

Inclusive and Green Growth in developing countries

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Question

What is Inclusive and Green Growth (IGG) in the developing country context, and what are the potential trade-offs involved in achieving it?

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1. Overview

This rapid review explores the potential trade-offs involved in supporting Inclusive and Green Growth (IGG) in developing countries. The International Institute for Environment and Development comments that to bring about real transformation towards IGG will require leadership, to generate societal demand, including by poor women and men, and to supply supportive governance reforms (IIED, 2016).

The question of how policy makers weigh the trade-offs between the costs (possible reductions in investments, income, and consumption) and benefits (possible improvements on the environmental, social, and economic fronts) given that the net impact varies depending on the policy considered, the context, and the time horizon. According to the World Bank (2012), many green policies impose economic costs in the short term, such as higher investment or operational costs. But over the longer term, they are designed to yield economic benefits and contribute to long-term sustainable growth. Even so, short-term costs can create trade-offs between environmental protection and short-term economic growth. For this reason, political and social acceptability require that green growth policies be designed with the specific goals of mitigating trade-offs across both space and time and offsetting costs by maximising synergies and short-term economic benefits (such as job creation, poverty alleviation, and increased efficiency).

A range of organisations have developed approaches to address these issues (OECD, 2011; World Bank, 2012; UNEP, 2014; GIZ, 2015); while these concepts or approaches offer much to delineate green (sustainable) and inclusive growth, many important aspects remain vague. As such, they do not facilitate a systematic assessment of interactions (i.e., synergies and trade-offs) between the green and inclusive dimensions of growth, even though, particularly in developing countries, this is a central concern of policymakers (GIZ, 2015). Becoming more precise implies having to take decisions on the scope of 'greenness,' and on the intensity of inclusiveness. These decisions can be politically contested and, given their normative nature, there is no single best solution.

There is no single green growth model. IGG strategies will vary across countries, reflecting local contexts, preferences, and resource. The World Bank (2012) argues that the outcomes of green growth policies are likely to be good for people living in poverty, but that, nonetheless, these policies should be explicitly designed to maximise benefits and minimise costs to the poor.

In terms of inclusiveness, Klasen (2010) found that people living in poverty may be affected by policies that impact their ability to participate in growth (growth process dimension) and on the distribution of growth's benefits (growth outcome dimension). The following case studies of developing countries highlight both successful and unsuccessful IGG policies, as well as examples of trade-offs used:

- **Brazil:** This country has tried to build consensus for IGG through open and participatory approaches involving political parties and civil society. Approaches that feature iterative, multi-stakeholder involvement and extensive consultation with the private sector and civil society create the transparency and political buy-in to make commitments to green growth sustainable. It is particularly important to ensure opportunities for the indigenous and poor communities to voice their concerns and priorities (Transparency International 2011).
- **Burkina Faso:** Although one of the poorest countries in the world, Burkina Faso has been implementing the Strategy for Accelerated Growth and Sustainable Development

(SCADD) since 2011, which has the potential to improve agricultural yields, productivity and growth of agricultural value added by 10.7% (Gaye et al 2015: 2). Moreover, SCADD will increase the growth of valued added of secondary and tertiary sectors by 11.8% and 12.5%, respectively. The ultimate impact will be reduced poverty and better income distribution.

- **Ethiopia:** Although one of the fastest growing economies in Africa, and one of the top ten fastest growing economies in the world, the poorest of the poor in Ethiopia are yet to benefit to the same extent. The country has embarked on structural transformation agenda, as reflected in its Growth and Transformation Plan (GTP) (2011-2015), which places emphasis on promoting the agricultural and manufacturing sectors, and infrastructure development. GTP also recognises the importance of environmental issues (e.g., climate change) and of conservation and management of natural resources for sustainable structural transformation. Ethiopia is also implementing a Climate Resilient and Green Economy (CRGE) strategy. Four initiatives were selected to fast-track implementation of the CRGE strategy - selected to maximise synergies between environmental, social, and economic development outcomes, while managing the costs, trade-offs, and uncertainties of the transition: hydropower development, rural cooking technologies, livestock value chain, and forestry development. These initiatives offer prospects of immediate economic growth and large carbon abatement potential.
- **Tunisia** has been suffering from increasing spatial and social exclusion, caused by regional disparities and high unemployment. Intra-sectoral transformation in the agriculture sector through crop diversification, coupled with soil and water conservation are viewed as policies that could contribute to positive agricultural yields and revenues, positive impacts on rural poverty and reduced rural emigration. Energy efficiency and renewable energy also represent a vast field of deployment of IGG policies. The positive impacts on employment of the Tunisian Solar Plan are estimated between 7,000 and 20,000 jobs (National Agency for Energy Efficiency & GIZ, 2012).

