



Centre for Climate Change Financing and Multilateral Policy
Fiscal Policy Agency, Ministry of Finance
Republic of Indonesia

Green Planning and Budgeting Strategy for Indonesia's Sustainable Development, 2015-2020

Executive Summary





Introduction

This Green Planning and Budgeting (GPB) Strategy reflects growing concerns about Indonesia's impressive record on economic growth which is vulnerable to environmental risks associated with climate change and the losses and degradation of its rich natural resources.



The preparation of the GPB Strategy was driven by the need for the Government of Indonesia to fulfil its commitment to implement Presidential Regulation no.61/2011 on the National Action Plan for the Reduction of Greenhouse Gas Emissions (RAN-GRK) by the year 2020. It also reflects growing concerns about Indonesia's reliance on natural resources while its environmental carrying capacities decline and the poor performance of some green policies. The GPB Strategy therefore aims to define a more sustainable set of policies and to show how these can be implemented in line with the Medium Term Expenditure Framework and performance-based budget system, despite the additional costs that will be needed for some new policy reforms.

The GPB Strategy adopts a Green Economy approach with primary focus on mitigation of, and adaptation to, climate change and on the environment and long-term growth. The Strategy was coordinated by the Ministry of Finance's Centre for Climate Change Finance and Multilateral Policy (PKPPIM) and supported by an inter-ministerial team and a senior advisory panel.



Vision and Objectives

The Green Planning and Budgeting Strategy aims to ensure that Indonesia can become a High Income Country by 2033, despite the need to reduce emissions and the threats posed by climate change and natural resource degradation which are likely to reduce GDP growth from 7% to 3.5% by 2050, without the GPB Strategy. Achieving this vision requires a new approach to development planning which takes into account the valuation and sustainability of natural resources and the environment as well as of human capital. This approach will need to be integrated into national, sectoral and regional development policies, as described in the Medium Term National Development Plan (RPJM-N) and the Strategic Plan of Line-Ministries (Renstra K/L) for the period 2015 – 2019, and so to guide planning and budgeting process and prioritised green policies.

Guiding Principles

To support its vision and objectives, the implementation of Green Planning and Budgeting Strategy is guided by the following five principles.



- **Regional Integration.** Improved regional integration and inter-island connectivity will reduce pressure on natural resources in the more developed regions of Indonesia and will open up opportunities for new economic activity, based on the sustainable use of natural resources in less developed areas.
- **Valuing Natural Resources.** Development planning and budgeting needs to take into account the value of natural resources, so that activities that improve these resources are prioritised and those that degrade the resources are discouraged or required to pay for the degradation.
- **Food, Water and Energy Security.** A green economy has to secure food and energy supplies, despite growing competition for water and land. It achieves this by giving a high priority to food production, by promoting efficient use of energy, water and land.
- **Demographic Bonus Opportunity.** The proportion of people in the productive age group will grow until 2020-2030. Green economy policies ensure that the activities taken up by young people in the next two decades can be sustained, as the population ages.
- **Good Governance.** Good governance is always important. A green economy adopts policies that promote a growing role for wider society, both in private enterprise and civil society. Such policies include incentives, financing and regulations and are particularly dependent on good governance.

Policies and Programme Priorities

Guided by the above vision, objectives and principles, the GPB Strategy identifies the top 6 policy areas and 21 priority programmes for achieving the greatest Green Economy benefits. This process started with a long list of all development policies in related government strategies (see table at page 17-19).



The priorities were then selected, in consultation with a group of officials from the main ministries involved, by rating each policy in terms of its contribution to the five Green Economy dimensions (i.e. environment, climate mitigation and adaptation, long term economic growth and social equity). The top 21 priorities are grouped into six clusters of policy areas, as follows:

- **Forestry, Peat-land and Marine Resources** : forests protection, peat-land rehabilitation, coral reefs and marine resources protection; trust-fund for nature/biodiversity conservation.
- **Agriculture** : climate adapted crops, oil palm plantation reforms, and irrigation rehabilitation.
- **Energy and Industry** : energy efficiency, new and renewable energy, resource efficiency in industry, energy and fuel pricing, large scale power, sustainable mining, and corporate social responsibility.
- **Transport, Urban and Regional Development** : public transport, waste management, climate proofing infrastructure, regional development, urban and spatial planning.
- **Education and Health** : green education, climate change sensitive health services.
- **Other Supporting Priorities** : natural disaster insurance, disaster reduction management, inter-ministerial coordination, governance & capacity building.

