



## Green Growth in Practice

# Lessons from Country Experiences Executive Summary

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# About the Green Growth Best Practice Initiative

Green growth is a relatively young field of public policy practice. The Green Growth Best Practice (GGBP) initiative was set up to accelerate learning and to inform design of green growth programs, by undertaking an analysis of early experiences. For this report, GGBP engaged 75 authors in evaluating practices and lessons from green growth programs in all regions of the world. GGBP is also conducting a broad array of activities to build awareness and support countries in applying results of the findings to their national and sub-national programs, such as by presenting results through seminars and dialogues requested by government agencies and partnering with others on policy dialogue workshops, e-learning and peer learning programs.

GGBP is supported by the European Climate Foundation, Climate and Development Knowledge Network, and the Global Green Growth Institute, and is governed by a steering committee with representatives from the following organizations: Children's Investment Fund Foundation; Climate and Development Knowledge Network; European Climate Foundation; Global Green Growth Institute; International Climate Initiative of the German Federal Ministry of Environment, Nature, Conservation, and Nuclear Safety; LEDS Global Partnership; Organisation for Economic Co-operation and Development; United Nations Development Programme; United Nations Economic and Social Commission for Asia and the Pacific; United Nations Economic Commission for Latin America and the Caribbean; United Nations Environment Programme; and the World Bank. GGBP is also working in close collaboration with various other regional and global partners and green growth experts.

www.ggbp.org

# Preface

Green growth is the opportunity of our time. Today, governments have a choice. They can chart new, more sustainable pathways toward a prosperous, inclusive and climate resilient future. Or, they can back conventional forms of development that deepen today's environmental and social problems, and create ecological debts for the future. On the first path lies the promise and potential of green growth.

Fulfilling the promise of green growth takes vision, courage and a different way of doing things. Over the past several years, countries, regions, and cities around the world have designed and tested a range of policies that aim, simultaneously, to deliver economic development, poverty reduction, environmental protection, and action on climate change. Decision-makers – together with the millions of business strategists, project managers, civil servants, community organizers, and others responsible for delivering these policies – have built up an important body of experience. These come, equally, from some of the least developed countries in the world, and from some of the richest; from small states and territories to the world's largest countries.

The scale of the world's environmental challenge means there is no time to waste in sharing these valuable lessons within and across borders. That's why our organizations –

the Climate and Development Knowledge Network, the European Climate Foundation and the Global Green Growth Institute – supported the Green Growth Best Practices (GGBP) initiative.

The initiative has produced this volume, Green Growth in Practice: Lessons from Country Experiences, which documents and assesses a wide range of green growth experiences. It draws on the expertise of a broad range of policy makers, practitioners, researchers, international organizations, and development agencies from around the world.

We hope this report will become a valuable tool for experts, advisers and policymakers in pursing effective green growth policies and practices and achieving climate compatible development, and so inspire readers to choose a more sustainable future for humanity.

**Yvo De Boer Director-General**Global Green Growth Institute

**Johannes Meier Chief Executive Office**European Climate Foundation

Sam Bickersteth

**Chief Executive**Climate and Development Knowledge
Network

# Foreword

Governments today face challenges in advancing economic and social development in light of resource constraints and risks posed by climate change and environmental degradation. Green growth – a path towards an inclusive green economy that achieves resource efficient and climate resilient economic development and poverty reduction – is now a necessity rather than a choice.

A growing number of countries and sub-national governments around the world are demonstrating the value of green growth in achieving economic, environmental and social development and are designing and implementing appropriate green growth policies and strategies. Recent seminal studies - from UNEP, OECD, World Bank, UNDP, UNESCAP, UNECLAC, ADB, AfDB, IDB and others – have shaped our understanding of green growth principles for both developing and developed countries. Yet, there remains an unfulfilled demand for a practical assessment of effective approaches and lessons on green growth design and implementation.

This report on Green Growth in Practice: Lessons from Country Experiences, produced by the Green Growth Best Practice (GGBP) initiative in which our respective institutions participate, responds to this demand by providing the first comprehensive global assessment of good practices and lessons in green growth planning, analysis and implementation. It showcases inspiring examples of green growth leadership around the world in order to motivate others and create momentum to facilitate a transition towards more sustainable economies. The GGBP assessment demonstrates the substantial benefits that governments are realizing through green growth implementation and provides guidance on

strategies to capture these benefits and achieve impact across all segments of society. The report also identifies key challenges and limitations that create obstacles for green growth implementation, providing lessons on how governments have addressed or could address them.

We encourage all leaders, experts, and stakeholders engaged in green growth planning and implementation to read this report and learn from the wealth of experiences it presents. The GGBP initiative also makes a vital contribution to peer-to-peer learning and knowledge sharing. Only through such co-operation across governments, institutions and stakeholders can we promote green growth policies with the urgency needed to effectively curb environmental degradation and support sustainable and inclusive development.

Our organizations are committed to advancing green growth and we have been pleased to partner with GGBP in conducting this assessment. We will continue to work together to foster broad awareness and use of the findings and to assist capacity development of governments and other partners around the world in conducting successful green growth programs.

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# Executive summary

Green growth is becoming an attractive opportunity for countries around the world to achieve poverty reduction, environmental protection, resource efficiency and economic growth in an integrated way. Green growth strategies generate policies and programs that deliver these goals simultaneously. They accelerate investment in resource efficient technologies and new industries, while managing costs and risks to domestic taxpayers, businesses, communities and consumers.

The Future We Want, the outcome of the Rio+20 Sustainable Development Summit, recognizes the vital role for green growth strategies, which "should contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the earth's ecosystems" (UNCSD, 2012).

