



Green Growth Best Practice

Synthesis of key findings

March 2014

Introduction

Environmental risks and challenges are becoming material economic and social issues, which can fundamentally alter opportunities and potential growth pathways for nations. National and sub-national governments are responding with green growth strategies that seek to accelerate investment in resource efficient technologies and new industries while managing costs and risks to domestic taxpayers, businesses, communities and consumers. These strategies are at the heart of kick-starting both near and long-term transitions to inclusive green economies. In *The Future We Want*, the Rio+20 outcome recognizes the vital role for green growth, noting it:

“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 seek to reconcile policy goals related to poverty reduction, environmental protection and economic growth, and to unlock synergies between them. They are driven by a range of factors (see the EU’s Green Growth Group, 2013) including:

- **Productivity improvements are possible:** Green, resource efficient technologies and practices often save resources and money compared to conventional alternatives enhancing competitiveness over the long term, and sometimes in the short term.
- **New growth opportunities beckon:** Growing demand for green technologies, products and services offers opportunities for industrial development and new markets.
- **Resource scarcity is increasing:** As economic growth depends on energy, water and natural resource supplies, enhanced resource efficiency and management enables sustained growth.
- **Environmental hazards are significant:** Air, water, and soil pollution, ecosystem loss, floods, storms, and other environmental hazards can endanger economic growth and social development if not proactively addressed.
- **Quality of life and social equity can be improved:** 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.
- **Reducing policy uncertainty can unlock investment:** Recognition that action will need to be taken in the future creates uncertainty and concerns about “stranded assets” which constrains investment.

Some prominent examples of government leadership on green growth are presented in Box 1.

Box 1:

Examples of countries adopting green growth strategies

- **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.
- **Ethiopia's** government sees a strategic link between economic growth, social development, greenhouse gas emission reduction and building resilience to climate change. Through their green economy plan the government aims to increase per capita GDP from \$380 to \$1000 while achieving carbon neutrality by 2025. They have embarked on Sub Saharan Africa's largest renewable energy drive with wind and geothermal projects planned both for local energy and for export. (Tekleberan, 2012)
- **China** has committed to green growth in its 12th Five Year Plan. Actions include investing in natural resource management, with the aim of creating 1 million new forestry jobs and reducing rural poverty. (OECD, 2013)
- **Germany's** green growth policies have been an important engine for environmental innovation and the emergence of an internationally competitive environmental goods and services sector particularly focused on renewable energy.
- **Mexico** is pursuing green growth through sector policies, incentives, and regulation, particularly focused on the energy and transport sectors. Its policies seek to make economic growth and the protection of the environment compatible, and at the same time to tackle poverty.
- **Cambodia** has developed a National Green Growth Roadmap which defines holistic pathways the country is taking to advance economic growth, environmental protection, and human well-being for the agriculture, energy, forestry, transport, water, and other sectors. (UNCSO, 2012)

Green growth policy making is economic policy-making that takes environmental, industrial, and social risks and opportunities into account. The key question is not 'does green growth work?' but what are the specific, viable opportunities that a particular government can take to achieve environmental and social benefits and help stimulate broad based economic development? (Toman, 2012). Answering this question involves a different mindset and a different set of actors than those that have been involved in the pursuit of sustainable development over the past two decades. Most importantly it involves stronger engagement of national ministries of finance, economic development and planning, as prime movers.

Initial reviews of green growth, green economy, low emission, low carbon and climate resilient development plans by the OECD (2013), UNEP (2011), the World Bank (2012), and UNESCAP (2012), 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. The

Green Growth Best Practices (GGBP) Initiative focuses on 9 interlinked steps that are commonly used by governments in green growth analysis, planning, implementation, and monitoring, as illustrated in Figure 1.

GGBP has carried out the first comprehensive international assessment of lessons from experience of pursuing green growth, across all levels of government and all regions. It examined the design choices faced by practitioners in establishing plans and programs, and the lessons learned. The analysis was carried out by 9 teams of expert authors from around the world (75 in all) who each focused on one of the topics, and between them looked at 60 specific government programs, as well as reviewing general lessons from the literature.

The green growth cases were identified using a working scope which encompassed programs at national, state, provincial and local levels from different regions designed to achieve economic growth and environmental protection goals together. In particular they focused on plans and programs that:

- Form part of a comprehensive development framework for long-term economic, social, and environmental transformation;
- Foster efficient and sustainable use of natural resources;
- Aim to achieve socially-inclusive development;
- Aim to improve resilience to climate change and natural disasters;
- Aim to promote a low carbon/low emissions economy.

This is consistent with and builds on definitions of green growth offered by others (see UNCSO, 2012, OECD, 2011, World Bank, 2012, Federal Democratic Republic of Ethiopia, 2012, Republic of Korea, 2010, and DEFRA, DECC, and BIS 2010).

Figure 1:

Green growth topics addressed by GGBP



Emerging good practices and lessons

The GGBP assessment identified the following practices that drive successful green growth planning and implementation, when adapted to local conditions and constraints.

I.

Employ well designed planning and coordination processes

Clear institutional mandates and support of governmental leaders and stakeholders are of utmost importance for developing credible analysis and establishing policies for promoting green growth. While governments have employed a wide variety of approaches to green growth planning, 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.
- Clear economic, environmental, and social objectives reflected in formal outcome-based mandates supported by strong institutional governance.
- Robust and adequately resourced planning and coordination process, designed to generate compelling evidence, overcome barriers, and manage conflicting interests.
- Active and strategic processes of stakeholder engagement with clear roles and well managed expectations.
- Well-governed institutions able to manage a predictable long-term cycle of planning, implementation and review, which aligns with other activities and protects against political change and interference by interest groups.

