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# "Is the Concept of a Green Economy a Useful Way of Framing Policy Discussions and Policymaking to Promote Sustainable Development?"

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# Viewpoints

“Is the concept of a green economy a useful way of framing policy discussions and policymaking to promote sustainable development?”

Sustainable development has three pillars: economic, environmental and social. Economic sustainability is growth without undermining an economy’s capital base. Environmental sustainability includes a stable climate and biodiversity, among others. Social sustainability is a world free from poverty and inequity.

The debates on sustainability are about the relationships — often contradictory — among these pillars. Growth is seen as inequitable and a threat to the environment, environmental protection as a burden on development and poverty eradication, and poverty reduction as having been achieved at significant environmental costs. There is a need to integrate the three dimensions. Various assessment tools exist to facilitate this integration. In practice, however, it is more about reconciliation than integration when it comes to addressing these relationships.

This is where the concept of a green economy may help. Definitions of a green economy may vary, but if we agree on one attribute of a green economy, i.e. seeking growth from pro-poor environmental investment, the concept can help change the focus of the debate from reconciling to synergizing the relationships. A stylized example of such a green economy is where poor farmers in Africa are enabled to improve soil and produce organic food that they can consume and export.

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The term ‘green economy’ is only useful if it deals with more than “environmentally friendly” products. It must address the issues of overall scale of the economy, throughput of materials and energy, and distribution of wealth. It is just as easy to have a green infinite growth

economy as a brown infinite growth economy. GDP growth can continue unabated if we just make green products. It is just as easy to have green overconsumption as brown overconsumption. You can imagine a “green” consumer with his/her 10,000 square foot “green” house, buying lots of environmentally sustainable products, driving his/her Prius 20,000 miles a year and keeping depletion, sprawl and the waste stream just as big as before. It is just as easy to have extreme inequality of wealth in a green economy as in a brown economy. We have avoided the touchy issue of wealth distribution by assuming that growth will solve poverty. In fact this has been the primary strategy we have pursued for several centuries. It hasn’t worked. ‘Green economy’ is likely to be too vague a term to describe the changes that need to be made. Caring, fair, efficient, and sustainable might be better descriptions of the goals we seek.

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The ‘green economy’ concept is useful to the extent that it engages policymakers, economists and businesses in critical dialogue with other stakeholders to compare alternative pathways for development. The comparison should then consider economic criteria alongside social, political, cultural and ecological criteria, and how “business-as-usual” development and more sustainable alternatives trade off. Who defines ‘green economy’, how it is defined, and how it is applied as one integral component of multi-stakeholder, multi-criteria decision-making will determine its usefulness. When misused, it “green-washes” policies to appeal to public sensibilities about environmental stewardship and social justice. When underutilized the concept pays lip service to sustainability but fails to reach its full potential to transform the

policymaking process. How can it reach that potential? Economic policies and practices govern how sustainable the development pathway will be because they drive the two main causes of stress: overproduction of waste and overexploitation of natural resources — as well the main promoters of wellbeing: employment, education and health. Crafting a sustainable future for neighbourhoods, towns, districts, countries, regions and the planet requires a concerted societal commitment to greener jobs, greener production and consumption, and greener technologies for energy, transportation, agriculture, waste management, water supply and wastewater sanitation, disease prevention and health, among others. Not merely one sector or topic of concern, but all, explicitly linked as a dynamic socio-economic and ecological system. Authentic, innovative green economy thought and action can engender a new concept of “economy”, one with sustainability and social justice at its core.

