

Green Growth Concepts and Definitions Working Paper

October 2014

Component 1B: Green Growth Tools
Government of Indonesia - GGGI Green Growth Program

July 2014

1. Introduction

The Indonesia Green Growth Program was launched in June 2013 with the overarching objective of mainstreaming green growth planning into the country's key economic and development planning processes. The Government of Indonesia (GoI) recognizes the green growth opportunities for the country and the potential for sustainable economic growth, job creation and poverty reduction. What is required to achieve these opportunities is a systematic approach with concrete steps that moves the country from where it is now to where it needs to be to achieve its vision for sustainable economic prosperity. Green growth represents these concrete steps and is an important part of the process that will help deliver sustainable development for Indonesia through focusing on the role of natural capital as a driver of economic growth.

GoI is aware that the green growth concept must be developed and applied to support development that is pro-growth, pro-poor, pro-jobs and pro-environment. In achieving these overarching objectives is the need to mainstream green growth planning into the country's key economic and development planning processes. However, this mainstreaming process needs to be underpinned by a clear and shared understanding of what green growth is; of a vision for green growth in Indonesia; and of the conceptual and analytical framework for assessing and measuring what green growth means for the country.

These key related issues are discussed through two separate technical papers as follows:

- **Green Growth Concepts and Definitions Paper:** which articulates Indonesia's vision for green growth in the context of a number of internationally recognised concepts related to green growth, identifies the priority focus areas for Indonesia; and articulates an agreed green growth vision statement for Indonesia;
- **Green Growth Scoping Paper:** which provides a working definition of green growth and outlines the analytical framework for assessing green growth within an Indonesian context based on stakeholder input, proposes a suite of priority indicators for planning and measuring the country's green growth performance, and identifies relevant tools and methodologies to support mainstreaming green growth in development planning.

This document - the Green Growth Concepts and Definitions Paper - should be read alongside the Green Growth Scoping Paper. The overarching objective of this paper is to set out a clear vision of what green growth can achieve for Indonesia. The vision should provide a unifying framework for stakeholders to understand what green growth means for Indonesia, what the benefits of green growth are, and what that the country can aspire to become in ways that stakeholders can rally around.

More specifically, this Green Growth Vision Paper has four objectives:

- Summarise the different working definitions of green growth and provide examples of other countries pursuing a green growth strategy;
- Identify the implications of current development trends and outline the potential benefits achieved through Indonesia shifting to a green growth pathway;
- Summarise the specific green growth priorities for green growth in Indonesia drawn from consultations with stakeholders; and
- Present a simple, clear green growth vision for Indonesia that can be nationally owned.

2. What is Green Growth?

“The Government of Indonesia understands the opportunities which a green economy and its potential for sustainable economic growth, job creation and poverty reduction can bring to Indonesia. What is required to advance green growth in Indonesia is a systematic approach with concrete steps that take us from where we are today to our vision for a green economy.”

Dr Lukita Tuwo, October 2013

The concept of green growth

Green growth is a paradigm in which green policies, innovation, and investments drive sustainable economic development. More broadly, green growth is an approach for achieving a number of simultaneous objectives bringing Indonesia closer to achieving true sustainable development: through avoiding and curbing greenhouse gas emissions, building resilience to climate extremes and longer term change, using resources more efficiently, providing sustainable and equitably-distributed increases in GDP and standards of living, and valuing the often economically invisible natural assets that have underpinned economic success over the centuries. The model of green growth that is right for Indonesia is still evolving, but it is the experience of countries testing what works, and what doesn't, that will help shape this model.

The concept of green growth in Indonesia has been informed by the views of leading international organizations involved in green growth planning and development. There have been a number of recent publications on green economy and green growth that have offered a perspective on its characteristics and a working definition of green growth, including leading international organizations such as United Nations Environment Program (UNEP), The United Nations Department of Economic and Social Affairs (UNDESA), the United Nations Conference on Trade and Development (UNCTAD), United Nations Social Commission for Asia and the Pacific (UNESCAP), the International Labour Organization (ILO), the World Bank, the Organization for Economic Cooperation and Development (OECD), The Global Green Growth Institute (GGGI), the Green Economy Coalition, the Green Growth Leaders, and the Green Growth Knowledge Platform (GGKP).

There is also emerging practice in the design and implementation of national level green economy and green growth strategies in both developed and developing countries. However, whilst there is no one, internationally accepted working definition of green growth, this international experience provides important insights and helpful clarity in informing stakeholders about a green growth vision for Indonesia. Also, it is worth mentioning that the concepts of green economy and green growth, and low carbon development to a lesser extent, are often used interchangeably by international organizations.

In the context of the Indonesia program our primary focus is on green growth which has a narrower focus than sustainable development, and emphasizes the role that natural capital can play in driving sustainable economic growth. However, Huberty et al (2011) provides a review of different international approaches to green growth and identifies a distinction between weak, moderate and strong versions of green growth. In particular different countries have adopted alternative approaches that emphasize weak, moderate or strong versions of green growth as follows:

- **Weak green growth:** growth is seen as compatible with emissions reductions and environmental safeguards but a “do no harm” approach is adopted. Under this version economic growth is consistent with avoiding environmental damage and there are benefits identified from focusing on natural capital as a growth driver (eg: cost savings from natural resource efficiency)
- **Moderate green growth:** a more ambitious version sees green growth as a way of boosting jobs in new green sectors. Under this version investments in low carbon technology and infrastructure can create new employment opportunities (green jobs) in new green industries, which has been

particularly attractive in developed economies in need of kick starting growth in depressed economies.

