

Working towards a Balanced and Inclusive Green Economy
A United Nations System-wide Perspective
31 October 2011

Executive Summary

1. Introduction

In September 2009 the United Nations (UN) Environment Management Group agreed to establish an Issue Management Group on Green Economy. This group was tasked to prepare a report to assess how the UN system could coherently support countries in transitioning to a green economy. The report is expected to facilitate a common understanding of the green economy approach and the measures required for the transition. The report is envisioned to also contribute to the preparatory process for the 2012 UN Conference on Sustainable Development (UNCSD or Rio+20) where “the green economy in the context of sustainable development and poverty eradication” is one of the two themes along with “the institutional framework for sustainable development”.

A green economy is an approach to achieving sustainable development. It requires breaking away from resource intensive growth models, a transformation of consumption and production into more sustainable patterns, and increased value added created and reinvested in resource-rich supplier communities in the developing world. The context for this approach is the increasing resource intensity of consumption in developed countries even though their production is becoming less resource intensive, which implies the shifting of environmental impact to other countries through international trade. At the same time, the resource intensity of both consumption and production in developing countries may increase in absolute terms in their industrialisation process. These trends tend to exacerbate resource constraints and breaking the planetary boundaries.

A broader context is the projected population growth, which further raises the stakes in poverty reduction efforts. These efforts depend on higher consumption and production. Without appropriate policies in place, population growth will further significantly increase pressures on all natural resources. The likely growth of the world population from 7 billion today to over 9 billion by mid-century requires a considerable increase in economic output to ensure food security, reduce poverty, raise living standards, and create full, productive, and remunerative employment for the populations.¹ Demographic change together with urbanisation not only heightens the need for a swift transition to a green economy, but also calls for policies to address population dynamics within a human-rights based framework. These policies, most notably, include universal access to reproductive health care and family planning as well as the empowerment of women and appropriate investments in education, especially for girls and women who are too often left behind.

In these contexts, a green economy requires the inclusion of the marginalised in all development processes. It also requires the reduction of gaps between developing and developed countries and regions in labour productivity and in the capacity to generate and have access to technology and scientific knowledge. It requires bolstering the capacity of developing countries to develop, review, and implement science, technology, and innovation policies that are oriented towards green solutions to the climate, food, and energy crises. This includes strengthening science education, enhancing research and development (R&D) capacities, and fostering innovation through South-South Cooperation, North-South Cooperation, and public-private partnerships. For commodity-dependent countries, it is particularly important that they have access to new green opportunities to diversify their economies.

¹ UN, World Population Prospects: The 2010 Revision, report prepared by the United Nations Department of Economic and Social Affairs, Population Division, United Nations, New York, 2011.

Specifically, in a transition to a green economy, public policies will need to be used strategically to reorient consumption, investments, and other economic activities - in line with domestic development agendas and contexts - towards:

- Reducing carbon emissions and pollution, enhancing energy and resource efficiency, and preventing the loss of biodiversity and ecosystem services, including the development of efficient, clean, and low environmental impact technologies, buildings, and transport infrastructure, investments in renewable energy, application of the life cycle approach¹, promotion of environmental goods and services, sustainable sourcing of materials, and the maintenance and restoration of natural capital consisting of land, soil, forest, freshwater, the oceans, marine resources, wild fauna and flora, and other biodiversity components; and
- Improving access to energy, food, freshwater, biological resources, sanitation services, public health and health care, new jobs, labour protection, social protection systems, information and communication technologies (ICTs), and training and education including education for sustainable development and the promotion of sustainable consumption.

Priorities should be given to developing public policies that meet social, environmental, and economic objectives, that focus on sustainable livelihood approaches, that increase access to services for the marginalised, and that bring about the required structural change associated with a green economy transformation. But a green economy is not a one-size-fits-all path towards sustainable development. From its dynamic policy toolbox, decision makers - local or national - can draw ideas coherent with their specific sustainable development agendas and contexts.

Proper incentives provided through economic instruments, regulations, sound framework conditions for innovation and technology diffusion, distributional policies, and voluntary initiatives can help channel investments - public and private - towards targeted sectors and enhance the effectiveness and fairness of such investments. They can also affect incentives and public awareness, thereby contribute to behavioural changes in production, consumption, and lifestyles. The mix of public policies for a green economy will differ across countries based on their specific socioeconomic conditions, institutional settings, resource endowments, and environmental pressure points.² All countries, however, stand to gain from pursuing a green economic transformation, achieving direct economic gains through enhanced resource productivity and new sources of growth and jobs from innovation and the emergence of green markets and activities. In certain economies, a major development benefit of moving towards a green economy is manifested in greater human health and well-being as a result of lower pollution.