Table at page 17-19 presents more details about the top 21 programme priorities, describing the instruments to be used to deliver the priorities, along with the current budget and the key indicators for monitoring the programme.



Analysis on Budget Expenditure

The analysis of recent government budget expenditure on the top 21 priorities for GPB interventions was undertaken by examining expenditure at the activity level codes across the Government budget from 2011 to 2014.

The analysis suggest that the total budget expenditure that is related to the 21 GPB priorities (excluding energy subsidies for fuel and electricity) has increased by about 24% between 2011 and 2014, to the amount of more than IDR 100 trillion. About three quarters of this budget spending was for irrigation, public transport, road and bridges, which are primarily motivated to deliver conventional economic benefits but which also provide some green economy co-benefits.

A 'Green Economy weight' (GE%) was then defined by estimating Green Economy expenditures as a proportion of total budget expenditures. When the total expenditure is weighted by the GE%, the green budget expenditure grew from IDR 14 trillion to about IDR 19 trillion from 2011 to 2014. When expressed as a proportion of total government budget, the weighted spending remained fairly stable at only about 0.9% to 1.1% of total central government expenditure. The budget for energy subsidies has been between IDR 255 trillion to IDR 350 trillion from 2011 to 2014, which is more than three times more important than all other GPB priority expenditure combined.

Policy Instruments

The above GPB programme priorities are to be delivered through a range of policy instruments. These instruments involve an element of public expenditure and many also aim to ‘leverage’ or to induce and generate some complementary private investments and civil society participation.



The Strategy introduces the concept of ‘leverage ratio’ which measures the ratio of public spending to private spending. The Leverage Ratio instruments can be grouped into the following categories:

- Direct government budget expenditure typically has low leverage ratios of less than 1. This may be necessary for some green economy policies (eg in climate proofing public infrastructure or public health programmes for climate sensitive diseases), but can be replaced by policies with higher leverage ratio as the institution’s capacity develops.
- Public financial transfer instruments, including fiscal incentives, aim to encourage private investment and typically have leverage ratios of 2 to 4. These include subsidies (eg for forestry) and tax incentives (eg for many energy policies).
- Instruments involving the financial sector (such as bank, insurance, etc) in implementing green policies (eg through loanable funds, interest rate subsidies, loan guarantees) tends to increase the leverage ratios, typically to between 3 and 5, because the financial sector adds delivery capacity and plays a role in scaling up and sustaining the policy.
- Instruments by using Government Regulations (eg environmental standards or rules governing renewable energy shares) tend to have much higher leverage ratios, although the cost of enforcing the regulations can be high, especially while enforcing institutions being newly established.
- Transfer of funds from central to local governments may subsequently lead to the use of any of the above instruments by the local governments.

The GPB Strategy aims to achieve a shift in emphasis in using the instruments, from direct government expenditure, towards greater use of financial transfers and regulatory policies to promotional activities so as to improve and increase the leverage ratios.



Scenarios for Growth and Funding

Without a GPB Strategy, or under ‘business as usual’ (BAU) policies, Indonesia will suffer from losses and damages associated with climate change and the degradation of natural resources.



This is likely to reduce economic growth from the target levels of 7% to 3.5% by 2050, with a 2.5% drop caused by damage and loss from climate change and a 1.0% drop caused by degrading natural resources. This reduction in GDP growth will increase progressively, as climate change takes hold and natural resources are even more degraded. As a result, total GDP under BAU policy will be 6% lower by 2020 and 19% lower by 2033. The GPB Strategy aims to protect Indonesia from this loss of GDP. In addition, Indonesia must close the existing gap between Green GDP and conventional GDP, to ensure that the achievement of high-income status is not dependent on unsustainable natural resource use.

