

## **The Green Economy: The Dangerous Path of Nature Commoditization**

Mark Wilson

Mark Wilson is a Cemus course coordinator at the Center for Sustainable Development at Uppsala University, Sweden. His research interests include ecological economics and food system resilience.

[mark.wilson@csduppsala.uu.se](mailto:mark.wilson@csduppsala.uu.se)

### **Abstract**

UNEP's proposal of the green economy advocates the pricing of ecosystem services in the hope of providing greater environmental protection and eradicating poverty. There are five aspects of the green economy which could undermine its practical implementation as well as its social legitimacy; i) ecosystem services are inherently difficult to price, ii) the consideration of the rebound effect is insufficient, iii) primacy of economics over the environment is ensured, iv) markets offer little protection for the poorest people, and v) existing market mechanisms aimed at safeguarding the environment have not succeeded. The green economy relies upon the discursive power of ecological modernization and our faith in progress to uphold a failing strategy of unfettered economic growth. This discourse limits our capacity to conceive solutions outside the economic sphere. Achieving sustainable development will require a process of social change that could be facilitated by the acceptance that nature is more than just a form of capital.

**Keywords:** Green Economy, Payment for Ecosystem Services, Sustainable Development, Commoditization of Nature, Ecological Modernization, Economic Growth

## The Future We Want?

The 2012 Rio + 20 United Nations Conference on Sustainable Development (UNCSD) has resulted in a disappointing and rather vague outcome document. A brief look at some of the words used most frequently in the text tells you everything you need to know. ‘*Voluntary*’ appears eleven times, as opposed to (legally) ‘*binding*’ which is used only once (UNCSD, 2012). ‘*Reaffirm*’ occurs fifty-nine times, which in itself is not so interesting until you compare it to the use of ‘*binding*’. It seems that plenty of good ideas have emerged from the various UN initiatives over the last forty years, but most nations are not enthusiastic about the prospect of implementing them. Perhaps most enlightening is the use of the term ‘*sustained growth*’, which the delegates pledged to pursue no less than sixteen times (ibid). World leaders regard *sustained growth* as the principle means of achieving sustainable development, or ‘the future we want’. Alternative policies, such as conservation, regulation and enforcement, and wealth redistribution, have been left on the shelf for now.

At the risk of getting embroiled in semantics, it is important to clarify what is meant by *sustained growth*. It is, quite simply, “economic growth, in perpetuity”. *Sustained growth* is a surprisingly transparent term that removes much of the ambiguity over how leading politicians interpret *sustainable development*. For anyone concerned about the dimension of social justice in this new policy, it is conveniently handled by the insertion “sustained *and inclusive* growth”. So now we have it: “continuous economic growth, for everyone”. This may sound ominous to you. Unfettered economic growth is the destructive force that got us into this mess, and now it has become the primary instrument in our efforts to get us out of it (Monbiot, 2012). The problem is redefined as the solution.

The green economy is the strategic tool proposed by the United Nations Environment Program (UNEP) in their paper *Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication* (2011), which set the agenda for Rio + 20. The green economy aims to direct nations away from harmful modes of production and consumption, a so-called “brown economy”, and towards sustainable practices that will result in “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP, 2011, p16). This will operate through, “Improvements in environmental valuation and policy analysis ... to ensure that markets and policies incorporate the full costs and benefits of environmental impacts” (ibid, p18). Environmental services that we previously took for granted as free of charge will be priced using a cost-benefit approach, and markets will be created in which to trade them.

The authors of *Towards a Green Economy* attempt to resolve the two major challenges of our time, environmental degradation and persistent poverty, and their good intentions are evident in the report. However, their approach of using market mechanisms to overcome these challenges is inherently problematic. This paper is a critique of the green economy and the unstated assumptions on which it is based. The first section analyses the weaknesses of the green economy, both as an ideological concept and the obstacles to its practical implementation. The second section delves

deeper into the discourse used to rationalize the green economy, which enables the wholesale commoditization of nature.