2. Investing in infrastructure and target sectors

The call for a green economy comes during a global financial and economic crisis to which many governments have responded with stimulus packages including particular provisions for infrastructure development. As governments seek to scale up the implementation of their provisions, these stimulus packages and their green components are paving the way for longer-term policy reform and infrastructure development. They hold the potential to design new growth paths and avoid locking capital into inefficient and polluting technologies.

¹ In the context of environmental protection, the life cycle approach means considering and addressing the environmental impacts of a product throughout different stages of its life, from design to disposal.

² OECD, *Towards Green Growth*. Organisation for Economic Co-operation and Development, Paris, 2011.

Ongoing systemic problems such as global climate change give the greening of infrastructure additional importance. In developing countries, the need for investments in greening infrastructure could reach USD264-563 billion by 2030 with an additional USD30-100 billion for climate adaptation.¹ If these investments are made, it could mean new jobs, new incomes, and better health while reducing households' and countries' energy bills in the long run, lessening the fiscal burden from unemployment and health payments, and providing new business opportunities. The Green Climate Fund agreed in Cancun in December 2010 (with an expected launch in 2013) and the developed country commitment to a goal of jointly mobilising USD100 billion in public and private funds per year by 2020 as financial support for developing countries can reduce the infrastructure funding gap once operational.

Because of the valuable services they provide, healthy ecosystems - both terrestrial and marine, wild fauna and flora - and the underlying biodiversity play the role of infrastructure as well. Though often unacknowledged, that role is all the more critical in cities and city-regions where the majority of humans live and the fastest economic growth continues to occur. Their maintenance or restoration - including for ecosystem based climate adaptation and species management - should be considered as a priority for investments.

Greening infrastructure – including the buildings, energy, and transport sectors, which are significant consumers of resources and emitters of greenhouse gases (GHGs) - is urgent as emerging economies and developing countries will build the bulk of their infrastructure in the next few decades. Strategic planning in city-regions is critical for piloting innovations and delivering infrastructural transitions at an increased scale. Given the substantial inertia and “committed emissions” of infrastructure investments, which would lead to the lock-in of unsustainable fossil fuel consumption patterns, delaying action in developing countries by 10 years could result in doubling the amount required to mitigate GHG emissions and make climate adaptation very costly.²

Investing in greening infrastructure, however, must leverage funding for broader investment needs in developing countries estimated at USD1.0-1.5 trillion per year, only about half of which has been met.³ In the absence of adequate funding for adequate infrastructure, the deployment and use of individual power generators and batteries, unregulated wells, and open drains carries significant social, environmental, and economic costs. Tackling these issues requires scaled-up and accelerated international cooperation, innovative technologies, financing mechanisms, integrated city-regional spatial planning, and delivery models including decentralised power generation sourced from solar and wind, which could generate multiple benefits at a relatively low cost. By transitioning now, developing countries have the potential to avoid costly retrofits.

Beyond infrastructure, the greening of agriculture, industry (including mining or extractive industries), and services is also crucial for satisfying demands of an urbanising global population for higher living standards while adjusting to increasing environmental constraints. In the agriculture and food sectors, investments should aim at improving food and nutrition security and livelihoods while reducing emissions and other negative environmental impacts along the entire food chain through:

¹ The World Bank, World Development Report 2010: Development and Climate Change, The World Bank, Washington, DC, 2010.

² *Ibid.*

³ This represents 5-8 per cent of developing countries' Gross Domestic Product (GDP) today, a rough estimate of what developing countries need to spend annually on infrastructure to move towards universal coverage and to deliver the infrastructure service needed for economic growth. For a full discussion of the difficulties of estimating infrastructure investment needs and the methodologies to do so, see Fay, M., M. Toman, D. Benitez and S. Csordas, “Infrastructure and Sustainable Development” in S. Fardoust, Y. Kim, and C. Sepulveda, Eds., *Postcrisis Growth and Development: A Development Agenda for the G20*, The World Bank, Washington DC, 2010. Available at: http://siteresources.worldbank.org/DEC/Resources/PCGD_329-382.pdf

- reducing farm-to-table transport distances;
- sound soil and nutrient management, including reduced use of chemical fertilisers and pesticides and promotion of organic agriculture;
- efficient harvesting and water use;
- reducing the environmental impacts of animal husbandry;
- enhancing production system resilience and associated biodiversity functions such as pollinators and natural pest predators;
- enhancing vulnerable community resilience through livelihood protection, development, and productive safety nets interventions;
- strengthening market and risk management opportunities for the most vulnerable;
- intensifying transformational landscape interventions including through climate smart agriculture approaches;
- conserving genetic resources;
- reducing post-harvest losses;
- improving processing;
- sustainable diets; and
- reducing food waste at final sale and consumer levels.