Green growth strategies are, in part, a response to the serious risk now posed to the global economy by increasing pressure on the environment. Resource scarcity is increasing and water, land, biodiversity, and other natural resources have become degraded. Therefore, transforming economic activity to improve efficiency and management of natural resources is vital to the stability and sustainability of the future economy – a green economy. Reducing environmental liabilities and risks is critical as well. Pollution of the air, water and land, biodiversity losses, and climate-related hazards can endanger economic and social development if not proactively addressed. But this is not the only reason why green growth strategies are becoming increasingly popular among governments and reaching a new stage of maturity - green growth can unlock substantial economic, social and environmental benefits for societies and enable synergies between them.

Green growth can enhance efficiency and productivity.
 Green, resource efficient technologies and practices often save resources and money compared to conventional alternatives. They enhance competitiveness over the long term, and sometimes in the short term.

- Green growth can underpin industrial policy and macroeconomic goals. Growing demand for green technologies, products and services – domestically and internationally – offers countries opportunities for developing new industries and markets.
- Green growth can improve quality of life and, if
  designed and implemented well, can address social
  equity issues. By reducing environmental degradation
  and conserving vital natural resources, governments can
  enhance the quality of life for citizens, especially the poor
  who are particularly vulnerable to natural resource limits
  and environmental damage.

While further evaluation of long-term impacts is required, there is emerging evidence that green growth works. Growing numbers of national and subnational governments in all regions are achieving results in implementing plans, policies, and programs that accelerate private sector green investment and changes in consumer behavior. These programs are most effective where they respond to trade-offs associated with green growth and invest in initiatives to mitigate the risks and costs of a transition to green development.

Some prominent examples of government leadership on green growth are presented in Box A. Many of these and other countries have carried forward their visions into implementation programs that are achieving concrete results, while others are still at the early stages that have not yet realized impacts.

#### Box A

# Examples of governments adopting green growth strategies

Chile launched the National Green Growth Strategy in December 2013 outlining a set of actions over the short, medium, and long term (2014-2022). Actions include implementing environmental management instruments, promoting the market for environmental goods and services, and monitoring and measuring progress (Government of Chile, 2013).

China has committed to green growth in its 12th Five Year Plan. Actions include investing in natural resource management, with the aim of creating one million new forestry jobs and reducing rural poverty (OECD, 2013).

**Germany's** green growth policies have been an important engine for environmental innovation, enabling the development of an internationally competitive environmental goods and services sector particularly focused on renewable energy.

**Korea** has adopted a green growth strategy to drive economic competitiveness through development and use of advanced technologies. The government is investing in innovation and deployment programs for 27 priority

technologies guided by a Green Technology Roadmap with the goal of becoming the world's 7th largest economy by 2020 (Young et al., 2013) and a more recent emphasis on a 'creative economy' as the vision for green growth.

Mozambique launched the Green Economy Roadmap at the Rio+20 Conference on Sustainable Development, setting out its vision to become an inclusive, middle income county by 2030. In October 2013 the government approved the Plan of Action for 2013/2014 laying out the actions over the period of one year on the road to a green economy and is in process of linking the Roadmap to the long-term National Development Strategy 2015-2035 (WWF, 2013).

Rwanda released the Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development in October 2011. It aims to be a developed climate-resilient, low carbon economy by 2050, through the achievement of three key strategic objectives: energy security and a low carbon energy supply; sustainable land use and water resource management; and social protection and disaster risk reduction (Republic of Rwanda, 2011).

### About this assessment

Initial reviews of green growth, green economy, low emission, low carbon and climate resilient development plans by the OECD (2011 and 2013), UNEP (2011), the World Bank (2012), UNESCAP (2012a), ADB (2013), AfDB (2012 and 2013), and UN et al. (2013) confirm that there is no single approach to green growth. They highlight common features and elements in the way that countries are developing their strategies, policies and measures for green growth.

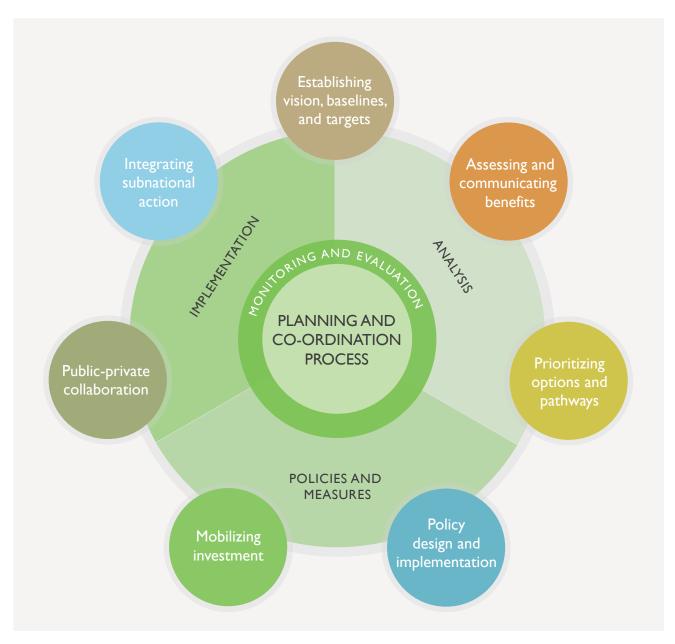
This report, Green Growth in Practice: Lessons from Country Experiences, carried out by the Green Growth Best Practice (GGBP) initiative, is the first comprehensive international assessment of lessons from experiences of pursuing green growth across all levels of government and all regions. It engaged 75 authors in evaluating more than 60 programs around the world.

The report focuses on nine interlinked elements that are commonly used by governments in green growth analysis, planning, implementation, and monitoring, as illustrated in Figure A. These elements are not a linear, step-by-step process which has to be followed. Governments may choose different entry points or initiate several elements in parallel depending on the domestic context.

