trillion from 2018–2019. Each action may incur differing costs; for example, law enforcement is likely to be cheaper than restoration and or management actions | Regulation already in place through the issuance of the FOLU Net Sink 2030. Besides, the cost of peatland and wetland protection can be very high | Concern arises in terms of ensuring law enforcement and preventing forest fire, while protecting the rights of customary land communities | 1. Law enforcement, where resources came from<br>2. Prevention of forest fire<br>3. Protection and involvement of the rights of customary land and communities | 1. How can the government ensure that they have the resources they need for law enforcement to halting deforestation and forest fire?<br>2. How can the government ensure that customary rights are protected, and customary communities are involved in |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | deforestation prevention? |
| FOLU | Land use | LTS-LCCR 2050 | Land rehabilitation | Medium | | | No significant political barriers | Ensuring resources needed are available | 1. What are the government's action plan to ensure that the budget for this is used efficiently?<br>2. Do the government have action plan on the innovative ways to obtain financial resources?<br>3. What are the government's plans to ensure that communities are involved in the peatland and wetland management? |
| FOLU | Land use | | Peatland and wetland restoration | High | | | The ability of the BRGM to effectively manage peatlands and wetlands using the resources available, and prevent further forest fires from happening | Ensuring the oversights of the BRGM in preventing forest fires while restoring/managing peatlands and wetlands, ensuring community participation, all while ensuring the resources needed are available | |
| FOLU | Land use | FOLU NET SINK 2030 | Protection of forests from deforestation and degradation | Low | | FOLU Net Sink is upgraded with a more technical details on mapping, but needs to be | Concerns from concession owners | Law enforcement on limiting natural forest degradation | What are the government's concrete steps on limiting deforestation, other than limiting the issuance of new forest concession licenses? |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| FOLU | Land use | | Forest and land rehabilitation | Medium | | more connected with the LTS LCCR 2050 | No significant political barriers | Ensuring resources needed are available | 1. What are the government's action plan to ensure that the budget for this is used efficiently?<br>2. Do the government have action plan on the innovative ways to obtain financial resources?<br>3. What are the government's plans to ensure that communities are involved in the peatland and wetland management? |
| FOLU | Land use | | Peatland management | High | | Regulation already in place through the issuance of the FOLU Net Sink 2030. Besides, the cost of peatland and wetland protection can be very high | The ability of the BRGM to effectively manage peatlands and wetlands using the resources available, and prevent further forest fires from happening | Ensuring the oversights of the BRGM in preventing forest fires while restoring/managing peatlands and wetlands, ensuring community participation, all while ensuring the resources needed are available | |
| Energy | Transport | Perpres No. 55/2019; Permen ESDM No. 12/2015 | Cleaner combustion: biofuel | Medium | BKF (2020) estimates the energy sector in general requires IDR 3,3702 Trillion from 2018–2019, the highest of all sectors | The target is already set. The government is using the palm oil export levy and use it to subsidise the price of biofuel through the | 1. Biodiesel might bring the unintended effects of increasing deforestation for new palm oil and jeopardies climate goals<br>2. Palm oil levy through the BPDPKS is mostly for biofuel instead of | 1. Need to consider low and/or fluctuating global oil price.<br>2. Need to implement CPO plantation moratorium.<br>3. Overarching plan frog-leaping to EV | 1. How to ensure further deforestation is prevented while meeting the target of biofuel production from CPO?<br>2. How can the government ensure the effectiveness of new palm oil plantation moratorium in forest |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Palm Oil Fund (BPDPKS). Regulation is also in place, which promises fiscal & non-fiscal incentives for investors in the supply chain. The penalty is also there, despite it being administrative penalty only. However, it lacks the estimation of fiscal and non-fiscal needs. | sustainability transition | | areas?<br>3. How to ensure the smooth transition from biofuel to EV industries, which develop without wider nickel mining damages? |