The review concludes with a list of core areas that policymakers need to consider when designing inclusive green growth policies (GIZ, 2015: 20). However, there are still gaps in the required knowledge base. Existing academic work is fragmented and focuses on specific policies and other aspects, and thus fails to provide a comprehensive picture. Furthermore, when it comes to the design and implementation of IGG strategies and action plans, there is a dearth of experience in addressing trade-offs and synergies in a more coordinated way and at a higher level. This means that practical examples are limited and very specific to their context.

2. Defining Inclusive Green Growth

Narratives pertaining to how to make growth greener date back to the 1950s and have consistently identified the following basic instruments, with environmental taxation, norms, and regulations being the main tools of a green growth strategy. Making these measures work is complex in real-world settings plagued by governance failures, market failures, and entrenched interests and behaviours, particularly in contexts where inequality is pervasive (World Bank, 2012). It requires complementary policies, including public investments, innovation and industrial policies, education and training, labour market reforms, and communication.

Inclusive Green Growth (IGG) attempts to provide a solution to the joint objectives of economic growth, environmental sustainability and social inclusiveness. Concepts, such as green growth,

green economy, new climate economy and low-carbon development have developed concomitantly, with slightly different definitions. IGG is therefore not considered to be a new paradigm, but rather one that engages with and links across pre-existing approaches to both sustainable (green) and inclusive growth. According to Bowen (2012), it aims to operationalise sustainable development by reconciling developing countries' need for rapid growth and poverty alleviation, with the need to avoid irreversible and costly environmental damage.

The International Institute for Environment and Development (IIED, 2016) comments that IGG offers a route out of multiple related crises (economic, environmental and societal). It continues that whilst most green growth efforts have placed the economy and environment front and centre, for green growth to really fulfil its promise it also needs to focus on people, to tackle the poverty, inequality and exclusion that constrain both growth and environmental sustainability. Without this broader support, stand-alone green growth projects and investments will not lead to real transformation. To bring about real transformation towards IGG will require leadership, to generate societal demand, including by poor women and men, and to supply supportive governance reforms (IIED, 2016).

A range of organisations have developed approaches to address these issues, including the United Nations Environment Programme's (UNEP) Green Economy initiative¹, the Organisation for Economic Development and Cooperation's (OECD) Towards Green Growth initiative², and the World Bank's Inclusive Green Growth framework³. However GIZ (2015) comment that the vague definitions of 'inclusive' and 'green' adopted by these approaches do not facilitate a systematic assessment of interactions (i.e., synergies and trade-offs) between the green and inclusive dimensions of growth, even though, particularly in developing countries, this is a central concern of policymakers.

Organisational approaches to IGG

UNEP (2010) explicitly includes social equity in its definition of the green economy, by which it means fully actualised green growth, describing a green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. A green economy is characterised by substantially increased investments in economic sectors that build on and enhance the Earth's natural capital or reduce ecological scarcities and environmental risks. These sectors include renewable energy, low-carbon transport, energy-efficient buildings, clean technologies, improved waste management, improved freshwater provision, sustainable agriculture and forest management, and sustainable fisheries. These investments are driven or supported by national policy reforms and the development of international policy and market infrastructure (UNEP 2010: 3). It further states that "in its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive" (UNEP, 2014).

¹ <https://www.greeneconomycoalition.org/members/un-environment-programme-gei>

² <http://www.oecd.org/env/towards-green-growth-9789264111318-en.htm>

³

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSDNET/0,,contentMDK:23192335~menuPK:64885113~pagePK:7278667~piPK:64911824~theSitePK:5929282,00.html>

The World Bank (2012) asserts that green growth is a vital tool for achieving the three pillars of sustainable development (economic, environmental, and social sustainability). The World Bank's (2012) IGG framework suggests that policies must be carefully designed to maximise benefits for, and minimise costs to, the poor and most vulnerable, and policies and actions with irreversible negative impacts must be avoided. The World Bank defines green growth as 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 (World Bank 2012: 30).