### **Weaknesses of the Green Economy**

The green economy fails to address five fundamental problems and, thus, has the potential to increase environmental degradation and cause even greater social inequity than we see today:

1. Ecosystem services are inherently difficult to price.
2. The consideration of the rebound effect is insufficient.
3. Primacy of economics over the environment is ensured.
4. Markets offer little protection for the poorest people.
5. Existing market mechanisms aimed at safeguarding the environment have not succeeded.

#### *How Can We Accurately Price Natural Services?*

The Millennium Ecosystem Assessment report (MEA, 2005) was instrumental in highlighting the range of benefits bestowed on humans from natural processes, such as the purification of air and water, the cycling of nutrients, or the provision of food through the pollination of crops. Collectively these benefits are known as ecosystem services. According to the MEA report, sixty percent of the ecosystem services they assessed are being degraded by the aggregate impact of anthropogenic activities. As a result, there is an increasing likelihood that these ecosystems will experience nonlinear and potentially irreversible changes in how they function (ibid, p11). The degradation of ecosystems is preventing the Millennium Development Goals from being realized, and threatens the wellbeing of all people, of both present and future generations (ibid, p14). The MEA report and other similar documents, such as the WWF's *Living Planet Report* (2012), argue that we should be taking the utmost care of the world's ecosystems, as our very existence depends on them.

In recognition of these concerns UNEP proposed its strategy of a green economy, with two aspirations in mind. One is the removal of externalities, which are benefits or services received from ecosystems but are not paid for. The cost of damaging an ecosystem does not feature in economic decisions. The other objective is poverty alleviation, through the transfer of funds from the 'users' of environmental services, such as governments, companies or communities, to the 'providers', the rural poor whose livelihoods often depend on exploiting fragile ecosystems (UNEP, 2011). To achieve these objectives the green economy will use the mechanism of 'Payment for Ecosystem Services' (PES), which operates by i) framing an ecological function as a 'service', ii) assigning it a price, and iii) creating a market to link those who affect, control or manage the provision of this service and those who are willing to pay for it (Kosoy & Corbera, 2010).

A major criticism regarding this market-based approach is that our knowledge of how ecosystems function is entirely inadequate to contemplate such crude

valuations. Even our most esteemed ecologists and natural historians assert that our understanding of our interaction with the natural world is, at best, scant (Attenborough, 2006; Hollings, 1998). Yet UNEP feels confident it can value pollination by insects at \$190 billion/year (2011, p18). This figure is based on the 'bioeconomic approach' proposed by Gallai et al. (2009), in which the market value of a crop is multiplied by its dependence ratio on pollinators in the nightmare scenario of "total pollinator loss". The ethical issue of a world without bees aside, the fact remains that we are unable to provide most of these services for ourselves on any relevant scale, despite our impressive array of technologies. If we cannot substitute natural capital with physical capital, the weak sustainability approach advocated by UNEP becomes redundant. Even Gallai et al. concede that "ecological responses to pollinator decline on large scales remain poorly known" (2009, p.820). Thus a reliance on economic formulae to protect ecosystems rather than heeding the warnings of the scientific community is a very risky strategy.

#### *The Rebound Effect Is Not Adequately Accounted For*

The pursuit of profit is the main driver behind innovation, and this usually results in technological processes that are more efficient in their use of natural resources. The unfortunate consequence is *the rebound effect*, whereby the efficiency gains are undermined by an increase in the use of the technology and the consumption of natural resources (Polimeni & Polimeni, 2006). The UK Energy Research Centre found that improved fuel efficiency in cars has led to people driving more frequently and further, or that the money saved from buying less petrol is spent on other energy-intensive goods and services, such as an overseas flight (2007).