- **Strong green growth:** under this version of green growth, green investment goes beyond job creation and can be seen as a transformative force across the whole economy over the mid to long term. The decarbonisation of the economy can become a growth engine for the whole economy through the effects of widespread technology investments and productivity improvements across all economic sectors.

How natural capital drives growth

The drivers of green growth, or the green growth “theory of change”, can be summarized in terms of an integrated approach to sustainable economic prosperity that typically is characterized by:

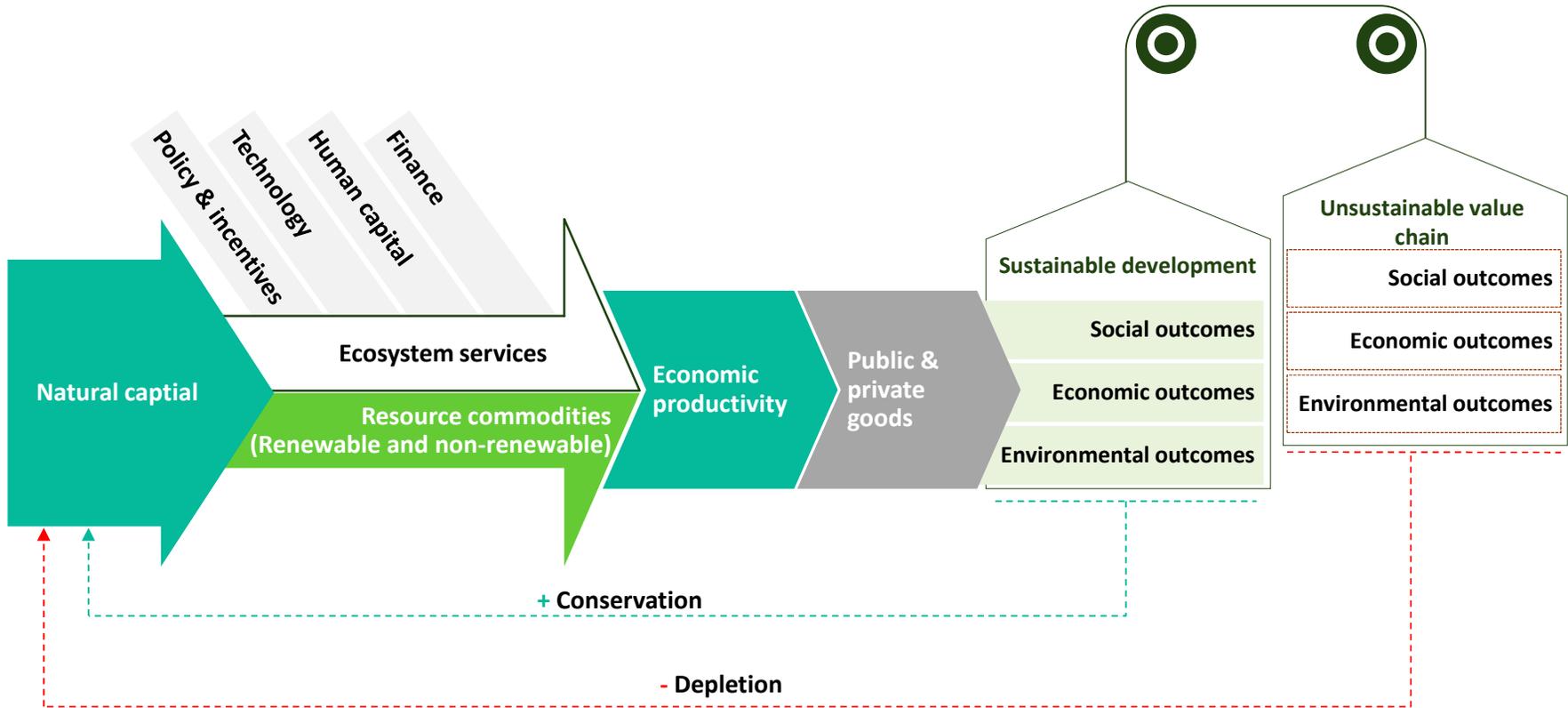
- Increases in the quality and quantity of natural resources and environmental services; as these are factors of production their availability is critical to higher long run economic growth;
- Increases in the productivity of resources; as higher growth can be generated by fewer resources;
- Increases in investment in new technology and innovative applications of existing technologies; as economic growth has historically always been driven by technological change;
- Removing market failures in the pursuit of economic, social and environmental goals; as economic growth is catalyzed by more efficient allocation of resources.