It also calls for this growth to be inclusive, but introduces the idea of potential trade-offs between green growth and inclusiveness by acknowledging that “we cannot presume that green growth is inherently inclusive” (World Bank 2012: xi). The World Bank argues that the outcomes of green growth policies are likely to be good for people living in poverty, but that, nonetheless, these policies should be explicitly designed to maximise benefits and minimise costs to the poor. However, the World Bank does not go into more detail and, instead, concentrates on the management of trade-offs between the environmental and economic dimensions of sustainability.

In a later publication, the African Development Bank (AfDB), OECD, UN and World Bank define inclusive green growth as:

“growth that not only helps green economies, but also helps move towards sustainable development by ensuring environmental sustainability contributes to, or at least does not come at the expense of, social progress” (AfDB et al., 2013: 3).

This reinforced emphasis on social progress may reflect the concern expressed by civil society and developing country governments regarding the negative effects a green growth approach can have on people living in poverty, an issue highlighted at the Rio+20 conference in 2012 (Benson et al., 2014).

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ, 2015) comment that the above definitions go some way in delineating green and inclusive growth; however, many important aspects remain vague. Becoming more precise implies having to take decisions on the scope of ‘greenness’ (for example, which environmental impacts to include, and whether or not to set a benchmark related to the Earth’s carrying capacity) and on the intensity of inclusiveness (i.e. avoiding harming people living in poverty, benefiting them or disproportionately benefiting them?). These decisions can be politically contested and, given their normative nature, there is no single best solution.

More recent framings of the IGG theme have been articulated by GIZ (2015), who propose a precise and normative ‘gold standard’ definition of green and inclusive growth that specifies both the environmental and social dimensions. They acknowledge that while this ‘gold standard’ represents an aspiration of green and inclusive growth policies, it may prove challenging to realise in practice. For this reason, a ‘minimum requirement’ definition has also been developed.

For GIZ (2015: 11) a ‘gold standard’ definition of green and inclusive growth that specifies both the environmental and social dimensions is as follows:

“Green and inclusive growth is that which allows for a reduction of humanity’s ecological footprint to a level that is in line with the Earth’s carrying capacity, while disproportionately improving the opportunities of people living in poverty to partake in the process and outcomes of economic growth, thereby lowering inequality”.

This definition relates to the environmental sustainability requirement of ‘Limits to Growth’ and to the concepts of planetary boundaries (Rockström et al., 2009) and planetary guard rails (Schellnhuber et al., 2011) which stipulate that humanity must not transgress certain thresholds of environmental damage lest it causes unacceptable environmental change. In its social dimension, it relates to the pro-poor definition of Klasen (2010) and explicitly includes equality as a goal of inclusive green growth.

If this is not possible to implement, then GIZ (2015:12) highlights the option of the minimum-requirement definition:

“Green and inclusive growth is that which allows for a reduction of humanity’s ecological footprint and improves, or at least does not harm, the opportunities of people living in poverty to partake in the process and outcomes of economic growth”.

Although the definition loses much of its stringency, it is considered by GIZ to be more realistic to implement. Its environmental dimension needs to be seen as a process prescription that, in a transitional period, allows the economy to exceed sustainable levels of natural resource use and pollution, while aspiring to realise a footprint in line with planetary boundaries. In this way, economic growth would become increasingly decoupled from natural resource use. The social dimension would not necessitate progress in reducing inequality or poverty, but would at least protect people living in poverty from harm. GIZ (2015) note that the two definitions should not be seen as either/or options, but rather as an aspiration for and a lower limit to the requirements of green and inclusive growth.

Rationale and approach to supporting IGG

The World Bank (2012: 3-5) have clearly articulated the rationale for IGG and outlined necessary ingredients for successful policies as follows:

- IGG is necessary, efficient, and affordable. Necessary because sustainable development cannot be achieved without it. Efficient in that addressing the market and governance failures of economic systems will create scope for growing cleaner without growing slower. Affordable because many green policies pay for themselves directly, and others make economic sense once externalities are priced and ecosystem services are valued.
- Greening growth is constrained by social and political inertia and by a lack of financing instruments, not affordability. Entrenched behaviour, special interests, and the complicated political economy of reform explain why measures that amount to good growth policies have not yet been implemented. Also, many green growth measures require increased up-front capital.
- Greening growth should be carefully sequenced, with priority going to what needs to be done in the next 5 to 10 years, both to avoid getting locked into unsustainable paths and to offer immediate, local benefits. Those benefits will help to reduce the cost of the transition and facilitate the political economy of reform.