The authors identified specific good practices and lessons for each of these nine key elements. In the following section, we summarize these practices and lessons with supporting examples from countries, states and cities around the world. The full report and individual case assessments are available online at www.ggbp.org.

Figure A:

Green growth topics addressed by GGBP



# Effective practices for green growth

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# Employ well designed planning and co-ordination processes

Planning processes driven by high level government leaders, with strong mandates and objectives, and which employ deliberate stakeholder engagement, sound institutional governance, and credible analysis are of utmost importance in establishing enduring green growth programs. While governments have employed a wide variety of approaches to green growth planning and no one size fits all, the most successful ones are characterized by:

- Strong, high-level leadership, which links long-term national goals with environmental risks and opportunities and builds winning coalitions. The development of robust coalitions can also ensure that this high level support is maintained during political transitions and overcomes conflicting interests when the leadership changes (such as in South Korea and Mexico, Case I).
- Clear economic, environmental, and social objectives reflected in formal outcome-based mandates which can range from presidential or inter-ministerial decrees, legislation or high level policy documents and are supported by strong institutional governance.

Figure 1:

Foundations for green growth planning and co-ordination

#### Effective green growth planning and co-ordination PROCESS DESIGN INSTITUTIONALIZATION **STAKEHOLDER ENGAGEMENT** √ Focus on green growth √ Strategically select who √ Green growth led by objectives to engage strong government institution √ Establish clear "rules of √ Be clear about roles and the road" manage expectations ✓ Embed green growth plans in well-governed √ Generate compelling √ Facilitate contestation institutions evidence between stakeholders √ Institutionalize for longevity and durability **OBJECTIVES AND MANDATE** √ Clear and well-articulated green growth objectives ✓ Formal green growth mandate(s) with high-level support **LEADERSHIP** ✓ Link long-term national goals to green growth √ Build winning coalitions

#### Case I:

#### **Examples of leaderships for green growth**

In South Korea, strong leadership from the President's office, followed by ministerial representation on the Presidential Committee for Green Growth, sent a strong message throughout the government that green growth planning and implementation was a priority (UNESCAP, 2012b). President Lee Myung-bak noted "the challenge for Korea going forward is to recognize that we are entering a new stage in our development that will no longer permit us to conduct 'business as usual', without regard to the toll our economic activities are taking on the environment and, indeed, on future generations... It is imperative that we fundamentally change our economic strategy" (Lee, 2009). The new Korean government since

2013 has continued to support green growth, with shifted emphasis on the 'creative economy' as the vision that achieves green growth (Yonhap News, 2013).

In Mexico, President Felipe Calderon played a key role in driving the process of creating a national plan of action and legislation on climate change. His strong personal and political commitment to the environment and addressing climate change was reinforced by the experience of natural events, such as flooding in the south of the country that led to public demands for action and increased political sensitivity to the issue.

- Robust and adequately resourced planning and coordination process, designed to generate compelling evidence and overcome barriers. These processes should be designed as a sequence of steps and rules of the road, while allowing for adjustments along the way.
- Active processes of stakeholder engagement with clear roles and procedures to manage and resolve conflicting interests and contestation.
- Well-governed institutions able to manage a predictable long-term cycle of planning, implementation and review, aligning green growth policies with national development and protecting against political volatility and interference by interest groups.

#### 2.

# Establish clear visions, targets, and baselines

Governments achieve greatest success when they define their green growth objectives in terms of a 'vision' for a desired end-state, at the end of an ambitious and long-term pathway of transformative change. This is usually accompanied by more concrete short and medium term goals related to economic growth, poverty reduction, employment, emission abatement, industrial growth, and natural resource protection. In many cases 'business-as-usual' scenarios are used as a baseline against which these stories about the future can be told. Examples of high level visions established by Cambodia, Guyana, and Japan are shown in Case 2.

Governments have achieved greatest success with use of visions, targets, and baselines for green growth when they:

• Establish a vision for long-term green growth transformation driven by support from high-level

- political leadership and supported through consensus building processes across stakeholder groups to achieve ownership.
- Establish integrated performance targets aligned with domestic economic, environmental, and social priorities, such as economic output, poverty reduction, employment, emission reductions, industrial growth, and natural resource protection.
- Establish both long and short-term economy wide targets, and short-term sector specific targets including for multidimensional poverty reduction and related social dimensions. Use long-term targets to ensure strategic direction and short-term targets to guide concrete actions and achieve immediate benefits.
- Underpin visions and targets with objective baselines where necessary. As part of the design and monitoring of integrated, coherent policy responses, it is important for these baselines to reflect as much as possible the linkages between key social, environmental, and growth indicators. Special attention is often required to identify green growth targets and baselines for poverty reduction and related social dimensions efforts to ensure green growth does not overlook social development objectives.
- Build close links between the vision and targets and the allocation of budgetary resources and policy mandates needed to achieve targets.
- Use metrics and methodologies that balance purpose with practical considerations related to cost, data availability, and capacity.

