

GREEN ECONOMY – RISKS AND CHALLENGES OF SUSTAINABLE DEVELOPMENT

Drd. Dumitru Raluca-Ana-Maria* PhD

National Institute of Economic Research “Costin C. Kirişescu”,
Romanian Academy

Abstract

The concept of the green economy provides a response to the multiple crises that the world has been facing in recent years – the climate, food and economic crises – with an alternative paradigm that offers the promise of growth while protecting the earth’s ecosystems and, in turn, contributing to poverty reduction. In this way, the transition to a green economy will entail moving away from the system that allowed, and at times generated, these crises to a system that proactively addresses and prevents them.

Keywords: sustainable development, green economy, risks, challenges

During the recent global financial crisis, the United Nations General Assembly and several UN agencies underscored that the crisis represented an opportunity to promote green economy initiatives as part of the stimulation packages being put in place to support the recovery. Furthermore, when the GA decided to approach UN Conference on Sustainable Development (UNCSD), which has been in June 2012 in Rio de Janeiro, it was chosen as one of its major themes, namely as “a green economy in the context of sustainable development and poverty eradication”

The concept carries the promise of a new economic growth paradigm that is friendly to the earth’s ecosystems and can also contribute to poverty alleviation. Regarding in this framework, it is compatible with the older

concept of sustainable development which has been mainstreamed into the United Nations' work for many years. But it also entails risks and challenges, particularly for developing countries, for whom economic development becomes more demanding and the fear arises that the new concept could be used to reinforce protectionist trends, enhance the conditionality associated with international financial cooperation, and unleash new forces that would consolidate the international inequalities.

In May 2009 at the UNCSD's first Preparatory Committee, several delegations therefore requested that the United Nations Department of Economic and Social Affairs, the United Nations Environment Program, the United Nations Conference on Trade and Development and other relevant organizations cooperate to prepare a study to be available for the next Preparatory Committee which would assess both the benefits and the challenges and risks associated with a transition to a green economy.

The concept of a green economy has become a center of policy debates in the last years. It has gained currency to a large extent because it provides a response to the multiple crises that the world has been facing in recent years – the climate, food and economic crises – with an alternative paradigm that offers the promise of growth while protecting the earth's ecosystems and, in turn, contributing to poverty reduction. In this way, the transition to a green economy will entail moving away from the system that allowed, and at times generated, these crises to a system that proactively addresses and prevents them.¹

There is not a single 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 emphasizes 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.

Responding to concerns of many countries, the concept of green economy should be seen as consistent with the broader and older concept of

¹ Khor, Martin, *Food Crisis, climate change and the importance of sustainable development*, Penang TWN, 2008

sustainable development. The specificities of the broader concept are its *holistic* character, as it encompasses the three pillars of development – economic, social and environmental – and its particular focus on *inter-generational* equity. 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”.¹

Khor Martin raises several concerns and risks in the use of this concept from the perspective of developing countries. In particular, he underscores the need to identify and deal with the tradeoffs that may be involved at different stages of development and with different environment endowments and challenges. Furthermore, for connecting the concepts of the green economy and sustainable development, he underscores the need to respect fully the principles agreed upon at the 1992 United Nations Conference on Environment and Development (UNCED) and particularly the principle of common but differentiated responsibilities. This requires, in his view, a three-pronged approach in which: the developed countries have to take the lead in changing their production and consumption patterns; developing countries maintain their development goals but do so while adopting sustainable practices; and developed countries commit to enable and support the developing countries and sustainable development through finance, technology transfer and appropriate reforms to the global economic and financial structures.

Also, Khor presents several risks that may be associated with the misuse of the concept of the green economy. The first risk is that it could be defined or operationalized in a one dimensional manner, as merely “environmental”. The second risk is that of a “one size fits all” approach, in which all countries are treated in the same manner. There are also a series of risks related to the trade regime: of using environment for trade protection; of gaining market access through the guise of environment; of developing countries’ facing production that is subsidized in the industrial world without being able to impose corrective measures; of limiting the policy space that developing countries have to promote their own green economy sectors; and of facing technical standards that their exporters cannot meet.