- The search for solutions needs to shift from a search for more financial resources to “getting smart”:
 - Smart about learning the lessons of complex reforms to tackle difficult political economy questions, given that many green policies trade immediate costs for later benefits or redistribute benefits from one group to another.
 - Smart about changing behaviour of consumers and firms and the view of societies about what constitutes social success and acceptable behaviour. This entails combining economic incentives with well-framed information.
 - Smart about developing appropriate financing tools for the private sector, especially small firms, for local governments and for national governments, which are sometimes fiscally constrained and have to choose the investment with the lowest up-front cost over one that may be less expensive in the medium term.
- There is no single green growth model. Inclusive and green growth strategies will vary across countries, reflecting local contexts, preferences, and resource.

3. Inclusive green growth in developing countries

Although there exists much theoretical and empirical knowledge pertaining to both green and inclusive growth, green growth raises challenging questions, especially when it comes to the developing world. These include (World Bank, 2012):

- How can developing countries avoid locking in unsustainable and inefficient socioeconomic systems?
- Will technology allow developing countries to pursue a less environmentally damaging development path than industrial countries did?
- What is the best way to manage growth with scarce fiscal resources and limited planning and technical know-how? Is green growth just an aspirational goal - desirable from an environmental and ethical point of view, but unattainable given competing economic needs?

In what follows I provide an overview of a number of case studies of countries which have attempted to implement inclusive green growth policies, highlighting both successes and failures:

Tunisia

Gaye et al (2015: 2) comment that development programs implemented since independence have contributed to sustained economic growth and establishment of a diversified economic structure. Despite the integration of sustainable development into policies, Tunisia still faces serious challenges including:

- Increasing spatial and social exclusion, caused by regional disparities and high unemployment.
- High pressure on natural resources and ecosystems with negative consequences for air, water, and soil quality, as well as coastal marine degradation.

The National Conference on Sustainable Development held in October 2014 and “The National Strategy for Sustainable Development” recently adopted are considered to reflect a strong

commitment to an inclusive green economy. It is estimated that green investments of 2% of GDP would lead to 227,000 to 307,000 jobs, 7-9.5% of total employment (ITUC, 2012).

Further to this, the National Agency for Energy Efficiency (ANME) and GIZ (2012) comment that intra-sectoral transformation in the agriculture sector through crop diversification, coupled with soil and water conservation are viewed as policies that could contribute to positive agricultural yields and revenues, positive impacts on rural poverty, and reduced rural emigration. Energy efficiency and renewable energy also represent a vast field of deployment of IGG policies. The positive impacts on employment of the Tunisian Solar Plan are estimated between 7,000 and 20,000 jobs (ANME and GIZ, 2012).

Ethiopia

According to Gaye et al (2015: 2), over the past decade, Ethiopia's economy has become one of the largest non-oil exporting economies in Africa, and one of the top ten fastest growing economies in the world. Economic growth has led to a considerable increase in per capita GDP, from USD162.8 in 2005 to USD505 in 2013. Despite the progress, the poorest of the poor are yet to benefit to the same extent.

Ethiopia has embarked on structural transformation agenda, as reflected in its Growth and Transformation Plan (GTP) (2011-2015). The GTP places emphasis on promoting the agricultural and manufacturing sectors, and infrastructure development. GTP also recognises the importance of environmental issues (e.g., climate change) and of conservation and management of natural resources for sustainable structural transformation.

Ethiopia is also implementing a Climate Resilient and Green Economy (CRGE) strategy. This strategy is consistent with the structural transformation plan and reinforces the country's long-term economic vision. The Government has selected a suite of green economy projects meeting CRGE criteria. The Ethiopian Government (FDRE, 2011) suggest that when implemented, GDP per capita will increase to more than USD1800 by 2030, while at the same time GHG emissions will decrease on a per capita basis to 1.1t CO₂e. Four initiatives were selected to fast-track implementation of the CRGE strategy: hydropower development, rural cooking technologies, livestock value chain, and forestry development. These initiatives offer prospects of immediate economic growth and large carbon abatement potential. More importantly, the initiatives were selected to maximise synergies between environmental, social, and economic development outcomes, while managing the costs, trade-offs, and uncertainties of the transition.

