The role of the Green and Blue Economy in the post-2015 development agenda

Development Series

Riccardo Mastini, M.Sc.
Andrea M. Bassi, Ph.D.
The Green and Blue Economy

International attention to the concept of Green Economy has arisen in recent years by widespread disillusionment with the prevailing economic paradigm, ensuing from several concurrent crises: climate, biodiversity, energy, food, and water. The causes for these crises are complex and manifold, but their lowest common denominator is the misallocation of capital. Over the last century, mainstream economic development theories have placed the emphasis on the rapid accumulation of physical, financial and human capital. This was pursued at the expense of excessive depletion and degradation of natural capital, which includes the endowment of natural resources and ecosystems (UNEP, 2011).

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 addition, the Green Economy is seen as an action-oriented approach (i.e. a set of policies and investments) to reach sustainable development. The main areas of intervention in a green economy strategy are: renewable energy, energy efficiency, public transportation, sustainable agriculture, ecosystem and biodiversity protection, and land and water conservation. In its simplest expression, a green economy is low carbon, resource efficient, and socially inclusive (UNEP, 2011). In a green economy, growth in income and employment should be 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. To achieve these objectives requires public policies, including pricing and regulatory measures, to change the perverse incentives that drive this capital misallocation and ignore social and environmental externalities. For governments, this transition would involve leveling the playing field for greener products by phasing out harmful subsidies, reforming policies and incentives, strengthening market infrastructure, introducing new market-based mechanisms, redirecting public investment, and greening public procurement (UNEP, 2011).

Closely connected to the concept of Green Economy is the emerging concept of Blue Economy. The Blue Economy focuses on the sustainable management of marine resources and ecosystems. Marine ecosystems have substantial economic value as they provide goods and services as many commercial activities depend directly on healthy oceans. However, nowadays more fish stocks than ever before are considered overexploited or depleted, and accidental oil spills and land-based pollution plague the health of coastal seas (UNEP, 2012). Harmonizing traditional economic activity and ecosystem-dependent economic values is one of the greatest challenges we face. Just as with the Green Economy, the Blue Economy supports policies that internalize the external costs of practices which damage the environment. There are several ways to reduce the environmental footprint of economic activities on marine and coastal areas, such as: greening small-scale fisheries and aquaculture, changing the way maritime transport is done, developing marine-based renewable energy, diminishing ocean nutrient pollution from agricultural fertilizers, and regulating coastal tourism (UN Commission for Africa, 2010).
An agenda for sustainable development in developing countries

A major challenge is to accommodate the economic development aspirations of poor countries in a world economy that is facing increasing climate change, energy insecurity, and ecological scarcity. A green economy can meet this challenge: as economic growth and investments become less dependent on liquidating environmental assets and sacrificing environmental quality, developing countries can attain more economic development (UN, 2013). The concept of a green economy is pivotal to sustainable development: there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right (UNDP, 2012), in a way that it does not negatively impact on society and the environment. The chain of connections between socio-economic development and environmental protection is clear: conventional (resource and carbon intensive) development causes climate change, climate change impacts the health of ecosystems and availability of environmental resources, environmental degradation (which lowers resilience and increases vulnerability) in turn affects negatively economic growth and well-being.

Figure 1. The chain of causality between conventional development and loss of well-being

The United Nations Millennium Declaration, agreed by world leaders in the year 2000, is due to expire in 2015 and the debate on what should replace it is in full swing. The objective of the post-2015 process is to cover the next 15 years of implementation of the Declaration. The Millennium Development Goals (MDGs) are international development goals which underpin the objectives set out by the UN’s Millennium Declaration. The MDGs encapsulate eight globally agreed goals in the areas of poverty alleviation, education, gender equality and empowerment of women, child and maternal health, environmental sustainability, reducing HIV/AIDS and communicable diseases, and building a global partnership for development (Melamed, 2012). One of the main outcomes of the Rio+20 Conference, which took place in Rio de Janeiro in June 2012, was the agreement by member states to launch a process to develop a set of Sustainable Development Goals (SDGs), which will build upon the MDGs and converge with the post 2015 development agenda. The SDGs are to replace the MDGs when they expire at the end of 2015.
The SDGs and the Green Economy