If pricing mechanisms are used to reduce environmental risks, there is a strong possibility for a rebound effect in all sectors. As the costs of damaging ecosystems are internalized through PES, the price of natural resources will rise, and goods will become more expensive. Companies hoping to gain a larger share of the market will then invest in more efficient technological processes to reduce their operating costs. This allows them to drop prices, thus generating higher demand. The reduced operating costs could make it profitable to extract more of the resource than before the introduction of PES. Kosoy et al. (2012) therefore argue that just shifting the supply curve is insufficient. We also need to focus on the dynamics of social behavior which influence the demand for goods. This need is explicitly recognized by UNEP, which asserts that new technologies should be accompanied by "appropriate behavioral and institutional change" to prevent such a rebound (2011, p359). While this recognition is welcome, UNEP does not explain anywhere in its 631-page report how the behavior of institutions or individuals might be changed, except for a brief reference to tax incentives and some unsubstantiated regulatory policies. This is a major oversight in the report. It is not enough to simply accept that the rebound effect may be a problem. There has to be clearer guidelines on how the green economy and its architects can avert a threat that could completely undermine their principle aim of protecting the environment.

#### *Primacy of Economics Over the Environment is Ensured*

Let's consider for a moment the premise on which the green economy is based. When a price is put on a natural service, *you can buy it*. Corbera (2012) argues that this causes a fundamental shift in the logic of conservation. Ethical arguments regarding the protection of the environment, such as inter-generational justice or that nature has intrinsic value, are substituted for utilitarian ones that prioritize the elements of nature most useful to humans. While this raises important moral questions for consideration in developed countries, it also risks undermining the social norms of rural communities in developing countries. Gómez-Baggethun et al. (2010) observe that valuation processes are by no means ideologically neutral and can act as institutions that articulate particular notions of property and private ownership. There is a risk that in creating economic incentives for the protection of nature, market mechanisms can induce logics of individualism and competition in societies previously structured upon community and reciprocity value (ibid). Traditional forms of nature stewardship, such as ethical obligation or communal regulation, could be supplanted by economic self-interest, thereby changing the way people relate to nature and to each other.

The assumption that economic valuation will actually offer protection for the natural environment is in itself highly precarious, as McCauley observes:

“To make ecosystem services the foundation of our conservation strategies is to imply – intentionally or otherwise – that nature is only worth conserving when it is, or can be made, profitable. The risk in advocating this position is that we might be taken at our word. Then, if there is a ‘devaluation’ of nature... what are we to tell local stewards who have invested in our ideology, and how can we protect nature from liquidation?” (2006)

As mentioned earlier, it will prove very difficult to accurately price ecosystem services. If the payment for conservation is considered insufficient to compensate for the opportunity cost, the value gained from choosing alternative options, then PES may actually be counterproductive in achieving its aims (Gómez-Baggethun et al., 2010). This negative outcome would be further compounded if other conservation strategies had been abandoned in favour of PES. Moreover, in leaving environmental protection to the whims of the market, we would do well to bear in mind that businesses do not have environmental protection as their primary aim. Milton Friedman (1970) famously said that businesses have only one social responsibility: the pursuit of profit. If a corporation can profit from destroying an ecosystem, without alienating its customers or shareholders in the process, the less scrupulous will certainly do so. The exploitation of the Athabasca oil sands in Canada is a poignant example.

#### *Nature for Those Who Can Afford It*

There are one billion malnourished people in the world today (UNCSD, 2012, p4), despite productivity increases during the Green Revolution. UNCSD states that “poverty is the greatest global challenge facing the world today” (2012, p1), and so a failure to address it would undermine the legitimacy of the green economy. A major concern is that an unequal distribution of wealth can exist in a green economy just as easily as in a brown economy (Flomenhoft, 2011). The UNEP report (2011) repeatedly

states the need to construct some sort of protection for the poor into the new economic policy. However, the report does not fully acknowledge the ability of market forces to swiftly harm livelihoods and the natural environment (Brockington, 2012). For instance, in less than a decade over 18 million hectares of primary rainforest in Indonesia have been cleared for highly lucrative biofuel production, leading to the severe impoverishment and disempowerment of the indigenous communities who lived there (Colbran, 2011). Moreover, this is not just a moral question of social justice. Wangari Maathai (2008) highlighted that poverty and inequality lead to conflict. This invariably results in environmental destruction and the lack of a democratic voice, which generates further poverty, and so on. If the green economy does not succeed in alleviating poverty and inequality, attempts at protecting the natural environment will be severely hampered in many parts of the world.