The GPB Strategy defines three funding scenarios in responding to the challenges for Green Economy to keep the GDP growth on target, and particularly for increasing public and private expenditures for the top 21 green priorities:

- The **first scenario** involves achieving 7% growth in Green GDP and requires an increase in the share of total central government budget expenditure that is devoted to green priorities, from the current level of 1.0% to 3.8% by 2025.
- The **second scenario** involves the green share in public expenditure increasing to 1.6% by 2025 and succeeds in preventing half the damage that would otherwise arise from climate change and natural resource degradation. As a result, total GDP is nearly 10% lower by 2025 and HIC status is reached in 2035.
- The **third scenario** involves the same level of public spending as the second scenario, but succeeds in accelerating the move towards reliance from the public sector to the private sector and civil society in green investment, with leverage ratios improving three times as fast. This protects Indonesia from about three quarters of the expected damage from climate change and natural resource degradation. Total GDP is only 5% lower in 2025 and HIC status is reached in 2034.



Priority for Increasing Budget Expenditures

For each of the above funding scenarios, the GPB Strategy introduces three categories of priority for the increase in expenditure on the top 21 priority programmes.



The choice of the category is based on two main criteria: first, the evidence about the level of Green Economy benefits delivered by the priority; and, secondly, evidence about the likely ability to introduce new instruments that will leverage greater private investment.

- The **first category of priorities** will see expenditure grow by 100% in real terms between 2015 and 2020, compared with an increase in average expenditure of 40%, in the first scenario. These include: forest protection; peatland rehabilitation; irrigation; energy efficiency; corporate social responsibility; regional development and urban and spatial planning; and Green Economy coordination. The phased removal of energy subsidies is also amongst the highest of the top priorities, but of course, involves a reduction not an increase in spending;
- The **second category of priorities** will see real expenditure grow by 75%, in the first scenario, and include: coral reef and marine resource protection; adapted crops; oil palm; renewable energy; resource efficiency; public transport; and disaster reduction management; and
- The **third category of top priorities** will see real expenditure grow by 50%, in the first scenario. This category includes: large scale power; sustainable mining; waste management; climate proofing of infrastructure; Green Economy education; and climate sensitive diseases.

It is assumed that the GE expenditure by both government and the private sector will replace conventional expenditure and the protection happens because of the additional green benefits, above the normal conventional benefits. The increase in government expenditure will be accompanied by an even larger increase in private investment in the Green Economy, leveraged by a shift in government instruments towards regulations and incentives that utilise the capacity of private finance.

In the first two scenarios, the average leverage ratio of public expenditure on the top 21 priorities will increase from 1.9 in 2014 to 2.3 in 2020 and to over 5 in the long term. As a result, about 15% of total investment in Indonesia will be green by 2033. In the third scenario, the leverage ratio grows rapidly to 3.4 in 2020 and to over 10 in the longer term, in line with typical levels in HIC countries.

For most ministries, this means that an increasing share of existing expenditure must be devoted to green activities. Under the second and third scenarios, virtually all expenditures by MoFor must be green by 2025 and the shares for other ministries are 28% for MoT, 10% for MEMR, 8% of MoA and 6% for MPW. Under the first scenario, it will not be enough for line ministries to green their existing expenditure and some increase in spending beyond the national average would be required.

Net Impact on Revenue

Despite this modest increase in public spending on the Green Economy, the net impact on the public budget will be positive, for the following reasons:



- Many of the GPB programme priorities can be funded by changing the existing activities of line ministries, without requiring additional budget. This will include introducing new policy instruments that leverage more private investment.
- The policy to phase out energy subsidies will ensure short term budget gains;
- In the medium to longer term, the GPB Strategy will prevent a deterioration of economic growth and so protect general revenue and growth; and
- There is also likely to be some increase in non-tax revenues as a result of introducing policies that increase taxes and license fees in order to strengthen disincentives for deforestation, pollution and other unsustainable activities.

The GPB Strategy estimates that, after taking into account the above factors, the public revenue will be IDR 6 trillion higher in 2020, in real terms, and about IDR 200 trillion higher in 2033. This will make it possible for some of the increase in green expenditure to be new expenditure, rather than simply the greening of existing development activities, whilst also maintaining a limit to the central government deficit of 1.3% of GDP, as required in the current macro-economic framework.