This green growth theory of change can also be illustrated through a green growth value chain which emphasizes the way in which natural capital catalyzes sustained economic growth through the generation of resources commodities and resource amenities (Krautkraemer 2005):

- **Resource commodities** are those natural resources directly used in the production of goods and services; these may include non-renewable resources, such minerals, but also renewable ones, such as wood; their exploitation is governed by the law of demand and supply with a price signaling their relative scarcity; however, this may not reflect all social costs and benefits associated with their exploitation.
- **Ecosystem services or resource amenities** include those natural resources that are not traded in markets but are directly or indirectly used to produce goods and services or contribute to human welfare in other ways; these include resources such air, fresh water, carbon, nitrogen, and nutrient cycles, but also the climate, the sinks where production and consumption waste are deposited and the ecosystem services that support our agricultural and other economic activities; they are often pure public goods and in the lack of a well-functioning market, resource amenities tend to be undervalued and overused.

Both resource commodities and resource amenities underpin economic productivity and generation of public and private goods and services, although this process needs to be underpinned by an enabling environment that includes good policies and regulations, access to finance, technological innovation, strong institutions and governance, and investment in human capital. The economic, social and environmental outcomes produced by natural capital then in turn, through feedback loops, can enhance or destroy the natural capital assets themselves dependent upon the extent to which the unsustainable drivers for growth can be managed through green growth interventions. The net outcome will, therefore, depend on the balance between green growth and unsustainable development. This green growth value chain is illustrated in the figure below.

Figure 1 : Green Growth Value Chain



International definitions of green growth

Some of the working definitions of green growth/green economy, and the key insights offered by selected international organizations, have been presented below.

UNEP

In October 2008 UNEP launched its Green Economy initiative to provide analysis and policy support for investment in new green sectors of the economy as well as investment to green existing resource and/or pollution intensive sectors. The green economy was at that time taken up by development countries as part of the policy response to the global financial crisis and as a way of kick starting the economic recovery process; in developing countries engagement with the green economy was seen as a way of poverty reduction and reduced carbon emissions and ecosystem eradication. In March 2010, the UN General Assembly agreed that green economy within the context of sustainable development and poverty eradication would form one of two specific themes for Rio+20.

UNEP's flagship report – Green Economy Report, 2011 – provided a working definition of a green economy which has subsequently been taken up by a number of country governments and non-government organisations. Their definition is: *“Green Economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive”* (UNEP). The report highlights the key costs associated with the current economic models, and maps out what a green economy looks like, emphasising the role of policy reforms (such as abolishing harmful subsidies, greening public procurement, and greater involvement of the private sector in the economic transformation process).

Another report by UNEP and UNCTAD, *“Why a Green Economy Matters for the Least Developed Countries,”* highlights how well positioned developing countries are to transition towards a green economy given their low carbon profile and rich natural capital assets. Key sectors for greening economies include energy access, waste, ecotourism, agriculture, sustainable urbanisation and forestry.

OECD

In 2009 OECD publically declared that green and growth can go hand in hand, and since then has been a major champion of green growth and the efforts of other countries to promote green growth. The *“Towards Green Growth Report, 2011”* provides a framework for how countries can achieve economic growth and development at the same time as combating climate change and preventing costly environmental degradation and inefficient use of resources. According to OECD *“Green growth means fostering economic growth and development, whilst ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”* (OECD)

Also, for OECD the concept of green growth is narrower in scope than sustainable development, and seeks to promote a resource efficient, climate compatible and resilient way of guiding sustainable consumption and production decisions. One key way in which this can be achieved is through explicitly valuing the impact on natural capital of investment choices in order to influence the quality of growth and development. According to OECD *“Green growth presents a new approach to economic growth that puts human wellbeing at the centre of development, while ensuring that natural assets continue to provide the resources and environmental services to support sustainable development”* (OECD, *Putting Green Growth at the Heart of Development*, 2013).

The OECD's report – *Inclusive Green Growth: For the Future We Want* (2012) – sets out successful green growth strategies which typically include: making pollution more costly, reforming environmentally harmful subsidies, innovation and green technology development, skills development and labour market policies, leveraging private investment for green infrastructure, and greening consumer behavior.

World Bank

In their report – From Green to Green Growth: A Framework (2011) - the World Bank defines green growth as about *“making growth processes resource efficient, cleaner and more resilient without necessarily slowing them”*. This report was followed up by - Inclusive green growth is the pathway to sustainable development (2012) – which emphasises that whilst economic growth has lifted more than 660 million people out of poverty over the last 20 years, it has often come at the expense of the environment and is not necessarily compatible with inclusiveness or equity.

For the World Bank Green Growth is *“growth that is efficient in its use of natural resources, clean in that it minimises pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters”*. This means that green growth policies must be developed to maximise benefits at the same time as minimising costs to the poor and most vulnerable, and avoid irreversible negative impacts. However, it suggests a “comprehensive wealth” approach to measuring value, including natural capital, but acknowledges that there is no single green growth model.

GGGI

In 2010 the Global Green Growth Institute was set up as a non-profit foundation (then became an international organization in 2012) dedicated to diffusing green growth as a model of economic growth, targeting poverty reduction, job creation, social inclusion, environmental sustainability, climate change mitigation, biodiversity loss, and security of access to clean energy and water. Green growth was recognized as an inherent part of sustainable development which could be a pathway to leapfrog old technologies across many sectors. According to GGGI *“Green growth simultaneously targets key aspects of economic performance, such as poverty reduction, job creation and social inclusion, and those of environmental sustainability, such as mitigation of climate change and biodiversity loss and security of access to clean energy and water”*.