#### Case 2

## Examples of high level green growth visions

#### Cambodia's National Green Growth Roadmap.

"In Cambodia, green growth aims to unify development and environment objectives by means of implementing policies tailored to address the needs of all, including the most disadvantaged, to create jobs, to increase the resilience of the environment and of the population to adverse impacts, thus sustaining economic growth and human and environmental well-being in the long term. This Roadmap is also intended to promote women's status for the realization of a gender-equal society." (Kingdom of Cambodia, 2009)

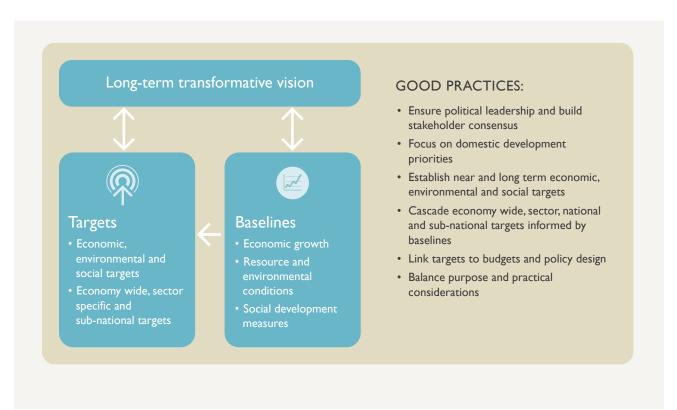
**Guyana's Low Carbon Development Strategy.** The key focus areas of the strategy are investments in low carbon economic infrastructure; investments in high-potential low-carbon

sectors; expanding access to services and new economic opportunities for indigenous, forest communities; improving social services and economic opportunities for the wider Guyanese population; and investments in climate change adaptation infrastructure. (Republic of Guyana, 2010)

Japan's Comprehensive Strategy. Four key policy areas of the strategy are 'Green', 'Life', Agriculture', and 'SMEs'. The philosophy is to "construct a resilient and adaptable socioeconomy and demonstrate model solutions to the world by addressing energy constraints and an aging society; and build local communities driven by individuals and entrepreneurs supported by local agriculture to reap the benefits of a new kind of growth." (Government of Japan, 2012)

Figure 2:

Vision, baselines and targets as part of green growth planning



#### 3.

# Undertake robust analysis and balanced communication of the benefits of green growth

A green growth development pathway can offer a broad range of economic, environmental, and social benefits. Governments that are successful in pursuing green growth focus on leveraging the synergies between these three dimensions, while managing the trade-offs efficiently and seeking to facilitate transformational change, especially the de-coupling of growth from natural resource depletion and improving climate resilience.

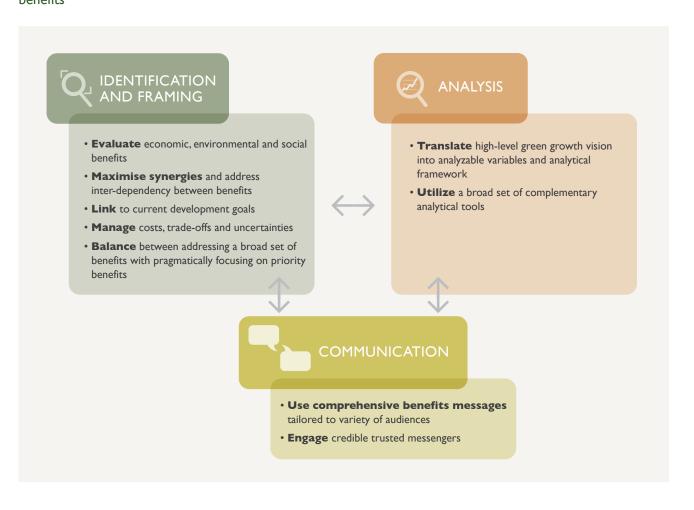
There is no uniform model of green growth, nor a set of universal aims or benefits. The appeal of green growth will be stronger in some countries than others and must be defined locally based on domestic preferences and circumstances. Governments need to conduct credible analysis of priority benefits to build a strong case for green growth and

communicate these benefits in a comprehensive, robust and balanced way. Key lessons from experiences of identifying, assessing and communicating the benefits of green growth are:

- Evaluate a range of economic, environmental and social benefits in a manner that addresses their inter-dependency and links these benefits to current development goals and plans.
- Seek to maximize synergies (such as attracting investment in innovation, creating green jobs and industries, conserving natural capital, advancing sustainable rural livelihoods, etc.) between development outcomes and manage the costs, trade-offs and uncertainties.
- Balance the value of addressing a broad set of benefits and associated synergies, costs, and trade-offs, with the pragmatic value of focusing on a key sub-set of priority benefits and identifying and communicating short-term benefits along with longer term ones.

Figure 3:

Identification, analysis, and communication of benefits



#### Case 3:

#### Benefits identified in Ethiopia's Climate Resilient Green Economy (CRGE) Strategy

Ethiopia's main framework for green growth focuses on how climate change resilience and greenhouse gas mitigation is crucial to achieving its economic and social goals of becoming a middle-income country by 2025. It considers synergies between economic development, poverty reduction, climate change mitigation and resilience across all sectors of the economy (Federal Democratic Republic of Ethiopia, 2011). Agriculture, energy and water are key sectors. In agriculture benefits include increased productivity, enhanced food security, jobs and stability of export income (through crop diversification). In energy and water compelling benefits come from expanding energy access and security and reducing economic and social vulnerability. At the same time, the country has to manage trade-offs in making policy decisions

to improve the lives of the rural poor such as between forest conservation and increasing land for agricultural production. Possible solutions for managing these trade-offs are increasing the productivity of agriculture and providing economic incentives for forest preservation.

Ethiopia used a broad analytic framework for assessing green growth benefits. An Integrated Assessment Model was used for macro-economic impact such as the loss of GDP from climate change impacts in the agriculture and energy sectors. The benefits (and costs) of each option were assessed using multiple criteria that ranged from economic cost-benefit ratios, to qualitative assessments of the benefits for biodiversity and poverty reduction. A relatively basic spreadsheet-based analysis was used to assess sector specific benefits.

- Translate the high-level vision on green growth into a concrete set of analyzable variables on benefits and a robust benefits analysis framework.
- Utilize a broad, though not necessarily complex, analytic framework that integrates a number of complementary approaches. For example, Ethiopia (Case 3) has employed 'extended' cost-benefit analysis in addition to other approaches such as macroeconomic assessments and isolated assessments of individual benefits.
- Use comprehensive benefits messages to address the variety of audiences affected by green growth, including tailoring of messages to different 'value groups' who will have different entrenched interests.
- Engage credible and trusted messengers in presenting robust, tailored, and balanced messages to offer evidence based argument for deviating from business-as-usual.

