

I. Why a Green Growth Strategy?

1. Two main factors underpin the demand and rationale for green growth. First, there are growing concerns about the environmental unsustainability of past and current economic growth patterns and the risk of irreversibly altering the environmental base needed to sustain economic prosperity. Increased awareness of a potential future climate crisis has made it clear that the environment and the economy can no longer be considered in isolation. These concerns point to the need for substantial transformation of consumption behaviour, industry structures and technologies. Without a global shift to a low-carbon, resource-efficient economy, the world is on track for increasing greenhouse gas (GHG) emissions by 70% by 2050, and temperature increases of 4-6°C by the end of the century, far from the target countries recently agreed in Copenhagen of staying within a 2°C increase (Table 1)¹. To feed the expected world population in 2050, food production will need to be increased by 70% (FAO, 2009) putting additional pressure on already over-used natural resources. A further 1 billion people are expected to live in severe water-stressed areas by 2030, raising a challenge in terms of the policies and financing needed to ensure access to clean water. The costs of inaction on these challenges to the economy, to human health and welfare and to the environment would be high (OECD, 2008a).

2. Second, the financial and economic crisis creates room for public policies aimed at encouraging recovery and renewed growth on more environmentally and socially sustainable grounds. The high level of economic slack implies that the opportunity cost of green growth investments is temporarily depressed and indeed the fiscal stimulus packages put in place by governments in response to the crisis contain a number of measures specifically aimed at greening the recovery. A strategic vision is necessary to ensure that, during the crisis exit and beyond, the implemented policies are the most appropriate from an economic efficiency, environmental integrity and social equity point of view, as well as coherent from both a national and an international perspective.

3. Within this context, green growth can be seen as a way to pursue economic growth and development, while preventing environmental degradation, biodiversity loss and unsustainable natural resource use. It aims at maximising the chances of exploiting cleaner sources of growth, thereby leading to a more environmentally sustainable growth model. This will involve seizing the opportunities for development of new green industries, jobs, and technologies, as well as managing the transition for greening the more traditional sectors and the associated employment and distributional effects. It will require adopting new technologies, developing new products and supporting new patterns of demand from households, companies as well as governments.

4. Green growth policies will require an integrated strategy that effectively combines economic, environmental and social policy objectives covering demand and supply aspects, both economy-wide and at sector level to insure coherence in policy design and implementation as well as to maximize the synergies among different policy actions. Green growth will also necessitate the development of new measurements covering dimensions of quality-of-life above and beyond material well-being.

5. A strategy for green growth will provide renewed direction to environmental and economic policy in the tradition of sustainable development. Sustainable development, first enshrined in the Rio declaration nearly 20 years ago, is an important antecedent for green growth. At the same time, a green growth strategy which leverages off the substantial body of analysis and policy effort that has flowed since Rio can be used to create a clear and focused agenda for delivering on many of its aspirations.

6. Green growth is relevant to both developed and developing countries. For the majority of developing countries providing basic education, ensuring food security, and delivering essential services such as water supply and sanitation will remain overarching

1. See OECD (2009a). The baseline scenario examined in the study suggests that, on the assumption of unchanged policies, GHG emissions could rise by over 50% between now and 2050.

priorities. At the same time, developing countries also have a larger share of their economies directly dependent on natural resources and are particularly vulnerable to the impacts of climate change. Adaptation to the impacts of climate change will be critical for development, while sound management of natural resources offers considerable economic opportunities. While green growth strategies will be articulated at the national level, the international dimension should be fully considered in developing any related policy approaches. International co-operation and co-ordination will be critical for ensuring overall effectiveness.

Responding to the Ministerial mandate

7. At the OECD Ministerial Council Meeting (MCM) of June 2009, ministers from all 30 OECD countries as well as Chile, Estonia, Israel and Slovenia endorsed a mandate for the OECD to develop a Green Growth Strategy, bringing together economic, environmental, social, technological, and development aspects into a comprehensive framework. As one of the Organisation's horizontal priorities, the Strategy draws on the work of more than 25 OECD Committees involved in its development as well as on the insights of the Innovation Strategy and the Reassessed Job Strategy. The Strategy's Synthesis Report will be delivered at the 2011 MCM and will provide specific tools and policy recommendations to help OECD and non-OECD governments to identify policies for the most efficient shift to a green economy. The policy framework will be flexible enough to adapt to different national circumstances.