| Energy | Transport | RPJMN 2020–2025 | Increasing public transportation usage | High | | 1. The plan has gone into real LRT & BRT project.<br>2. COD might be in 2022–2023. | 1. LRT might be preferred in some cities, but it is relatively costly compared to BRT<br>2. Foreign investors might be interested | 1. Costly, hence private investments and/or foreign public investments might be necessary<br>2. Subsidy will likely be required to | How can the government find the adequate financing (other than APBN/APBD) for sustainable public transports without |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 3. WB, China, Korea, & several companies are interested funders.<br>4. Has been formalised as a part of Indonesia's Development Plan<br>5 The train will have different functions, such as for tourism, connecting to airport, etc<br>6. More detail on feasibility study and financing the project is still under discussion<br>7. In general, project | especially for large-scale projects, which may not sound well for some groups<br>3. Subsidy for tickets is likely still needed | ensure public affordability | sacrificing public affordability and transition to from private to public transports (i.e., subsidies for tickets)? |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | preparation and construction will take time | | | |
| Energy | Renewable | Draft Permen ESDM | Replacing PLN owned diesel power plants with renewable energy | High | | On coal phase-out:<br>1. 5,200 PLTD spread over 2,130 locations have the potential to be included in the dedieselisation program.<br>3. In the initial stage, a PLTD conversion program will be implemented in 200 locations equivalent to ±225 MW.<br>4. In the early stages, the conversion of PLTD to NRE | 1. Arguments that coal is so far from Indonesia's cheapest energy deposit<br>2. Global climate justice discourse where developed countries got rich from coal hence Indonesia can too.<br>3. Rejection from coal business associations and stakeholders on green agenda | 1. Reducing the impact of coal as stranded assets and the loss of coal-related jobs<br>2. Understanding to stop global climate crisis, we need green growth for developing countries and de-growth for developed countries<br>3. Sustainability aspects: how to ensure that biomass co-firing will not induce further deforestation<br>4. Blending/co-firing coal power plants with renewable-sourced | 1. How can the government manage the impact of coal as stranded assets and the loss of coal-related jobs?<br>2. How can the government ensure the public that green growth is imperative as opposed to "dirty growth"?<br>2. On sustainability, how to ensure that biomass co-firing will not induce further deforestation?<br>3. Are there any cooperation potential to speed up coal phase out?<br>4. How to ensure energy/electricity is still affordable despite |
| Energy | Renewable | National Dedieselisation Program | Replacing PLN owned diesel power plants with renewable energy | High | | | | | |
| Energy | Renewable | RUPTL 2021–2030 | Replacing PLN owned diesel power plants with renewable energy | High | | | | | |
| Energy | Energy transition, | Multiple draft regulations have been established or are underway to | Blending co-firing for coal-fired power | Medium | | | | | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | renewable | support co-firing for coal-fired power plants. Also, part of ESDM roadmap. | plants with renewable source-fuel | | | will be carried out for generating units with an age of more than 15 years<br><br>On coal co-firing with new/renewable energy:<br>1. There will be pilot project with 5% biomass at 32 existing PLTU unit and will be expanded to 52 locations.<br>2. To achieve 23% RE Mix in 2025, will require 10–20% portion of biomass co-firing (10% in Java, 20% outside Java) | | might be a good adaptation strategy but could also delay coal phase out<br>5. How to disprove the fear of increased electricity pricing due to multiple issues such as feedstock continuity, provenance (does it come from faraway places), etc. For co-firing, technological wise, many boilers in existing PLTU can only accept uniform type of fuel and logistically will be difficult for biomass cofiring. | coal/biomass co-firing or coal phase-out? |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 3. The estimated biomass volume: 8-14 million ton/year (at CF 70%)<br>4. New PLTU must be designed with biomass cofiring capacity at 30% | | | |
| Energy | Energy transition | New and Renewable Energy Draft Bill | Prioritisation on underdeveloped regions for new and renewable energy | High | | New energy (nuclear and other resources) must first prioritise isolated, underdeveloped, rural regions in Indonesia. Either state-owned or private enterprise can | Fear over the safety of nuclear power plants | 1. Public understanding on nuclear power plant, including its benefits and safety<br>2. Affordability - any alternative energy sources must consider consumer affordability, especially in rural regions where buying power is low | 1. For new energy especially nuclear, how does the government ensure its safety and convince the public of that?<br>2, What are the government's plan to ensure affordability of new energy among rural consumers, without too much weighing on the APBN/APBD? |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | participate in the process. | | | |