Burkina Faso

Despite the positive outcomes observed in terms of economic growth rates (4.4%) over the period 2000-2013, Burkina Faso is one of the poorest countries in the world. The poverty rate was more than 40% 2000-2010 (UNICEF, 2010). The economy is heavily reliant on agriculture and mining. About 85% of the population depends on natural resources which contribute 31.5% of the GDP. In this context, the government is focusing on sustainable development through implementation of poverty-environment objectives and encouraging innovative investment in the agriculture and environment sectors for pro-poor growth. Since 2011, the country has been implementing the Strategy for Accelerated Growth and Sustainable Development (SCADD) (Gaye et al 2015: 2).

According to Gaye et al (2015: 2), the policies implemented through SCADD will accelerate the transition to an inclusive green economy and structural transformation. In the primary sector, SCADD has the potential to improve agricultural yields, productivity and growth of agricultural value added by 10.7% due to:

- water management;
- grants of agricultural inputs;
- technical assistance to producers;
- support to agricultural research and introduction of modern varieties, and
- farmers' access to agricultural mechanisation and credit. Moreover, SCADD will increase the growth of valued added of secondary and tertiary sectors by 11.8% and 12.5%, respectively. The ultimate impact will be reduced poverty and better income distribution.

Brazil

Countries such as Brazil have tried to build consensus through open and participatory approaches involving political parties and civil society. Ahead of the preparation of its 'National Plan on Climate Change', Brazil created the 'Brazilian Forum on Climate Change,' which brought together representatives from government, civil society, business, universities, and non-governmental organisations to mobilise society around a climate plan of action. Public participation took the form of a national conference on the environment and sector dialogues. Approaches that feature iterative, multi-stakeholder involvement and extensive consultation with the private sector and civil society create the transparency and political buy-in to make commitments to green growth sustainable. Extensive consultation can also help address some of the governance risks inherent in climate change - which is characterised by complexity, uncertainty, and asymmetries in information. It is particularly important to ensure opportunities for the indigenous and poor communities to voice their concerns and priorities (Transparency International 2011).

A systematic approach to assess how green growth policies affect inclusiveness

As suggested by Klasen (2010), people living in poverty may be affected by policies that impact their ability to participate in growth (growth process dimension) and on the distribution of growth's benefits (growth outcome dimension). Klassen (2010) continues that when conducting the analysis, it is of less importance which effects of green growth policies on inclusiveness are assigned to which specific dimension. Instead, it is more important to think in terms of these process and outcome dimensions, as this will facilitate the development of a comprehensive set of analytical questions and help to ensure that no relevant effects are omitted.

The ability of people living in poverty to participate in the growth process (process dimension) can be assessed by asking the following questions (GIZ, 2015: 13-14):

1. Sectors: Does the green growth policy affect sectors where an above-average share of people living in poverty are economically active? (For example, agriculture or the informal sector.)
2. Employment and production factors: Does the green growth policy affect employment opportunities and production factors that people living in poverty depend upon? (For example, low-skilled labour, health, education and financial, physical, social and natural

capital (Hallegatte et al., 2014: 6). This aspect needs to factor in both the ‘green’ employment opportunities created, and the ‘brown’ employment opportunities lost (Bowen, 2014).

The distribution of growth benefits (outcome dimension) can be assessed by asking the following questions (GIZ, 2015: 13-14):

3. Income: Does the green growth policy affect the income of people living in poverty?
4. Inequality: Does the green growth policy affect income distribution within the society?
5. Access: Does the green growth policy affect access to goods or services by people living in poverty? (For example, to food, energy, water or finance.)
6. Regions: Does the green growth policy affect regions with an above-average share of people living in poverty? (For example, rural areas or urban slums.)

Here, the question of inequality goes beyond the narrower focus on poverty reduction to include distribution effects on all groups of society. This question may require normative decisions to be taken on, for example, the desirability of green growth policies that enable the economic growth of all income groups, but allow poor people’s incomes to grow at a slower pace, thereby increasing inequality. Here, the question of inequality goes beyond the narrower focus on poverty reduction to include distribution effects on all groups of society. This question may require normative decisions to be taken on, for example, the desirability of green growth policies that enable the economic growth of all income groups, but allow poor people’s incomes to grow at a slower pace, thereby increasing inequality.