Figure 2:

Planning and coordination of green growth processes



2.**Establish clear visions, targets, and baselines**

Governments often 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 GDP, poverty reduction, employment creation, 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 transforming the future can be told. Examples of high level visions established by three countries are shown in Box 2.

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

- Build ambitious, yet achievable vision for long-term green growth transformation driven by support from high level political leadership and employing consensus building processes across all stakeholder groups to achieve ownership.
- Establish performance targets aligned with domestic interests for priority economic, environmental, and social goals, such as GDP, poverty reduction, employment, emission reductions, industrial growth, and natural resource protection.
- Underpin visions and targets with objective baselines (where appropriate) for economic growth, resource and environmental conditions, and social development measures, supported by analysis of impacts targets and considering political factors.
- Establish both long and short-term economy wide targets and short-term sector specific targets to measure progress and adjust plans. Use long-term targets to ensure strategic direction and short-term targets to guide concrete actions.
- Build close links to budget allocation and policy design to establish accountability and to provide necessary resources, incentives, and enabling conditions to achieve targets.
- Balance purpose of targets and baselines with practical considerations related to cost, data availability, and capacity.

Box 2:

Examples of high level green growth visions

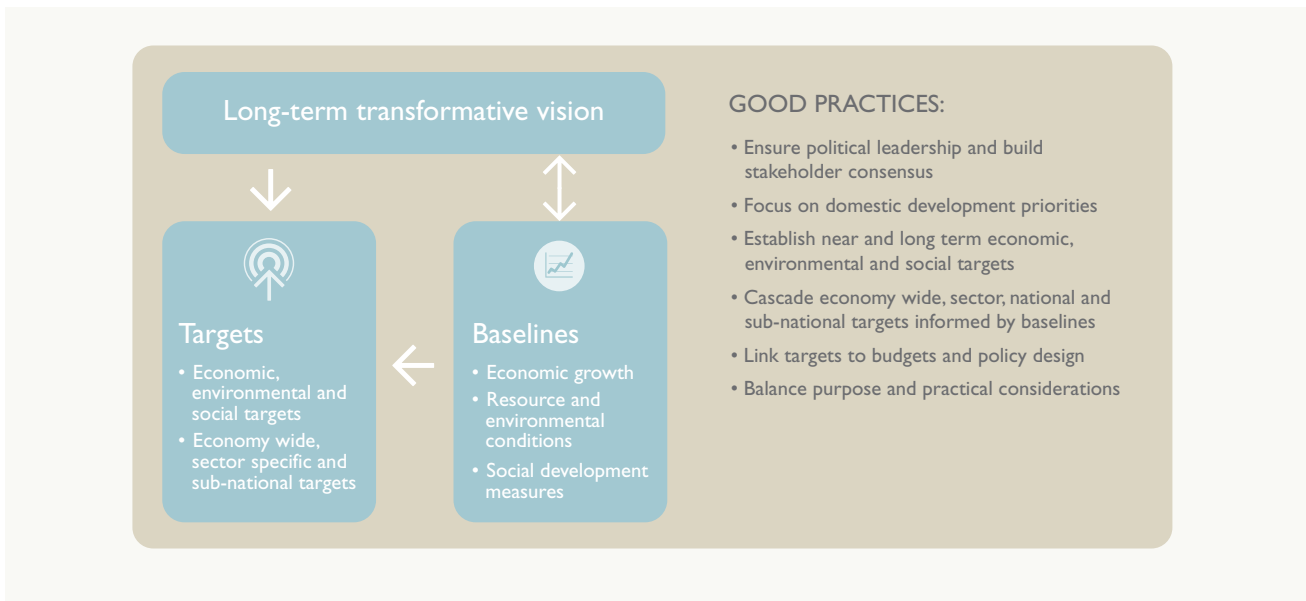
Cambodia: "In Cambodia, green growth aims to unify development and environment objectives by means of implementing policies tailored to address the needs of all, including the most disadvantaged, to create jobs, to increase the resilience of the environment and of the population to adverse impacts, thus 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." – Cambodia National Green Growth Roadmap (Kingdom of Cambodia, 2009).

Guyana: 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. – Guyana's Low Carbon Development Strategy (Republic of Guyana, 2010).

Japan: Four key policy areas including 'Green', 'Life', 'Agriculture', and 'SMEs'. According to the strategy document, the philosophy is to "construct a resilient and adaptable socio-economy 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." – Cabinet Secretariat of Japan (Government of Japan, 2012).

Figure 3:

Developing a high-level vision: purpose, practice, and links to other green growth analyses



3.

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

A green growth development path offers a broad range of benefits relative to a 'conventional' development path where environmental and social sustainability are not considered. The benefits of green growth depend on understanding synergies in benefits across economic, social and environmental dimensions, while also acknowledging costs and trade-offs. 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 (see Box 3).
- 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.
- Translate the high-level vision on green growth into a concrete set of analyzable variables and a robust analytical framework.
- Utilize a broad, though not necessarily complex, analytic framework that integrates a number of complementary approaches. For example, many countries (e.g. Ethiopia, UK) have 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 and balanced messages to offer evidence based argument for deviating from business as usual.