| Energy | Energy transition | New and Renewable Energy Draft Bill | Local contents of new and renewable energy | Medium | | Any enterprise on renewable energy should prioritise local energy potentials and domestic products, including domestic materials and components. | Some materials for renewable energy, such as PV cells, are cheaper imported (i.e., from China) than produced locally | Ensuring local contents requirement does not obstruct local industry growth | How to ensure that local content requirement does not prevent the development of local renewable energy industries, as some material (i.e., PV cells) are cheaper imported? |
| Energy | Fund Agency | New and Renewable Energy Draft Bill | The establishment of the New and Renewable Energy Fund | Medium | | The Fund is currently still in the early design phase - nothing is out yet. But some wonder what the prioritisation of the fund would be (i.e., solar might | There is already the Environment Fund, a fund management agency for environmental program | 1.. Ensuring the right prioritisation of the Fund<br>2. Potential overlap with the BPDLH | 1. How can the government ensure that the Fund will invest in the "more sustainable" type of renewable energy (i.e., solar, wind, etc) instead of, for example, coal-biomass co-firing?<br>2. How will the government mitigate |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | need more support) | | | potential overlap with the existing fund, such as the BPDLH? |
| Energy | Renewable energy pricing | New and Renewable Energy Draft Bill | Pricing mechanism of new and renewable energy | Low | | 1. Ensuring that renewable energy prices are affordable for the consumer base while also bringing sustainable profit for private investors - PLN should take an active role<br>2. The problem of PLN's Business Area where the requirements for private energy provider on renewable | PLN tends to be reluctant in granting private enterprises for underdeveloped regions | 1. Ensuring affordability and sustainable profits, without being too much of fiscal burden<br>2. Inviting private investors for renewable energy development without compromising PLN's electrification plan | How will the government ensure the affordability of new and renewable energy to the public, especially among households in the eastern Indonesia where the electrification ratio is still lower than Java's? How can the government ensure that private investors are more inclined to invest in renewable energy rather than dirty energy (i.e., coal, oil, etc.)? |
| Energy | Renewable energy incentives | | Incentive mechanism of new and renewable energy | Medium | | | | | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | energy is complicated and at times costly | | | |
| Energy | Energy transition | Draft Presidential Regulation for coal phase out is underway between ESDM and Kemenko Marves. | Moratorium on new coal power plants and coal phase-out | High | | 1. Is this secured in any policies? Indeed, there is NO specific policy on moratorium<br>2. What could go wrong? Legal dispute with coal IPPs?<br>3. What is the status of discussion here? It seems that the public has accepted that the moratorium will be happening as PLN, as the grand | 1. Arguments that coal is so far from Indonesia's cheapest energy deposit<br>2. Global climate justice discourse where developed countries got rich from coal hence Indonesia can too.<br>3. Rejection from coal business associations and stakeholders on green agenda | 1. Lack of concrete policies on coal moratorium<br>2. No plan to mitigate potential disputes with coal actors<br>3. Understanding to stop global climate crisis, we need green growth for developing countries and de-growth for developed countries | 1. What are the underpinning policies for coal moratorium in Indonesia?<br>2. What are the strategies to overcome potential disputes over coal moratorium in Indonesia?<br>3. How can the government ensure the public that green growth is imperative as opposed to "dirty growth"? |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | executioner, has stated this in its RUPTL (although RUPLT can be revised every year)<br>4. Engagement options? What are problems and how can this policy be improved? | | | |