UNEP asserts that “a pro-poor orientation must be superimposed on any green economy initiative” (2011, p20). Imposing a pro-poor agenda onto the green economy will inevitably require strong governance and extensive intervention into the workings of global and national markets. There is a contradiction here, because the entire notion of the green economy is based on the prevailing neo-liberal paradigm of creating markets and allowing them to function freely, albeit with a possible kick-start from governments in the form of tax incentives. The scale of intervention required to ensure the green economy does not suffer from an ‘elite capture’ of the opportunities these new markets create would be considerable (Brockington, 2012). This bears more of a resemblance to welfare capitalism than a free market. Most governments have supported policies of market liberalization in recent decades, and so it seems unlikely that they would be willing to engage in such heavy interference in the markets at this time.

#### *The Failure of Carbon Markets*

The experience of Kyoto’s flexible mechanisms should serve as a warning to extending the use of markets into other areas of environmental protection. The United Nations Framework Convention on Climate Change (UNFCCC) hoped to stabilize global carbon emissions by imposing legally binding emission reductions on developed (Annex I) countries under the Kyoto Protocol. The flexible mechanisms are intended to help countries “meet their targets by reducing emissions or removing carbon from the atmosphere in other countries in a cost-effective way” (UNFCCC, 2013). They allow countries to trade carbon emission allocations by purchasing ‘permits’ from other Annex I countries or operators which have a surplus (cap and trade), or by buying ‘offset credits’ through investment in ‘emissions saving projects’ in developing (Non-Annex I) countries (the Clean Development Mechanism).

The Kyoto flexible mechanisms are theoretically sound, but the reality is less encouraging. In April 2013 the world’s largest carbon market, the European Union Emissions Trading System (EU ETS), valued carbon at less than €3 per tonne (The Economist, 2013). This devaluation was primarily caused by the EU ETS allocation of free credits to large polluters based on their historical emissions, a practice known as ‘grandfathering’ (Coelho, R., 2012). There are now too many credits on the market for it to function properly. Ultimately, €3 per tonne is not a sufficient deterrent for large

polluters such as energy companies to reduce their emissions. Even if the carbon markets do survive, their ability to prevent anthropogenic climate change remains doubtful. Since the markets were formally introduced in 2005, atmospheric carbon dioxide has increased from 379 to 398 ppm (National Oceanic and Atmospheric Administration, 2013). Hansen et al. (2008) regard 350 ppm as the target we should aim for if we wish to maintain the relatively stable climate of the Holocene epoch, and so we are heading in the wrong direction. This illustrates that market mechanisms do not necessarily result in environmental protection despite the best intentions of those who design them.

Payment for Ecosystem Services (PES) will most likely follow the model of the international climate policy REDD+ (Reducing Emissions from Deforestation and Forest Degradation). REDD+ promotes the commoditization of forest ecosystems' carbon storage and sequestration functions, whereby funds are transferred from carbon offset *buyers* to *sellers* in exchange for the sustainable management of forested areas (Corbera, 2012). It is too early to pass judgment on the success of REDD+, but the program has encountered problems such as slow funding from donor countries and the lack of institutional infrastructure in recipient countries to implement it (Clements, 2010). REDD+ has drawn criticism from indigenous people's organizations, who claim that it is being used to undermine their fundamental rights and could potentially lead to a mass land grab (Espinoza Llanos and Feather, 2011). REDD+ pilot projects have had to surmount multiple challenges, such as negotiating different forms of land tenure-ship, building trust between diverse stakeholders, and accurately monitoring and assessing ecosystem services (Corbera, 2012). The complexity of embedding a market mechanism into the local context presents an acute challenge to the implementation of REDD+ and other forms of PES.

## The Commoditization of Nature

### *Nature as a Fictitious Commodity*

UNCSD leaders hope to translate the function of ecosystem services into what Karl Polanyi (1944) calls *fictitious commodities*, so that they can be incorporated into global and local economies (Brockington, 2012). *Real commodities*, such as oil or timber, are physical items that exchange hands when sold. Fictitious commodities, such as land and labor, do not exchange hands when they are sold. Instead, complex social arrangements and political institutions, such as title deeds or employment contracts, are relied upon to transfer ownership or user rights (Polanyi, 1944). PES is an example of this arrangement.

