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The Green Economy and Ecosystem Services

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The Green Economy and Ecosystem Services

By Denise de Souza

Our economic, physical, mental and cultural health depend on the health of ecosystems and the “services” provided by the ecosystem. An ecosystem can be seen as “a complex of living organisms and the abiotic environment with which they interact in a specified location” (United Nations Convention on Biological Diversity, 1992). Although the concept of Ecosystem Services (ES), also known as Environmental Services, has existed in scientific literature since the 1970s, it has only recently begun to receive attention in decision-making at the national level and on a global scale. The Millennium Ecosystem Assessment (MEA) is a study that was sponsored by the UN in 2003, in order to evaluate the state of the world’s ecosystems. This MEA is key to bringing attention to and promoting the application of the concept in planning and decision-making. It identified and assessed 24 specific ecosystem services, in the context of what it described as the “benefits people obtain from ecosystems.” The MEA classifies ES into four types: provisioning; regulating; cultural; and supporting services. Figure I presents an overview of these types of services and lists some of the ways in which they contribute to human well-being.

Figure I: Linkages between Ecosystem Services and Human Well-being.
Source: Millennium Ecosystem Assessment. *Ecosystems and Human Well-being. A synthesis*, p.vi

The information above makes it clear that even business operations and thus ultimately human welfare rely on ecosystem services such as freshwater or other natural resources. Given that our economies depend on this *natural capital*, the degeneration or loss of ecosystems and their services pose a significant risk to companies and whole industry sectors. Nevertheless, ecosystem services are not fully captured in commercial markets or comparable economic values and are thus rarely, or only marginally, considered in policy and corporate decisions. The absence of economic value and visibility of ecosystem services has led to “The Economics of Ecosystem and Biodiversity” (TEEB) Report, which is part of the Green Economy Initiative of the UN Environment Programme (UNEP). The TEEB report analyses and highlights the economic value of ecosystem services and associated emerging green markets, such as the ecosystem services of coral reefs or the market for certified sustainably managed forest products. Responding to the same challenge corporate associations as the World Business Council for Sustainable Development and individual companies have started to develop business strategies and corporate environmental policies.

The findings of the MEA suggested that human activities were impacting negatively on the quality and availability of the ecosystem services – in large part because these services were seen to be public goods and hence made available to all at no cost. This is deemed to be a market failure. In the search for a method to ration and control their rate of consumption, the idea of attaching a price, reflective of the value contributed by the ecosystem service, has gained significant support. This is backed by the Ayres principle of *Industrial Metabolism*, which suggests that *Prices* play a role in signalling shortages far enough in advance to precipitate innovation. And this is sufficient to prevent misuse or over exploitation of ES.

The introduction of payments for ecosystem services (PES) aims to correct the market failure by internalising the value of the benefits received from nature. In this way the missing incentives for the provision or conservation of ES would be created. PES has the potential to become very valuable transfer mechanisms to internalise positive environmental externalities, and to generate new revenues for sustainable development. In short, it is about putting a “price” on natural assets – recognising the environmental, economic, and social values of ecosystem services (for example from forests, or biodiversity) – as one way to promote conservation and more responsible decision making. Several economic instruments can be used to meet these purposes; for example, taxes, user fees, subsidies, direct contributions, grants, loans, and donations.

The Green Economy

There is no unique definition of the green economy, but the term itself underscores the economic dimensions of sustainability or, in terms of the recent UNEP report on the Green Economy, it responds to the “growing recognition that achieving sustainability rests almost entirely on getting the economy right”. It also emphasises the crucial point that economic growth and environmental stewardship can be complementary strategies, challenging the still common view that there are

significant tradeoffs between these two objectives – in other words, that the synergies prevail over the tradeoffs.

Intrinsic to the Green Economy concept is its *holistic* character, because it encompasses the three pillars of development – economic, social, and environmental factors – and its particular focus on *inter-generational equity* or sustainability. This is reflected in UNEP's definition of a green economy as “one that results in improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities”.

The Green Economy Initiative was launched by UNEP in 2008, at the height of the global financial and economic crises. It has served to inform governments of two unique opportunities. First, that a significant slice of the multi-trillion dollar stimulus packages could, if targeted at environmental investments, be deployed to revive the global economy, save and create employment, and assist in addressing emerging environmental challenges. This point was particularly relevant to the developed countries and was not lost on the USA Obama Administration that has been using Green Technology to drive its own recovery. Second, that such investments coupled with domestic policy reforms in some key areas and the development of international policy and market infrastructure, could set the stage for a transition to a truly “Green Economy”: one which achieves increasing wealth, provides decent employment, successfully tackles inequities and persistent poverty, and reduces ecological scarcities and climate risks. Guyana is working to cash in on these opportunities as well through its agreement with Norway, and by accessing REDD+ funds using the LCDS as a vehicle.

While the methods of estimating the value of ES are still evolving, there is a significant level of acceptance of the method for valuing carbon sequestration. Carbon emissions (and other greenhouse gases) are associated with climate change; and the McKinsey Consultancy Report (2008), which is central to the LCDS propositions, argues that avoided deforestation in Guyana represents avoided emissions of greenhouse gases for the world in the order of 1.5 gigatons of CO₂e by 2020. The challenge therefore is to access the level of compensation for this global environmental service – possibly under a Global Environmental Fund modality in exchange for aligning Guyana's economic growth along a low carbon trajectory (outlined in the LCDS), and in so doing, mitigate the principal drivers of deforestation that lie outside the forest sector.

According to UNEP a “... Green Economy is characterized by substantially increased investments in economic sectors that build on and enhance the earth's natural capital or reduce ecological scarcities and environmental risks.” These sectors can typically include renewable energy, low-carbon transport, energy efficient buildings, clean technologies, improved waste management, improved freshwater provision, sustainable agriculture and forest management, and sustainable fisheries. These investments are usually supported by national policy reforms and the development of international policy and market infrastructure; for instance, Guyana's LCDS and the carbon market, which has provided Guyana with funding from Norway for the LCDS.