Among the 17 SDGs agreed at the Rio+20 Conference there are some that incorporate the Green Economy and the Blue Economy principles more than others. Examples follow:

(2) *End hunger, achieve food security and improved nutrition and promote sustainable agriculture.* A transformation of today’s predominant agriculture paradigms is urgently needed because conventional agriculture as practiced in the developed world has achieved high productivity levels primarily through high levels of finite inputs, such as chemical fertilizers, herbicides, and pesticides; extensive farm mechanization; high use of transportation fuels; increased water use that often exceeds hydrologic recharge rates; and higher yielding crop varieties resulting in a high ecological footprint (World Bank, 2008). Agriculture that is based on a green-economy vision integrates location-specific organic resource inputs and natural biological processes to restore and improve soil fertility; achieve more efficient water use; increase crop and livestock diversity; support integrated pest and weed management and promotes employment and smallholder and family farms. Green agriculture could nutritiously feed the global population out to 2050 if worldwide transition efforts are immediately initiated. This transformation should particularly focus on improving farm productivity of smallholder and family farms in regions where increasing population and food insecurity conditions are most severe (Tillman et al., 2002).
(6) **Ensure availability and sustainable management of water and sanitation for all.**
Access to clean water and adequate sanitation services is critical to the future of each and every household. Water is clearly fundamental to food production and providing ecosystem services and vital for industrial production and energy generation. The costs of achieving a transition will be much lower if the increased investment is accompanied by improvements in governance. The opportunity to improve governance arrangements is one of the biggest opportunities to foster transition to a greener economy. In any area where there is water scarcity, it is critical that governance arrangements are put in place to prevent over-use and over development of the available water resource (UN, 2010).

(7) **Ensure access to affordable, reliable, sustainable and modern energy for all.**
The challenges posed to society by the energy sector, in terms of energy security, climate change, pollution and public health hazards, and energy poverty, are real and pressing, making the greening of the energy sector an imperative. And the absolute level of energy demand will grow with increasing population and income (UNDP, 2009). Raising energy efficiency and shifting from fossil fuels to renewable energy are crucial strategies for greening the energy sector. To reduce energy poverty, renewable energy development needs to be tailored to the circumstances in rural areas where the majority of the poor in developing countries live. Mini-grids and off-grids may provide an effective means of delivering electricity to the poor, while reducing GHG emissions.

(9) **Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.**
The infrastructure sector should be central to any attempt to use resources more efficiently. Buildings consume a large proportion of the global energy supply but opportunities to improve efficiency are huge and the sector has a remarkable potential to reduce global GHG emissions. Great gains can also be achieved from a broader, more holistic approach to buildings; a life-cycle perspective that covers each stage from the building design and the extraction of resources to construction and usage and through to disuse and eventual demolition and the recycling or disposal of the building materials (WBCSD, 2009). In addition to buildings, roads, ports and other large infrastructure projects (e.g. those aiming at creating new economic corridors in Africa and Southeast Asia) play an important role in shaping land use and development at the local level, which would in turn impact on natural capital and the availability of critical ecosystem services.