Box 3:

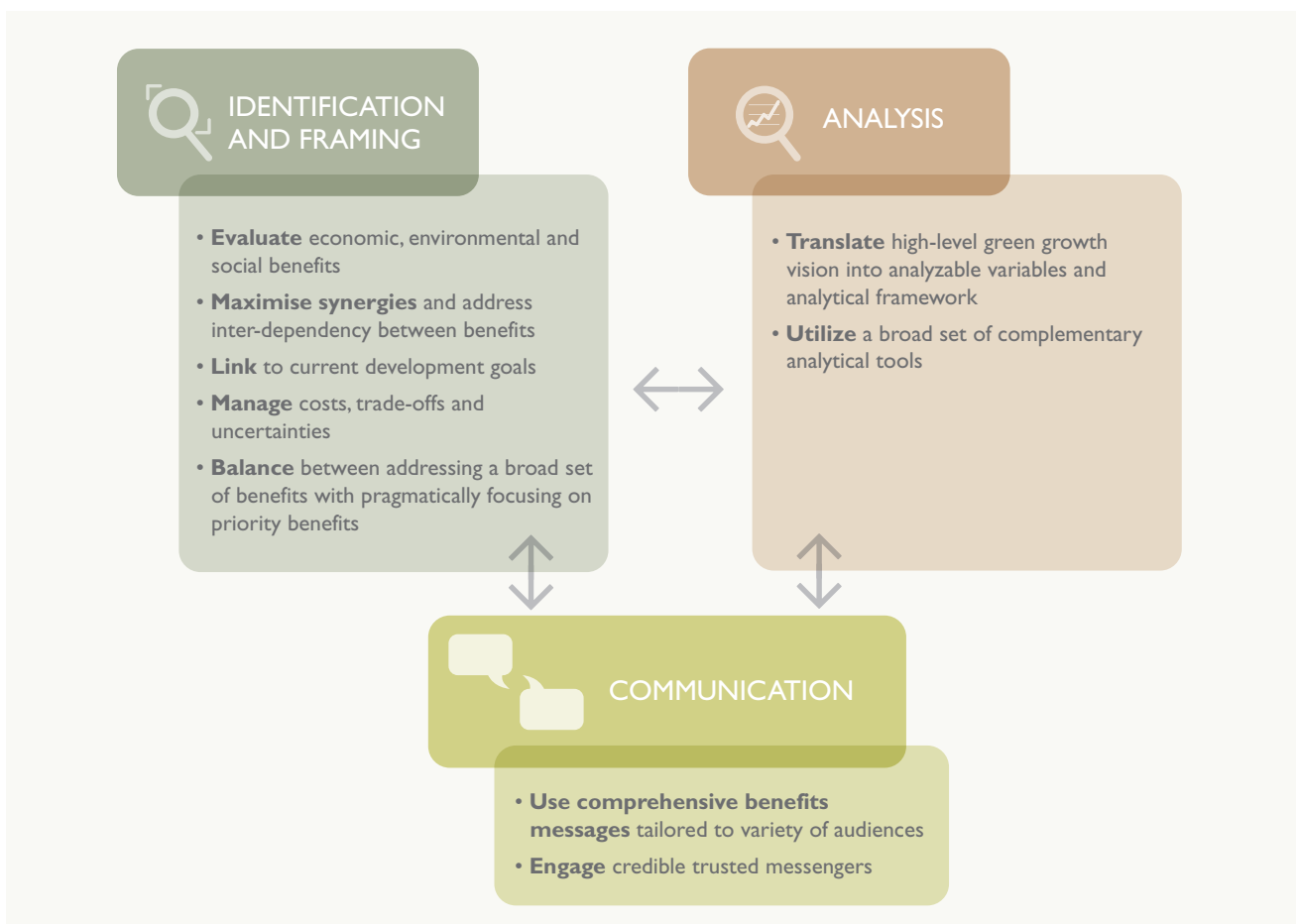
Benefits Identified in Ethiopia's Climate Resilient Green Economy (CRGE) Strategy

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 (FDRE, 2011). Two important sectors for the country's green growth development transition are agriculture and energy and water. 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 such as between deforestation, clearing land for agricultural production and improving lives of the rural poor. Possible solutions for managing these trade-offs are increasing the productivity of agriculture and providing economic incentives for forest preservation.

Figure 4:

Assessment and communication of green growth benefits



4.**Prioritize options and construct credible pathways towards formulated targets**

