





Introduction Setting the stage for a green economy transition

Towards a green economy

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Contents

1	Introduction: Setting the stage for a green economy transition	ŀ
1.1	From crisis to opportunity	ŀ
1.2	What is a green economy?16	5
1.3	Pathways to a green economy)
1.4	Approach and structure – Towards a green economy	ŀ
References		
List of tables		
Table	1: Natural capital: Underlying components and illustrative services and values	\$
List o	of boxes	
	: Managing the population challenge in the context of sustainable development	
Box 2	: Towards a green economy: A twin challenge	

1 Introduction: Setting the stage for a green economy transition

1.1 From crisis to opportunity

The last two years have seen the idea of a "green economy" float out of its specialist moorings in environmental economics and into the mainstream of policy discourse. It is found increasingly in the words of heads of state and finance ministers, in the text of G20 communiques, and discussed in the context of sustainable development and poverty eradication.

This recent traction for a green economy concept has no doubt been aided by widespread disillusionment with the prevailing economic paradigm, a sense of fatigue emanating from the many concurrent crises and market failures experienced during the very first decade of the new millennium, including especially the financial and economic crisis of 2008. But at the same time, there is increasing evidence of a way forward, a new economic paradigm – one in which material wealth is not delivered perforce at the expense of growing environmental risks, ecological scarcities and social disparities.

Mounting evidence also suggests that transitioning to a green economy has sound economic and social justification. There is a strong case emerging for a redoubling of efforts by both governments as well as the private sector to engage in such an economic transformation. For governments, this would include leveling the playing field for greener products by phasing out antiquated subsidies, reforming policies and providing new incentives, strengthening market infrastructure and market-based mechanisms, redirecting public investment, and greening public procurement. For the private sector, this would involve understanding and sizing the true opportunity represented by green economy transitions across a number of key sectors, and responding to policy reforms and price signals through higher levels of financing and investment.

An era of capital misallocation

Several concurrent crises have unfolded during the last decade: climate, biodiversity, fuel, food, water, and more recently, in the global financial system. Accelerating carbon emissions indicate a mounting threat of climate change, with potentially disastrous human consequences. The fuel price shock of 2007-2008 and the related skyrocketing food and commodity prices,

reflect both structural weaknesses and unresolved risks. Forecasts by the International Energy Agency (IEA) and others of rising fossil fuel demand and energy prices suggest an ongoing dependence as the world economy struggles to recover and grow (IEA 2010).

Currently, there is no international consensus on the problem of global food security or on possible solutions for how to nourish a population of 9 billion by 2050. See Box 1 for further information on the population challenge. Freshwater scarcity is already a global problem, and forecasts suggest a growing gap by 2030 between annual freshwater demand and renewable supply (McKinsey and Company 2009). The outlook for improved sanitation still looks bleak for over 1.1 billion people and 844 million people still lack access to clean drinking water (World Health Organization and UNICEF 2010). Collectively, these crises are severely impacting the possibility of sustaining prosperity worldwide and achieving the Millennium Development Goals (MDGs) for reducing extreme poverty. They are also compounding persistent social problems, such as job losses, socio-economic insecurity, disease and social instability.

The causes of these crises vary, but at a fundamental level they all share a common feature: the gross misallocation of capital. During the last two decades, much capital was poured into property, fossil fuels and structured financial assets with embedded derivatives. However, relatively little in comparison was invested in renewable energy, energy efficiency, public transportation, sustainable agriculture, ecosystem and biodiversity protection, and land and water conservation.

Most economic development and growth strategies encouraged rapid accumulation of physical, financial and human capital, but at the expense of excessive depletion and degradation of natural capital, which includes the endowment of natural resources and ecosystems. By depleting the world's stock of natural wealth – often irreversibly – this pattern of development and growth has had detrimental impacts on the wellbeing of current generations and presents tremendous risks and challenges for the future. The recent multiple crises are symptomatic of this pattern.

Box 1: Managing the population challenge in the context of sustainable development

The link between population dynamics and sustainable development is strong and inseparable, as reflected in Principle 8 of the 1992 Rio Declaration on Environment and Development.

"To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies." Rio Declaration, Principle 8 (UN 1992).