The commoditization of nature is by no means new. We have been buying and selling the fruits of nature's bounty since the advent of money. What is different about the green economy, however, is its scope. Commoditization will now be extended into areas previously governed by other social institutions, such as protective legislation, community ownership, or regarded as sacred (Kosoy et al., 2012). These social institutions have not always been successful in protecting the environment, but this is primarily because they were undermined by the same market forces that will now be expanded. In the green economy we will be entitled to buy clean air, fresh water, and

healthy soil, so long as we have enough cash in our bank account. We are selling nature *itself*, not just the fruits it produces.

This trepidation is accompanied by a more practical concern of how markets often perform poorly when allocating fictitious commodities and common goods. Brockington observes:

“Fictitious commodities like land and labor do not live easily in markets because the commodity form only captures part of their social existence. Markets do not recognize the emotive attachments to homes and place, they do not recognize that labor is composed of people with identity, ambition, dreams and families” (2012, p420).

When goods or services are defined as fictitious commodities, their social and ecological contexts are removed and a host of cultural and intrinsic values become obsolete. Polanyi did not mince his words when he argued “to allow the market mechanism to be the sole director of the fate of human beings and their natural environment...would result in the demolition of society” (1944, p76).

#### *The Rhetoric of the Green Economy*

The commoditization of nature is made possible because a discourse has been constructed which allows people to perceive it in monetary terms. This discourse has been promulgated by powerful elites since the time of philosopher Francis Bacon, who advocated binding “nature with all her children...to your service and make her your slave” (1603, cited in Farrington, 1964). That nature can be bought and sold is not, however, ontologically defined, but is a socially constructed reality which reflects a particular cultural and temporal context. The Plymouth colonists asked Massasoit, a leader of the Wampanoag Native American Nation, his views on selling land in the 1620s. He replied:

"What is this you call property? It cannot be the earth, for the land is our mother, nourishing all her children, beasts, birds, fish and all men. The woods, the streams, everything on it belongs to everybody and is for the use of all. How can one man say it belongs only to him?" (cited in Batt, 2003).

The language used by Massasoit clearly expresses a very different social reality to the one understood by the authors of *Towards a Green Economy*, who state that, “Ideally, changes in stocks of natural capital would be evaluated in monetary terms and incorporated into national accounts” (2011, p23). In describing the environment as ‘stocks of natural capital’, UNEP employs a worldview that Evernden (1993) refers to as ‘resourcism’, whereby nature is defined by its utility to humans. This legitimises the rationality of pricing ecosystem services, while simultaneously excluding discourses that reflect different worldviews, such as Massasoit’s ecocentrism.

The representation of nature shapes and influences how environmental problems are understood and, thus, determines which potential solutions can be

considered (Lindseth, 2006, p26). As a result, the discourse defines the space in which analysis of the problem can occur, and the worldview on which the discourse rests can remain unquestioned or even unidentified. In *Towards a Green Economy* (2011) the overwhelming voice is one of ‘ecological modernization’; that technological advancement will lead to a more efficient use of natural resources (Brockington, 2012). This has important implications, as Hajer explains, “The discursive power of ecological modernization manifests itself in the degree to which its implicit future scenarios permeate through society and actors re-conceptualize their interests and recognize new opportunities and new trouble spots” (1995, p261).

Ecological modernization is a persuasive discourse because it reframes economic growth and environmental protection as complementary and perhaps even mutually reinforcing. Not only does this appeal to powerful target audiences, such as policy makers and business leaders (Dryzek, 1997, p15), but it also helps allay the fears of an environmentally aware general public. The ‘trouble spots’ that concern people switch from ‘the possibility of ecological collapse’ to ‘what is the most appropriate technological fix?’