¹ UNEP, *The Economics of Ecosystems & Biodiversity. Mainstreaming the Economics of Nature*, 2010

And finally, the concept of the green economy should not be used to impose new conditionality on developing countries for aid, loans, and debt rescheduling or debt relief.¹

While underscoring the connections between the economy and the environment, it should not lose sight of the equity dimensions, including the needs of the poorer members of society throughout the world, the specific needs of developing countries (and of different groups of developing countries) and, of course, of future generations.

The Macroeconomic Dimensions of the Green Economic Growth

There are four different macroeconomic issues that must be taken into account into a green economy analysis. The first one relates to issues of inter-temporal welfare: how the welfare of future generations is taken into account in current economic decisions, an issue that is relevant for savings and investment decisions today, but has broader implications, as the social discount rate chosen should be used in cost-benefit analysis at the microeconomic and sectoral levels. The second refers to the effects that the degradation of the environment has on aggregate supply, as well as the effects of environmental spending and protection policies on both aggregate supply and demand. The third is the fact that economic growth is always a process of structural change, a fact that is highlighted by the significant changes in the patterns of production and consumption that must be put in place in the transition to the green economy, which in this regard can be characterized as no less than a new technological or industrial revolution. The final one relates to how global initiatives in this area are going to be financed.

The first of these issues relates to the discount rate that is used to value in current economic decisions the consumption (welfare) of future generations and the environmental damages that are being created today but which will fully affect economic activity only in the future – the damages generated by climate change, the loss of biodiversity or the deterioration of water systems, to name just a few of all these. The importance of this issue can be best understood in terms of the debates of climate change. For

¹ Khor, Martin, *The impact of trade liberalization on agriculture in developing countries: the experience of Ghana*, Penang TWN, 2008

example, environmental damage worth \$100 half a century from now would be valued at \$49.90 today using the Stern Review's discount rate of 1.4% a year but only \$5.43 or \$6.88 using the alternative rates preferred by its critics (6 and 5.5%, respectively). Therefore, using a high discount rate significantly reduces the social profitability of taking mitigation actions today, favoring delayed action or even no action at all. For this reason, a high rate of discount reduces the attractiveness of savings and investing today to benefit the welfare of future generations.¹

This implies that social discount rates used for the analysis of optimal economic growth paths and associated savings and investment decisions are inherently linked to ethical debates on inter-generational equity. On these grounds, it is justified the use by Stern and supporters of strong environmental action of social discount rates that are the market rates. Indeed, the full inter-generational equity calls for the use of a discount rate equivalent to the expected rate of technical change (on the order of 1.5 to 2%). This also implies that savings and investment today to reduce environmental damages must be increased to benefit future generations.

A complementary argument is that strong action today insures future generations against the asymmetric and non-linear effects that certain developments can have on the ecosystem (for example, the fact that the risk of losses associated with climate change or the extinction of species, among others, is higher than the probability of a more favorable outcome than those being projected), including the rising likelihood of extreme events (catastrophes). As indicated, this implies that microeconomic and sectoral cost-benefit analysis of relevant environmental investments should be evaluated using low social discount rates.

Macroeconomic considerations also indicate that green investments have a dual positive economic effect, on aggregate supply and demand. In the first case, the recent Green Economic report by UNEP shows that a strategy of reallocating investments towards the green economy may lead to slower potential economic growth for a few years, as renewable natural resources are replenished (an effect that can be strong in some sectors, such as fisheries), but will result in the long run in faster economic growth.

¹ Khor, Martin, *Some Key Points on Climate Change, Access to Technology and Intellectual Property Rights*, European Patent Office conference on climate change and IPR policy, Penang TWN, 2008

Furthermore, investments in the green economy also reduce downside risks of adverse events associated with climate change, energy shocks, water scarcity and loss of ecosystem services. They will also result in the long term in increased employment, as green investments are generally more employment intensive, and have direct benefits in terms of poverty reduction. The latter is particularly true in the case of agriculture, where green technologies will tend to improve the agricultural productivity of rural smallholders.