This year the world population will reach 7 billion and by mid century grow to over 9 billion. Contrary to previous projections the most recent population projections expect continued population growth thereafter (UN DESA 2009 and 2011). Population growth raises the stakes in efforts to reduce poverty. It not only increases the challenge of feeding a growing population, which crucially depends on higher agricultural output (FAO 2009 and 2010; Tokgoz and Rosegrant 2011), but also requires creation of sufficient employment opportunities, which in turn depend on favorable economic development (ILO 2011; UNFPA 2011a; Basten et al. 2011; Herrmann and Khan 2008).

A transition to a green economy can assist in overcoming the contribution that population growth makes to the depletion of scarce natural resources. The world's least developed countries (LDCs) are more strongly affected by environmental degradation than most other developing countries (UNCTAD 2010a), so therefore have much to gain from the transition to a green economy.

In addition, changing spatial distributions of populations, driven both by rural to urban migration and by urban growth, are changing environmental impacts and vulnerabilities. When planned,

urbanisation can be a powerful driver of sustainable development. Given that in 2008 the share of the urban population has for the first time exceeded the share of people living in the rural areas at the global level (UNFPA 2007), a transition to a green economy becomes increasingly important. Significantly, in the least developed countries where the majority of people are still living in the rural areas, 2000 to 2010 was the first decade that growth of the urban population outpaced the growth of the rural populations. These types of changes at a societal level can also present opportunities for a green economy to develop.

For example cities can provide essential services, including health and education, at lower costs per capita due to economies of scale benefits. Efficiencies are also realised in the development of vital infrastructure including housing, water, sanitation and transport. Urbanisation can also reduce energy consumption, particularly in transport and housing, and create interactive spaces that further cultural outreach and exchange. Realisation of these positive benefits requires proactive planning for the future demographic changes.

Forward planning by governments and local authorities can address population dynamics in a proactive way. For example, one tool available to assist countries is to make better use of available population data and conduct a systematic population situation analysis (UNFPA 2011b), aiming to highlight how current and projected population trends affect the development of countries. Such analysis provides the necessary foundation to address population dynamics and their links to sustainable development and poverty reduction strategies.

Source: UNFPA

Existing policies and market incentives have contributed to this problem of capital misallocation because they allow businesses to run up significant, largely unaccounted for, and unchecked social and environmental externalities. To reverse such misallocation requires better public policies, including pricing and regulatory measures, to change the perverse incentives that drive this capital misallocation and ignore social and environmental externalities. At the same time, appropriate regulations, policies and public investments that foster changes in the pattern of private investment are increasingly being adopted around the world, especially in developing countries (UNEP 2010).

Why is this report needed now?

UNEP's report, *Towards a Green Economy*, aims to debunk several myths and misconceptions about greening the global economy, and provides timely and practical guidance to policy makers on what reforms they need to unlock the productive and employment potential of a green economy.

Towards a green economy

Perhaps the most prevalent myth is that there is an inescapable trade-off between environmental sustainability and economic progress. There is now substantial evidence that the greening of economies neither inhibits wealth creation nor employment opportunities. To the contrary, many green sectors provide significant opportunities for investment, growth and jobs. For this to occur, however, new enabling conditions are required to promote such investments in the transition to a green economy, which in turn calls for urgent action by policy makers.

A second myth is that a green economy is a luxury only wealthy countries can afford, or worse, a ruse to restrain development and perpetuate poverty in developing countries. Contrary to this perception, numerous examples of greening transitions can be found in the developing world, which should be replicated elsewhere. *Towards a Green Economy* brings some of these examples to light and highlights their scope for wider application.

UNEP's work on green economy raised the visibility of this concept in 2008, particularly through a call for a Global Green New Deal (GGND). The GGND recommended a package of public investments and complementary policy and pricing reforms aimed at kick-starting a transition to a green economy, while reinvigorating economies and jobs and addressing persistent poverty (Barbier 2010a). Designed as a timely and appropriate policy response to the economic crisis, the GGND proposal was an early output from the United Nations' Green Economy Initiative. This initiative, coordinated by UNEP, was one of the nine Joint Crisis Initiatives undertaken by the Secretary-General of the UN and his Chief Executives Board in response to the 2008 economic and financial crisis.

Towards a Green Economy – the main output of the Green Economy Initiative – demonstrates that the greening of economies need not be a drag on growth. On the contrary, the greening of economies has the potential to be a new engine of growth, a net generator of decent jobs and a vital strategy to eliminate persistent poverty. The report also seeks to motivate policy makers to create the enabling conditions for increased investments in a transition to a green economy in three ways.