Making these investments employment intensive will benefit workers, communities, and local enterprises. Some of the priority areas requiring policy attention include: increasing productivity in a sustainable manner, in particular by according a higher priority to R&D, innovation, education, extension services, and information; ensuring that well-functioning markets provide the right signals and, in particular, that prices reflect the scarcity value of natural resources as well as the positive and negative impacts of their use; establishing and enforcing well-defined property rights so as to ensure sustainable use;¹ and enhancing access by the poorest to agricultural inputs, including credit and insurance, as well as to food and nutritional security at an affordable price.

In the industry sector, investments in renewable energy technologies and more resource- and energy-efficient production processes could generate multiple benefits, but distributional effects need to be taken into account with an emphasis on improving access to cleaner technology and employment opportunities. Apart from renewable energy, investments in the broad category of environmental goods and services sector ranging from clean production processes, low impact logistics, and material-saving packaging to natural products and services from ecosystems including the often neglected oceans also have a potential for generating multiple benefits.

The global environmental markets were projected to reach USD688 billion in 2010 and just under USD800 billion by 2015.² As demand for environmental services, equipment, and technologies has been increasing, mainly pushed by regulatory demands in developed countries, the environmental industry has become a dynamic growth pole in OECD countries. This market provides important opportunities for small and medium-sized enterprises (SMEs).³ The greening of industry holds the potential for opening up vast new markets such as services in the prevention and management of waste and markets created through the application of life cycle approaches.

¹ OECD, *A Green Growth Strategy for Food and Agriculture – Preliminary Report*, Organisation for Economic Co-operation and Development, Paris, 2011.

² Department for Environment, Food and Rural Affairs, United Kingdom, *Study of Emerging Markets in the Environmental Industries Sector* (Executive Summary), London, November 2006. Available at: <http://www.bis.gov.uk/files/file35101.pdf>

³ UN-ESCWA, *Environmental Goods and Services in the ESCWA Region: Opportunities for Small and Medium-Sized Enterprises*, United Nations Economic and Social Commission for Western Asia, Beirut, August 2011.

In the service sector, ICTs as applied, for example, to intelligent transport networks and smart grids can become enablers of resource efficient development. While intelligent use of ICTs can help industries and consumers to dematerialise, the sound management of electronic waste poses new risks and opportunities. A growing number of transport sectors are also scaling up their responses to climate and related risks and opportunities. In the aviation sector, substantial investments are needed to scale up the production of fuels from sustainable biomass or renewable oils to commercially-viable levels for meaningful uptake by the sector while reducing the emissions of GHGs, particulate matter, and fuel sulphur content.

Payments for ecosystem services (PES) is a tool used by many sectors, notably agriculture and forestry, to promote the management of land resources and provide the necessary incentives for restoring rural livelihoods and for rehabilitating damaged ecosystems. It aims at adapting to and mitigating against climate change and at preserving biodiversity or reducing its loss. It is also increasingly used for income generation in rural areas and, thus, can support the transition to a green economy. Standards can be voluntary through, for example, environmental labels that are in demand by environmentally-aware consumers willing to pay price premiums for quality and environmental friendly products.

3. Investing in people and social infrastructure

At the heart of the green economy approach is the desire to improve human well-being and social equity, which implies targeted investments in human and social capital on top of investments in natural capital and green physical capital (e.g. clean technologies). A green economy must contribute to the Millennium Development Goals (MDGs), which are likely to be pursued beyond their 2015 target year with a continued focus on enhancing the access of the poor, women, and other vulnerable and marginalized segments of society to services, resources, and opportunities, as well as supporting necessary social transformations. The UN Millennium Project projected the cost of meeting the MDGs in all countries to amount to USD121 billion in 2006 and USD189 billion in 2015 (in 2003 US dollars).¹ In the global transition towards a green economy, these financing gaps must be addressed in synergy with the investments needed to green infrastructure and other economic sectors. Poverty reduction policies should be formulated with a view to encouraging sustainable consumption and production patterns and establishing a green path for future development.

Transitioning to a green economy requires a fundamental shift in the way we think and act. For this to happen, investments in people's capacities and the fulfilment of their entitlements are needed. With greater education, training, information, awareness, understanding, and participation in decision-making processes comes greater ownership and responsibility to take action at a grass roots level and change individual and collective behaviour and production/consumption patterns. Investments and technological progress are important in moving towards a green economy, but equally important is awareness, motivation, and empowerment of individuals and communities.

