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Background paper for the ministerial consultations

Discussion paper presented by the Executive Director

Addendum

Green economy

Summary

The present paper has been prepared to provide a succinct background briefing for ministers on the first topic of the ministerial consultations to take place at the twenty-sixth session of the Governing Council/Global Ministerial Environment Forum: “Benefits, challenges and risks associated with a transition to a green economy”. It is intended to stimulate discussion during the ministerial consultations.

* UNEP/GC.26/1.

Introduction

1. Discussions during the ministerial consultations to be held during the twenty-sixth session of the United Nations Environment Programme (UNEP) Governing Council/Global Ministerial Environment Forum will focus on the theme of “Benefits, challenges and risks associated with a transition to a green economy”. These discussions will build upon the ministerial consultations on the green economy held at the eleventh special session of the Council/Forum, as reflected in the President’s summary of those consultations.¹
2. The discussions present an opportunity for the world’s environment ministers to explore the following subjects relevant to a green economy:
 - (a) Historical context – the United Nations Conference on Environment and Development in 1992 and the World Summit on Sustainable Development in 2002 and recent international developments, including calls for greening the economy amid a global financial crisis;
 - (b) Challenges and opportunities: the initial findings from the forthcoming UNEP green economy report and their implications for policy;
 - (c) Country needs, support and capacity-building for Governments and industries on the use of new policies and economic instruments, including those related to sustainable consumption and production approaches;
 - (d) Learning from others: country experiences in designing and implementing policies and instruments for low-carbon, resource-efficient and equitable growth;
 - (e) Vehicles for tracking progress: indicators for measuring and communicating progress on green investment, job creation, resource efficiency, poverty eradication, ecosystem integrity and wealth creation beyond gross domestic product.

I. Context and concept of a green economy

3. The green economy concept is best understood in reference to its historical context. Although it has gained international prominence relatively recently, the concept builds on decades of analysis and discussion of the interaction between humans, the economy and the environment, and its genesis is intimately linked to the concept of sustainable development.
4. In 1982, the General Assembly established the World Commission on Environment and Development (commonly referred to as the “Brundtland Commission”) to examine the relationship between environment and development. Five years later, the Brundtland Commission published its landmark report entitled “Our Common Future”, in which sustainable development was defined as the “ability to make development sustainable – to ensure it meets the needs of the present without compromising the ability of future generations to meet their own needs”.² The report made clear the interdependency between environment and development by noting that “the ‘environment’ is where we live; and ‘development’ is what we all do in attempting to improve our lot within that abode. The two are inseparable”.³
5. Sustainable development gained further prominence at the United Nations Conference on Environment and Development, held in 1992 in Rio de Janeiro, Brazil. At that conference, Governments issued the Rio Declaration on Environment and Development⁴ and adopted Agenda 21,⁵ which contained a programme of desired actions. In so doing, they affirmed that “States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation”.

1 A/65/25, annex II. The President’s summary is a reflection of the interactive dialogue that occurred among the ministers and other heads of delegation attending the eleventh special session of the Council/Forum. It reflects the ideas presented and discussed rather than a consensus view of all points raised by participants.

2 World Commission on Environment and Development, *Our Common Future* (New York, Oxford University Press, 1987), p. 8.

3 *Ibid.*, p. xi.

4 *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992* (United Nations publication, Sales No. E.93.I.8 and corrigenda), vol. I: Resolutions adopted by the Conference, resolution 1, annex I.

5 *Ibid.*, resolution 1, annex II.

6. During roughly the same period, two academic publications first introduced the concept of a green economy. The first, *Blueprint for a Green Economy*, highlighted the interdependence of the economy and the environment as a means of further understanding and achieving sustainable development.⁶ The second, *The Green Economy*, considered the relationship between the environment and the economy in a broader framework and emphasized the importance of humankind's relationship with the natural world.⁷ Although these publications first raised the concept, it was not until nearly 20 years later that the green economy gained international attention.

7. In the interim, a number of major international conferences were convened that further refined the definition and objectives of sustainable development. The two most prominent were the Millennium Summit of the United Nations and the World Summit on Sustainable Development. The Millennium Summit, convened in New York from 6 to 8 September 2000, resulted in the General Assembly adopting the United Nations Millennium Declaration,⁸ which formed the basis for the Millennium Development Goals, a group of eight time-bound international targets relevant to sustainable development. At the World Summit on Sustainable Development, held from 26 August to 4 September 2002 in Johannesburg, South Africa, world leaders renewed their commitment to the Millennium Declaration⁹ and adopted a plan of implementation that encouraged, among other things, relevant authorities at all levels to take sustainable development into account in decision-making, including actions to promote the internalization of environmental costs and the use of economic instruments.

8. In 2008, the world witnessed an unprecedented financial crisis that undermined and threatened efforts to achieve the Goals and sustainable development. In the wake of this crisis, many Governments began to reconsider traditional economic models and concepts of wealth and prosperity. This discussion was further stimulated by increased evidence and recognition of the risks posed by climate change and unsustainable ecosystem degradation. It was in this context that the green economy concept re-emerged.