A full consideration of the fact that green investments today will also increase aggregate demand gives an even more positive macroeconomic picture. Also such investments can help increase economic activity and employment in the short-run, a much needed action for industrial economies that are still characterized by high levels of unemployment. This positive effect may even counteract whatever adverse aggregate supply effects those investments can have in the short term. In turn, to the extent that investment is embodied in new equipment or leads to learning-by-doing, higher investment induces productivity growth, reinforcing long-term growth. Obviously, the composition of the demand stimulus must be carefully chosen to reinforce sustainable development: certain types of consumption and investment must be restricted to avoid excessive resource depletion and waste, whereas environmentally-friendly investment and consumption should expand.

Developing Countries' Green: Development Strategies

The third macroeconomic dimension comes from recognizing that economic growth is nothing else but a process of structural change: one in which some activities expand, based on new technological knowledge, while others contract. In this "structuralist" view, those changes are not just a byproduct of growth but their prime mover: development is nothing other than the capacity of an economy constantly to generate new dynamic activities. This view is essential because the transition to the green economy involves no less than a technological revolution, and will have deep impacts on production structures as well as on consumption patterns.

These structural transformations have two types of implications. Since new technologies are largely going to originate in the industrial

countries, there are a series of international issues related to how these technologies are disseminated, what changes in trade patterns they will generate and what mechanisms will be put in place by the international community to guarantee that this process will benefit all countries. The second set of issues relates the domestic policy response by developing countries.

The major implication in this regard, which is underscored by the three authors, is that active development strategies must be put in place to drive the transformation towards new dynamic green activities. This strategy can be called as an investment-led strategy, or an active industrial and technology policy. In the latter case, it must be emphasized, however, that it involves not only manufacturing or industry but the whole range of economic activities (agricultural transformations, for example, are critical). For this reason, “production sector policies” could be a better term than industrial policies. Developmental states must be at the center of these strategies, but they must be designed to encourage strong private-sector responses. In Khor’s terms, the state has traditionally had a strong developmental role in developing countries: it now has to take on a *sustainable* development role.

According to some specialists, the core of this strategy should be a strong technology policy with a focus on adaptation and dissemination of green technologies and the treatment of green economic activities as “infant industries” that require appropriate support (subsidies, preferably time-bound, access to credit and perhaps some level of protection). In the opinion of other specialists, a wise industrial policy requires giving preference to new public and private investment that contribute to sustainable development: investment with good prospects for generating backward and forward linkages in the economy, and which aligns with countries’ development priorities. In the end, he argues, governments looking to support domestic green sectors will inevitably pick losers as well as winners, but this should not be a blanket admonition against trying, as we have a rich history on which to draw in judging what works and what does not. These actions should be supported by public sector investments that develop the necessary infrastructure and provide access to basic energy and water and sanitation for the poor.

Besides encouraging faster economic growth, the strategy must also incorporate sustainable development principles and practices. The set of related issues is extensively analyzed in Khor's contribution. It includes regulation, pricing policies, taxes and subsidies to limit pollution and emissions and to control over-exploitation of natural resources and making prices better reflect environmental values, as well as mainstreaming environmental criteria in government procurement policies. This principle should also be incorporated in the pricing of public services, but in such a way as not to penalize the poor, especially when the products or services concerned are essentials. Thus, if water is generally underpriced, when revaluing its price a system of differential pricing should be put in place that ensures access for the poor. Public expenditure on restoring damaged ecosystems (such as forests, hillsides, water catchment areas and mangroves) is also important.

One of the crucial issues is the right of rural communities to a clean environment that enables them to have a sound basis for their livelihoods and their living conditions. One of the most serious potential effects of global warming will be the lower productivity of agriculture in developing countries. For the same reason, however, poor rural communities are also among the main beneficiaries of the green economy. Sustainable agricultural production methods have great mitigation and adaptation potential, particularly with regard to topsoil organic matter fixation, soil fertility and water-holding capacity, and increasing yields in areas with medium to low-input agriculture and in agro-forestry.