To break the cycle of poverty and over-exploitation of resources, a firm commitment is needed to make long-term investments in quality education and training. ESD including climate change education is a particularly important part of quality education. It provides people at all levels of education, in particular youth, with the skills, competencies, and knowledge needed to prepare for green jobs and to change unsustainable consumption and production patterns. It must, therefore, be integrated into educational curricula at all levels and in all educational settings. Communication and media, including the generation of information on sustainable use of resources for poverty reduction and access to such information is also important. Exclusion and inequalities linked to wealth, gender, ethnicity, language, location, and

¹ UN Millennium Project, Investing in Development, Chapter 17, United Nations, New York, 2005. The investments considered in the MDG needs assessments are hunger, education, gender equality, health, water supply and sanitation, improving the lives of slum dwellers, energy, and roads. Available at: <http://www.unmillenniumproject.org/documents/MainReportComplete-lowres.pdf>

disability are holding back progress in providing people with basic education. Girls are disproportionately affected.

In addition, culture must be an integrated part of a green economy transition. Sustainable tourism, cultural as well as creative industries, and heritage-based urban revitalisation are powerful economic sectors that generate green employment, stimulate local development, and foster creativity. Local and indigenous knowledge systems and environmental practices must also be taken into account as they provide valuable insight and tools for tackling ecological challenges, preventing biodiversity loss, reducing land degradation, and mitigating the effects of climate change.

A green economy and green jobs present a significant opportunity to overcome poverty and inequality by creating more and better jobs. This can be a major contribution to inclusive growth. A transition to a green economy can lead to net gains in employment, not only in green jobs but across the economy compared to the unsustainable conventional growth path.¹ It is thus not necessary to choose between the environment on the one hand and employment and economic growth on the other. In order to address the root causes of poverty and inequity, however, any green economy initiatives should include supporting social policies and measures, in particular for the provision of access to better quality social protection. Coherence between social, environmental, and economic policies is needed to maximise opportunities and buffer the social cost of the transition. A transition to a green economy needs to project a vision of a greener as well as a fairer economy and society.

Addressing the unemployment challenge through a green economy approach requires increased investments in sectors with high potential for the creation of productive employment opportunities. It also requires exploiting the potential synergies between different policy objectives. Labour market policies could support targeted investments by focusing on improving the skills of the most vulnerable - women, youth, informal workers, small farmers, and the unemployed - with particular attention to imparting skills of value in a green economy.

Measures to support the most vulnerable groups such as access to a social protection floor and social safety nets are essential to achieve social inclusion, to deal with the restructuring towards a greener economy, and to adapt to climate change as well as to lift marginalised people out of the poverty trap and include them in a green development path. They are also needed to protect groups that might be negatively affected by a transition towards a green economy as may be in the case of workers in the fossil fuel sectors. Such investments include access to nutritious food, health services, education, training and retraining, and unemployment benefits. It requires an improved and sound social and physical infrastructure as well. A just transition also requires social dialogue and civic participation in identifying the employment impacts of green economy policies and to charter the way to economic diversification that generates green jobs.

4. Enabling the transition towards a green economy

4.1 Mainstreaming: environmental and social integration

A fundamental challenge the green economy debate poses to all public institutions is that of the failure to effectively converge, align, and integrate work across the social, environmental, and economic dimensions of sustainable development. This is in part a failure of institutional collaboration and coherence of policy approaches between different UN entities at international and national level. The green economy approach requires a new level of mainstreaming that goes beyond business-as-usual. The

¹ UNEP, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication – A Synthesis for Policy makers, United Nations Environment Programme, Nairobi, February 2010.

linkage of “green” and “economy” with human well-being and social equity as core goals requires renewed commitment to more appropriately measure and value human and natural assets and put them at the centre of economic development. It also requires more inclusive and pro-poor growth.

Investments in efficient transport systems, housing energy efficiency improvements, sustainable sourcing of biological resources, and environmentally sustainable agricultural practices, among other priorities, have the potential to generate significant social benefits. For example, household energy investments to replace inefficient biomass/coal stoves with improved stoves and cleaner fuels as well as household waste-for-biogas production could improve the sanitation and health of 3 billion people and the well-being of women in particular.¹ These linkages point to the need for an integrated approach, which should provide a basis for prioritising investments in a green economy. Those investments that generate both environmental and social benefits should be the priorities.

4.2 Public and private financing

A global transformation towards a green economy will require substantial financial resources and coherent criteria for their use. Subsidy reforms and ecological taxes can unlock a substantial amount of funds to support a balanced and inclusive green economy transition. If, for example, industrialised countries were to use carbon taxes or auctioned emissions permits to reach the GHG emission targets they pledged in the Cancun Agreements, they could raise as much as 0.6% of their GDP or about USD250 billion in revenues per year by 2020.² In addition, other forms of carbon finance, PES, green stimulus funds, micro-finance, social responsibility investment funds, green bonds, and other local financial innovations have emerged in recent years and can open up the space for large-scale green financing. To further scale up the financing for a green economy, public-private innovative financing mechanisms are needed to tap institutional investors’ capital.