8. The Strategy will also aim at developing measures and analytical tools for identifying the potential effects of green growth on levels and nature of employment, trade, well-being, the value of material income, fiscal balances and income distribution, comparing these to developments otherwise expected if historical economic and environmental trends were to continue. Moreover, the Strategy will examine how OECD countries can better support green growth in developing countries, including by strengthening development co-operation and through ensuring increased coherence in OECD country policies that affect development (Box 1).

Box 1. Contribution of the Green Growth Strategy

- Creating a common understanding of green growth;
- Developing a conceptual framework for green growth;
- Assessing countries' green growth measures taken since the crisis and future plans;
- Quantifying the potential effects of green growth;
- Describing the new issues raised by green growth;
- Identifying key policy principles and providing a toolkit for green growth policies;
- Developing a set of indicators covering economic, environmental and well-being aspects;
- Strengthening performance through peer reviews of green growth policies;
- Addressing the political economy considerations of green growth;
- Identifying lessons learned and best practices;
- Providing a platform for international co-ordination and dialogue through the International Green Growth Dialogue initiative;
- Promoting co-operation between OECD and non-OECD countries on issues relating to green growth.

The Interim Report

9. As a first step towards the 2011 MCM, this Interim Report provides a framework for understanding green growth and some preliminary findings on a number of key challenges that policy makers are facing in promoting green growth. This selection reflects the shorter-term challenges that countries will need to address to sustain a green recovery, as well as areas of OECD work where initial analytical results are already available. The Interim Report therefore only addresses a small sub-set of the broader range of issues that will be covered in the Synthesis Report of the Green Growth Strategy.

10. Section II presents a broad framework for understanding green growth, outlining the key parameters and policy approaches needed to move towards more sustainable economies. Section III considers a number of challenges that countries are facing in exiting the crisis and moving towards greener economies, as well as selected issues in the broader policy framework. Section IV identifies the need for new measurements for green growth and presents the key indicators that will be developed by the Strategy. Section V closes with a discussion of the next steps for delivering the Synthesis Report and the directions of ongoing work in this regard. Appendix I to this Report includes an indicative compendium of existing OECD indicators related to green growth. Appendix II highlights a few examples of work areas that are being further developed as input into the Synthesis Green Growth Strategy.

Box 2. Progress on key environmental challenges

A number of environmental targets have been agreed internationally that reflect the carrying capacity of the environment. Surpassing these targets poses risks of irreversible damage to the environment and the ecosystems that support life on earth. However, sizeable gaps remain with respect to the targets that the international community has endorsed to tackle the risks associated with environmental degradation. For certain environmental challenges, knowledge gaps and uncertainty suggest that precaution may need to be applied in the management of the potential risks.

In the case of climate change, while the Copenhagen Accord noted at the United Nations Framework Convention on Climate Change Conference of the Parties at its fifteenth session (COP 15) represents an important international step in addressing climate change, the emissions reductions that countries have put forward are not yet enough. Since Copenhagen, 113 countries have associated themselves with the Accord, responsible for about 85% of greenhouse gases worldwide. The Accord lists both emission reduction targets put forward by industrialised countries (Annex I countries) and specific emissions reduction actions from most emerging and a number of developing countries. Recent OECD analysis suggests that the most ambitious industrialised country targets on the table following the Copenhagen meeting would amount to an 18% reduction in their emissions by 2020 from 1990 levels. While this is significant, it is less than the 25-40% reduction that the Intergovernmental Panel on Climate Change (IPCC) suggests is needed to stay within a 2°C temperature increase (Table 1). If industrialised countries reach only the lower bound of their declared targets, they will reduce emissions by only 12% in 2020 compared with 1990. According to the IPCC, significant deviation from business-as-usual is needed by developing countries; their current targets would amount to an 8% reduction in emissions in 2020 from business-as-usual levels.