9. As a number of countries considered adopting fiscal stimulus packages to tackle the financial crisis, UNEP was instrumental in reigniting interest in a green economy through its promotion of what it termed a "global green new deal". The concept encouraged countries to focus a portion of their fiscal stimulus packages on investments that would spur economic recovery and job creation in economic sectors that contributed to environmental sustainability. Building on the success of that effort, UNEP launched a comprehensive green economy initiative in 2008 to outline policies and pathways for more sustainable economic growth.

10. As there is currently no internationally agreed definition of the term "green economy", UNEP developed a working definition, according to which a green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. On a more operational level, a green economy can be thought of as an economy whose growth in income and employment is driven by public and private investments that lead to enhanced resource efficiency, reduced carbon emissions, waste and pollution and the prevention of biodiversity loss and ecosystem degradation. These investments are in turn driven by a growing market demand for green goods and services, technological innovation and, in many cases, by correcting fiscal and sectoral policies to ensure that prices adequately reflect environmental costs.

11. The green economy concept gained additional international prominence when the General Assembly, by its resolution 64/236 of 24 December 2009, decided to organize, in 2012, the United Nations Conference on Sustainable Development, which would focus on the theme of a green economy in the context of sustainable development and poverty eradication.

12. The eleventh special session of the UNEP Governing Council/Global Ministerial Environment Forum, which took place in February 2010 in Bali, Indonesia, provided an opportunity for environment ministers to discuss environment in the multilateral system, with the green economy being one of three principal topics considered. In his summary of the deliberations, the President of the Council/Forum said that a green economy was the right way towards a stronger, cleaner and fairer world economy and a prerequisite for a more stable economic foundation. He noted that many countries had the will to move to a green economy and that some were already making commitments

6 D. Pearce and others, *Blueprint for a Green Economy* (London, Earthscan Publications Ltd., 1989).

7 M. Jacobs, *The Green Economy* (London, Pluto Press, 1991).

8 A/RES/55/2.

9 *Report of the World Summit on Sustainable Development*, Johannesburg, South Africa, 26 August-4 September 2002 (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

and implementing elements of such an economy, suggesting that such fast movers were likely to become the developed countries of the future, while those who moved slowly would become the new under-developed.

13. The discussions at the eleventh special session led to the adoption of the Nusa Dua Declaration, in which ministers and heads of delegation acknowledged that advancing the concept of a green economy in the context of sustainable development and poverty eradication could significantly address current challenges and deliver economic development opportunities and multiple benefits for all nations and highlighted the important leading role of UNEP in discussions on further defining and promoting the concept.

II. Green economy in action

14. Many countries are actively promoting a transition to a green economy. Green economy policies and objectives have been incorporated into national strategies in many developed and developing countries. One such example is Indonesia’s long-term national development plan for 2005–2025, which includes the goal of a “green and everlasting Indonesia”. Likewise, China’s five-year plan for 2006–2010 allocated a significant share of investments to green sectors, with an emphasis on renewable energy and energy efficiency, and the draft plan for 2011–2015 looks to continue these green investments. In Brazil, the State of Sao Paulo has implemented green economy plans and a set of green economy indicators that will be used to measure progress in a range of sectors. In Barbados, the idea of building a green economy by strengthening the physical infrastructure and preserving the environment is part of the country’s national strategic plan. The table highlights some green economy plans and activities at the country level.

Snapshot of national green economy initiatives

<i>Country</i>	<i>Green economy initiatives</i>
Barbados	Barbados’ national strategic plan 2006–2025 includes achieving a green economy as one of its six strategic goals. The plan sets policy goals and measurable targets for energy efficiency, waste management and the sustainable management of natural resources and ecosystems, with emphasis on coastal ecosystem protection. One such target is for renewable energy to meet 30 per cent of energy requirements by 2025.
Brazil	Brazil, the host of the United Nations Conference on Sustainable Development, is taking numerous initiatives at the national and state level to promote a green economy. One example is the comprehensive green economy initiative launched by the State of Sao Paulo, which covers a range of economic sectors and areas critical to a transition to a green economy.
Cambodia	Cambodia adopted a national green growth road map in 2009. The road map outlines possible paths for short-term, medium-term and long-term implementation of a green economy in the context of Cambodia’s overall development framework during the period 2009–2014.
China	China has set a target to produce 16 per cent of its primary energy from renewable sources by 2020. Its five-year plan for 2006–2010 included significant investment in the wind, solar and other renewable energy sources, and the draft plan for 2011–2015 includes further measures to enhance the production and use of renewable energy.
Egypt	Egypt’s green transformation strategy incorporates many green economy principles and objectives. This overall strategy aims to expand targets set for specific sectors, such as the energy sector. The latest competitiveness report by the Egyptian National Competitiveness Council focuses on the strategies, investments and policies that can drive a green transformation.
Ethiopia	Ethiopia has announced plans to begin producing wind energy. It is expected that the planned wind power plants will contribute to an increase in access to energy in a country where currently only 25 per cent of the population enjoy such access. Ethiopia is also implementing a policy to increase its forest cover and to improve the management of existing forests.