The private sector is a major driving force in many national and local economies beside farmers, foresters, and fisher folks. With its capacity to invest and innovate, the private sector is uniquely positioned to create solutions that can reduce emissions and resource use while generating growth and employment opportunities including for the poor. The bulk of green investments will come from the private sector.

The role of the public sector, however, is indispensable for influencing the flow of private financing and triggering a green economy transition. Public spending is important for setting the appropriate investment context, institutionalising more sustainable consumption and production patterns, and building the necessary capacity for the transition. Governments including at the local level could develop PES schemes, focus on greener public infrastructure, including for access to food, water, sanitation, and energy services as well as on poverty eradication, gender equality, and biodiversity and ecosystem conservation and sustainable use. Governments should also use their resources, including through public procurement, to leverage financial flows from the private sector towards green and socially beneficial economic opportunities including at the local level.

Effective green investments and innovation and the adoption and dissemination of green methods of production require good governance. Corruption is a key bottleneck for investments as are the absence of the rule of law, clear regulations, transparency, and predictability. A level and transparent playing field will be necessary for a green economy to deliver as required. Governments should involve the private sector in jointly identifying impediments to a green economy and establishing clear, stable, and coherent policy and regulatory frameworks to facilitate the integration of social, environmental, and governance

¹ WHO, Health in the green economy: co-benefits to health of climate change mitigation - the household energy sector of developing countries, World Health Organization. Accessed at: www.who.int/hia/green_economy/en/index.html

² OECD, *Environmental Outlook to 2050*, Organisation for Economic Co-operation and Development, Paris, forthcoming 2012.

issues into investment decision-making. At the same time, given the importance of international investment as a vital source of finance and a powerful vector of innovation and technology transfer, governments are encouraged to continue monitoring their investment treaty practices with regard to green economy objectives to ensure that they encourage green investments without leading to green protectionism.¹

The UN system and the multilateral development banks have an important role to play in supporting investments in resource efficient development and advancement of sustainable consumption and production. They can provide technical advice and capacity support to governments in the following areas:

- policy and project design and implementation;
- carbon market development;
- the greening of strategic value chains;
- helping countries catalyse investments in energy efficient and climate change mitigation and adaptation by the private sector;
- using a range of instruments to support and fund development of climate-smart agriculture and greener and more resilient infrastructure.

To support the kind of governmental decision-making that will underpin a balanced, inclusive and green transition, however, entities of UN system and international financial institutions will need to work together more coherently based on their respective mandates and comparative advantages. To truly contribute to a green economy transition, investments and interventions need to be environmentally sound and socially inclusive to ensure that they are neither harmful to the environment nor disadvantageous or harmful to the poor and that the continued flow of funding towards education, health, and social protection activities is guaranteed.

4.3 Full-cost pricing

Full-cost pricing, which includes full social and environmental cost, is an essential tool for changing investments as well as consumption and production patterns and motivating innovations. Apart from reflecting social and environmental costs in prices through taxes, full-cost pricing also implies the phasing out of harmful subsidies, such as those on fossil fuels, fisheries, forestry, water use, land use, and agriculture. These subsidies not only encourage carbon emissions, resource depletion, and environmental degradation, but can also cause trade distortions and strain public finance. Developing and emerging economies are currently providing subsidies to fossil fuel consumption in an estimated amount of USD409 billion per year while OECD countries provide USD45-75 billion in support to fossil fuel production and use.² In comparison, government support to electricity from renewable and biofuels globally was estimated to amount to USD57 billion in 2009.³

Full-cost pricing contributes to a more level playing field between established, “brown” technologies and newer, greener ones. Distributional consequences, especially the impacts on the poor and marginalised should be duly considered when designing and implementing subsidy reforms. UN entities can help governments and others to find the most appropriate ways of phasing out harmful subsidies while combining that with the introduction of new incentive schemes to encourage positive steps forward.

¹ OECD, "Harnessing Freedom of Investment for Green Growth", Freedom of Investment Roundtable 14, April 2011, Organisation for Economic Co-operation and Development, Paris, 2011.

² OECD, *Inventory of Estimated Budgetary Support and tax Expenditures for Fossil Fuels*, Organisation for Economic Co-operation and Development, Paris, 2011; IEA, *World Energy Outlook*, International Energy Agency, Paris, forthcoming 2011.

³ IEA, *World Energy Outlook*, International Energy Agency, Paris, forthcoming 2011.

Governments need to stimulate inter-ministerial collaboration to communicate the societal implications of under-pricing to all concerned and collectively design fiscal and tax policies as well as policies on how to use the newly generated revenue. Consultations with major groups including trade unions, employers' organisations, and women's associations on the various policy options for implementing full-cost pricing need to take place in order to decide on options that enjoy the broadest societal support. Such consultations will also help strengthen these groups and facilitate participatory policy dialogues especially where social organisations are weak. Any adverse effects of changes in prices of goods and services vital to the welfare of vulnerable groups must be compensated for and new livelihood opportunities provided.