Operationalising the Strategy

The Green Planning and Budgeting Strategy will be used as a tool to assist government budget preparation. The Strategy will help the Ministry of Finance and the National Development Planning Agency (Bappenas) to encourage Line Ministries and Sub-National Authorities to integrate Green Economy perspectives into their planning and budgeting system.



The GPB Strategy requires Line Ministries to take account of Green Economy objectives when preparing proposals for new policy and/or programmes, as part of the budget process. It does this in three ways:

Firstly, budget proposals should define and estimate the green economy benefits that will be delivered and should explain the relative importance of these benefits for the justification of the proposal. This will involve the estimation of a GE%, which will form part of a budget scoring system.

Secondly, proposals should explain how they contribute to a shift towards the involvement of wider society, including private enterprises and civil society organizations. This will include greater use of incentives, financing or regulations.

Thirdly, budget proposals should refer to the extent to which they respect the five guiding principles of the GPB Strategy, as defined above. This will ensure that green economy benefits are maximised.

These three requirements will be referred to during budget negotiations, including in the trilateral budget discussions between MOF, Bappenas and Line Ministries. MoF will use the GE% budget score to monitor trends in the proposed budget and will include a section in the Nota Keuangan, that reports on the way in which the proposed budget contributes to greening Indonesia's economy. Commitments on the green economy will be an increasingly strong feature in the national strategies that guide new policy formulation.

Sub-national governments will play an increasing role in managing the Green Economy. In many countries, it is the municipalities that are most active in pursuing Green Policies. The central government will support sub-national authorities with capacity building and with policies that combine financing incentives with government regulations. We will build on recent experience in piloting sub-national grants for targeting Green Economy priorities, but also provide some flexibility to the Regional Governments in deciding their programme priorities.

The GPB Strategy proposes that more attention is given to the use of Green GDP, which takes into account natural resource degradation and the impact of climate change. MOF will take into account the implications of climate change on economic growth in preparing Medium Term Expenditure Framework.. This should help to give higher priority to sustainable natural resource use in the planning and budgeting process annually and in the medium term.

A GPB Annual Progress Report (APR) will be produced by PKPPIM of MOF early in the budget cycle. This will include a subjective assessment of progress with green strategy development across government. It will also include analysis of the latest budget expenditure trends and will report on a set of national level monitoring indicators. Finally, each of the top 21 priorities will report on indicators of outputs and outcomes as part of the normal performance based budgeting system as required in the Medium Term Expenditure Framework.