4. Trade-offs and synergies involved in inclusive and green growth

At the core of this rapid literature review lies the question of how policy makers weigh the trade-offs between the costs (possible reductions in investments, income, and consumption) and benefits (possible improvements on the environmental, social, and economic fronts) given that the net impact varies depending on the policy considered, the context, and the time horizon.

The World Bank (2012) suggests that a start is classifying the potential benefits of green growth policies (Table 1). In a green growth context, any new policy should be examined for ways to maximise the potential for short-term benefits while minimising the costs. Measuring the net impacts of green growth policies also requires capturing suboptimal conditions caused by market or government failures or non-rational behaviours.

Table 1: Potential benefits of green growth policies (World Bank, 2012: 40-41)

Type of Benefit	Impact on Welfare	Channels through which Policy Affects Welfare
Environmental	Increases welfare directly	Improved environment
Economic	Increases welfare by raising income	Increase in factors of production (physical capital, human capital, and natural capital)

		<p>Accelerated innovation, through correcting market failures in knowledge</p> <p>Enhanced efficiency, through correcting non-environmental market failures and influencing behaviours</p>
Social	Increases welfare through distributional effects, reduced volatility, and other social indicators	<p>Increased resilience to natural disasters, commodity price volatility, and economic crises</p> <p>Job creation and poverty reduction</p>

Green growth strategies can increase welfare by providing both environmental and economic benefits. However, as noted by the World Bank (2012) such policies are not a panacea to a country's economic ills: if economic growth is insufficient because of institutional or policy problems, green growth will not boost it in the absence of other structural changes. Many green policies impose economic costs in the short term, such as higher investment or operational costs. But over the longer term, they are designed to yield economic benefits and contribute to long-term sustainable growth. Even so, short-term costs can create trade-offs between environmental protection and short-term economic growth. For this reason, political and social acceptability require that green growth policies be designed with the specific goals of mitigating trade-offs across both space and time and offsetting costs by maximising synergies and short-term economic benefits (such as job creation, poverty alleviation, and increased efficiency).

Key dimensions of the needed balancing act between relevance and enforceability of environmental objectives include the choice of indicators with which to measure progress toward objectives; the time horizon over which environmental objectives should be selected; and the scale (national, local, or sectoral) at which environmental objectives are set. A green growth strategy needs to be designed before individual projects are evaluated and selected:

- Step 1 identifies the key economic and social objectives in terms of the growth and welfare channels:
 - Increase production factors (human, natural, and physical capital).
 - Enhance efficiency, by correcting market failures to move closer to the production function (the maximum production level possible with the available technology, physical capital, labour, and environment, assuming maximum efficiency).
 - Push out the production frontier, by correcting innovation and dissemination market failures in order to be able to produce more with less.
 - Increase economic resilience and reduce vulnerability to natural hazards and commodity price volatility.
 - Increase the job content and poverty reduction of growth.

In addition, policy makers need to take other important policy goals, such as maintaining a balance in regional and local development, which may also offer a potential source of synergy into account.

- Step 2 identifies:
 - the environmental improvements that are most likely to increase welfare, and

- the risks of irreversibility in both the environmental and economic domains. The idea is to focus on welfare-improving environmental objectives that preclude a “grow dirty, clean up later” pathway.

The analysis should combine scientific and economic information from reports, local knowledge, and widely agreed priorities. It should rely on broad consultations to ensure consistency with population goals, objectives, and preferences and to avoid conflicts between the green growth strategy and other planning initiatives.

- Step 3 is to determine which types of policy interventions would help a country reach its environmental goals while also improving economic growth and social welfare.

Political economy considerations play an important part in determining the feasibility of a realignment of fiscal policies with green growth objectives. Interest groups will resist the withdrawal of subsidies and tax incentives. A phased approach supported by communication and complementary policies that reallocate resources to the poor can help build constituencies for reforms. Policy makers must consider how environmental policies affect businesses and individuals, taking into account their decision-making biases and the noneconomic incentives that affect behaviours. A strategy that takes these aspects into account, by, for instance, framing policy changes within a positive collective project and providing individuals with feedback on how they behave with respect to the project, will be more efficient than one based on an economic argument alone.