Indonesia	The promotion of a green economy is part of Indonesia's sustainable development strategy, a strategy that is pro-growth, pro-jobs, pro-poor and pro-environment. Targets include 7 per cent sustained economic growth and reduction of carbon emissions by 26–40 per cent by 2020.
Jordan	Jordan is currently promoting various policies, initiatives and programmes aimed at achieving a green economy, such as the Eco-Cities Forum, the Eco-Financing Seminar, the Zarqa River rehabilitation project and a set of fiscal incentives to promote renewable energies and energy efficiency. The 2010 executive programme states the goal of turning the country into a regional centre for green services and industries.
Kenya	Kenya has launched a number of initiatives to enhance investment in ecosystem restoration and clean energy development. For example, it has adopted a renewable energy feed-in tariff and aims to stimulate the generation of 1300 MW of electricity from wind, biomass, small hydro, geothermal, biogas and solar energy sources.
Mexico	Mexico is one of the first countries to commit itself to a voluntary carbon reduction target by pledging to halve greenhouse-gas emissions by 2050. It is also undertaking a number of policies and projects on resource efficiency, clean energy and other areas of relevance to a green economy. In the energy sector, it has planned to add more than 500 MW of wind-powered generation capacity to the grid by 2012.
Republic of Korea	The Republic of Korea adopted a national strategy and a five-year plan for green growth for the period 2009–2013, allocating 2 per cent of its gross domestic product to investment in several green sectors such as renewable energy, energy efficiency, clean technology and water.
Papua New Guinea	Papua New Guinea has developed a national strategy for climate-compatible development and has set itself the objective of becoming carbon-neutral by 2050 while tripling its gross domestic product.
Rwanda	As part of the Vision 2020 strategy, Rwanda has adopted a set of measurable policy goals with regard to population, land, the management and use of natural resources, and other areas that can contribute to the emergence of a green economy.
South Africa	South Africa announced in 2009 a plan to put in place a binding climate change policy within three years to cap emissions growth by 2020–2025. It aims to enhance energy efficiency and generate some 15 per cent of its electricity from renewable sources by 2020. In May 2010, it convened a green economy summit and is currently working on a national green economy plan.
Spain	Spain has set a target of producing 22.7 per cent of the country's total energy supply, including 42.3 per cent of its electricity supply, from renewable sources by 2020. It is also implementing a comprehensive water resources management programme, which includes significant investments that focus on improving efficiency in water use.
United Kingdom	The United Kingdom adopted a low-carbon plan that seeks to achieve a 34 per cent cut in greenhouse-gas emissions from 1990 levels by 2020. In May 2010, it announced new measures to promote energy efficiency in homes and plans to create a green investment bank.
Uruguay	Uruguay has launched plans to produce half of the country's energy supply from renewable energy sources by 2015, including specific targets for producing electricity from renewable energy sources and from agro-industrial and solid municipal waste. It also plans to cut the consumption of fossil fuels in transport by 15 per cent by 2015.

15. One of the key challenges facing national Governments implementing green economy initiatives is how to measure progress in attaining their objectives. Although an internationally agreed set of indicators for measuring progress towards a green economy does not exist, such indicators could fall into three principal groups:

- (a) Economic indicators, such as the share of sectoral or aggregate investments that contribute to resource and energy efficiency or reduction in waste or pollution or, similarly, the share of sectoral or aggregate output or employment that meets established sustainability standards;

(b) Environmental indicators related to economic activity, such as resource-use efficiency or pollution intensity at either the sectoral or economy-wide level (these could be expressed, for example, as the quantity of energy or water used to produce a given unit of gross domestic product);

(c) Aggregate indicators of progress and well-being, such as macroeconomic aggregates to reflect natural capital depreciation, including those proposed in frameworks for integrated environmental and economic accounting, or those proposed under the “Beyond GDP” initiative, which can reflect health and various other dimensions of well-being.

16. Governments and stakeholders could then choose the most appropriate indicators based on their national circumstances, such as the structure of their economy, their natural resource endowment and data availability.

III. Green economy report: key policy messages

17. As part of its green economy initiative, UNEP has developed an extensive report entitled *Towards a Green Economy*, which applies economic modelling and sectoral analysis to demonstrate that public and private investments in key economic sectors can drive economic growth and lead to future prosperity and job creation, while addressing social and environmental challenges. Simulations carried out for the report projected trends from 2010 up to and including 2030 and 2050, comparing a business-as-usual scenario with two green investment scenarios in which 1 and 2 per cent of global gross domestic product, respectively, is invested in a range of sectors to improve resource and energy efficiency and waste management to develop sources of renewable energy and to maintain and restore natural capital. The simulations indicate how a transition to a green economy, or in other words a shift to an economic development path that restores rather than depletes natural capital, can offer continued medium-term to long-term economic growth exceeding business as usual over the period 2010–2050, generate new employment opportunities and reduce poverty. The following section outlines the key messages and findings emerging from the report.