(11) **Make cities and human settlements inclusive, safe, resilient and sustainable.**
Cities are where some of the world’s most pressing challenges are concentrated: unsustainable resource and energy consumption, carbon emissions, pollution, and health hazards. But cities are also where hope is. They are magnets attracting hundreds of millions of rural migrants in search for economic opportunities. The net effect of urbanisation on poverty reduction has been effective at the global level. Although urbanisation has been accompanied by increased pressure on the urban environment and the increase of the urban poor, these problems are not insurmountable. Greening cities can also produce a set of wider economic and social benefits (World Bank, 2010). First, as well as lowering per capita carbon emissions, densification as a central green city strategy tends to enhance productivity, promote innovation, and reduce the capital and operating cost of infrastructure. Densification can also raise congestion and the local cost of living, but green city strategies and interventions to subsidize housing costs can help to mitigate these.
(14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Greening the fisheries sector by rebuilding depleted stocks and implementing effective management could increase the overall marine fisheries catch, and raise the economic contribution of ocean fish populations to the global economy, sustainably. In order to achieve sustainable levels of fishing from an economic, ecological and social point of view, a serious reduction in current excessive capacity is required (World Bank/FAO, 2009). Given the wide difference in the catching power, the job creation potential, and the livelihood implications of large-scale versus small-scale fishing vessels, it appears that a reduction effort focused on large-scale vessels could reduce overcapacity at lower socioeconomic costs to society (UNEP, 2011). More investment is required to improve fisheries management in most parts of the world. This would enable a more effective implementation of all management tools that have proven to be effective, including stock assessments, monitoring and controlling programs, transferable and non-transferable quota systems, and expanding marine protected areas.

(15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

The active protection of tropical forests, for example, is now widely perceived as a crucial ecosystem management priority and a cost-effective way to reduce global carbon emissions. While the loss of forest carbon can be offset by planting trees, and some growing timber demand can be met by plantations, the loss of primary forest is often irreversible. There are reasons for optimism, but greening the forest sector requires a sustained effort (World Bank, 2004). Various standards and certification schemes have provided a sound basis for practicing sustainable forest management, but their widespread uptake requires a strong mandate and consistent policies and markets. Protected areas, although controversial from the beginning, remain an important option for preventing the permanent loss of critical ecosystems and biodiversity. Their effective and equitable enforcement remains a challenge. The emerging PES and REDD+ schemes are ambitious and innovative avenues for funding the greening of the forest sector.

The Green Economy at the national level

The transition to a Green Economy has a long way to go, but several countries are demonstrating leadership by adopting national “green growth” or “low carbon” economic strategies. And there are many examples of successful, large-scale programs that increase growth or productivity and do so in a sustainable manner. A number of these come from developing countries, including emerging economies, and illustrate a positive benefit stream from specific green investments and policies. What follows are some successful stories of Green Economy projects implemented at the national level in developing countries.

Several countries have designed nation-wide Green Economy and Blue Economy strategies (Figure 3). These include Mongolia, Mozambique, Mauritius and more. While their implementation is normally taking place at the sectoral level, these plan nevertheless guide policy formulation to ensure coherence across sector, anticipating potential challenges as well as new opportunities.
Some examples of nation-wide and sectoral strategies follow:

- The high degree of volatility in oil markets has increased awareness among local policy-makers in Mauritius of the need to decrease dependence on fossil fuels by increasing the use of renewable energy and investing in energy efficiency. The Ministry of Energy and Public Utilities (MoEPU) has therefore formulated a “Long-Term Energy Strategy: 2009 – 2025” that aims to: (1) reduce the vulnerability caused by dependence on imported fossil fuels and their volatile prices; (2) promote economic growth and job creation; (3) decentralize energy supply; (4) secure affordable energy for consumers; and (5) ensure long-term sustainable development in line with the concept of ‘Maurice Ile Durable’ (MID). These interventions are synergetic in the way they support the key goals of the long term energy strategy.
In China a combination of investments and policy incentives has encouraged major advances in the development of both wind power and solar power. In 2005, China passed the Renewable Energy Law which serves as the principal framework for development of the sector. The law offers a variety of financial incentives, such as a national fund to foster renewable energy development, discounted lending and tax preferences for renewable energy projects, and a requirement that power grid operators purchase resources from registered renewable energy producers (UNEP, 2010). This wave of investments has especially benefited national SMEs. For instance, to directly encourage local wind turbine manufacturing, China has implemented policies to encourage joint-ventures and technology transfers in large wind turbine technology and mandated the use of locally made wind turbines. The proof of that is the fact that domestic wind turbine makers, such as Sinovel Wind, Goldwind Science and Technology, and Dongfang Electric, have contributed an increasing share of total new installations. Together they accounted for at least half of a market dominated by foreign firms until 2008.