#### *Our Faith in Progress*

UNEP’s *Towards a Green Economy* (2011) attempts to provide a road map for humanity, and it is based on the same assumptions as its predecessor *Our Common Future* (1987). In 1983 the United Nations established the Brundtland Commission in response to two major concerns. One was the mounting evidence of environmental deterioration on regional scales resulting from industrialization, such as acid rain, deforestation, and the pollution of waterways. The other was the fear that economic and social development would soon be hindered by the scarcity of finite natural resources, as proposed by Donella Meadows et al. in their influential report ‘Limits to Growth’ (1972). Concern for the environment has escalated considerably in recent decades, and many of Meadows et al.’s predictions have proven to be remarkably accurate; the problems have not gone away (Bigg, 2011, p460). It is important to recognize that the Brundtland Commission and UNEP were both charged with answering the same questions, and they both came up with the exact same answer: economic growth.

The Brundtland Commission acknowledged the necessity of political action to prevent further environmental degradation, but it somewhat sidestepped the ‘limits to growth’ argument:

“The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities.” (The World Commission on Environment and Development, 1987, p7).

Their conclusion was that we do not have ‘absolute limits’, but simply a few inconvenient ‘limitations’ which can be resolved by our own ingenuity. *Towards a Green Economy* (2011) toes the same line with its discourse of ecological modernization.

Both reports feed into the well-established grand narrative of humanity’s inexorable march towards a brighter future, through *progress*. The unwavering belief that we can overcome any obstacle with the twin forces of scientific reasoning and technological innovation has pervaded our collective consciousness since the Age of Enlightenment. Christopher Lasch suggests, “Progressive optimism rests, at bottom, on a denial of the natural limits on human power and freedom, and it cannot survive for very long in a world in which an awareness of those limits has become inescapable” (1991, p530). This statement is particularly revealing. If the Brundtland Commission had presented a different interpretation of sustainable development, one that accepted the possibility of absolute natural limits, *Our Common Future* (1987) would have raised serious doubts about the wisdom of pursuing economic growth as the main instrument of structuring our society. The three-hundred-year-old dogma of *progress* would have to be refuted or, at the very least, subjected to a genuine reexamination. We would be forced to admit that we had made a mistake, taken a wrong turn somewhere along the line. The Brundtland Commission was not prepared to take that step any more than UNEP and the UNCSD leaders are willing to do so now. The glorious age of progress must continue.

## Conclusion

*Towards a Green Economy* (2011) offers a very conservative vision of how humanity might achieve sustainable development. It relies heavily on the growth paradigm advocated in *Our Common Future* (1987), despite mounting evidence that this economic policy has accelerated environmental degradation at an exponential rate during the last twenty-five years (MEA, 2005; WWF, 2012) and that poverty remains prevalent in many countries (UNCSD, 2012). The green economy falls into the trap of placing economic growth as the goal of society, and therefore avoids the most essential question: what is the economy for? The proposal of ecological modernization does have some validity; switching to renewable energy, reducing pollution and avoiding the wasteful use of natural resources are all sensible, if not novel, suggestions. But the new risks introduced through the pricing of ecosystem services are of particular concern, as this ignores what Martínez-Alier (2002) calls ‘incommensurability’; that many aspects of human existence and the natural environment cannot be adequately discussed in economic terms.

So what are the alternatives? Albert Einstein reputedly once said, “the significant problems we face cannot be solved at the same level of thinking we were at when we created them”. We are confronted by complex, multi-scale ecological and social problems, and the discourse of progress and technological invincibility is not serving us well, as it limits our capacity to conceive of solutions outside of the economic sphere. A humble recognition of our absolute dependence on the natural environment would alter our perspective immeasurably. It then becomes permissible to regard some ecosystem functions as so fundamentally important, both intrinsically and in a utilitarian sense, that they should be safeguarded through the most assured

method possible. This lies not in standardised economic valuations, but in a range of context-specific measures, such as legal protection, proactive conservation, existing local institutions, and research into socio-ecological interactions. Shifting the discourse would also encourage individuals and communities to examine the logic of consumption and re-evaluate what is most important in our societies (Jackson, 2009). This self-reflection would most likely lead to a moral enquiry into global inequality. Governments would be called upon to regulate exploitative business practices and oversee meaningful wealth redistribution without the hindrance of economic growth as the overriding goal. This process of social change will not be easy, but it is driven by necessity. It begins with the acceptance that nature is something more than a form of capital to be traded.

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