A. Business-as-usual scenario delivers economic gains at an unaffordable price

18. In a business-as-usual scenario some economic gains can be expected, as in the past. The scenario is, however, also characterized by high-carbon-intensity and unsustainable resource use, leading to significant depletion of forest, land, water and fisheries resources and increased levels of waste and pollution. It follows that any development gains, if driven by economic growth in such a scenario, would be achieved at a significant cost to the environment and to natural capital, and might only show short-term benefits.

19. Further environmental degradation and unsustainable use of natural resources will also make it more difficult for Governments and the international community to take on development challenges. The risk from unreliable water resources is one such example. Approximately one billion people are today considered undernourished¹⁰ and, as the world’s population is projected to reach 8.9 billion by 2050, food will need to be produced for nearly 3 billion more people in a state of diminishing global water resources. As such, water is an increasingly critical resource upon which agriculture and other forms of economic activity, but more fundamentally life, depend. Nonetheless, this resource is currently being used unsustainably, and under a business-as-usual scenario, water resources are expected to become increasingly scarce with the potential of aggravating conflicts and social and economic hardship.¹¹

B. Green economy promotes poverty alleviation

20. A green economy strategy can contribute to economic growth and offer environmental benefits by restoring and building natural capital in addition to alleviating poverty. A number of economic sectors are particularly relevant to poverty alleviation and a transition to a green economy. For example, the fisheries sector is essential for economic development, employment and food security for millions worldwide. An estimated 520 million people – those working full-time or part-time in the fisheries industry and an average of three dependents per fisherman – are supported by the industry,¹² yet the sustainability of large parts of the industry is under threat from current fishing practices and

10 Food and Agriculture Organization of the United Nations, *The State of Food Insecurity in the World*, (Rome, 2010), p. 4.

11 United Nations Educational, Scientific and Cultural Organization, *The United Nations World Water Development Report 3: Water in a Changing World* (Paris and London, 2009), box 1.11.

12 Food and Agriculture Organization of the United Nations, “Fishing People”, available from <http://www.fao.org/fishery/topic/13827/en>.

policies. Promoting a sustainable and vibrant agricultural sector is also critical for poverty alleviation. Sustainable farming methods can increase both the quality and the quantity of food produced, while offering the means for sustained increases in crop yields.¹³ Hunger, poverty, health and the environment can all be linked to agricultural practices and output, and sustainable agriculture therefore has considerable potential to enhance the quality of life in rural communities.

C. Green economy has the potential to create additional jobs

21. The UNEP green economy report predicts that by 2050 investments in a green economy would create employment gains beyond a business-as-usual scenario.¹⁴ New opportunities would materialize in sectors such as renewable energy, transport and sustainable agriculture and forestry. In the agricultural sector, for example, a transformation to sustainable practices is expected to increase the number of jobs in farming operations and in pre-harvest and post-harvest supply chains.¹⁵ Likewise, investing in improved energy and resource efficiency in the tourism sector – a key economic sector in many developing countries – is expected to stimulate economic growth and job opportunities.

22. In the short term, however, net direct employment may decline under green economy scenarios as a consequence of the need to reduce excessive resource extraction and to avoid collapse in some sectors, such as fisheries. Transition and adjustment measures will be critical for the sectors in which employment may stagnate or even decline. While some countries have well-established policy mechanisms to cope with these changes, others might have to introduce cash-transfer programmes to provide a social safety net, complemented by re-skilling and retraining programmes.

D. Green economy promotes resource efficiency and energy security

23. Stimulating energy and resource efficiency across economic sectors is a central objective of a green economy transition. Simulations carried out for the UNEP green economy report show that, in green economy scenarios, increased efficiency in the agriculture, industrial and municipal sectors would reduce wasteful demand for water.

24. Moreover, switching to renewable energy and improving energy efficiency across sectors insures the economy against energy price shocks and leads to economic savings. Greening the energy sector includes the expansion of low-carbon power generation and second-generation biofuel production. This could be achieved by substituting investments in carbon-intensive energy sources with investments in renewable sources, whose share could double to more than one-quarter of total primary energy demand by 2050.¹⁶ Greening the use of energy includes energy-efficiency improvements in the manufacturing, transport and building sectors. Savings on capital and fuel costs in power generation could average \$760 billion per year between 2010 and 2050.¹⁷ In addition, renewable off-grid solutions offer a cost-effective part of a strategy to provide access to the more than 1.4 billion people currently without access to electricity.

E. Green economy delivers environmental benefits

25. A shift to a green economy can entail significantly reduced greenhouse-gas emissions. In the investment scenario in which 2 per cent of the global gross domestic product is invested in key sectors in a green economy, more than half of that investment is allocated to increasing energy efficiency and expanding the production and use of renewable energy, including second-generation biofuels. The result is a 36 per cent reduction in global energy intensity, measured in millions of tonnes of oil equivalent per unit of gross domestic product by 2030.¹⁸ In the same investment scenario, energy-related carbon dioxide emissions would decline in volume from 30.6 Gt in 2010 to 20.0 Gt in 2050 (see figure).¹⁹ Investing in a low-carbon economy therefore has significant potential to meet the challenges posed by climate change, although additional investments and policy measures would be necessary to limit atmospheric concentrations of carbon dioxide to 450 ppm or less.