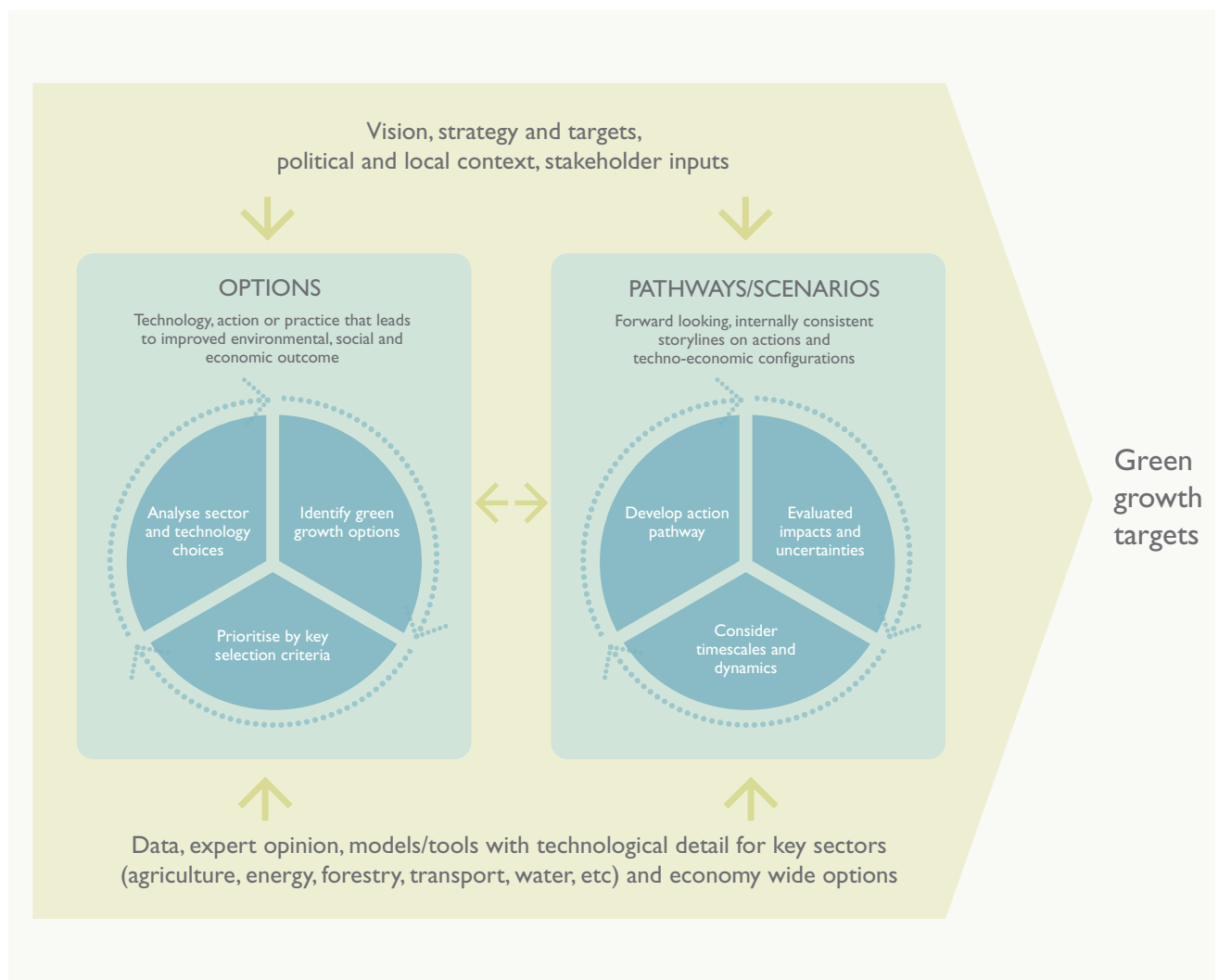
Green growth planning requires decision-makers to prioritize options and outline a pathway towards desired outcomes. Selection of such priority pathways requires robust evaluation of options through consultative processes. Key lessons from effective approaches are to:

- Select and adapt prioritization tools and methods to address key economic, environmental, and social drivers in a robust manner appropriate for the local context, without letting the tool drive the analytic direction.
- Combine top-down approaches reflecting macro-economic impact and bottom-up approaches capturing technological detail to identification, evaluation, and prioritization of pathways to improve robustness of results and address limitations of individual tools and methods. Consider options across broad range of sectors (including agriculture, energy, forestry, transport, water) and economy-wide options (e.g. poverty reduction, natural asset protection and resource efficiency, green jobs, etc.).
- 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.
- Use pathways (or scenarios) to identify 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.

**Box 4:****Options Analysis for Kenya's Low Carbon Climate Resilience Plan**

In Kenya, an efficient approach was to develop simple spreadsheet tools to record and assess the key characteristics and potentials of different low-carbon options. This approach enabled transparency and replicability, and allowed subsequent updating. The tool was easily workable and used data and assumptions that often started from educated guesswork, validated by stakeholders. All data and spreadsheets were transferred to the government to build in-country capacity and to ensure updating of the analysis. This bottom up analysis was complemented with an economy wide computer general equilibrium (CGE) model that projected the macroeconomic effects of low carbon development through 2030. Combining these two approaches allowed for comparison and calibration and resulted in more robust and comprehensive information for decision-makers.

Figure 5:
Setting green growth options and pathways



5.

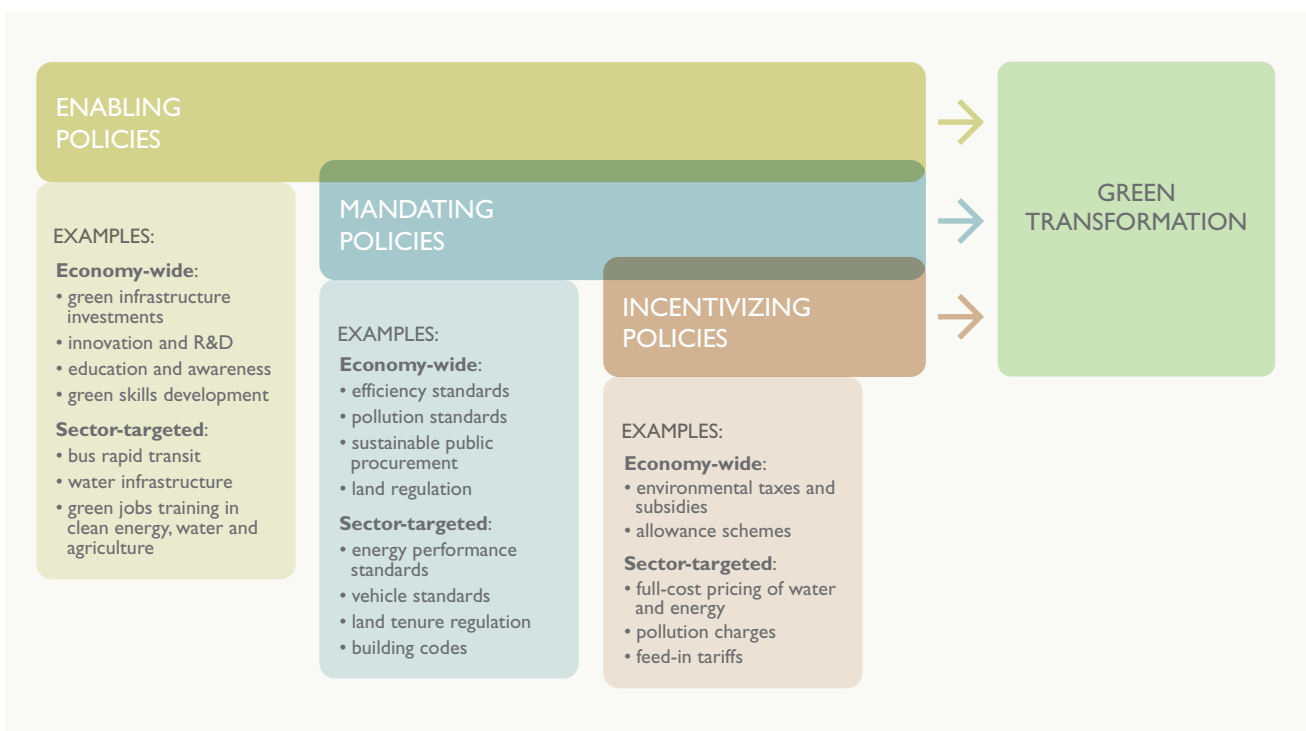
Design portfolios of policies to address multiples goals and respond to specific market failures and political economy challenges