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This question calls to mind a similar question posed almost two decades ago when the concept of “environmental economy” was first set forth, namely: what can the economy do to resolve our ecological problems? The economy already has enough trouble tackling its own problems, and with manifestly little success. It would probably be as appropriate — if not more appropriate — to ask: what can ecology do to resolve our economic problems? (Ramos, 1993) Since then, the limitations of the market economy and the variety and complexity of our environmental problems have impeded the development of an integrated solution. I believe that the concept of the green economy (or the ecological economy) is a powerful political tool for the promotion of green economic sectors. However, it will play no significant role in global sustainable development until we see the creation of different modes of action in the territory. The enactment of these policies is a technical task whose methodology should be based on an ecological approach to territorial planning; that is, integrating both the physical and socio-economic aspects. Sustainable development is a process that affects multiple activity sectors; therefore, to achieve this goal requires acting beyond the economy, on a global scale and in a spirit of fairness (aspiring to balance the sustainable use of resources and human needs). I also consider it essential that the progress of these policies be periodically assessed by developing relevant indicators that keep the political institutions abreast of the degree to which these programmes are implemented.

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## Reference

Ramos, A., 1993. Por qué la conservación de la naturaleza? Discurso leído en el acto de su recepción. Real Academia de Ciencias Exactas, Físicas y Naturales y Fundación Conde del valle de Salazar. Madrid, España.

Is the notion of a green economy useful? Yes. However, three main points need to be considered in policy discussions: there is a multiplicity of green economies; distinct ideas of greenness may lead to conflicts between sustainable development initiatives; and it is essential to ask to what are green economies being compared. One day, an environmental utopia may exist in which the activities driving economic growth are complimentary and green: agriculture is organic and diverse; energy is renewable; the conservation of forests and wild fauna are economically profitable; waste materials are reutilized. However, as geographer Michael Watts states, there is a “polyvalency” of green movements (Watts, 1998). Green initiatives may eventually contradict one another, and national priorities must be negotiated. For example, geothermal energy in Costa Rica has reached the limit of expansion, unless plants are developed in national parks (Agüero, 2010) — the country’s iconic emblem of greenness that drives the tourism industry. The transition to organic production within a mega-agricultural industry is another kind of greenness. Yet vast cultivation of organic bananas or pineapples involves entirely different trade networks than those of the small farmer who does not use agrochemicals but cannot afford organic certification. The very use of land for agriculture may be viewed in opposition to conservation schemes built around parks and protected areas. Eventually, these different kinds of greenness are implicitly or explicitly valued in policy debates. Despite these complications, the notion of a green economy — which inherently suggests an un-green alternative — will push policymakers and the public to consider sustainable choices.

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## References

Agüero, M., 2010. País alcanzó límite legal para generar energía con gas volcánico. *La Nación*, September 12, Electronic Edition. Available at: <http://www.nacion.com/2010-09-12/EIPais/NotasSecundarias/EIPais2516365.aspx>.

Watts, M., 1998. Nature as artifice and artifact. In Braun, B. and Castree, N. (Eds.) *Remaking reality: Nature at the millennium*, Routledge, London, p. 245.

A rose by any other name would smell as sweet. But in modern politics this is not the case. Because sustainable development covers three different dimensions — ecology, economy and society — it is important to account for economic, environmental and social aspects if one wants to promote sustainable development. Now, with the concept of a ‘green economy’, it appears that environmental issues are given most weight. And of these environmental issues, it is especially energy use and carbon dioxide emissions that are being targeted. There is nothing particularly wrong with that. These are both interesting and important issues. But if the aim is to promote sustainable development, policymakers will have to address social problems and issues in connection with environmental policies and, at the same time, take care that the scarce resources are allocated in the optimal way. If one wants to promote sustainable development, one needs to have policies in place that are targeted at the key components. And one should clearly communicate that, apart from trying to green the economy, it is also to be a fair economy. Green is not another word for fair or efficient, nor is it the other way around. Sustainable development may seem complex but it is much less so if politicians (and scientists) account for the key ingredients. And they can still use green, fair and efficient separately if they want to focus on particular items. But if you don’t know where you are going, any road will take you there.