13 J. Pretty, "Agroecological Approaches to Agricultural Development", 2006, p. 15. Available from <http://www.rimisp.org/getdoc.php?docid=6440> (accessed 12 January 2011).

14 United Nations Environment Programme, "Towards a Green Economy", forthcoming.

15 Ibid.

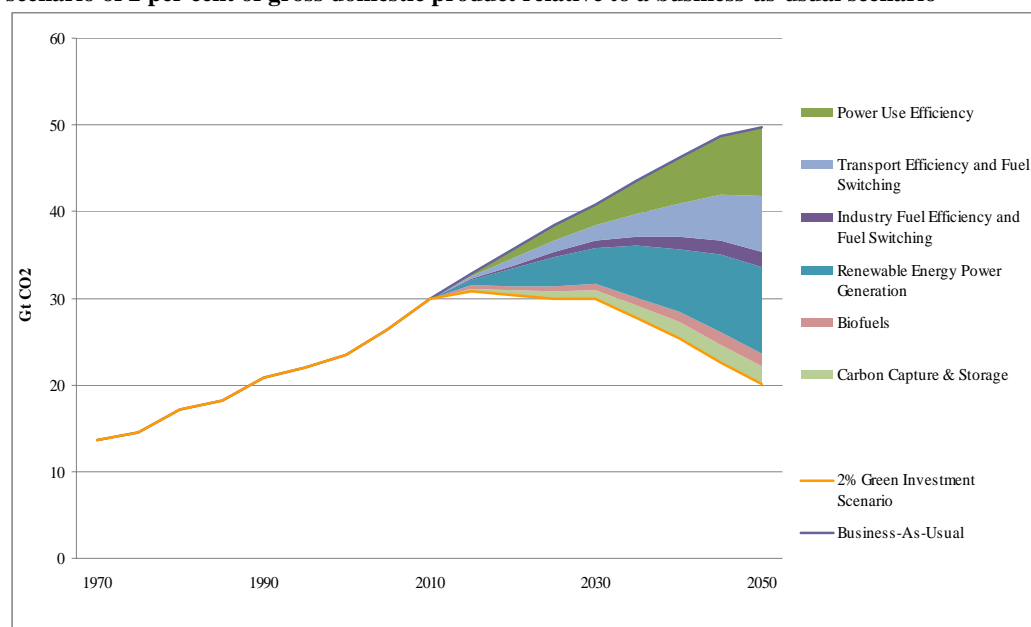
16 Ibid.

17 Ibid.

18 Ibid.

19 Ibid.

Total energy-related carbon dioxide emissions and reductions under the green investment scenario of 2 per cent of gross domestic product relative to a business-as-usual scenario



Source: UNEP, *Towards a Green Economy*, forthcoming.

26. Further environmental benefits to be reaped from a green economy can flow from the sustainable use of ecosystem services. Research carried out for the UNEP green economy report shows how considerable progress towards this goal can be accomplished through initiatives to manage demand on ecosystem services complemented by investments to boost supply of those services over the medium to long term. Better and more sustainable management of the world's forests can lead to an increase in forestland, thereby contributing to soil fertility, water availability and carbon-storage services. Moreover, improved water efficiency can significantly reduce water consumption, and improved management of water supply and access can help to preserve groundwater and surface water. Economic modelling carried out for the report shows that investments in managing and increasing supply and improving access to water will support the preservation of both groundwater and surface water. Sustainable agriculture can lead to higher yields, increased soil fertility and reduced deforestation and freshwater use.

F. Setting policies, targets and standards is a practical first step

27. Adequate national and international regulatory frameworks and governance structures are critical for stimulating investment in sustainable activities and regulating the most harmful forms of unsustainable behaviour. Well-designed and enforced property laws and access rights, such as land rights or the right to use fisheries or forest resources, can encourage sustainable management of natural resources. Moreover, targets and standards can drive green investments. By early 2010, 85 countries, more than half of them developing countries, had set national targets for renewable energy.²⁰ Between 2005 and 2010, the number of countries that implemented supportive renewable energy policies rose from approximately 55 to over 100.²¹ New investments in clean energy reached \$162 billion in 2009 and \$173 billion in 2008.²² The growth is increasingly driven by countries that are not members of the Organization for Economic Cooperation and Development, especially large emerging economies such as Brazil, China and India.

28. Public procurement can also be a powerful tool in a transition to a green economy. Governments have high-volume and long-term procurement needs and may therefore use sustainable public procurement practices to create and enhance markets in sustainable goods and services.

²⁰ Renewable Energy Policy Network for the 21st Century, *Renewables 2010 Global Status Report* (Paris, 2010), p. 9.

²¹ Ibid.