At the international, sub-regional, and regional levels, there is a need for policy coherence and financial and technological cooperation, as countries may not be willing to adopt full-cost pricing unilaterally or in isolation for fear of losing international competitiveness. In spite of this potential "collective action problem", which should be addressed at global and regional levels, it is still beneficial for countries to take full-cost pricing measures independently as in the case of the European carbon emission trading system. As commodity prices including fossil fuel prices are generally expected to continue to rise, countries can benefit from the development of resource-efficient technologies and renewable energies even if others continue with business-as-usual.

4.4 Regulatory approaches

To support the transition to a green economy, governments can employ mandatory technical regulations, voluntary standards, and information-based instruments. Often, regulatory frameworks are required to support the greening of sectors that rely on natural resources. At the international level, global conventions including, but are not confined to, Multilateral Environment Agreements (MEAs), can foster global commitments and promote coordinated activities on key aspects of the green economy agenda. In some cases, legislators may choose to adopt domestic regulatory frameworks to further these global objectives. The role of international non-environmental agreements such as on labour standards and human rights in a green economy, however, requires further research.

Regulatory approaches are often taken to support price-based measures or when a ban or binding limitation is deemed necessary to stop certain damaging activities or bring about behavioural changes. Regulations can also provide enabling conditions and incentives, establish the needed market signals and certainty for businesses to make investment decisions, deploy green technologies, accelerate green innovation, and foster clean technology development and diffusion. Information-based instruments, such as labelling schemes and voluntary reporting, which show the environmental and social implications of goods and services coupled with appropriate pricing, can alter consumption habits and promote demand for green and socially responsible goods and services while stimulating suppliers to design and produce such products and services and improve their environmental and social performance.

The success of regulatory approaches hinges on the certainty of policies as well as the quality and credibility of regulatory institutions and their compliance mechanisms, including justice systems. Regulatory institutions need to be transparent, accountable, efficient and designed with a view to minimising additional costs for business and consumers. Effective compliance mechanisms should be put in place in order to achieve the desired outcomes. Fostering regulatory approaches to support a green economy requires strengthened integrated institutional framework and governance. To avoid the proliferation of national regulations and standards, the use of relevant international standards is essential.

In this regard, a number of UN entities have been involved in developing international regulations, standards or guidelines to be used as a basis for national regulations or standards to support green economy objectives. Examples are the mandatory emission targets under the Kyoto Protocol, the mandatory measures introduced to reduce GHG emissions from international shipping - the first global

mandatory GHG reduction regime for an international industry sector, and the framework developed to reduce GHG emissions from international aviation - the first sector with a shared global commitment to increasing fuel efficiency and stabilising its GHG emissions in the medium term. It is important that regulations and standards to promote the green economy do not become a source of green protectionism, in line with *Principle 12 of the Rio Declaration on Environment and Development*. In this respect, WTO Agreement on Technical Barriers to Trade, while recognising the important role of standards and regulations for the achievement of legitimate policy objectives, seeks to ensure that they are not discriminatory and do not create unnecessary barriers to trade.

The UN system and the Bretton Woods Institutions (BWIs) have an important role to play in supporting the transition to a green economy in the area of regulatory approaches. They can encourage the ratification of relevant international agreements, assist the Parties to implement and comply with related obligations, develop relevant international standards and guidelines, promote good regulatory practice, and build capacity, including that of legislators at national and sub-national levels to prepare and ensure compliance with regulations and standards in supporting the transition to a green economy.

4.5 Sustainable trade

Trade can expand the markets for green goods and services and diffuse clean and resource-efficient technologies and production methods. It can also transmit the growing environmental and social preferences of firms and consumers. An open, rules-based and non-discriminatory multilateral trading system that provides predictability, security, and stability is essential for enabling green investments, innovation, and technological change, and for preventing trade protectionism disguised as green economy measures.

Positive steps are needed to take the Doha Round negotiations forward, which could contribute to a transition towards a green economy. These include negotiations on the removal of trade distortions, in particular of harmful subsidies including in fisheries and agriculture, and the elimination or reduction of tariff and non-tariff barriers to environmental goods and services. Support is needed to assist developing countries, especially their low-income producers and SMEs, to identify green export opportunities, develop capacity in the production and export of related goods and services, facilitate access to information, training and education, finance, technologies, and markets, and increase their competitiveness. International and regional organisations have an essential role to play in this regard.

Freer trade should be tied to important human values, welfare goals, and inclusive growth, assisting those developing countries that are marginalised in the global trading system. Trade policy also needs to be accompanied by policies in both the social and environmental spheres.