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The concept of a green economy is crucial for guiding policies for sustainable development, since it goes to the heart of the matter: organize economies in ways that fit local and global ecological prerequisites and long-term dynamics. Based on the works of German social scientists Joseph Huber and Martin Jänicke in particular, Spaargaren and Mol summarize its basic principles as “ecologizing the economy” while “economizing ecology”. Although these principles seem simple and easy to realize, they turn out to be complex in practice. The theory of the ecological modernization of production and consumption aimed to implement the green economy programme from a social science perspective. Its application in Europe delivered new knowledge about the contribution of market dynamics and civil society actors to sustainable development. Its application in non-OECD economies, particularly in Asia,

generated knowledge about the pitfalls of the green economy programme: the latter’s dependence on solid institutionalized networks for environmental governance and reliance on resources (capital, knowledge, technology) abundant in developed economies, but less so in developing or transitional economies. Today, its main challenges can be summarized as follows: Are improvements real or a greenwash? Are absolute or relative measures of sustainability most effective? Does the carrot or stick work better? How can consumption, as the micro version of the green economy, be confronted most effectively?

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The idea of a ‘green economy’ is a prudent initiative in light of the increasing pressures a growing world population and economic development are placing on the earth’s resources. However, due to the failure of free markets to provide adequate incentives to individuals and businesses to voluntarily adopt sustainable development initiatives, policy interventions are needed. Economists and policymakers have frequently espoused the virtues of taxes and subsidies to steer economic agents to behave in certain ways. However, individual governments are often handicapped in implementing policies by international mandates. For instance, WTO agreements prohibit certain subsidies, especially in the case of exports. Besides these external obstacles, governments might also face internal policy inconsistencies. For instance, environmental and technology policies of governments are often conducted by different agencies with little coordination (for example, the National Science Foundation versus the Environmental Protection Agency in the USA). Consequently, it can be the case that R&D subsidies to boost research could inadvertently increase pollution by increasing production, thus undermining pollution reduction intended by pollution taxes. Hence, while the talk of a green economy is appealing and indeed timely, it would behoove policymakers to pay greater attention to policy coordination to avoid self-defeating outcomes.

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If one were to put on your desk two words, “green economy”, what would your first take on this be? My reaction: an economy that produces goods and services for human consumption by respecting nature and harnessing its potential efficiently, without causing damage. A quick literature review reveals this is partly true. According to UNEP, a green economy is “an economy that results in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities”. This is a different ballgame. The concept may usefully frame policy discussions, given that it provides alternative operational interpretations of sustainable development. There are both advantages and disadvantages to this. On the former, the term may offer opportunities to reinvent economics for a better handling of 21st century problems. It acts as a warning: economies are intrinsically embedded in nature and cannot function without ecosystems’ support. Limitations are that, short-term impacts are sidelined. Also, the language chosen may be prone to misinterpretation: discussions could overemphasize the environment, without due consideration to poverty or equity. It remains to be seen if “colouring the economy” will significantly change policymaking or maintain the status quo with a touch of green.

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Although (or rather because) the concept of a ‘green economy’ covers only two of the three dimensions of sustainable development, I regard it as the more useful concept in framing policy discussions concerned with making economic developments fit for the future, in particular in a European context. Why do I prefer the concept of a green economy (or green growth/green recovery, to use procedural concepts) over sustainable development? In my numerous works on the governance of sustainable development (mainly with a European focus) I recognized that the guiding model is too vague, too complex, and too all-encompassing to be addressed meaningfully by policymakers. While sustainable development has invaluable merits in emphasizing the societal responsibilities of businesses and in raising awareness for the interconnectedness of contemporary problems (e.g. among academia), it has proved to be dysfunctional in guiding policymakers strategically through everyday policymaking. One of the most demanding utopian dreams in modern history proved to be too big for pragmatic governments. In contrast, the reform ambitions of the green economy concept are more tangible and straightforward, leaving

less room for ambiguous interpretations (and respective misunderstandings). By focussing on the integration of economic and environmental concerns, the concept of a green economy is the ideal complement to the existing social welfare state models that (aim to) integrate economic and social concerns to varying degrees. In the large parts of the world with severe social problems, sustainable development still has political potential. However, non-European countries are also advised to decompose sustainable development into more manageable bits and pieces, such as a social market economy and a green economy.