Green Growth Knowledge Platform

In 2012 the World Bank along with UNEP, OECD and GGGI launched a new international knowledge sharing platform – the Green Growth Knowledge Platform – bringing together under one roof the major international organisations supporting and promoting both green growth and green economy. The GGKP aims to enhance and expand efforts to identify and address major knowledge gaps in green growth theory and practice, and to help countries design and implement policies to shift towards a green economy.

UNESCAP

The UNESCAP report – Green Growth, Resources and Resilience (2012) – highlights that socio-economic progress has come at the expense of the environment due to unsustainable and inequitable growth patterns. The UNESCAP definition of green growth is *“Growth that emphasizes environmentally sustainable economic progress to foster low carbon, socially inclusive development”*.

UNCTAD

The UNCTAD report – The Green Economy: Trade and Sustainable Development Implications (2011) – focuses on the opportunities that global trade can bring in the transition to the green economy, and how trade can catalyse this transition through generating new investment, income sources and jobs. Trade plays an essential role in the development of green goods and services, clean technologies and production, and through stimulating economic diversification can support broader sustainable development goals.

Danish 92 Group

In their report – Building an Equitable Green Economy (2012) – the Danish 92 Group emphasizes that a green economy must contribute to (rather than distract from) sustainable development. Also in defining the green economy there is a clear principle that the economy can't be green without being equitable, and therefore a presumption that a green economy is not equitable per se. A green economy therefore is one that results in human well-being and equitable access to opportunity for all people, while safeguarding environmental and economic integrity in order to remain within the planet's finite carrying capacity.

Social Progress Index

One interesting framework that has recently been launched is the Social Progress Index 2014 which seeks to make social and environmental measurement integral to national performance measurement. The SPI measures social progress directly and independently of economic development (ie: not through economic proxies) and defines social progress based on 54 indicators of social and environmental outcomes, covering basic human needs. According to the Social Progress Index *“The capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential”*.

Green Economy Coalition

The Green Economy Coalition (GEC) is a diverse set of organisations and sectors from NGOs, research institutes, UN organisations, business to trade unions. The Coalition's vision is one of a resilient economy that provides a better quality of life for all within the ecological limits of the planet. Their mission is to accelerate the transition to a new green economy. The Coalition has offered a vision for green growth which is *“A resilient economy that provides a better quality of life for all within the ecological limits of the planet.”*

Finally, a number of common concepts and desired outcomes cut across all these definitions by international organisations. UNDESA (A Guide to the Green Economy, 2012) has summarised the key words that appear in different definitions of green economy and green growth as presented below.

Table 1: Keywords in published definitions of Green Economy and Green Growth

Dimension	Green Economy	Green Growth
Social	Human well-being; social equity; socially inclusive; reduced inequalities; better quality of life; social development; equitable access; addressing needs of women and youth.	Well-being, socially inclusive, access to basic commodities for the impoverished; meeting demands for food production, transport, construction, housing and energy.
Economic	Growth in income and employment; public and private investments; resilient economy; economic growth; new economic activity.	Economic growth and development; technology and innovation; environmentally sustainable economic progress; more resilient; sustained economic growth; driver for economic growth; new growth engines; green technology; new job opportunities; qualitative growth rather than simply increasing GDP; job creation or GDP growth.
Environmental	Reducing environmental risks and ecological scarcities; low carbon; resource efficient; reduce carbon emissions and pollution; enhance energy and resource efficiency; prevent loss of biodiversity and ecosystem services; within ecological limits of the planet; environmental responsibility; finite carrying capacity.	Protection and maintenance of natural assets and environmental services; provision of resources and services; low carbon; using fewer resources and generating fewer emissions; resource efficient; cleaner; climatic and environmental sustainability; energy and resource efficient; minimises pollution and environmental impacts; resilient to hazards; harmony between the economy and the environment; environmental protection; reduce GHG.

A working definition of green growth

Based on the various international definitions presented above, and an appreciation of the Indonesian context, it is suggested the OECD offers a good working definition of green growth:

“Green growth means fostering economic growth and development, whilst ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”

This definition will be tested and refined with stakeholders through the roadmap development process, with the intention that an agreed definition of green growth that is relevant to Indonesia will be presented in the roadmap document.