The key challenge for policy design is to reconcile short-term priorities and long-term sustainable development objectives through implementable policies. Government policies alone cannot deliver green growth but seek to influence consumers, businesses, investors, and other parts of government. 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 innovation, workforce development, public awareness, and infrastructure programs.
- Support green innovation policies to decouple economic growth from environmental and natural resource depletion by advancing development both 'breakthrough' technologies and systems and support for local innovation by small and medium enterprises, micro-enterprises, and community groups.
- Adopt labor and skill development programs to 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 skill workers.
- Couple consistent and coherent policy instruments across green growth sectors and at national and sub-national levels with strong governance and enforcement.
- Design policies based on an understanding of resource limits and environmental threats and to achieve development paths that protect and apply natural capital to accelerate and not retard economic and social development.

Figure 6:

Overview of green growth policies by type and application



Box 5:**Inclusive green growth in Brazil**

Brazil has achieved inclusive economic growth with a reduction in poverty from 20% of the population in 2004 to 7% in 2010, supported by a set of complementary policies and programs to reduce the environmental impacts of agriculture (Beddington et al., 2012). Key policy elements include: (i) a focus on agricultural R&D and diffusion of knowledge at local levels with the pivotal role of the agricultural research agency, Brazilian Agricultural Research Corporation (EMBRAPA), and the allocation of the necessary resources (more than

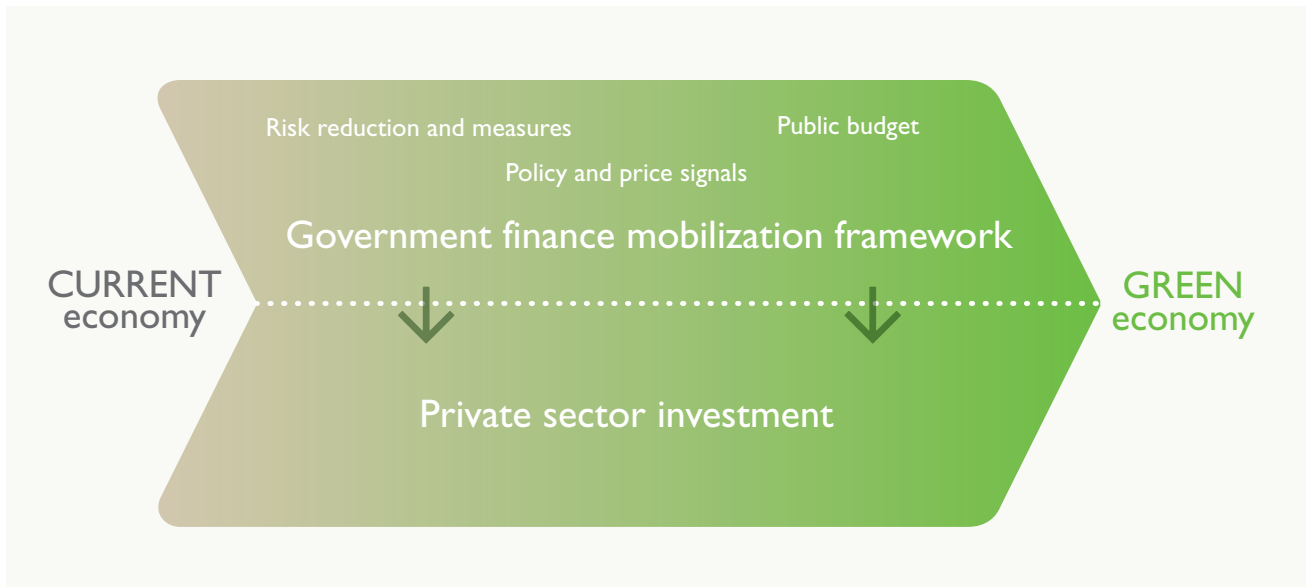
in any comparable country in the world); (ii) provision of complementary measures such as agricultural credit and the pro-environment guidelines of the Brazil Development Bank; (iii) dovetailing agricultural production patterns to the national program on Zero Hunger ensuring consistency of poverty and agricultural policies; (iv) farm-level capacity building policies and mechanisms ensuring stakeholder participation; and (v) supporting trade policies.