#### 4.

# Prioritize measures and technologies and construct credible pathways towards formulated targets

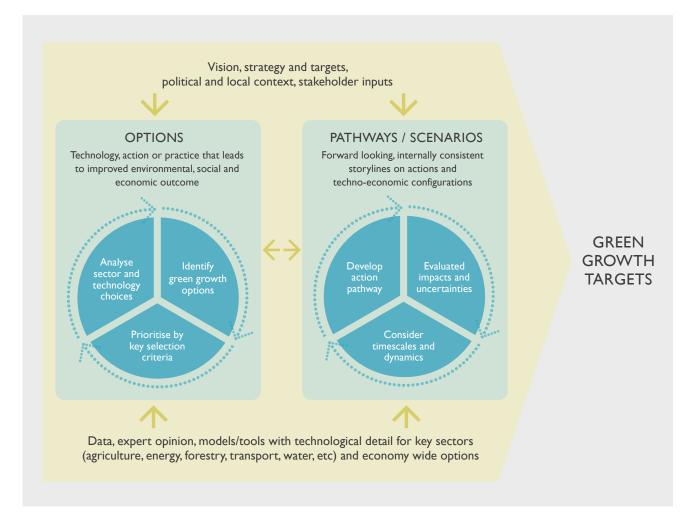
Selection of technologies and policies to achieve a desired outcome requires robust evaluation of options through consultative processes. Key lessons from effective approaches are:

• Top-down approaches to green growth analysis and planning need to be supported by bottom-up analysis

- of concrete actions and options. The analysis should consider options across a broad range of sectors (including agriculture, energy, forestry, transport and water), economy-wide goals (such as poverty reduction, natural asset protection and resource efficiency and employment), and their impact on different groups, including the poor (see the Mexico example in Case 4).
- Use alternative pathways to explore the scale and pace of change required in different sectors and highlight the choices and actions that need to be made over time, along with uncertainties.
- Apply an iterative process to analyze options, identify priorities and combine them into pathways for near and long-term green growth transformation. The analysis can start simple and increase in complexity over time, and with the input of stakeholders.
- Choosing priorities and pathways for green growth requires clear assumptions, reasonable data and active stakeholder engagement.
- The choice of analytical tools and approaches should be deliberate and driven by the local context of key economic, environmental, and social drivers, without letting the tool drive the analytic direction.
- Combining outputs from different types of analysis can improve the consistency and robustness of results and address limitations of individual tools.

Figure 4:

Options, pathways and scenarios as part of green growth planning



#### Case 4:

# Options analysis for the Mexico's Low Carbon Plan

In 2009 the Government of Mexico published the Special Climate Change Program (PECC) which sets out a broad program to achieve a long-term climate change agenda of reducing emission by 50% by 2050 compared to 2000 level, and medium-term and sectoral goals for adaptation and mitigation.

Good underlying data on emissions and economic activity by sector enabled rapid analysis of potential measures and technologies for emission abatement. A range of tools were used including the long-range energy alternatives planning (LEAP) system, the Computable General Equilibrium (CGE), Marginal Abatement Cost Curves (MACC), Input-Output (I-O) models and cost-benefit analysis. Using a range of tools allowed different aspects to be addressed which helped to improve robustness by drawing on the particular strengths and overcoming the limitations of each type of tool.

(UNESCAP, 2012c)

#### 5.

#### Design portfolios of policies to address near-term development and longer-term green growth transformation goals and respond to specific market failures and political economy challenges

Governments pursuing green growth recognize the need for comprehensive and coherent policy reforms and developments to enable transformational change across the economy. Both economy-wide and sector-targeted policies are needed to achieve structural and behavioral change among consumers and producers and to mobilize private investment. These policies must address market failures, deal with political economy challenges, employ strong governance and enforcement regimes, and be integrated with other existing policies. Green growth policy lessons from current practice are:

 Apply a mix of policy instruments to achieve short term 'wins' and support long-term transformation. This can include fiscal or price signals that incentivize action, regulations and standards that mandate changes in practices, and policies that enable the transition through direct government support, such as for innovation and infrastructure, and information and education programs to enable workforce development and build public awareness.

- In design of a portfolio of green growth policies that includes the above types of instruments, give special attention to green innovation policies and labor and skills development which are essential for green growth transformation:
  - I. Green innovation policies can decouple economic growth from environmental and natural resource depletion by advancing both 'breakthrough' technologies and local innovation by small and medium enterprises, micro-enterprises, and community groups.
  - Labor and skill development programs can improve competitiveness and avoid bottlenecks to investment, increase employment opportunities, smooth the transition of workers from declining sectors, and reduce social inequalities especially for marginalized or lower skilled workers.
- Couple consistent and coherent policy instruments across green growth sectors and at national and sub-national levels that address multiple green growth goals with strong governance and enforcement.
- Design policies based on an understanding of resource limits and environmental threats to achieve development paths that protect and apply natural capital to accelerate and not hamper economic and social development.