The northern regions of Cameroon are covered with savanna and are considered an important biodiversity hotspot. However, these regions are menaced with deforestation by agricultural activities. The government has recently launched an initiative aimed at reorganizing the legal rights of communities with the aim of promoting participatory management of the forests. This project has already born fruit: more than 10,000 ha of forests are now sustainably managed, a program of awareness-raising with local communities on the importance of ecosystem services has been launched, local families now benefit from an extra income accruing them from silviculture, and ecosystem services are ensured by preventing deforestation (P-EVA, 2015).

The Dangbo area in Porto Novo, Benin, is facing a challenging wave of urban migration of unemployed youth and women. Besides, the city suffers from a lack of waste treatment facilities which causes public health concerns. In this context, the local NGO Jevev launched a campaign to communicate to the local population the value of garbage as a resource. The youth and the women residing in the city slums are the primary beneficiaries of this initiative as they will be directly involved in the management and the implementation of the project. This project will bring the following benefits: the installation of public waste containers, the reduction of hygiene-related diseases such as cholera and dysentery, and the empowerment of unemployed youth and women (P-EVA, 2015).

In the Sahel region, climate change is adding further pressure to the construction sector that was already experiencing socio-economic difficulties. In order to tackle this issue, a local NGO is attempting to spread construction practices that are more adapted to the local environmental conditions. To this end, the NGO is popularizing an ancient building technique, known as “voûte nubienne”, which in recent decades has fallen out of practice. Such building technique is low-energy, low-cost, it uses only already available construction materials, and it ensures thermic efficiency. Furthermore, this technique is easy to learn and transmit so that local unemployed people can learn a useful set of skills and know-how that can be sold on the marketplace (P-EVA, 2015).
References


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UNDP. 2009. *Bringing Small-Scale Finance to the Poor for Modern Energy Services: What is the role of government?*

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Annex 1: KE’s expertise in the Green Economy field, selected projects

Green Economy advisory work

- WWF Greater Mekong. Lead author for the pilot study “Green Economy Modelling of Ecosystem Services in the Dawna Tenasserim Landscape (DTL) along the ‘Road to Dawei’. 2013.

Green Economy reports

• IISD. Contributing author for the report “Fossil Fuel Subsidies and Climate Change. Options for policy makers within their Intended Nationally Determined Contributions”, IISD (2015).


• UNEP. Lead author for the report titled “Measuring Progress Towards an Inclusive Green Economy”. 2012.

Green Economy in the context of UNDP Africa Adaptation Programme

• UNDP AAP Mauritius. International economist for the creation of a climate change adaptation policy framework for the Government of Mauritius. This project includes the creation of a framework, policy, strategy, action and investment plan for climate change adaptation in Mauritius. 2012.

• UNDP AAP Congo and Nigeria. Along the lines of what done for Mauritius, but with emphasis on green economy solutions to climate change challenges. 2012.

Systemic thinking and system dynamics, training and applied research in the context of the green economy

• Green.EU. Project partner in the Green.EU consortium, and innovations projects funded by the EU. 2015.

• IFDD. Coordinator and trainer: École d’été francophone sous le thème: "La mise en œuvre des accords multilatéraux sur l'environnement comme levier de création d'emplois verts et d'activités génératrices de revenus", 2014 (Morocco) and 2015 (Madagascar).

• ISPI (Istituto Per Gli Studi Di Politica Internazionale), Green Economy course. A two-day program offered at the 2013 Summer School (September 2013), 2014 and 2015 Winter School (April 2014 and 2015).

• WECOOP Project, EU – Central Asia Strategy For A New Partnership. Platform for Environment and Water Cooperation, Regional Coordination and Support for the EU-Central


- Horizon 2020, a multi year UNEP supported and EU funded project. Trainer for the Green Economy training carried out in Rabat, Morocco, for the Ministry of the Environment and invited stakeholders. June 6 - 7, 2012.