In this context, paying farmers for carbon sequestration may be considered a "triple dividend" policy, as carbon dioxide is removed from the atmosphere (mitigation), higher organic matter levels and moisture retention in soils enhance their resilience (adaptation), and improved soil organic matter levels lead to better crop yields (production).

This issue is also related to "food security", a term that has shifted back to the traditional concept of greater self-sufficiency and increased local food production. This may require, in Khor's view, putting back many institutions that were dismantled in developing countries due to structural adjustment policies: those that assisted farmers in marketing, credit, subsidies, infrastructure, and protection. It should also include international trade reform that sufficiently reduces or removes harmful agricultural

subsidies in the developed countries, while enabling developing countries to have special treatment and safeguard mechanisms to promote their small farmers' livelihoods.

Domestic and International Technology Issues

The technological revolution surrounding the green economy is likely to differ from previous processes of this sort in at least three major ways. First of all, government policy is going to play a more central role than in past industrial revolutions. Secondly, given the level of integration of the world economy today and the fact that it is responding to veritable global challenges, the associated technological change is going to be essentially a global process, with specific international institutions playing a fundamental role in coordinating international cooperation. Thirdly, it will take place under the prevalence of intellectual property rights which are stronger and enjoy global protection under the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights) of the World Trade Organization (WTO).

This raises essential issues as to who will benefit from technological change, in terms of being at the center of research and development efforts, and generating new economic activities and linkages with the rest of their economies. The available evidence indicates that most innovation in climate mitigating technology does take place in industrial countries and that, therefore, firms from those countries are the main holders of intellectual property rights, but a number of major developing country firms (from Brazil, China and India, in particular) have already gained some market share in new technologies. Given the center-periphery character of the process of technology generation, an important concern relates to whether this process will generate new forces for international inequality associated with the uneven technological capacities that already exist, both between industrial and developing countries but now also among developing countries.

A critical issue here is that, aside from the very large disparities in capacities to generate technology, technological absorption on the recipient side is always an active learning process. So, a central aspect of technology development and transfer is building local capacity so that developing

countries can absorb, adapt, diffuse into the domestic economy and eventually design new technologies. Government support is thus essential to create national systems of innovation. This requires mechanisms to disseminate the technology, such as agricultural extension services for green agricultural technologies and similar mechanisms to spread knowledge about better building practices to household and construction firms, and about energy-saving technologies to small and medium-sized manufacturing firms, to mention a few. It also requires growing public, academic and private research and development and engineering teams that adapt imported technology and eventually contribute to generate new technology.

In any case, given the fact that most developing countries will be technology followers, there is a need to develop global institutional arrangements that increase international cooperation and collaboration on research and development in all areas relevant for green growth, and accelerate the spread of those technologies to developing countries.

An important measure to promote sustainable development is to expand the space for technologies in the public domain, and to stimulate the transfer to developing countries of publicly-funded technologies. Industrial countries should influence the flow of such technologies directly, or through requiring the private sector and public institutes that receive research and development funding from government to be more active in transferring technologies to developing countries. At the international level, there can also be public funding and joint planning of research and development programs, following for example the model of the Consultative Group on International Agricultural Research (CGIAR).

Products and technologies emerging from such publicly funded programs should be placed in the public domain. A network of technology experts in various areas should be made available to advise developing countries, as well as designing a model of research and development cooperation agreement, global demonstration programs, knowledge-sharing platforms, and a global database on freely available technologies and best practices in licensing.

International Trade and Investment Rules

Changing trade patterns will be an essential part of the structural change surrounding the transition to the green economy. This restructuring brings potential economic benefits to developing countries by opening up new export opportunities. The growth in environmental goods and services has tended to exceed growth of merchandise exports since at least the mid-1990s as well as growth of GDP. However, there are also risks. Although, some developing countries – notably China, but also India and Brazil – are participating dynamically in these markets, most environmental goods are produced in industrial countries. New trends also pose risks associated with using environment for protectionist purposes, including the undue use of subsidies and technical standards, and limiting the policy space that developing countries have to promote their own green economies.