Green sectoral interventions can help increase factors of production, push out the production frontier, enhance efficiency, improve resilience, create jobs, and reduce poverty. In some countries, urban congestion and the lack of efficient transportation reduce well-being and hold back economic growth, on top of causing negative environmental effects. Investments in public transit and changes in land-use plans to favour a more compact urban area could reduce air pollution and spur growth (thanks to the benefits from urbanisation and concentration).

- Step 4: Policy makers face limitations in terms of the capacity and resources to design and implement reforms and the political and social capital to launch several reforms simultaneously. They therefore need to define priorities based on urgency (to avoid lock-in and irreversibility) and synergies (the existence of local and immediate benefits that will help diminish political and social resistance). In designing a green growth strategy, priority should go to policies that are high in terms of local and immediate benefits and more urgent (such as public urban transport and sustainable intensification in agriculture). Policies that provide local and immediate benefits, even if they are not urgent, can be implemented at any level of income. It is more difficult to implement policies that are urgent but involve significant trade-offs (such as reduced deforestation). But these policies would be more costly, or even impossible, to implement later. For this reason, these policies require international cooperation, especially when they affect global challenges, such as climate change. Developing countries (especially low income countries) should focus on environmental policies that have a negative or zero economic cost thanks to synergies with development (such as developing hydropower where appropriate, or implementing specific urban plans); have a positive economic cost but large direct welfare impacts, that is, when they target local environment goods such as local air pollution or natural risks; and whose cost can be offset with external resources (such as carbon trading).

- Step 5 is to thoroughly review each policy and project as a function of the selected priorities and strategic choices. The standard cost-benefit analysis, which is commonly used to evaluate public policies or investment projects, is necessary but needs to be supplemented by other approaches for green growth policies. The reason is that cost-benefit analysis encounters three major difficulties when applied to environmental or green growth policies.
 - First, some of the benefits (or costs) are difficult to assess and measure. Environmental benefits are often problematic to quantify and value, beyond the assessment of health impacts. However, some economic benefits, such as innovation-related or resilience-related benefits, are also difficult to assess and are thus often left out of the analysis. More generally, benefit-cost ratios consider only one project at a time and often cannot take into account the integration within a broader, longer-term strategy and the consistency with priorities and strategic choices.
 - Second, different stakeholders often assign very different weights to different types of consequences, and differences in world views and priorities translate into different preferences for design and targets of policies. Cost-benefit analysis requires agreeing on values, something that can be difficult to achieve.
 - Third, many of the tools and policies that can be part of a green growth strategy involve significant uncertainties. This uncertainty arises from many sources, including technological change, climate change, and policy efficiency and enforcement. Cost-benefit analysis can capture uncertainty when it can be translated into probabilities for different outcomes. Where policies and projects involve deep uncertainty, however it is difficult to estimate probabilities or reconcile different stakeholders' world views.

Since the inception of the green growth concept, agencies such as UNEP have stressed the potential for achieving synergies with social development outcomes (Benson et al., 2014). However, the evolution of the discourse on green growth during the Rio+20 conference, shaped in large part by non-governmental organisations and developing-country governments, and the subsequent adaptations of green growth definitions to include a stronger focus on inclusiveness are evidence of the widely held concern that to deliver green growth and achieve social development goals trade-offs may be required or inevitable. In practice, it might not be possible to achieve both goals simultaneously. Indeed, the effects of green growth policies - for example, energy price rises imposed to offset the cost of supporting renewable energy, can have negative income effects on people living in poverty.

General guidance of synergies and trade-offs that are possible between the environmental and economic pillars of sustainability is difficult to obtain, and guidance on those possible between the environmental and social pillars even more so (Dercon, 2014). The complexity of environmental and social challenges to be addressed by green and inclusive growth policies and the dearth of policies and measures attempting to meet them preclude a general overview of this topic. However, by combining the concepts of inclusive growth and green growth, it becomes possible to develop a checklist against which policymakers can assess the social impacts of green growth policy measures and, consequently, address concerns related to the achievement of social development outcomes.

While green growth can create significant opportunities for growth and offers the chance for sustainable development, it may also require, at least temporarily, trade-offs between achieving

environmental sustainability and realising social development objectives. What is needed, therefore, is smart and coherent policy planning that will achieve the synergies required to ensure green growth policy also contributes to the delivery of social development objectives.