Figure 5:

#### Policies for green transformation

#### **ENABLING POLICIES MANDATING EXAMPLES: POLICIES** Economy-wide: green infrastructure **INCENTIVIZING** investments **EXAMPLES: POLICIES** innovation and R&D Economy-wide: • education and awareness · efficiency standards • green skills development pollution standards **EXAMPLES:** • sustainable public Sector-targeted: Economy-wide: · bus rapid transit procurement · environmental taxes and subsidies water infrastructure · land regulation allowance schemes • green jobs training in clean Sector-targeted: energy, water and agriculture Sector-targeted: • energy performance standards · full-cost pricing of water and energy vehicle standards pollution charges • land tenure regulation · feed-in tariffs building codes

#### Case 5:

#### The Singapore Green Plan 2012

Singapore first launched its Green Plan at the World Summit on Sustainable Development in Johannesburg in 2002, and it has been reviewed and upgraded at 3 year intervals since then (MEWR, 2006). The plan is driven by concern for quality of life and resource security in the city state, as well as securing a clean and green image as a means to attract investment. The plan includes regulations and standards, pricing systems, demonstration programs, consumer behavior change campaigns, information management, and other policies. It addresses air quality, climate change, water, waste, nature conservation and public health. Singapore's government has

invested significant resources in achieving its environmental goals, and has met most of its 2012 goals. In 2009 the Inter-Ministerial Commission on Sustainable Development launched a longer term Sustainable Singapore Blueprint which sets out stringent sustainable development goals to 2030. These include ambitious targets for energy efficiency, water consumption, air quality, public transportation, water catchment areas and green buildings. One feature that has enabled Singapore's success is the use of a comprehensive mix of policies and measures tailored to each environmental goal.

#### 6.

# Design public finance instruments to overcome barriers to mobilizing private investment into green growth sectors

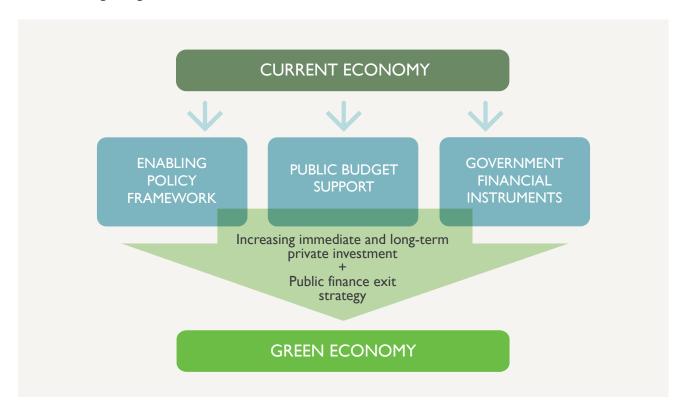
Transition to green growth depends on large-scale shifts in capital mobilization. Successful financing strategies for green growth create the market conditions for these mostly private sector investments to take place and overcome barriers such as investment risks, insufficient rates of return for some green technologies and practices, competing subsidies and policies, insufficient capacity, information gaps, and regulatory and institutional barriers. Effective green growth financing strategies combine three primary roles in mobilizing private green growth investment through: i) creation of an effective enabling environment for long term green investment; ii) allocation of public budgets and investments, including through dedicated funds and/or financial intermediaries to encourage green growth; and iii) tailored application of financial instruments to mitigate risks and increase returns on investment to mobilize private green investment. These strategies are most successful where they have the following features:

 Create an enabling framework that provides green price signals, investment grade policies, removes market barriers, aligns economic drivers, and supports early market projects and green products and entrepreneurs.

- Effectively allocate and manage public investments, including budget support for green growth programs implemented by national and sub-national agencies, dedicated funds for green growth, loan and equity investment programs, and support for dedicated market and project development institutions. Such public funding support should be fully integrated with current fiscal frameworks and strategic plans and have strong governance systems.
- Employ instruments to mitigate the financial risk and improve the return on private green investment, such as concessional loans, green lines of credits, guarantees, and insurance mechanisms, and ensure they are transparent, coupled with policy instruments, and provide appropriate levels of support and do not crowd out private capital.
- Team with central banks, financial regulators, development finance institutions, institutional investors, and others to attract long term green financing through financial regulatory and reform measures; expanded consideration of environmental benefits and risks by banks, investors, and fund managers; and promotion of socially sound sustainable banking and investment practices.

Figure 6:

Role of public policy and finance in unlocking private investment in green growth



#### Case 6:

## Payment for Ecosystem Services, Costa Rica

The government of Costa Rica introduced the Payments for Environmental Services (PES) program as a way to tackle the high deforestation rates in private forest lands. The PES program departs from basic concept of subsides by acknowledging and providing compensation for the environmental services and associated economic activities provided by the forests beyond the commercial value of the wood.

PES is financed by a number of different sources — national, international, private and public. At the national level, Costa Rica has contributed more than US\$170 million of the national budget since its launch in 1993, mainly by

two mechanisms: a fuel tax and a water tariff. The funds from these sources are collected by the Ministry of Finance who then transfer them to National Forestry Financing Fund (FONAFIFO) which manages the PES program (FONAFIFO, 2013). The government also introduced a risk mitigation mechanism, the Environmental Service Certificates (CSA) which aims to capture resources from the private sector at national and international levels to pay for projects under the PES program. The CSA reduces transaction costs and provides greater flexibility by replacing bilateral contracts between FONAFIFO and the buyers (Rodriguez, 2012).