One obvious way trade policy might help in the greening of economies is by lowering tariff and non-tariff barriers to goods such as wind turbines and efficient light bulbs, and services such as environmental engineering. However, Khor claims that some developed countries may be attempting, through the categorization of certain goods and services as "environmental", to eliminate the tariffs of unrelated goods in WTO negotiations. In turn, he argues in favor of developing countries retaining some room for protection to develop their own environmental goods and services and support their diversification efforts.

Khor and other specialists also cautioned against the use of environmental standards as a new form of protectionism. The clearest case is that of border carbon adjustments, which would operate in practice as additional import tariffs and should thus be rejected. In addition, standards and prohibitions based on production and processing methods, which are not necessarily protectionist, may be easily specified in ways that provide undue advantage to domestic producers. They include carbon footprint labels, or labels that display the amount of greenhouse gases a product emits over its life cycle. More generally, environment-related product and process standards, regulatory regimes and restrictions are steadily ratcheting up in industrial economies, and private buyers in these countries are also developing a parallel set of related standards and codes.

The rise of these standards has major implications for developing country exporters. Governments should thus focus on enabling exporters to meet such standards, working with the private sector to communicate the content of the regulations and to help firms identify, acquire and assimilate the technologies needed to meet them. Governments can also help build accredited national or regional capacity to test and certify goods as compliant; this includes building laboratories, working with foreign accreditation bodies, supporting technical training etc. They can also design domestic standards that are not too far from those required internationally, which would help build up private sector capacity to export successfully to demanding key markets and result in less local pollution, resource use and waste. At the international level, however, the plethora of product energy performance standards, testing procedures and labeling requirements used in different markets creates a barrier to export. Harmonizing these standards would thus be a huge boon, in particular for small and medium sized exporters.

The support given by industrial countries to green industries, including for research and development, though essential for the transition to the green economy, also raise some concerns. There is nothing close to international agreement on the propriety and ideal character of such support, which is thus liberally granted by developed and developing countries alike. Furthermore, while there are rules in this area, there is a divergence of opinion among some authors about what WTO rules say, which reflects a broader policy debate. Although we could wait for clarity from the WTO dispute settlement process, this would not give policy makers certainty about what they can and cannot do.

Furthermore when rule-breaking is a widespread practice, it is unwise to use this mechanism, as any WTO dispute settlement decision risks looking anti-environment, anti-development, or both. Far better would be to hammer out some agreement (whether inside or outside of the WTO) that would identify best practice in the application of such support that is consistent with fair international trade.

Usually, there is broad agreement that technical standards and subsidies are essential for the transition to the green economy, but there is the possibility, as Khor argues that, through particular and narrow definitions of the trade-environment connection, powerful nations could try

to shift the economic burden of ecological adjustment to the weaker parties. A particular challenge in this regard is the interpretation of GATT Article XX, which allows countries to take measures contrary to the GATT rules on certain grounds, including measures “necessary to protect human, animal or plant life or health” and measures relating to the conservation of exhaustible natural resources.

Excepting these considerations, some countries will lose markets and/or suffer worsening terms of trade under a green economy. Any policies that help them successfully diversify away from known long-run losers would be essential for their success in a global green economy. A major concern here is obviously the commodity dependence of a large number of developing countries, particularly in Africa, the Middle East and Latin America. However, the best way to face the structural diversification efforts is to start by relying on capabilities and assets they already possess. For the economies that rely heavily on extractives, the most feasible near-term course is to focus first on process improvements to existing activities, though clearly understood as a step in building up different classes of activities.