3. What are the costs and benefits of green growth?

A “brown growth” future

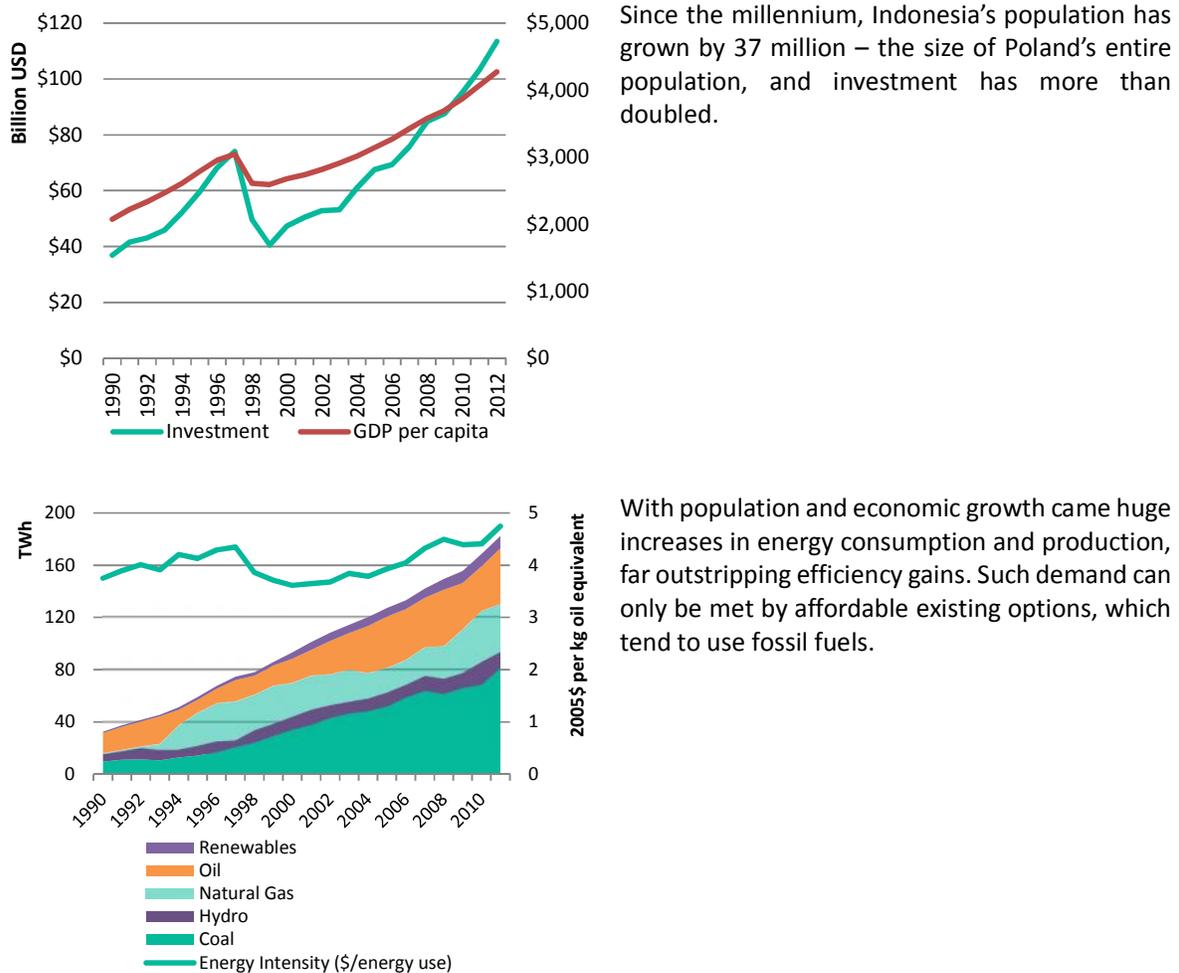
Indonesia has seen spectacular growth since 1990 and especially since the Asian Financial Crisis:

- 57 million people have been lifted out of poverty
- Average incomes have doubled
- Growth in recent years has hovered around 6% per annum

The current growth path is expensive however, especially in Indonesia where vulnerability to environmental threats are heightened by inequality, poverty and rapid population growth. For example, inadequate water and sanitation already costs the national economy more than 2% of GDP in 2005 (World Bank, 2009).

The figures below show trends which are placing stress on Indonesia’s natural capital.