#### **7.**

# Tap the power of public-private collaboration

Successfully achieving green growth will require engagement from all parts of society to build new skills, unlock innovation, achieve more sustainable management of resources, and

create new visions and pathways for how economies are developed and communities interact. Strong government and private sector collaboration is an important tool to mobilize the resources, expertise, and innovative leadership needed to achieve green growth goals. Key lessons with design and use of public private collaboration include:

#### Figure 7:

Examples of green growth outcomes achievable through public-private collaboration

#### PUBLIC-PRIVATE COLLABORATION (PPC)

Enhancing public policy effectiveness and efficiency. Diverse PPC options: governemnt-led, private-led, collaborative governance

Examples of green growth outcomes advanced by PPC\* and PPC roles



# SPURRING INNOVATION AND CREATING MARKETS

- Provide long-term certainty for private sector innovation investments
- Deliver mentoring and capacity support to stimulate 'green' entrepreneurship
- Support research networks to advance innovation outcomes



#### MANAGING NATURAL RESOURCES

- Build shared public- private ownership and responsibility for natural resources
- Establish shared valuation and awareness of natural resources
- Achieve effective compliance and enforcement



#### GREEN INFRASTRUCTURE DEVELOPMENT

- Enhance efficiency of large infrastructure investments
- Mobilizing resources and support for smaller scale infrastructure projects
- Unleash entrepreneurial innovation for infrastructure in new growth areas

- The public sector can support green growth R&D and innovation processes by providing greater market certainty for innovators and facilitating capacity support to research and innovation actors (see Case 7).
- Public-private collaboration has proven effective in improving management of natural resources, especially where co-operation starts early in resource management planning and strengthens resource valuation and enforcement.
- Close government and private sector co-operation is essential in mobilizing increased public and private investments in green infrastructure for large public goods and for smaller distributed systems, while also supporting

- entrepreneurial innovation in emerging technologies and business models.
- Pursue public-private collaboration only where all parties are making substantial long-term commitments and have carefully considered the risks, costs, and benefits and where it is an appropriate mechanism that has clear value to governments and private sector partners.
- Design collaborations through forums that establish trust and promote both scale-up and innovation.
   Develop shared visions and clearly articulated goals and responsibilities, create transparency and accountability, and achieve deep and thorough stakeholder engagement.

#### Case 7:

#### **Netherlands innovation agreements**

In the Netherlands, companies, research institutes, universities and the government collaboratively drafted agreements to stimulate innovation and improve economic competitiveness. These agreements set sector-wide research agendas, commit participants to invest financial and human capital towards R&D and describe measures, plans, deals and targets. The government has such agreements in place with nine sectors: agriculture, horticulture, high-tech, energy, logistics, the creative industry, life sciences and health, chemicals and water. In the energy sector, for example, agreements focus on wind,

bio-energy, smart grids, green gas, solar and energy efficiency (Bunzeck, 2013).

A 'Top Consortium for Knowledge and Innovation' develops a research agenda, establishes collaboration between participating actors and disseminates knowledge to develop innovative products, services and technologies. The government co-funds innovation by top consortia and invests EUR 0.25 for every euro invested by a company (Government of the Netherlands, 2011).

#### 8.

# Pursue mutually reinforcing action across subnational and national levels of government

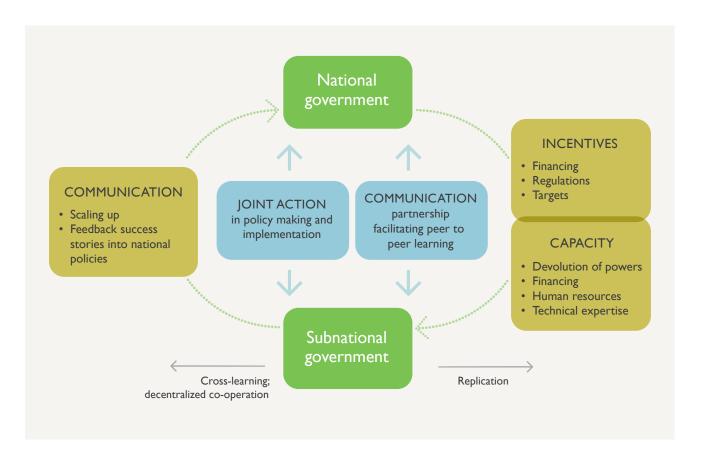
Along with nationally led green growth programs, an increasing number of subnational governments are implementing green growth initiatives and in some cases are leading or catalyzing national efforts. Successful implementation of these national and subnational efforts requires close collaboration to enable activities to be mutually reinforcing, including:

 Developing interlinked green growth national and subnational strategies and measures where national governments enable and motivate subnational replication,

- and state and local governments provide leadership and support for national goals.
- Establishing financial incentives, regulations, and targets to motivate and support subnational governments in promoting green growth.
- Enabling subnational government to implement green growth by empowering them with mandates, providing financial, human and technical resources and encouraging peer learning.
- Facilitating dialogues between subnational and national governments that provide feedback of success stories at the subnational level and actively engage stakeholders who can bridge and help sustain actions across governmental levels.

Figure 8:

Model of national and subnational integration



#### Case 8:

#### Jiha Tinou Programme, Morocco

The National Agency for the Development of Renewable Energy and Energy Efficiency (ADEREE) launched the Jiha Tinou pilot program in Morocco (2012-2014) with a long-term goal of reducing energy dependence, and increasing the use of renewable energy at the subnational level to contribute to the national energy targets for 2020 (ADEREE, 2012).

Three municipalities were selected via a call for proposals for the pilot program based on criteria such as previous involvement in renewable energy development. The national government launched the 'advanced regionalization' process in parallel with 'decentralization reinforcement' which provided a legal framework for transferring resource authority to subnational levels of government, thus allowing regions and territories to have ownership of their renewable energy and energy efficiency. Although early in its implementation, the program has contributed to mainstreaming energy considerations in territorial and urban planning, active interaction between municipalities and international partners, and establishing quantitative targets and roadmaps to assess and quantify local impacts.

#### 9

# Build and maintain robust green growth monitoring and evaluation systems

Effective monitoring and evaluation (M&E) systems enhance learning, decision-making and management, strengthen government accountability, improve public trust and enable stakeholder participation. Such systems should be built and maintained to assess, track, and communicate green growth progress and results. Governments have greatest success with green growth monitoring and evaluation where they:

- Incorporate monitoring and evaluation indicators which cover the most important economic, environmental and social policy objectives for the country or region.
- Combine a small number of easy-to-communicate headline indicators with more detailed sets of indicators.