²² United Nations Environment Programme Sustainable Energy Finance Initiative and Bloomberg New Energy Finance, *Global Trends in Sustainable Energy Investment: Analysis of Trends and Issues in the Financing of Renewable Energy and Energy Efficiency* (Paris, 2010), p. 11.

Governments can also lead by example and use sustainable public procurement policies to contribute to setting higher standards for domestic production.

G. Financing from the public and private sector is required

29. Public finance plays an essential role in a shift to a green economy. For example, the reconfiguration and development of public infrastructure, which depends on public financing, has a significant bearing on future patterns of economic development and environmental impact.²³ Public finance can also serve as an important catalyst for private finance. Public incentives such as grants for capital, funding for research and development, loan guarantees, low-interest loans and other fiscal instruments can send positive signals to private investors. Nonetheless, following the recent financial crisis, the Bank for International Settlements has projected a high debt/gross domestic product ratio for many major economies for the next 10 years.²⁴ As a consequence, there are likely to be limited public funds available for many countries in the future. It is therefore important that Governments use efficient fiscal policy instruments that not only increase the funds available through such measures as taxes and the reduction of some subsidies but also ensure that existing funds are well-targeted and minimize unintended negative outcomes.

30. The likelihood of a future with limited public funds also highlights the importance of leveraging private-sector financing. The finance sector controls trillions of dollars that could potentially be directed towards investments in a green economy. Moreover, long-term institutional investors such as pension funds and insurance companies are increasingly interested in building portfolios of green investments, for example to minimize environmental, social and governance risks that threaten their investments. Commercial and retail banks are also increasingly seeing the commercial benefits of bringing similar considerations into lending policies and the design of green financial products.

H. Rational use of subsidies provides an opportunity

31. Subsidies can be a powerful enabler for a transition to a green economy and may be justified for investments that have public-good characteristics or positive externalities. Examples include subsidies for sustainable agricultural practices, which contribute to food security and increased carbon storage, and subsidies for sustainable forest management, which contributes to the conservation of biodiversity and ecosystems services. Subsidies must, however, be used with caution as they constitute entitlements for their recipients, and proposals to eliminate them once they are in place are often met with significant opposition and political pressure.

32. At the same time, subsidies that are harmful to the environment to a degree that it is not balanced by the benefits they produce should be reduced or eliminated. For instance, subsidies for fossil fuels, estimated to total nearly \$700 billion per year,²⁵ can drive increased greenhouse gas emissions. Environmentally harmful subsidies can also lead to poor resource management, as is the case with global subsidies to fisheries, estimated at \$27 billion per year, of which at least 60 per cent has been identified as harmful²⁶ and is seen as a significant contributor to the rapid depletion of the world's fish stocks.

I. Taxes and pricing instruments can create a level playing field for investments

33. In a number of economic sectors, such as transportation, negative externalities such as pollution, health impacts or loss of productivity are typically not reflected in costs, which reduces the incentive to shift to more sustainable goods and services. Taxes and other pricing instruments can be deployed to provide a level playing field for green investments. Environmentally related taxes that increase the relative cost of polluting goods and services can also raise public revenue and increase the attractiveness of investments in sustainable activities. Moreover, placing a price on pollution has been found to stimulate innovation and the use of new technologies as firms seek out cleaner alternatives. Although the use of environmentally related taxes is not new, their full potential to raise revenue and

23 International Bank for Reconstruction and Development/The World Bank, *World Development Report 2010: Development and Climate Change* (Washington, D.C., 2010), chap. IV.

24 S.G. Cecchetti, M. S. Mohanty and F. Zampolli, "The future of public debt: prospects and implications", BIS Working Papers, No. 300 (Basel, Bank for International Settlements, March 2010), p. 9. Available from www.bis.org/publ/work300.pdf.

25 International Energy Agency and others, "Analysis of the scope of energy subsidies and suggestions for the G-20 initiative", paper prepared for submission to the G-20 summit meeting, Toronto, Canada, June 2010, p. 4. Available from www.iea.org/weo/docs/G20_Subsidy_Joint_Report.pdf.

26 United Nations Environment Programme, *Towards a Green Economy*.

discourage unsustainable activity remains untapped. For instance, the Organization for Economic Cooperation and Development estimates that revenues from such taxes amount to, on average, approximately 1.7 per cent of the gross domestic product across its member countries.²⁷ The opportunities for revenue-raising using such taxes are, however, potentially much greater, of the order of 15 per cent of total tax revenues in the medium to long term in the European Union, for instance.²⁸

34. Opportunities offered by environmentally related taxes are accessible to all countries. Many developing countries are increasingly focusing on implementing levies on natural resource extraction, including charges on forest resources, license-based fees for fisheries and taxes on extracting mineral and petroleum resources.²⁹ Several developing countries have also used taxes successfully to raise revenue and cut down on industrial pollution.³⁰

J. Establishing transitional arrangements is critical

35. A shift to a green economy by definition entails some degree of economic restructuring. The management of change therefore becomes an essential aspect of the transition not only to secure support for such restructuring but also, more fundamentally, to assist those industries and populations that might require temporary support to adjust. Social assistance, for example, may be needed to meet the needs of vulnerable groups affected by the economic shift. Education, awareness-raising and reskilling of the labour force may also be required. Governments play an essential role in managing change and in ensuring that green economy measures are implemented in a manner consistent with an overall green economy strategy. While government involvement is necessary, other stakeholders, especially the private sector and private investors but also intergovernmental organizations and civil society, will also play critical roles.