Figure 2: Development trends that place stress on Indonesia’s natural capital

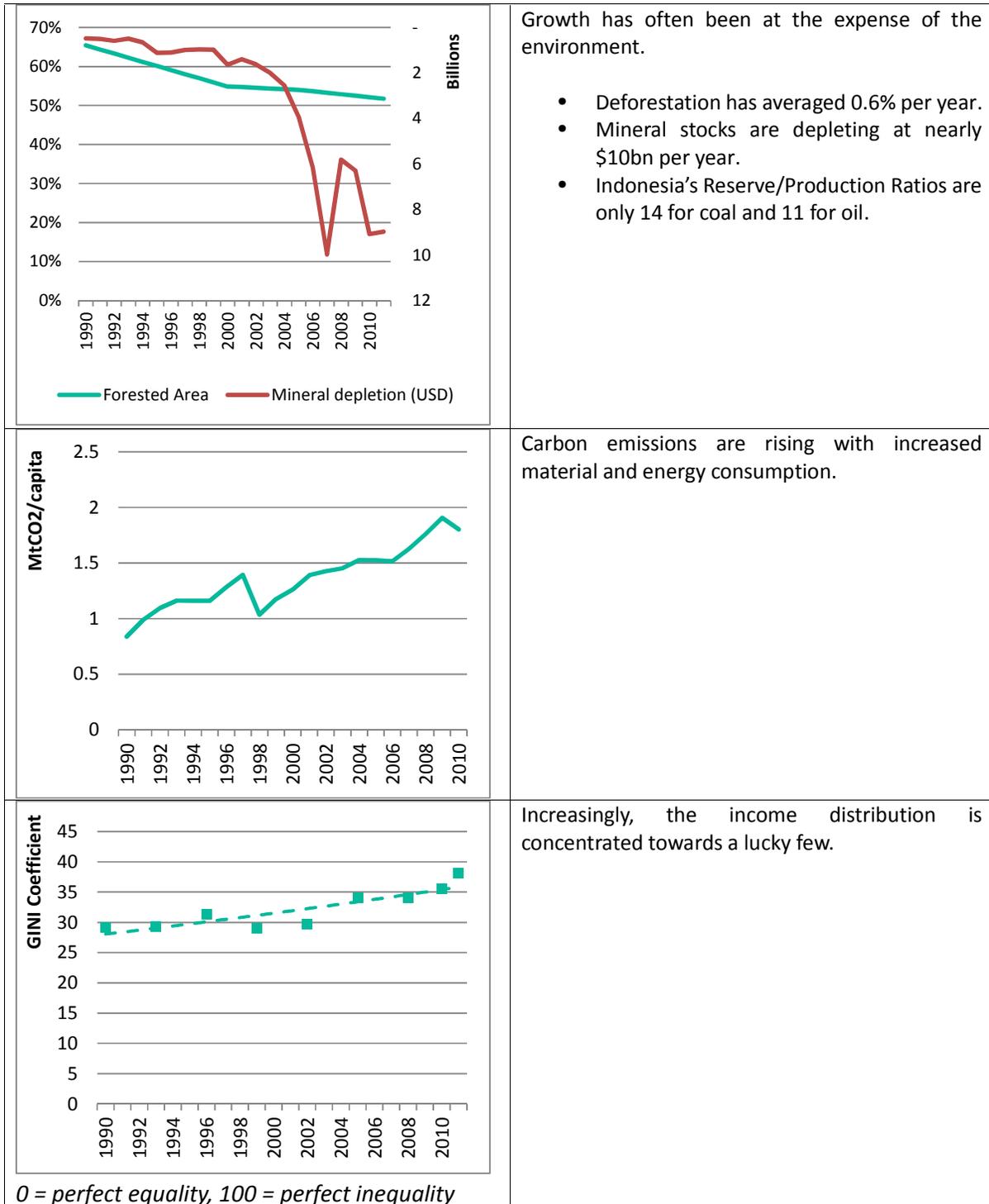


Since the millennium, Indonesia’s population has grown by 37 million – the size of Poland’s entire population, and investment has more than doubled.

With population and economic growth came huge increases in energy consumption and production, far outstripping efficiency gains. Such demand can only be met by affordable existing options, which tend to use fossil fuels.

Inevitably if these trends continue unchecked, Indonesia will face significant sustainability challenges. Below we show trends in macro level sustainability indicators over the past 20 years.

Figure 3: Historic trends in macro level sustainability indicators



Global climate change will manifest itself in rising temperatures in Indonesia as well as increased rainfall and flooding at the same time as increased droughts. This will directly impact agricultural productivity among other significant impacts on the environment and society.

The business case for green growth

There is growing evidence that countries at all levels of development have been designing and implementing nationally tailored policies and programs for green economy and/or green growth. A growing number of countries are also experimenting with a more comprehensive framing of their national sustainable development strategies and policies along green economy lines, including low carbon green growth or development strategies. There is a clear focus on achieving early wins to build confidence and momentum behind green growth strategies, and recognition that moving towards a green economy is as much about structural change in governing institutions as it is about investment in technological change and innovation.

Embracing green growth can secure a strong, stable and sustainable future for developing countries such as Indonesia. Governments that place green growth at the heart of economic development can aim to secure sustainable economic growth as along with social stability, safeguarding the environment and conserving resources for future generations. Reconciling economic growth with environmental protection and poverty reduction is critical to minimize the risks of natural capital depletion, adverse climate change and social instability. This is particularly the case for developing countries that, like Indonesia, are exposed to environmental risks such as flooding, pollution, and reliance on natural resources to underpin economic growth.

The 2013 OECD report, "Putting Green Growth at the Heart of Development," outlines some of the key lessons emerging from developing countries who are pursuing green growth:

- Advance a long term vision for national development and green growth, securing high level political will and stakeholder engagement.
- Ensure social equity and poverty reduction as a critical dimension of this policy transformation.
- Review green growth development options in the light of environmental and socio-economic changes.
- Broaden access to international financing avenues while supporting local financing mechanisms.
- Focus on programmatic rather than project-based solutions.

Green growth is a new approach to economic growth that places human well being at the heart of the growth process and explicitly acknowledges the contribution that natural capital makes to the economic wealth creation process. More than just balancing growth with being green, this new approach sets out a pathway for utilizing green technologies and designing incentives and policies that will help countries like Indonesia leapfrog the conventional, resource intensive, "brown growth" development models.