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Only a green economy concept that takes into account our planetary boundaries can be a successful policy framework for environmentally sustainable development. As long as policy discussions are framed in the neoclassical economic model which assumes unlimited resource supplies and complete substitutability between resources and capital, traditional growth concepts will not be able to identify the extent to which economic activities are environmentally sustainable. Even the best resource and energy efficiency improvements cannot prevent rebound effects (efficiency improvements being offset by increases in the overall scale of economic activity) and a growing environmental burden. A green economy concept is valuable to foster a shift in thinking and behaviour among decision-makers. It explicitly includes the environment and its services to the economy, such as the provision of resources, services as a sink for waste from production and consumption activities, amenity services for humans and basic life support services. By recognizing that the economy is a subsystem of human society which is itself a subsystem of the environment, the green economy concept helps to prioritize sustainable development and resource management on decision-makers’ agendas, influencing their thinking and giving them a mandate to ensure that our economic activities do not exceed environmental tipping points.

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The history of human use of natural resources and the environment has been plagued with instances where institutional and policy innovation lags behind the pressures

put on these resources. We continued using open access institution for fishing many years after the technological changes and the demand for fish as a protein source were not commensurate with this institution. The same could be said for water resources, mineral resources, and the atmospheric capacity to accept CO<sub>2</sub> emissions.

This failure of institutional and policy innovation leads to the severe depletion of the resources that we often witness — the collapse of fisheries, drying-out of rivers and lakes — and to the degradation of the environment, such as global warming. Institutions eventually do change in response to these calamities, but this often happens only after sustaining substantial, possibly preventable, damages.

Any paradigm shift that can speed up the process of institutional change in the light of changing pressures that people put on natural resources and the environment is welcomed. Whether or not the concept of a green economy represents such a paradigm shift is not obvious — partly due to its somewhat vague definition — but it certainly has the potential to channel efforts towards more timely policy innovation in the future.

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A ‘green economy’ concept is an essential step towards the transition to a resilient and sustainable economy. However, it does not go far enough as long as it does not address the dilemma of economic growth: every expansion of economic activity implies more stress on the planet’s ecosystems. An absolute decoupling of economic growth from environmental impacts has not yet been achieved and is unlikely to be achieved by efficiency improvements and a transition towards renewable energy alone. So far, improvements in efficiency have always been offset by increases in the overall scale of economic activity. The scale of the required efficiency improvements for a truly sustainable development is immense. Even under the assumption of economic stagnation (0% growth), annual energy efficiency improvements in the industrialized countries will have to increase by a factor of 3.4 in order to reach the 2050 Copenhagen climate targets. Hence, improving energy and resource efficiency is essential but will not solve the problem. An open discussion about the limits to growth is urgently needed. Economically possible and politically acceptable solutions for the growth question have to be found based on a green economy concept which respects the planet’s ecological boundaries.

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Sustainable development is about inclusive action. The concept of a green economy is helpful to the extent that it acknowledges that current economic systems are not inclusive in at least two important ways. First, economic development, even if it raises the general standard of living, often increases inequality within societies. Secondly, a green economy requires that complete product chains, from extraction, production, consumption to recycling and waste disposal have minimal ecological impact. Often, products and services are called green when the ecological impact is merely displaced from one part of the chain to another, or to other countries. The growth of China as the production centre of the world is the real reason that several Western firms and governments are able to claim that their ecological impact has decreased.

The concept of a green economy may thus lead us astray if it makes us believe that we can make progress in terms of sustainable development through minimal tinkering with the economic systems we now have in place. If we are able to include in this concept the principles of inclusive action, then it can act as a powerful motivation for policymakers, citizens and corporate actors.

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The term ‘green economy’ implies a wider meaning of the term ‘economy’ than was originally intended. The following aspects demonstrate that the term is intellectually dubious, confusing in its perception, and politically loaded.