IV. Way forward

36. There is a clear case for making a transition to a green economy. At the country level, however, the opportunities for and challenges posed by such a transition will vary. For developed countries, a green economy may mean an opportunity to open up new avenues for employment. For emerging economies, a low-carbon and resource-efficient development pathway may help to create a competitive advantage in the global marketplace and sustain the rapid growth to meet their peoples' material and non-material aspirations. In many developing countries, a green economy may be an opportunity to leapfrog development stages and apply advanced, yet locally appropriate, technologies that can contribute to economic growth and help alleviate poverty.

37. As highlighted above, a number of background conditions and actions may nevertheless be necessary to enable a transition to a green economy. The following section, while not offered as a blueprint, sets out some possible steps that Governments and other stakeholders can take in promoting a green economy.

A. Prioritizing action according to national circumstances

38. Green economy strategies and their associated time frames will vary based on a country's natural resource endowment, level of development, institutional capacity and economic profile. A country that is rich in forest resources, for example, is likely to have investment in sustainable forest management as one of its green economy priorities. A close analysis of country-specific factors will enable a Government to determine the benefits, opportunities and potential risks that it can expect in a green economy. This analysis can then form the basis for prioritizing those green economy actions that are likely to maximize benefits and help to mitigate any risks.

39. The participation of relevant stakeholders in decision-making will help to ensure that any analysis of and decision on priority actions is well informed. To have a meaningful discussion, stakeholders will require accurate and comprehensive data on social, economic and environmental indicators, information regarding relevant lessons learned and assessments of the impact of various policy options on the economy, wherever possible. Cooperation between stakeholders, including

27 Organization for Economic Cooperation and Development, document C/MIN(2010)5, p. 36. Available from www.oecd.org/dataoecd/42/46/45312720.pdf.

28 Samuela Bassi and others, *Feasibility of Implementing a Radical ETR and its Acceptance* (London and Brussels, Institute for European Environmental Policy, 2009), p. 2.

29 United Nations Environment Programme, *Driving a Green Economy Through Public Finance and Fiscal Policy Reform* (Geneva, 2010), pp. 13 and 14.

30 The International Bank for Reconstruction and Development/The World Bank, *Greening Industry: New Roles for Communities, Markets, and Governments* (New York, Oxford University Press, 1999), p. 37.

various Government ministries, may facilitate the process of reaching a consensus on priority actions. In some instances, variations at the subnational level may require different priority actions, as is typically the case for urban and rural areas.

B. Developing and disseminating technologies

40. A critical component of a green economic transition is the development of, and access to, environmentally sound technologies. Technological innovation, leading to more environmentally sustainable products and production methods, is essential in most sectors. A major challenge for policymakers, businesses and other stakeholders is creating the necessary conditions that can foster such innovation. While businesses clearly play a key role in the development of new technologies, it is important for Governments to consider financial incentives, such as tax breaks for research and development, to encourage innovation. Such incentives are particularly important for technologies that are not yet established or profitable.

41. Not every country, however, is or will become competitive in developing or producing environmentally sound technologies. The international community must therefore ensure that existing and new environmentally sound technologies are disseminated widely to enable all countries to benefit from them. This is essentially a question of balancing measures that can drive innovation, such as investment incentives and intellectual property rights, with the need to facilitate technology transfer by making access to technology easier and less costly. In this regard, international and national actors, including intergovernmental organizations, international financial institutions, bilateral aid agencies, multinational companies and non-governmental organizations, can offer support, such as technical expertise or financial resources, to facilitate the transfer and deployment of environmentally sound technologies in developing countries.

C. Building capacity

42. The capacity to seize green economic opportunities and implement supporting policies varies by country, and national circumstances often influence the readiness and resilience of an economy and population to cope with change. Capacity-building, in the form of international technical and financial assistance, can be a vital component in the transition to a green economy. A shift towards a green economy could require the strengthening of Governments' capacity to analyse challenges, identify opportunities, prioritize interventions, mobilize resources, implement policies and evaluate progress. For example, environmentally related taxes have been used with success by some developing countries. Nevertheless, the implementation and administration of such taxes may present challenges, and a country's administrative capacity may need to be enhanced.³¹

43. Intergovernmental organizations, international financial institutions, non-governmental organizations, the private sector and the international community as a whole can play a role in providing technical and financial assistance in developing countries. South-South cooperation is also likely to be important: the experiences and successes of many developing countries and also indigenous peoples in achieving a green economy can provide valuable impetus, ideas and means for other developing countries to meet similar concerns. South-South cooperation can thus increase the flow of information, expertise and technology at a reduced cost. More broadly, as countries take steps towards a green economy, formal and informal global exchanges of experiences and lessons learned can prove a valuable way to build capacity.