Key potential short and long term benefits of green growth are:

- Sustaining and enhancing the country's natural assets through recognizing and valuing the ecosystem services provided;
- Reducing poverty through well designed green growth policies that distributes fairly the proceeds of growth;
- Harnessing new growth opportunities and employment through investment in technological innovation;
- Investing in resilient infrastructure that shift the country away from fossil fuel dependency and emission intensive pathways;
- Reducing vulnerability to climate change and natural hazards;
- Transition to low carbon development and a reduced ecological footprint of economic growth

Key potential short and long term costs of green growth are:

- Rapid green growth could lead to transition costs in the short term as the limited absorptive capacity of the economy to accommodate rapid investment leads to over crowding effects and rising inflation costs (eg: labour costs). Each country is likely to have its own “speed limit” for optimizing the expansion of its green growth program.
- Understanding the trade-offs involved in green growth, such as avoiding negative effects on the poorest sections of the community and increasing inequality
- Weak capacity and resources for innovation and investment, both public and private. This limits developing countries’ ability to seek out and exploit opportunities that emerge from a green growth planning
- There may be adverse pressure on natural capital preservation as there a limited mechanisms to ensure that those who protect natural assets (eg: forests, and peatlands for carbon sequestration) receive sufficient financial incentives to maintain them. Without strong enough financial incentives, the political viability of green growth could be weakened.

However, properly integrating green growth into core planning and policy development processes is not at all easy, and requires strategic leadership from Government in collaboration with the private sector and civil society. Also important are the enabling conditions for green growth in terms of the presence of strong institutions and governance structures. There are important trade-offs to be understood between short term priorities and longer terms needs, and some natural capital depletion may be justified to support economic and social development. So green growth for Indonesia is not about environmental preservation per se, but about understanding how the country can grow and be green at the same time to make sure that development is sustainable in the long term.

International Green Growth Experience

The **Republic of Korea** was one of the first countries to explicitly adopt low carbon green growth as the country’s new development vision. Most recently this was expressed in the National Strategy for Green Growth and Five Year Plan for Green Growth, 2009 – 2013 where the strategy aims to shift the country to quality oriented growth that is more dependent on new and renewable energy sources. Green growth has been placed at the heart of Korea’s vision for the next 60 years with a focus on promoting eco-friendly new growth engines, enhancing the quality of life for its citizens and contributing to international efforts to combat climate change.

Ethiopia and Cambodia were among the first low-income developing countries to adopt green growth development strategies. Both national strategies rely on attracting foreign investment to finance green investment in new technologies, although they differ in their focus and priorities. In Cambodia the strategy focuses on wellbeing, whereas Ethiopia’s strategy focuses on climate resilience (eg: food security) and aims to raise the country to middle income status.

In 2009 **Cambodia** launched its National Green Growth Roadmap providing a framework for environmentally sustainable and socially inclusive development. The Strategy builds on UNESCAP’s definition of green growth that emphasizes ecologically sustainable economic progress to foster low carbon, socially inclusive development. The Roadmap proposes short, medium and long term plans for green growth that focuses on access to water, agriculture, sustainable land use, renewable energy and energy efficiency, information and knowledge, better mobility, and finance and investments. A National Green Growth Master Plan is being developed to implement these objectives.

In **Ethiopia** the main framework for green growth is the Climate Resilient Green Economy Strategy (CRGES) launched in 2011. The strategy provides a blueprint for rapid economic growth to increase GDP per capita by 475% by 2030 whilst reducing GHG emissions by 35% below 2011 levels (which would be 64% below

BAU level in 2030). The strategy also focuses on climate change adaptation in sectors such as agriculture, forestry, and land use.

The **Vietnam** Green Growth Strategy was launched in 2012, covering the period 2011-2020 with a vision to 2050. Green growth is seen as a means to achieve a low carbon economy and to enrich natural capital, and will become the principal direction in sustainable economic development. A core part of the strategy is to reduce greenhouse gas emissions and increase the capability to absorb greenhouse gas which is gradually becoming compulsory and important indicators in socio-economic development. Other objectives are to restructure the economy through greening existing sectors and encouraging the development of economic sectors to use energy and natural resources efficiently with higher added values; to conduct research and enhance application of appropriate advanced technologies to more efficiently use natural resources, reduce greenhouse gas emissions intensity and to contribute to an effective response to climate change; to improve living standards of the people, creating an environment friendly lifestyle through employment generation from green industry, agriculture and services; investment in natural capital; and development of green infrastructure.

India is focusing on building skills for green growth through taking a thematic approach to the shortage of green economy skills. In some sectors, such as energy efficiency in buildings, agencies like the Indian Green Building Council and the Bureau of Energy Efficiency are conducting training programs and a national certification examination for energy managers and energy auditors. Also needs based training programs in new and emerging areas such as organic farming are organized by the Indian Council of Agricultural Research.

Green growth opportunities have been analysed in **New Zealand** (University of Auckland, 2012). Green growth is seen to integrate environmental concerns, especially climate change, into growth. It is the only growth path that allows humanity to develop and flourish, reduce poverty and achieve development goals, while at the same time protecting natural capital – such as climate stability – without which growth and development will be retarded or reversed. For New Zealand green growth in addition to being necessary, is also incredibly attractive, because it:

1. Creates prosperity: A green growth model implies a new wave of technological change, full of innovation, the dissemination of new ideas, and will lead to a cleaner, quieter, safer, more efficient, more secure and more sustainably prosperous world. New Zealand could benefit from global green investment patterns in two main ways: by exporting to nations investing in green assets and technology and by importing both new technologies and ideas to craft more world-leading policies at home. The potential green growth export opportunities for NZ include sustainable agricultural products and services, geothermal energy, biotechnology, and forestry, including second-generation biofuels. In the domestic economy, opportunities include improvements in building and transport energy efficiency and electricity grid technology. The economic opportunities are considered to be potentially large.