In many countries, a transition towards inclusive green growth will require deep structural changes. Steering such changes is a complex task and one that requires a strategic and long-term approach. Developing a long term vision for change and embedding it in the country's national development strategy is the first step in this journey. The identification of a viable vision for inclusive green growth crucially depends on the consideration of synergies and trade-offs between the economic, social and environmental dimensions of sustainability. Identifying these interrelations requires evidence on the social, economic and environmental 'hotspots' (i.e., factors that are either particularly advantageous or problematic) of a country, and on the likely impacts wrought by policy measures on these three dimensions. This evidence will guide the subsequent process to set goals, target sectors and choose and design instruments. It will also inform the implementation and evaluation stages, after which the initial goals, targets and instruments can be adapted, if required.

Following the logic of the above checklist, there are five core areas that policymakers need to consider when designing inclusive green growth policies (GIZ, 2015: 20):

1. *Exercising particular caution when a green growth policy targets sectors with an above-average share of people living in poverty.* Positive or negative effects on low-income households may in this case be particularly strong - for example, when a reform targets the agricultural sector.
2. *Protecting and improving the access of people living in poverty to employment opportunities and production factors.* Many environmental policies are designed to improve or protect natural resources and/or reduce pollution. Since people living in poverty disproportionately depend on natural resources for their employment and income and are least able to protect themselves from environmental pollution, there are clear synergies to be found in this area (Bowen, 2014). However, the distributional effects of such policies need to be considered and negative effects on low-income households avoided. Furthermore, when policies seek to protect natural resources from overuse and it is mainly people living in poverty who are responsible for this overuse, appropriate compensation mechanisms must be found to ensure that these people's livelihoods are not threatened.
3. *Assessing effects on inequality.* It is important to assess not only the absolute impact of green growth policies on the incomes of people living in poverty, but also how the policies affect these people's incomes relative to other groups in the population.
4. *Designing inclusive green growth policies to enhance the access of people living in poverty to goods and services.* Many people living in poverty lack access to basic goods and services. Policies that create, protect or enhance this access and, at the same time, protect the environment can be considered green and inclusive - for example, electrification with renewable energies or sustainable water management. However, there may also be trade-offs - for example, when establishing nature preservation areas it may be possible to provide poor people with access to game animals.
5. *Considering regional effects and maximising positive (or minimising negative) impacts on disadvantaged regions.* Green technologies that use new resources can offer new opportunities for economically disadvantaged regions that are, for example, endowed with high wind or solar energy generation potential. Tapping into these resources can

certainly create economic opportunities for residents of these areas. However, green policies can also further disadvantage structurally weak areas, as demonstrated by Liang and Wei (2012) in their example of the Chinese carbon tax scheme that could widen the income gap between rural and urban areas.

The relative weighting of environmental, social and economic aims with respect to development objectives will differ between countries, as will the emphasis placed on the environmental or social aspects of green and inclusive growth. For some countries, the priority might be identifying social hotspots, such as extreme inequality or persistent absolute poverty, while other countries may wish to tackle grave environmental challenges, such as air and water pollution or desertification. These national hotspots will define the starting point of strategic policymaking, with minimum requirements for the other dimensions of sustainability serving as guard rails. Identifying hotspots and appropriate strategies to tackle them requires evidence; however, particularly in developing countries, this is often unavailable. Further research is therefore needed, among other areas, into:

- appropriate and easy-to-use tools for identifying national environmental and social hotspots;
- the effects of specific green growth policies on the informal sector;
- the net employment effects of specific green growth policies - if possible, disaggregated by skill levels;
- the design features that specific green growth policies need to deliver a progressive income effect;
- the effects of specific green growth policies on regional distribution.

Alongside the knowledge-based, rational choice of green and inclusive growth policies, the government needs to mobilise societal support to ensure implementation is successful. To this end, policymakers need to cooperate with stakeholders, explore the policy space and understand the opportunities and risks. In so doing, they need to go beyond the national context: the global economy and international institutions can be supportive as well as obstructive factors, as can international actors like foreign investors and donors. It is important to align these actors with the transformative strategy and to draw on international support to create political impetus and ease capacity and funding constraints.

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