Programme Priorities and Instruments for the GPB Strategy

Priority	Policy/Programme Instrument	2014 Budget & GE%	Outcome Monitoring
Forestry, Peatland and Marine Resources			
F1: Forestry (MoFoR and SNAs)	<ul style="list-style-type: none"> Enforcement and policing of licenses Strengthening of forest protection Reforestation of degraded land Trust Fund for Nature/Biodiversity Conservation Land swaps REDD+ range of incentives Effective measurement, reporting and verification (MRV) 	<ul style="list-style-type: none"> IDR 4.5tr 100% protection 50% productive 	<ul style="list-style-type: none"> Forest area, by type of forest and condition (deforestation rate halved by 2018 and zero by 2030) Carbon measurement Trustfund establishment
F2: Degraded Peat-land (MoA and SNAs)	<ul style="list-style-type: none"> REDD+ instruments Rehabilitation of wet peatland canal system Some special policies and budget allocations Regulations to require local governments to fund peatland restoration Matched by special funding, from local and/or national budget Local community resources (knowledge, labour) Local Government and Project based costs 	<ul style="list-style-type: none"> N/A 100% restoration 	<ul style="list-style-type: none"> Hectares restored (increased to 0.1m ha in 2018 and 0.3m in 2030) Local & additional matching funds Numbers of rehabilitated peatland canals
F3: Coral Reefs and Marine Resources (Min of Marine & Fisheries)	<ul style="list-style-type: none"> Coral reef protection regulations Inter-island shipping & dumping sludge regulation Marine Resource and Coastal management Enforcement on marine & maritime regulations 	<ul style="list-style-type: none"> IDR 0.7tr 100% protect. 10-20% other 	<ul style="list-style-type: none"> Square km protected (increased from 62,000km2 now to 150,000 in 2018 and 500,000 in 2030) Coral tourism jobs
Agriculture			
A1: Cropping practices & varieties (MoA)	<ul style="list-style-type: none"> Applied research into improved varieties and green practices Improved agricultural Extension programs Rural finance and insurance system for farmers Labelling and certification 	<ul style="list-style-type: none"> IDR 2.4tr 10% crop productivity 	<ul style="list-style-type: none"> Hectares using new crop varieties and new practices (increased by 0.1m ha by 2018 and 0.5m ha by 2030)
A2: Oil Palm (MoA)	<ul style="list-style-type: none"> Land swaps Phasing out oil palm production on peatland area More flexible biofuel contracts with Pertamina Anti-dumping trade policies 	<ul style="list-style-type: none"> IDR 0.7tr 10% crop productivity 	<ul style="list-style-type: none"> RSPO increased from 28% now to 35% in 2018 and 50% in 2030 Oil palm area on degraded land Palm oil yields Biodiesel production
A3: Irrigation (MoA/MPW)	<ul style="list-style-type: none"> Maintenance, capacity building and Water User Groups Scheme rehabilitation/improvement 	<ul style="list-style-type: none"> IDR 1.4tr 33% 	<ul style="list-style-type: none"> Irrigated area managed by farmers (up from 6.7m ha now to 8.0m ha in 2018 and 10.0m ha in 2030)
Energy and Industry			
E1: Energy Efficiency (MEMR)	<ul style="list-style-type: none"> Incentives, revolving fund, loan guarantees Regulations Pilot schemes and appropriate technology development Public awareness and government pilot examples 	<ul style="list-style-type: none"> IDR 0.1tr 20% 	<ul style="list-style-type: none"> Energy intensity of GDP, by sector (falling from 15.8 kWh/\$ now to 15.5 in 2018 and 15.0 in 2030. Energy use in government offices

E2: Renewable Energies (MEMR)	<ul style="list-style-type: none"> • Licensing • FITs, tax incentives • Revolving funds and loan guarantees • Reduced import duties • Business awareness/networks • SME targets for financial sector 	<ul style="list-style-type: none"> • IDR 1.8tr • 20% 	<ul style="list-style-type: none"> • Power generated for each RE technology (increased from 4.8% now to 8% in 2018 and 23% in 2030)
E3: Resource Use Efficiency in Industry (Mol)	<ul style="list-style-type: none"> • Incentives, revolving fund and loan guarantees • Regulations • Pilot schemes and BUMN lead projects 	<ul style="list-style-type: none"> • IDR 0.4tr • 100% green • 5-10% industry 	<ul style="list-style-type: none"> • Physical input:output ratios, by sector
E4: Energy & Fuel Pricing (CMEA/MoF)	<ul style="list-style-type: none"> • Subsidy spending for fossil fuels and electricity reduced and phased out gradually • savings used for compensatory social welfare and public transport • savings used for energy efficiency funding and renewable investments 	<ul style="list-style-type: none"> • IDR 282.1tr • N/A 	<ul style="list-style-type: none"> • Value added:input ratios, by sector • % actual progress of subsidy reduction against planned (with subsidy eliminated by 2018)
E5: Large Scale Power (MEMR/PLN)	<ul style="list-style-type: none"> • Regulations on clean technologies, high efficiency plants, carbon capture • Links between regulations and carbon market incentives • Regulations/incentives on transmission • Smart grid to facilitate renewable connections 	<ul style="list-style-type: none"> • IDR 6.2tr • 5% 	<ul style="list-style-type: none"> • Carbon intensity of power generation
E6: Sustainable Mining (MEMR)	<ul style="list-style-type: none"> • Licensing requirements • Enforcement of clean-up deposit and land/site rehabilitation • Contracting revisions relating to non-tax revenue • Reforms to base royalties on net income and resource use • Community engagement in post-mining activities, including PES 	<ul style="list-style-type: none"> • IDR 6.0tr • 100% green • 5-20% other 	<ul style="list-style-type: none"> • % of mined area rehabilitated
E7: Corporate Social Responsibility (BUMN/KADIN)	<ul style="list-style-type: none"> • Awareness (companies & wider public) • Database, annual sustainability report 	<ul style="list-style-type: none"> • IDR 0.01tr • 100% 	<ul style="list-style-type: none"> • Expenditure on CSR activities • Number of publicly listed companies increased from 80 now to a target agreed with KADIN
Transport, Urban Planning & Regional Development			
T1: Public Transport (MoT/SNAs)	<ul style="list-style-type: none"> • Energy savings in public transport • Increase investments and budget allocation for railway and sea-transportation system • National Strategy covering all levels of government • Transfers from central government to support municipal funding • Disincentives for private vehicles • Investment grants and price guarantees • Traffic and parking management and/or alternative fuels 	<ul style="list-style-type: none"> • IDR 35.0tr • 50% urban/rail • 5% marine • 0% aviation 	<ul style="list-style-type: none"> • Number of rail journeys increased from 202m now to 250m by 2018 and 400m by 2030 • % of journeys using public transport • Travel times and accidents
T2: Waste Management (MoEnv/Local Govt)	<ul style="list-style-type: none"> • Increased budget allocation by local authorities • National campaign of awareness on recycling domestic waste • Incentives for waste to energy conversion 	<ul style="list-style-type: none"> • IDR 3.1tr • 100% pollution • 20-50% other 	<ul style="list-style-type: none"> • % waste in landfill