2. Builds community: Key elements of green growth, such as energy efficiency, public transport and closed-loop consumption models, require bringing communities together to share lessons and insights and make the most out of resources;

3. Reduces risks: In addition to reducing the worst risks of climate change, a green growth model also reduces shorter-term economic risks. It is likely that 10 or 15 years from now, other countries will tax goods from countries that subsidise pollution (by not dealing with it). Those countries that do not transition early will eventually have the transition forced upon them. And early means the transition can take place in a measured and structured way.

4. Indonesia's Priority Areas for Green Growth

A stakeholder-led approach

The process for determining the right green growth vision for Indonesia has been stakeholder led, which is critical if the country's green growth vision is to be nationally owned and mainstreamed into the economic and development planning systems. Therefore, a stakeholder engagement process operating at a number of levels has been underway and continues to underpin the vision development process. This process has involved moving towards a green growth vision that respects the key priorities of stakeholders, as expressed through a range of channels, including national, regional and sector focused workshops and engagement with both the public and private sectors and civil society.

The goal for Indonesian green growth that has been articulated to date is:

"An Indonesia that recognizes the value of its natural capital, improves resilience, builds local economies and is inclusive and equitable".

Key priority areas raised by stakeholders which should inform the development of a green growth vision for Indonesia includes:

Relationship between green growth and sustainable development

- green economy is an extension of the SD concept but green growth is too driven by economic growth ambitions
- Vision needs a truly integrated approach not dominated by economic drivers
- Social and environmental concerns need to be considered from the start
- Social Progress Index considers wellbeing as separate from economic growth or GDP
- Vision needs to incorporate core principles of SD – eg: gender equality
- Allow for local variation and innovation, with national support
- Vision should be equitable, inclusive, holistic, balanced, integrated, collaborative, gotong royong

Priority focus areas

- Vision needs an Indonesian character not western one
- Dominance of economic growth priorities means there is too much focus on the priorities of western part of Indonesia and to higher income groups
- Green growth vision needs to promote balanced development – both spatially and across income groups. More than 80% of the Indonesian economy is concentrated in the western regions (ie: Java and Sumatra), and this pattern has not shifted for years.
- Need for an overall macro frame for national development to overcome unequal development process
- Consider urban-rural linkages and central-regional linkages (balanced development approach)
- Integrate mitigation and adaptation solutions
- Vision should emphasize Indonesia's unique biodiversity as a contributor to growth (biodiversity corridors?)
- Connectivity will drive Indonesia's economic growth beyond 2030
- Indonesia needs to avoid the middle income trap by investing in high quality education and appropriate technology
- New Zealand is a good role model

5. Towards a Nationally Owned Vision

Towards a nationally owned vision

It is intended that a green growth vision for Indonesia will evolve during the roadmap development process and that by the finalization of the roadmap in December 2014 that there will be a nationally owned vision statement. An important aspect of this vision will be the extent to which it is underpinned by a weak, moderate or strong approach to green growth. However, based on the views of selected stakeholders consulted to date a draft vision statement has been prepared below which draws on the key priorities and principles expressed.

What kind of Indonesia do we want in 2050?

*Indonesia in 2050 is an advanced, cohesive, post-industrial democracy spanning a highly connected archipelago of great cultural and natural diversity—exemplifying the national motto of *bhineka tunggal ika*, or “unity in diversity. ”With average annual per capita economic growth of 7% since 2015, by its centennial year of independence in 2045 Indonesia has achieved a per capita income of some \$32,000. By 2050, population growth has levelled off and the population of nearly 300 million¹ is well educated, healthy, and economically productive, ranking in the top 10% of the global Social Progress Index.² Ecosystem services are valued and sustained in both urban and rural areas, which are highly interdependent and resilient to climate change and other perturbations.*

The country has avoided the “middle income trap,” despite the end of the demographic dividend around 2030, by investing heavily in basic human services and connectivity. As a result of strategic public and private investments across the whole country in green infrastructure, communications, biotechnology, education, and health care, a child born in 2045 in Papua, Maluku, or Nusa Tenggara enjoys the same life chances and standard of living as her compatriot in Java, Sumatra, or Bali.

Indonesia’s prosperity in 2050 derives from a diversified, low-carbon economy that invests in rather than exploits human and natural capital. The country has moved away from dependence on extractive sectors towards renewables, innovative technology, and services. The loss of species-rich forests and coral reefs has been halted and, in some places, even reversed through ecological rehabilitation. Forest-based sectors and fisheries are once again thriving and there are established sustainable economic sectors, such as ecotourism, biotechnology, and renewable energy. Indonesia is self-sufficient in energy, based on its wise use of geothermal, solar, and hydro-power together with biofuels, recycling, and energy efficiency. These along with reforms in forestry and land-use have brought the trajectory of Indonesia’s annual GHG emissions onto a declining pathway.

¹ Based on World Bank projections of 2014.

² Indonesia in 2014 ranks 88 out of 132 countries. See <http://www.socialprogressimperative.org/data/spi>.