6.**Design public finance instruments to overcome barriers and mobilize private investment into green growth sectors**

Governments need to unleash high levels of sustained investments to achieve a transition to green growth. Successful financing strategies for green growth create the market conditions for these investments to take place. They tend to apply an array of approaches that combine an effective government policy and pricing framework, with direct public funding support and financial risk mitigation instruments to scale up private investment. Successful strategies include the following features:

- Adopt investment grade policies, which send long-term green price signals and align economic and environmental drivers, and provide support for early projects and for priming markets for green products and entrepreneurs.
- Allocate public funds, including budgetary support, procurement, infrastructure investment, grant and loan facilities, and equity investment to support green growth priorities with strong governance of public funds and complementarity with current fiscal frameworks. Limited public funding needs to be carefully targeted to provisionally help create new markets and be used in parallel with fiscal policy reforms that simultaneously reform subsidies for environmentally harmful investments.
- Employ a variety of instruments to mitigate the financial risk and improve the return on private green investment, such as green lines of credits, guarantees, and insurance mechanisms, and ensure they are transparent, coupled with policy instruments, and provide appropriate levels of concessional support.
- Team with central banks, development finance institutions, and others to attract long term financing through green bonds and other innovative instruments, implement financial regulatory reforms, and promote green investment practices.

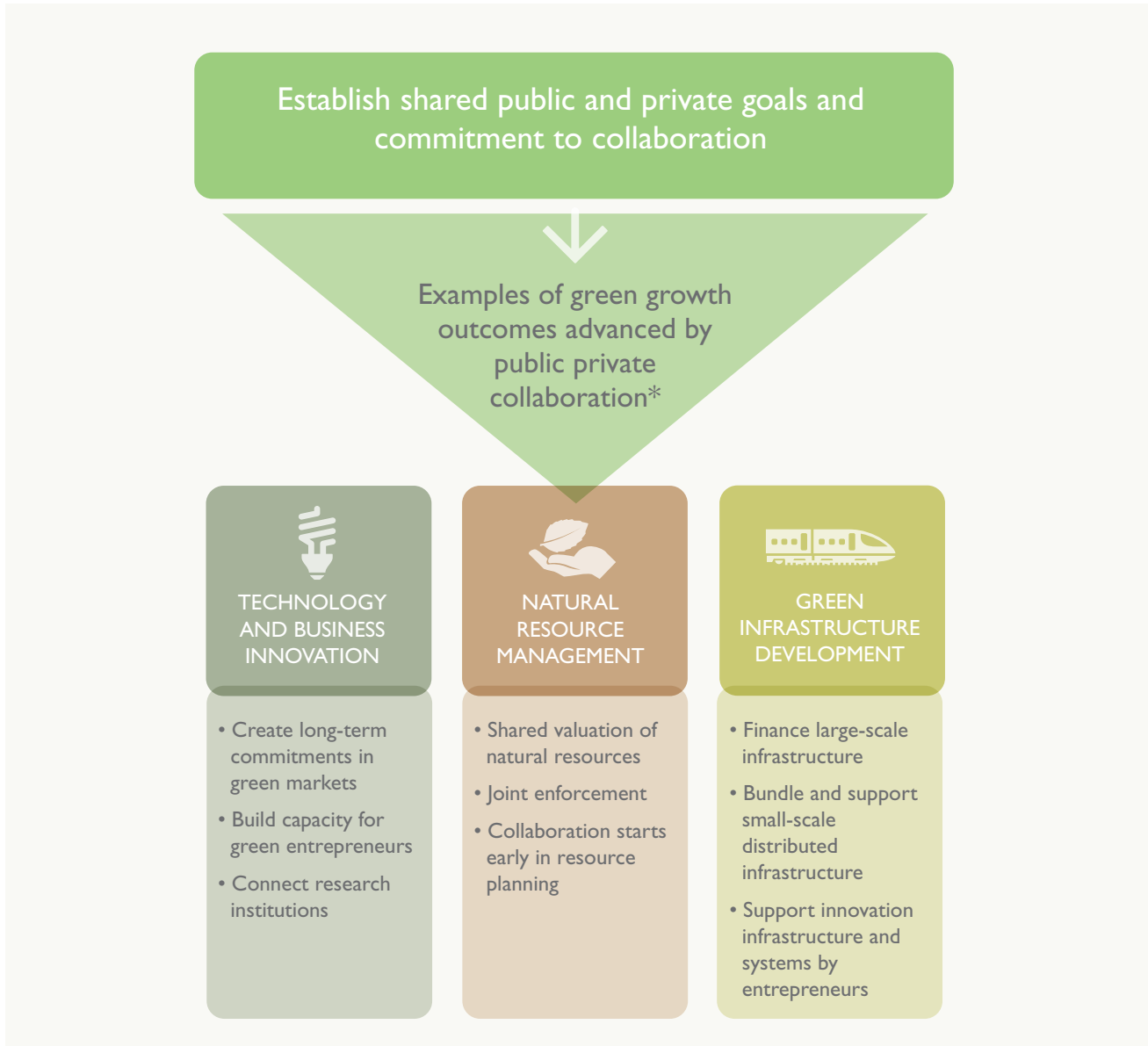
Figure 7:

Role of public policy and finance in unlocking private investment in green growth**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. In particular, a collaborative governance approach that engages the private sector in a joint effort with government can be a powerful mechanism when it has the following successful attributes:

- A focus on shared government, industry and community green growth goals, such as innovation and market development, natural resource management, resource efficiency and productivity, development of green infrastructure, and transparency and disclosure.
- Provide certainty for business investment in green innovations through long-term government and private commitment, deep technical cooperation by research collaborations among academic, business, government, and international agencies (on both business and finance delivery and government policies and programs), and capacity building.
- Drive the transition to sustainable management of natural resources through shared valuation of resources and enforcement systems, and active business and local community participation starting early in resource management planning.
- Mobilize investment in green infrastructure through collaboration focused on large public infrastructure systems, smaller distributed systems, including those that will alleviate poverty and support for entrepreneurial innovation in emerging systems and markets.
- Only pursue public-private collaboration where all parties are making substantial long-term commitments and have carefully considered the risks, costs, and benefits. 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.

Figure 8:
Areas of green growth outcomes achievable through public-private collaboration



* Other green growth areas for PPCs include resource efficiency, transparency and disclosure, etc. Only the three in the above boxes have been assessed in the GGBP.