4.6 Innovation and technology transfer

Technological innovation in product design, production processes, service systems, and organisational management is essential for reducing negative environmental and social impacts and improving resource efficiency. It is also essential for the development of new products, services, and technologies that promote decent work, benefit society, and support economic diversification and productivity-enhancing structural change.

Changing user behaviours in resource demanding sectors such as food, housing, and mobility, however, requires innovation not only in hard technologies but also in knowledge, management systems, and incentive mechanisms, all of which are important attributes of social innovation. The use of ICTs can help generalise access to relevant information in decision making, anticipate and manage potential risks from new technologies, and optimise sustainability and cost-efficiency in all economic sectors, including in

workplaces through workers-management collaboration and dialogue. UN entities need to scale up support for education and training, small business development, continual improvement in resource efficiency, and access to innovative financing. In addition, they should provide practical tools that support intellectual property rights and the critical complementary “know-how” to enable the transfer, adaptation, and widespread use and dissemination of green technologies. It is critical that local actors have ownership of the innovative process and new technologies and that local and indigenous knowledge is part of the change.

The UN system and the BWIs have indeed actively supported technological and social innovations in developing countries. Their activities range from policy advice and policymaking tools to technical and managerial engagement with industries on resource efficiency and cleaner production, financing and marketing support, skill and capacity development, and facilitating the development of knowledge networks and platforms. There is, however, a need for improving the delivery of joint, interagency initiatives as well as mainstreaming programmes on the introduction and effective implementation of new technologies and standards including North-South and South-South technological transfer and cooperation that a green economic transition requires. International policy coordination, e.g. through adherence to MEAs and technical and scientific capacity building in the receiving country are also key for inducing technology transfer and ensuring that markets for innovations are not fragmented across different countries¹.

4.7 Assessment and indicators

An integrated policy assessment framework including improved accounting systems and indicators to capture relevant information and measure/monitor progress is an essential part of making the green economic transition towards sustainable development. The policy framework - based on a wide range of assessment approaches and tools - should include the participation of all relevant stakeholders.

On accounting systems and indicators, an important starting point is the UN System of Environmental-Economic Accounting (SEEA), which will become an internationally agreed statistical framework in 2012. It is important that policy makers begin to use this system systematically, taking into account the effects of economic activities on all forms of capital when making policy decisions. It should be noted, however, that the SEEA is not designed to fully capture the social implications of economic activities. Dedicated efforts are needed to standardise and publicise social indicators and use them in public policies in conjunction with other indicators.

Building on the SEEA and other relevant initiatives such as the work on resource indicators by the International Resource Panel, the Wealth Accounting and Valuation of Ecosystems, The Economics of Ecosystems and Biodiversity, and the work on monitoring progress towards green growth, three interrelated groups of indicators may be considered:

- indicators that measure the green transformation of key sectors including environmental investments, environmental goods and services, and green jobs;
- measures of decoupling economic productivity and human well-being from resource and emission intensity, including eco-efficiency, re-use and recycling, dematerialisation (i.e. doing more with less), substitution, and material flow indicators; and
- overall measures of well-being with a particular focus on natural capital, poverty, social equity, and social inclusiveness - indicators of how well a green economy has delivered on human-centered development.

¹ OECD, *Invention and Transfer of Environmental Technologies*, OECD Studies on Environmental Innovation, Organisation for Economic Co-operation and Development, Paris, 2011.

UN entities need to improve their ability to contribute to the further development of the SEEA, including programmatic support to institutions in developing economies to improve their capacity to collect, organise, interpret, and communicate the relevant data. Public institutions can also learn from experience gained by responsible businesses in defining and applying “core and additional” indicators in their reporting systems and how non-financial information is increasingly linked with financial information in emerging models of integrated reporting. Efforts should also be made to build any new indicator on the basis of existing macro-level indicator sets such as the Human Development Index and indicators for sustainable development. In addition, and importantly, the system of green economy indicators should allow flexibility for countries to develop their own set of indicators that reflect their particular national and industrial circumstances.

5. The way forward for the UN system

5.1 Mobilising expertise

It is important to organise the expertise of the UN system including BWIs in a targeted and integrated manner when providing green economy related services to countries. It is also important to ensure that this expertise is delivered in a coherent manner and in accordance with nationally and locally identified challenges and priorities. To do these, it is necessary to sensitise policy and research staff as well as operational staff, at UN entities’ headquarters and in their regional and country offices to the green economy approach and to develop their capacity to align it to countries' policy frameworks and priorities. In some cases this may require the creation of special units within UN entities with expertise in economic analysis to support other experts in defining the economic case and supporting the mainstreaming of environmental and social goals in economic policy programmes.