T3: Climate Proof Infrastructure (MPW/SNAs)	<ul style="list-style-type: none"> Climate change included in road/bridge/ infrastructure design standards Regulation and increased budget for climate proofing 	<ul style="list-style-type: none"> IDR 41.2tr 5% 	<ul style="list-style-type: none"> % projects using proofing standards
T4: Regional Development and Urban Planning (Bappenas/ CMfEA/ SNAs)	<ul style="list-style-type: none"> Inter-island and Regional connectedness infrastructure Incentives to relocate industries & shopping centres outside Jakarta Health, education in the East and changing attitudes towards the East Land Capping and Land Acquisition Fund to purchase land for urban climate proofing and to speed up infrastructure development constrained by land and financial issues Project Development Facility to support Public-Private Partnership's infrastructure project for Green Urban Development Bank guarantees for SOEs/private sector to invest in green utilities Studies on zoning, land use planning and climate proofing, especially in cities Community participation in urban development plans Climate proofing for power, water, waste 	<ul style="list-style-type: none"> IDR 4.1tr 50% equality 10% other 	<ul style="list-style-type: none"> Gini co-efficient of regional income inequality Ratio of wages in richest region to poorest region falling from 1.6 now to 1.5 in 2018 and 1.2 in 2030 Number of businesses in climate proof locations
Education and Health			
H1: Education (CMfSW/MoEd)	<ul style="list-style-type: none"> Include Green Economy in curricula at all levels of education, especially in science and technology, and public awareness Increased funding for research and development in low carbon technologies 		<ul style="list-style-type: none"> Pupil/student numbers with Green Economy training Spending on CC programmes accounting for 0.1% of all education spending by 2018 and 0.5% by 2030
H2: Health (MoH)	<ul style="list-style-type: none"> Review budget allocation for climate sensitive disease prevention & treatment 		<ul style="list-style-type: none"> % climate sensitive diseases treated Spending on CC programmes accounting for 0.2% of all health spending by 2018 and 1.0% by 2030
Other Supporting Priorities			
S1: Disaster Reduction & Management (CMfSW/BNPB)	<ul style="list-style-type: none"> Natural disaster insurance scheme Inter-agency coordination in disaster preparedness Local communities participating in disaster preparedness 	<ul style="list-style-type: none"> IDR 2.8tr 100% 	<ul style="list-style-type: none"> Communities with disaster management plans
S2: Coordination, Capacity building, etc (President/MoF/ Bappenas/MoEnv)	<ul style="list-style-type: none"> Capacity building across government Improving public governance at central & local levels Public awareness for demand side changes towards green lifestyles National MRV for mitigation and adaptation, including RAN/RAD-GRK and RAN-API Use of Vulnerability Index More evaluation studies 	<ul style="list-style-type: none"> IDR 0.6tr 100% 	



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