8.**Pursue mutually reinforcing action across sub-national and national levels of government**

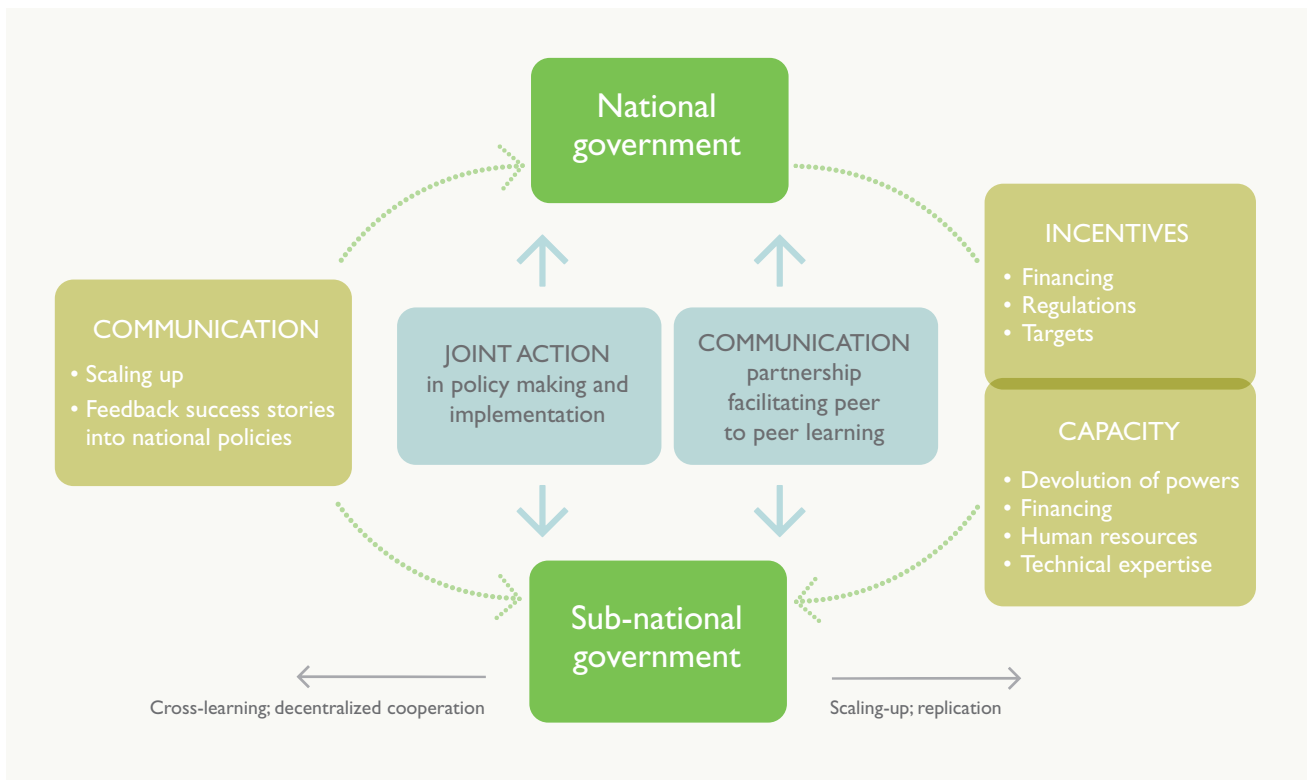
Along with nationally led green growth programs, an increasing number of sub-national governments are implementing green growth initiatives and in some cases are leading or catalyzing national efforts. Successful implementation of these national and sub-national efforts requires close collaboration and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

- Developing interlinked green growth national and sub-national strategies and measures where national governments enable and motivate sub-national replication and state and local governments provide leadership and support for national goals.
- Establishing financial incentives, regulations, and targets to motivate and support sub-national governments in promoting green growth.
- Enabling sub-national government to implement green growth by providing new powers, budgets, human and technical resources (especially for policies and programs and finance mobilization) and peer-to-peer learning.
- Facilitating dialogues between sub-national and national governments that provide feedback of success stories at the sub-national level and actively engage stakeholders who can bridge and help sustain actions across governmental levels.

**Box 6:****Emerging role of sub-national governments: the California case**

California's clean air program is a one of an increasing number of examples where sub-national governments are enacting regulations stricter than those of their central governments (Vogel, 1999). Under the Federal Clean Air Act of 1970 states are permitted to impose standards on pollutant emissions that are stricter than federal regulations. When the Act was passed, air quality was a particular priority in California because of smog in key cities and districts, and health concerns backed by emerging scientific evidence. This enabled political momentum for the state to enact a combination of regulations, investments and incentives targeting refineries, industries and vehicles. Many of the state's standards and initiatives were adopted by the federal Clean Air Act Amendment of 1990 (Bowen, 2013).