At the global inter-agency level this expertise is being mobilized through inter-agency mechanisms such as the High-Level Committee on Programming, the Environment Management Group and in a synthesized way directly targeting the work of UN Country Teams (UNCTs), the United Nations Development Group (UNDG). At the regional level the UNDG Regional Directors Team pool together resources needed to support UNCTs in their regions.

Regional and sub-regional cooperation should be enhanced further to support replicating, up-scaling, and advancing green economy initiatives, which have been successfully applied in various countries. In this regard, the UN Secretariat through the Regional Commissions provides a unique platform for regional dialogues and consensus building. In addition, the Regional Commissions as the Chairs of the UN Regional Coordination Mechanisms have the opportunity to also mobilise the expertise of the entire UN system as well as regional and international institutions and research community outside of the UN system.

5.2 Consolidating country assistance frameworks and strategies

Given the inter-sectoral and inter-agency nature of the green economy transition, it is important that any green economy policy development and programme support by a UN entity is demand driven, coordinated with the work of other agencies through the UNCTs and the cycle of the UN Development Assistance Framework. The “Delivering as One” approach being piloted in eight countries and applied in another 24 countries offers opportunities that are particularly noteworthy for the transition to a green economy by ensuring that support to countries in the transition to a green economy is delivered in an integrated manner and through a dialogue with all relevant parts of the host government. The ongoing challenge of improving integration across the three pillars of sustainable development is also one of improved interagency collaboration across the global, regional, and national level.

5.3 Generating green, efficient, and effective financial support at scale

Public resources are getting increasingly scarce, calling for a greater focus of public funds to catalyse larger scale private investments in supporting a transition to a green economy. In many cases private sector investment flows await regulatory reform and the introduction of new measures that facilitate the opening up of new markets in environmental goods and services and the mitigation of risks. Private sector financial flows seek adequate financial instruments for investing in the green economy that incorporate an acceptable risk/return proposition. Promoting country ownership and the alignment of UN system's programmes and projects with national priorities will be critical. Countries also need support in developing capacities to attract and drive green investments. In addition, there is a need to identify and develop new sources of international funds at scale that support the global transition towards a green economy. Efforts need to be made to explore the potential for an innovative use of Special Drawing Rights (SDR),¹ international reserve assets, and pools of concentrated assets to serve the aim of financing green economy investments with attractive social as well as private returns and increasing the provision of global public goods.

5.4 Nurturing green innovation and mobilising green technologies

Technology has historically provided the means by which humanity has addressed social and environmental challenges. Policy making needs to strike a balance between incentivising investments in new technologies and giving access to the social and environmental benefit of new technologies. Such incentives help mitigate the risks associated with private sector investments in developing new technologies to enable a shift towards a green economy. But these incentives must also be cognisant of the need to maximise the benefit of these new technologies to society as a whole.

The UN system must continue to support Member States in their efforts to achieve this balance. It must also continue to provide assistance in the building of innovation infrastructure in developing countries as well as partnerships and capacity to transfer, adapt, and disseminate green technologies. Support for efforts to facilitate the use of the global technology database provided by the patent system through the disclosure of technologies in patent applications and tailored search tools such as “IPC Green” can provide an inventory of green technologies that helps both innovation and technology transfer.² Support should also be provided for initiatives that create an efficient marketplace and platform for the sustainable transfer of green technologies, making available both intellectual property rights and associated know-how needed to implement a technology.

5.5 Contributing to the global economic recovery and success of Rio+20

The world has not recovered from the financial and economic crisis that broke out in 2008-2009. Recent developments indicate a renewed set-back in the recovery driven by the unsustainable debt levels of many industrial economies. The lingering crisis is causing damage to the world economy at large with serious implications for poverty, social equity, and social stability as well as commitments to environmental sustainability in all countries. Investments in renewable energy and energy-efficiency, sustainable transport, sustainable agriculture, and other areas, however, hold a great potential to contribute to global economic recovery. By fundamentally restructuring public spending and leveraging private investments

¹ “The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies.” See: <http://www.imf.org/external/np/exr/facts/sdr.htm>

² The International Patent Classification (IPC) facilitates searches for patent information. The IPC Green Inventory was developed by the IPC Committee of Experts in order to facilitate searches for patent information relating to environmentally sound technologies.

towards environmental and social investments, indebted industrial countries can expect to find new growth paths that support fiscal consolidation while contributing to a green economy.

At a global level, Rio+20 provides an important policy opportunity in the near term for the UN system to make commitments to support countries, including Least Developed Countries, in their efforts to move towards a balanced and inclusive green economy. Agreement among UN entities on core elements of strategy, policy, and programmatic services in support of governments' green economy initiatives will send a powerful signal to governments, businesses, and civil society of the determination of the UN system to "Deliver as One" on a green economy transformation for sustainable development and poverty eradication.