| Agriculture | Renewable, biofuel | UU No. 11/2020 on Jobs Creation and PP No. 5/2021 on Risk-Based Business Licensing | Ease of investment for palm oil investment | Low | BKF (2020) estimates USD 2.2 B needed for the agricultural sector to reach the NDC targets by 2030, although biofuel blending might intersect with the energy sector financing needs | | | Increasing incentives for oil palm plantation can have a negative impact on increasing the rate of deforestation | 1. How can the government guarantee that new investments will run together with the prevention of palm oil-induced deforestation (moratorium)?<br>2. How can the government provide incentives in the form of fiscal or non-fiscal ease for the practice of sustainable oil palm |
| Agriculture | Renewable, biofuel | LTS-LCCR 2050, RIPIN, and RUEN (not specific to CPO) | Increasing palm oil productivity | Low | | Increasing palm oil productivity may prevent deforestation ONLY if it can go together | No clear connection between the LTS-LCCR 2050 and the RIPIN and RUEN | Increasing productivity in oil palm plantations can prevent deforestation only if it goes along with the moratorium on | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | with effective moratorium on new deforestation on plantation | | new oil palm plantations in the forest area | plantations (Example: ISPO and RSPO certification)?<br>3. How can the government ensure the effectiveness of the moratorium of new oil palm plantations in the forest area?<br>4. How to ensure deforestation on peatlands can be prevented while at the same as the government is trying to meet the biofuel target from CPO production?<br>5. How can the government ensure that the funds collected from the Palm Oil Fund Management Agency (BPDPKS) is not only used for biofuel subsidies but can also be used for the |
| | | | | | | | | | |
| Agriculture | Renewable, biofuel | LTS-LCCR, RIPIN, and RUEN (not specific to CPO) | Promote CPO-based fuel | Low | | 1. The Indonesian government is actively increasing the use of biofuel<br>2. Further intervention is necessary to address the three main risks:<br>- Fiscal risks, due to the heavily subsidised biodiesel;<br>- Market risks, | Lack of public trust, either from domestic or international markets on Indonesia's CPO sustainability (ISPO is not enough) since it may worsen deforestation | 1. Lack of public trust, both from the domestic or international market about the sustainability aspects of Indonesian palm oil (CPO) - Indonesia Certification of Palm Oil - ISPO is considered very insufficient)<br>2. The fear that the use of CPO produced in Indonesia can | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | due to the domestic market saturation for biodiesel;<br>- Environmental risks, due to the accelerated deforestation caused by biodiesel/CPO production | | worsen deforestation | development of palm farmers' capacity and increase the added value of the Indonesian palm oil supply chain?<br>6. Because there are no derivative regulations for palm moratorium and this regulation is more resemble to a directive, the interest for the moratorium among local governments is low. How can the government ensure more effective moratorium implementations? |
| Agriculture | Renewable, biofuel | Inpres No. 8/2018 | Moratorium on new palm oil license | Low | | No specific targets, but intervention and implementation have been made to (1) suspend the relinquishment or forest area conversion into palm oil plantations for the | There is no further sub-regulation. The directive is inherently principal, which results in the underachievement of the moratorium. | No specific targets aside from suspension of activities in the three institutions. | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Ministry of Environment and Forestry; (2) suspend the issuance of the Right-to-Cultivate (HGU) if the acquisition of the HGU is deemed not to be in accordance with prevailing laws and regulations for the Ministry of Agrarian Affairs and Spatial Planning; and (3) suspend the issuance of recommendations/licenses by | | | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | subnational heads of government for palm oil plantation establishment within forest areas. | | | |
| Dual benefits | Adaptation and mitigation | Permen LHK No. 84/2016 | Promote and introduce the climate Village Programme (Proklim) | Low | 0.66–3.45% GDP, based on the LTS LCCR document, historically USD 55.01 billion in 2015–2019 (NDC) | | | | |
| Adaptation | Adaptation | Permen LHK No. 7/2018 | | Medium | | | | | |
| Adaptation | N/A | Permen LHK No. P.33/2016 on Guidelines for Development of Adaptation Actions | Sets the guideline for development of National Adaptation Plan (NAP) | High | | | | | |

| NDC Sector | Sub-sector | Policy Document(s) | Policy Objective | Fiscal Implication | Rationale for Fiscal Implication Estimates | Openness of Discussion | Political Barriers | Overall Gaps | Critical Guiding Questions |
|---|---|---|---|---|---|---|---|---|---|
| Adaptation | Adaptation | | Introduce the vulnerability index (SIDIK) | Medium | | | | | |