D. Leveraging international agreements and processes

44. International agreements and processes can facilitate and stimulate the transition to a green economy. For instance, multilateral environmental agreements, which establish the legal and institutional frameworks for tackling global environmental challenges, often create economic opportunities. The Montreal Protocol on the Substances that Deplete the Ozone Layer, which is widely considered to be one of the most successful such agreements, led to the development of an entire industry focused on shifting away from ozone-depleting substances. The United Nations Framework Convention on Climate Change and its Kyoto Protocol have also stimulated growth in a number of economic sectors, such as renewable energy generation and energy-efficient technologies, to tackle greenhouse-gas emissions. Indeed, active multilateral environmental agreement negotiation and implementation can be a potent way of generating green economic activity.

45. International trade can also be a powerful driver for a green economic transition. The international trading system can enable the flow of investments, environmentally sound technologies,

³¹ United Nations Environment Programme, *Driving a Green Economy Through Public Finance and Fiscal Policy Reform* (Geneva, 2010), pp. 14 and 15.

and sustainable goods and services. Trade measures such as standards can play an important role in driving growth in a number of sectors in a green economy. Such measures could, however, also be perceived by countries as a challenge to market access or a form of trade protectionism. It is therefore crucial for countries to strike the right balance between environmental protection and safeguarding market access. Multilateral dialogue and negotiations, wherever possible, are essential in this regard.

46. Lastly, and perhaps most importantly, the decision by the General Assembly to organize the United Nations Conference on Sustainable Development and the preparatory process for the Conference offer a unique opportunity for countries to make progress in their efforts to achieve a green economy in support of sustainable development and poverty eradication. Commitment and action by Governments, international organizations and others over the coming two years will determine whether the Conference provides the impetus to set the world on a new economic path that reflects the intrinsic interdependency between humans, the economy and the environment.

V. Possible questions for ministerial discussions

47. The sessions of the Governing Council/Global Ministerial Environment Forum provide a venue within the United Nations system for the world's environment ministers to review important and emerging environmental policy issues. The Council/Forum provides broad policy advice and guidance with the aim, among others, of promoting international cooperation in the field of the environment. Officials of United Nations agencies and heads of multilateral environmental agreement secretariats are invited to participate and interact with ministers at the sessions of the Council/Forum and the meaningful participation of representatives of major groups and stakeholders, including the private sector, is ensured.

48. It has become the practice for the President of the Council/Forum to prepare a summary of the ministerial consultations that take place at each session, offering an opportunity for the world's environment ministers to send a collective message to the United Nations system, Governments, civil society and the private sector. That practice will be followed at the current session.

49. The following questions are presented with a view to stimulating the round-table discussions to take place between the ministers during the twenty-sixth session:

- (a) What lessons relevant to a green economy can we learn from our past and present efforts to promote sustainable development, sustainable consumption and production and a green economy?
 - (i) What successful experiences and failures can be identified at the national and regional levels?
 - (ii) What lessons can we learn from those successes and failures?
 - (iii) How can we apply those lessons in a transition to a green economy?
 - (iv) How can indigenous knowledge be taken into consideration?
- (b) What are the policies and tools that can support a transition to a green economy?
 - (i) What are the key messages from recent research that can inform a global dialogue and action on green economy?
 - (ii) How can countries best stimulate investment in the sectors that are material to a green economy?
 - (iii) Which economic and fiscal policies would most effectively complement the regulations, standards and voluntary approaches that are being applied to promote sustainable consumption and production?
 - (iv) How could the future 10-year framework of programmes on sustainable consumption and production, expected to be developed and endorsed at the nineteenth session of the Commission on Sustainable Development, help to support the transition to a green economy?
 - (v) What are the challenges faced in making a transition to a green economy in the short, medium and long terms?
- (c) How do we move forward to achieve a green economy in an efficient and equitable manner?
 - (i) Which actions should be prioritized in a transition to a green economy?

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- (ii) What are some of the risks in the transition to a green economy and how can they be tackled?
 - (d) How can the transition to a green economy be promoted by UNEP and in the United Nations Conference on Sustainable Development process?
 - (i) How can UNEP facilitate a greater understanding of the concept of a green economy on the part of member States?
 - (ii) How can the Conference preparatory process, and the contribution of UNEP to it, assist countries in the transition to a green economy?
 - (iii) What could be a useful and practical outcome on green economy at the Conference?
 - (e) How should we define and measure progress in a green economy?
 - (i) Should there be an internationally agreed definition of green economy and, if so, what should it be?
 - (ii) What types of economic indicators should we use to measure progress with respect to investment in a green economy, job creation, resource efficiency, poverty eradication, ecosystem integrity and wealth creation beyond gross domestic product?
 - (iii) What role could existing sustainable consumption and production indicators play in measuring progress towards a green economy?
 - (iv) How should progress in the implementation of a green economy be monitored and reported, and in what forum?
 - (v) What further economic, policy or scientific analysis is required to enhance our understanding of the opportunities and challenges associated with a green economy?
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