Finally, the existing international investment “regime” – a web of over 2,700 bilateral investment treaties, investment provisions in a growing number of free trade agreements, and a host of firm/project-specific host government agreements – poses additional challenges. The first is that the plethora of agreements does not help states discriminate between desirable and undesirable forms of investment; in fact, some provisions in these agreements may actually act as obstacles to that sort of discrimination. Even more troublesome is the fact that, over the past decade, private sector actors have increasingly used dispute settlement provisions under these agreements to compel states into binding arbitration, arguing that new environmental regulations amount to an expropriation of their investments, or that they violate provisions on fair and equitable treatment by changing the rules of the game. This inappropriate interpretation of investment protection regulations must be unmistakably corrected. Furthermore, the Agreement on Trade-Related Investment Measures (TRIMS) under WTO and most investment agreements also prohibit the use of performance requirements. Such measures can be shown to work in fostering new innovative global players, prohibiting them could constitute an obstacle to

achieving a green economy. So, as in the area of subsidies, it may be better to reach fresh international agreement as to what should be acceptable (and/or best) practice in this area in the pursuit of the green economy.

In conclusion, there are many challenges and obstacles facing developing countries in moving their economies to more environmentally friendly paths. On one hand this should not prevent the attempt to urgently incorporate environmental elements into economic development.

On the other hand, the various obstacles should be identified and recognized and international cooperation measures should be taken to enable and support the sustainable development efforts. The conditions must be established that make it possible for countries, especially developing countries, to move towards a “green economy.” The main conditions and dimensions have been recognized in the negotiations that led to Rio 1992, and are well established in the Rio Principles and in Agenda 21. The treatment of the “green economy” in Rio Plus 20¹ should be consistent with the sustainable development concept, principles and framework, and care should be taken that it does not detract or distract from “sustainable development”. Thus the “value added” to the Green Economy as contrasted to sustainable development should be identified. Care has to be taken to ensure that the “green economy” term and concept is also understood to include the social, equity and development dimensions, including the need for international provision of finance and technology and accompanying global economic reforms and that the risks of the misuse of the term are adequately addressed.

Bibliography

1. Amza, Gh., *Ecotechnology and sustainable development*, vol. 1-2, Printech Publishing House, Bucharest, 2009;
2. Baboianu, G., Benea, C., Rusu, T., *Strategies and policies on sustainable development and biodiversity protection*, U.T. Press Publishing House, Cluj-Napoca, 2009;
3. Georgescu-Roegen, N., *Complete Works. Energy, natural resources and economic theory*, Expert Publishing House, Bucharest, 2006;

¹ Khor, Martin, *Preliminary Notes on the Green Economy, in the context of sustainable development*, Statement at the panel on Green Economy at the Rio Plus session, 2011

4. Khor, Martin, Food Crisis, climate change and the importance of sustainable development, Penang TWN, 2008;
5. Khor, Martin, Preliminary Notes on the Green Economy, in the context of sustainable development, Statement at the panel on Green Economy at the Rio Plus session, 2011;
6. Khor, Martin, Some Key Points on Climate Change, Access to Technology and Intellectual Property Rights, European Patent Office conference on climate change and IPR policy, Penang TWN, 2008;
7. Khor, Martin, The impact of trade liberalization on agriculture in developing countries: the experience of Ghana, Penang TWN, 2008;
8. Lachman, B.E., Linking Sustainable Community Activities to Pollution Prevention: a Sourcebook, Critical Technologies Institute, Canada, April 1997;
9. Polimeni J.M, Polimeni-Iorgulescu R., Shirey R.L., Trees C.L., Trees W.S., The Demand for Community Supported Agriculture, Journal of Business and Economics Research, 4(2), pp 49-59, 2006;
10. The Economics of Ecosystems and Biodiversity for National and International Policy Makers, TEEB, 2009;
11. UNCED, Rio Principles on Environment and Development, New York, United Nations, 1992;
12. UNCED, UN Conference on Environment and Development: Agenda 21, New York, United Nations, 1992;
13. UNCTAD, The Green Economy: Trade and Sustainable Development Implications, Geneva, United Nations, 2010;
14. UNEP, The Economics of Ecosystems & Biodiversity. Mainstreaming the Economics of Nature, 2010;
15. United Nations, Report of the Secretary-General's high-level advisory group on climate change financing, New York, United Nations, 2010.