First, the report makes an economic case for shifting both public and private investment to transform key sectors that are critical to greening the global economy. It illustrates through examples how added employment through green jobs offsets job losses in a transition to a green economy.

Second, it shows how a green economy can reduce persistent poverty across a range of important sectors

agriculture, forestry, freshwater, fisheries and energy.
Sustainable forestry and ecologically friendly farming methods help conserve soil fertility and water resources.
This is especially critical for subsistence farming, upon which almost 1.3 billion people depend for their livelihoods (UNEP et al. 2008).

Third, it provides guidance on policies to achieve this shift by reducing or eliminating environmentally harmful or perverse subsidies, addressing market failures created by externalities or imperfect information, creating marketbased incentives, implementing appropriate regulatory frameworks, initiating green public procurement and by stimulating investment.

1.2 What is a green economy?

UNEP defines a green economy as one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP 2010). In its simplest expression, a green economy is low-carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment are driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.

These investments need to be catalysed and supported by targeted public expenditure, policy reforms and regulation changes. The development path should maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and as a source of public benefits. This is especially important for poor people whose livelihoods and security depend on nature.

The key aim for a transition to a green economy is to enable economic growth and investment while increasing environmental quality and social inclusiveness. Critical to attaining such an objective is to create the conditions for public and private investments to incorporate broader environmental and social criteria. In addition, the main indicators of economic performance, such as growth in Gross Domestic Product (GDP) need to be adjusted to account for pollution, resource depletion, declining ecosystem services, and the distributional consequences of natural capital loss to the poor.

A major challenge is reconciling the competing economic development aspirations of rich and poor countries in a world economy that is facing increasing climate change, energy insecurity and ecological scarcity. A green economy can meet this challenge by offering a development path that reduces carbon dependency, promotes resource and energy efficiency and lessens environmental degradation. As economic growth and investments become less dependent on liquidating environmental assets and sacrificing environmental quality, both rich and poor countries can attain more sustainable economic development.

The concept of a green economy does not replace sustainable development; but there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right. Decades of creating new wealth through a "brown economy" model based on fossil fuels have not substantially addressed social marginalisation, environmental degradation and resource depletion. In addition, the world is still far from delivering on the Millennium Development Goals by 2015. The next section looks at the important linkages between the concept of a green economy and sustainable development.

A green economy and sustainable development

In 2009, the UN General Assembly decided to hold a summit in Rio de Janeiro in 2012 (Rio+20) to celebrate the 20th anniversary of the first Rio Earth Summit in 1992. Two of the agenda items for Rio+20 are, "Green Economy in the Context of Sustainable Development and Poverty Eradication", and "International Framework for Sustainable Development". With the green economy now firmly established on the international policy agenda, it is useful to review and clarify the linkages between a green economy and sustainable development.

Most interpretations of sustainability take as their starting point the consensus reached by the World Commission on Environment and Development (WCED) in 1987, which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987).

Economists are generally comfortable with this broad interpretation of sustainability, as it is easily translatable

available to both current and future generations (Pearce et al. 1989).

Society must decide how best to use its total capital stock today to increase current economic activities and welfare. Society must also decide how much it needs to save or accumulate for tomorrow, and ultimately, for the well-being of future generations.

However, it is not simply the aggregate stock of capital in the economy that may matter but also its composition, in particular whether current generations are using up one form of capital to meet today's needs. For example, much of the interest in sustainable development is driven by concern that economic development may be leading to rapid accumulation of physical and human capital at the expense of excessive depletion and degradation of natural capital. The major concern is that by irreversibly depleting the world's stock of natural wealth, today's development path will have detrimental implications for the well-being of future generations.

One of the first economic studies to make the connection between this capital approach to sustainable development and a green economy was the 1989 book *Blueprint for a Green Economy* (Pearce et al. 1989). The authors argued that because today's economies are biased towards depleting natural capital to secure growth, sustainable development is unachievable. A green economy that values environmental assets, employs pricing policies and regulatory changes to translate these values into market incentives, and adjusts the economy's measure of GDP for environmental losses is essential to ensuring the well-being of current and future generations.

As pointed out by the *Blueprint for a Green Economy* authors, a major issue in the capital approach to sustainable development is whether substitution among different forms of capital – human capital, physical capital and natural capital – is possible. A strong conservationist perspective might maintain that

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