Similarly, concerning biodiversity and ecosystems services, there is widespread acceptance that countries have failed to meet the 2010 target to achieve a significant reduction in the rate of biodiversity loss globally as was agreed in 2002 by Parties of United Nations Convention on Biological Diversity. This loss is driven primarily by land use changes (conversion to agriculture and infrastructure expansion), unsustainable use of natural resources, invasive alien species, climate change and pollution. Although governments have increased the scale of their responses to the loss of biodiversity, for example by expanding protected areas, the OECD projects continued biodiversity loss in the coming decade unless there is a significant policy shift. For example, recent data from the FAO indicates that on a global scale, 50% of fish stocks are fully exploited, 25-30% of stocks are over-exploited and about 20% of the world's fish stocks are viable for further exploitation.

Enhanced action is required to reverse the trend of unsustainable use and pollution of water resources. UN estimates suggest that the world is not on track to meet the Millennium Development Goals related to water, including halving by 2015 the proportion of people without access to safe drinking water and sanitation. Despite their pledges to develop integrated water resources management and water efficiency plans by 2005, the vast majority of countries (including OECD members) have yet to implement such plans.

Table 1: Declared country targets and actions to reduce GHG emissions and their revenue potential

Region /country	Declared targets and actions	Ambitious action scenario (with linking and offsets ¹); year 2020			
		Simulated target as % deviation from base year ²	GDP % deviation from BAU	Real income ³ % deviation from BAU	Potential revenues (billions of USD)
Australia & New Zealand	Australia -5% to -25% from 2000; New Zealand -10% to -20% from 1990	-12.0	-0.8	-1.7	24
Canada	-17% from 2005	0.0	-0.4	-2.7	24
EU27 & EFTA	EU27, Lichtenstein, Switzerland -20% to -30%; Norway -30% to -40%; Iceland -30%; Monaco -20%; all from 1990	-30.0	-0.4	-0.7	167
Japan	-25% from 1990	-25.0	-0.2	-0.2	44
Non-EU Eastern Europe	Ukraine -20% from 1990; Belarus 0% to -10%; Croatia -5%	-16.5	-2.1	-2.8	39
Russia	-15% to -25% from 1990	-25.0	-2.8	-3.5	73
USA	-17% from 2005	-5.5	-0.3	-0.7	253
Brazil	-36% to -39% from BAU	-20.8	-2.0	-5.3	94
China	Carbon intensity of -40% to -45% from 2005	62.3	-0.3	-0.3	81
India	Carbon intensity of -20% to -25% from 2005	66.8	0.0	0.6	0
Oil Exporting countries	Indonesia -26% from BAU; Israel -20% from BAU	32.6	-0.9	-2.9	33
ROW	Korea -30% from BAU; Mexico -50% by 2050; South Africa -34%; many other pledges (incl. Costa Rica, Maldives)	28.6	0.0	-0.1	57
Annex I	-12% to -18% from 1990; (-23% to -29% from BAU)	-18.1	-0.4	-0.8	624
non Annex I	+43% to +49% from 2005; (-5% to -9% from BAU)	43.2	-0.3	-0.7	265
World	+12% to +18% from 2005; (-12% to -17% from BAU)	12.2	-0.4	-0.8	889

1. Due to the limited information available on what offset policies might be in the future, a default value of 20% of the target is used for Annex I countries, with two exceptions. First, Canada has previously informally indicated it would limit companies to buy offsets to a maximum 10%. Secondly, for Russia, the Low & Fragmented scenario assumes no offsets, as the domestic target is not binding and thus there is no demand for offsets.

2. Due to data availability constraints, the base year is 1990 for Annex I regions and 2005 for non-Annex I regions (Brazil, China, India, Middle East, and Rest of the world). Global deviation is based on 2005 data for all regions.

3. Hicksian "equivalent real income variation" defined as the change in real income (in percentage) necessary to ensure the same level of utility to consumers as in the baseline projection.

Source: OECD ENV-Linkages model; updated analysis based on Box 7.2 and table 7.3 of OECD (2009a).