Headline indicators such as resource productivity and natural asset base, as well as composite indicators like the Ecological Footprint, synthesize or aggregate complex environmental, economic, and social data into metrics that are easy to communicate. Detailed indicator sets allow for monitoring of the various underlying changes required to achieve green growth in key sectors such as energy, transport and agriculture.

- Establish institutional arrangements that involve key government units and stakeholders, are fully accountable and transparent, provide clarity on roles and link with existing monitoring and evaluation systems.
- Share monitoring and evaluation information in a timely and audience-appropriate manner using communication methods and channels to target and engage green growth relevant stakeholders with often divergent interests.

#### Case 9:

## Karnataka Watershed (Sujala) Project, India

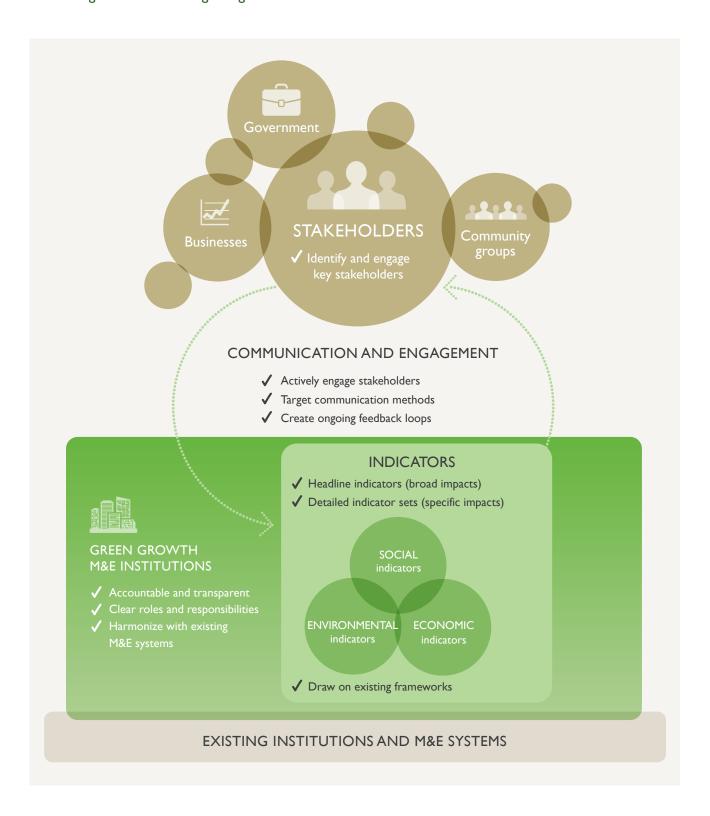
From 2001 to 2009 the World Bank invested USD 100.4 million into watershed management and poverty alleviation in rain-fed areas of India. The program employed a systems approach, with a focus on soil and water conservation and sustainable resource use, and used participatory planning and implementation to improve local livelihoods, gender equity, and community capacity.

Monitoring and evaluation was a key facet of the program. It was conducted by the Indian Space Research Organization (Antrix), combining remote-sensing data with on-the-ground monitoring techniques, including a household survey with baseline and control group, focus group discussions, participatory observations, thematic studies, and case studies. It measured quantitative and qualitative indicators before, during, and at the end of the project, as well as after the project's withdrawal. It also included a systematic database that integrated large volumes of data, provided a flow of reliable and timely information that helped monitor the project's physical and financial progress at all levels, and generated reports to provide comprehensive data to program managers and beneficiaries. (World Bank, 2013)



Figure 9:

Monitoring and evaluation of green growth



## Conclusion

In summary, the GGBP review of country experiences has found that:

Green growth can unlock substantial economic, social, and environmental benefits. Green growth strategies enable governments to achieve significant near and long-term benefits in economic growth, environmental protection, and poverty reduction. These synergistic benefits can be achieved through improvements in resource efficiency and management, support for green technology and business innovation, and investment in initiatives to mitigate the risks and costs of this transition to green development.

Integrated and robust planning, analysis, implementation, and monitoring are essential. Green growth strategies tend to be most effective where they link robust and credible planning, analysis, implementation, and monitoring processes in an iterative and reinforcing cycle and with active stakeholder engagement. Regardless of whether green growth starts with a head of state as champion or through action at the subnational level, successful strategies couple robust planning and co-ordination processes across different levels of government, thorough evidence and analysis, coherent policies and financing measures, strong partnerships with the private sector and other stakeholders, linked national and subnational action, and effective monitoring and evaluation that allows for ongoing refinements.

Broad support for transformative change is required. Green growth plans are most effective when driven by ambitious yet achievable visions with high level and broad government and stakeholder support. They should pursue both near and

long-term opportunities for dynamic shifts from the status quo in resource management, technology use, community development, industrial practices and competitiveness, education and worker training, and other factors.

Further efforts are needed to assess and validate the long-term and transformational benefits of green growth. While emerging evidence is demonstrating the value of green growth, this information is fragmented and is not yet adequate to determine the long-term economic, social, and environmental impacts of green growth and whether it is achieving the desired scale of transformation. Additional

attention should be given to ongoing rigorous assessment of

these longer-term impacts across countries and regions.

Greening growth represents a pathway for economic and social development that can sustain wealth creation and prosperity across society in a world threatened by global environmental risks and resource constraints. Governments in all regions face the challenge of fostering a transition to green development that enables durable economic growth and social development, while avoiding risks to public goods, natural assets, and social equality from the status quo. While not all encompassing, this Green Growth Best Practice assessment provides a strong foundation to inform and guide national and subnational governments as they address this vital challenge and seek to achieve sustainable development goals. It offers inspiring examples of green growth leadership around the world that can motivate others and create momentum towards more inclusive and sustainable. economies.

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