Figure 9:

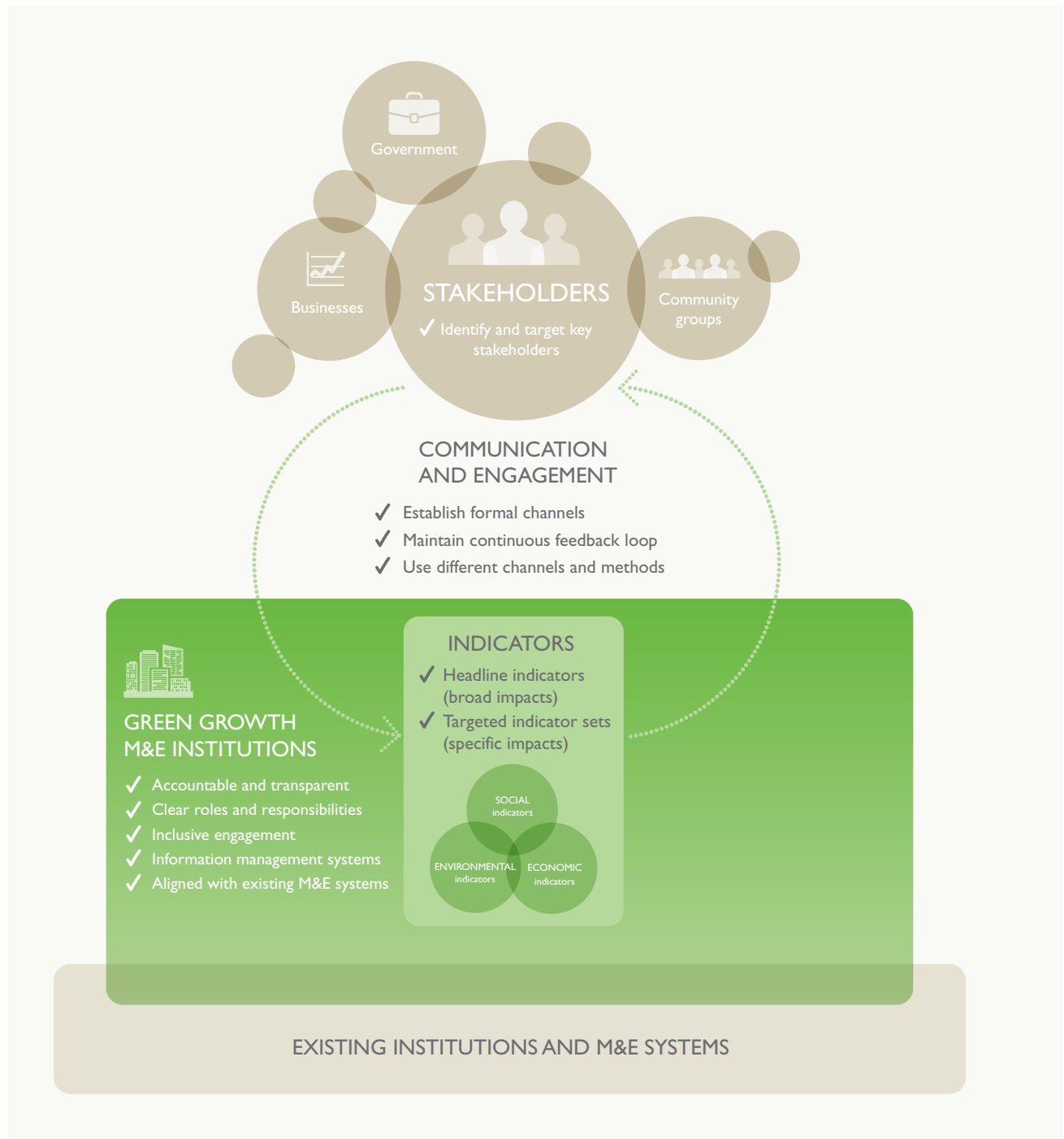
Effective model of national and sub-national integration**9.****Build and maintain robust green growth monitoring and evaluation systems**

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 economic, environmental and social policy objectives relevant for green growth.
- Combine a small number of headline indicators to facilitate easy communication of progress on green growth (e.g. resource productivity, natural asset base, environmental quality of life, etc.) together with more focused sets of indicators measuring specific economic, environmental, and social outputs and outcomes.
- Establish institutional arrangements for green growth monitoring and evaluation that are fully accountable and transparent, clear on roles across government agencies and partners and link closely 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.

Figure 10:

Components of an effective green growth M&E system



Conclusion

In assessing good practices across the nine topics, a key overall lesson that emerged is the importance of pursuing an integrated approach that links green growth analysis, planning, implementation, and monitoring into an iterative cycle as shown in Figure 1. Each element of the process depends on and feeds into successful implementation of the other steps. Regardless of whether green growth starts with a head of state as champion or by action at the sub-national level, successful strategies couple robust planning and coordination processes, thorough evidence and analysis, coherent policies and financing measures, strong partnerships with the private sector and other stakeholders, linked national and sub-national action, and effective monitoring and evaluation that allows for ongoing refinements.

Unlocking green growth opportunities requires not only a coordinated cycle of planning, implementation, monitoring and learning about what works best from a government policy point of view, but also a mutually reinforcing dynamic for economic development. Getting beyond 'low hanging fruit' and 'flagship projects' requires dynamic shifts where prices for

green technologies fall, investment risks are reduced, domestic benefits are generated and realized, and constituencies of support for new industries and new ways of consuming, or managing natural resources become stronger. Governments that are pioneering green growth strategies are testing out pathways to create these transformative changes through a process not of defining green growth but of discovering it.

Greening growth represents a pathway for economic development that can reinforce wealth creation and prosperity across society within the confines of a resource constrained world. Governments in all regions face the challenge of fostering a transition to green development that provide for durable economic growth and social development and avoid risks to public goods, natural assets, and social equality from the status quo. While not all encompassing, this Synthesis of Key Findings of the Green Growth Best Practice and the upcoming full assessment report in June 2014 provide a strong foundation to inform and guide governments as they address this vital challenge.

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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. GGBP engaged 75 authors in evaluating practices and lessons from cases of green growth programs in all regions of the world. This briefing highlights findings from each of the 9 chapters. The full report will be available in June 2014.

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 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; LEADS Global Partnership; Organisation for Economic Cooperation 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.

GGBP is conducting a broad array of activities to build awareness and support use of the findings of this assessment, including presenting results through seminars and dialogues requested by government agencies and partnering with others on policy dialogue workshops, e-learning and peer learning programs.

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