Unlike the social and ecological systems, the economic system is a human construct to serve as a means for something else. Understanding this, people may still dream about a ‘green economy’ as a silver bullet-means to derive some ecological goals. This is reductionist: “economy” means “efficient management of sparse resources”, implying that efficiency must be put in reference to something else. Politically, “green” has in many countries begun to be perceived as “leftist”. This implies that the term is also politically contentious. Green economy excludes the humanization of the economy. We cannot play chess by approaching one principle of checkmate at a time.

In conclusion, the economic system is an elegant human construct, and has the components we need to support any transition economically. But putting the means, e.g. economic growth, as a goal per se is a perversion of our time. To improve on its flawed assumptions by building a

green economy from economic growth would carry with it all the flaws and would only damage ecological sustainability.

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Promoting sustainable development ideally requires governments, other collective players and citizens to appropriate its key principles, such as equity between generations, population segments and territories. It also requires adopting a holistic perspective on development integrating socio-cultural, economic, environmental and political dimensions from local to international levels; and the effective participation of players and citizens in development processes. Without significant mobilization of non-governmental players, especially local players and citizens, senior governments are less likely to be innovative and take appropriate initiatives.

What gets people motivated and mobilized? The green economy holds much promise; anything that affects citizens' daily lives, their employment, environment, and the health of their communities, families and circles of friends motivates them. Work in the SDTD Laboratory on adaptation to climate change and community-based development demonstrates that bottom-up processes can yield truly innovative and environmentally-friendly initiatives, building a green economy and supporting sustainable development. The people involved in building local green economies can make important contributions to policy discussions and become involved in co-constructing policy involving senior governments, local and regional governments and non-governmental organizations, including citizen associations. Senior governments do not have a monopoly on wisdom in the domain of sustainable development.

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The term 'green economy' reflects a win-win concept and a harmony between economic development and environmental protection. Restriction and development, two elements of sustainable development, have long been

considered contradictory and restrictive in practice, with the result that policy formation is very often caught in controversy and confusion both domestically and internationally, thus impeding the implementation of sustainable development. The concept of a green economy provides a new opportunity and choice for breaking this bottleneck in mindset and methodology, adding fresh vitality for sustainable development. Currently, the concept of a green economy has already been very successful in some countries, so it is necessary to extend these experiences and encourage innovation in line with each country's practical situation. The concept of a green economy is especially important in view of today's economic globalization, particularly for those countries experiencing rapid economic development, such as China.

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The concept of a green economy, if appropriately devised, may indeed offer a unique opportunity to achieve the otherwise elusive goal of sustainable development. The contemporary economic system, which evolved over time, is largely self-regulatory in its underlying structure and has contributed much to the well-being of human society. Lately, the system has, however, produced signals of dysfunction in the form of environmental problems and has thereby indicated that there are some missing links in the underlying structure. The implication is not only for the environment but also for the sustainability of the overall development process and, by extension, the survival of the system itself.

In the past, environmental problems have been mostly responded to at the symptom level through the command and control approach, which has often created a costly trade-off between environment and economy. However, the concept of a green economy is more comprehensive in approach and seeks to focus on several structural issues, such as pricing natural resources correctly, taxing externalities appropriately, and taking the value of ecological services into account while computing gross domestic product. The concept clearly shows the prospects of generating valuable synergies between economic, environmental and social dimensions of the development process. It is possibly the most effective way to frame the policy discussion, as well as other discussions, in order to gain the much needed political acceptability for the agenda of sustainable development.

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As mighty financial institutions crumbled, leaving governments scrambling to salvage an increasingly deepening economic crisis, the time was ripe for new ideas on economic development. It is in this context that the concept of the green economy emerged, marking another step forward in the mainstreaming of environmental concerns into society. By emphasizing the importance of sustainability, resilience and resource efficiency, the notion of transitioning towards a green economy offered an attractive alternative to a bruised economic model.

Along with the recent economic downturn, the rising prominence of climate change concerns also provides an additional impetus for policymakers to shift their attention to the importance of natural capital. Indeed, the green economy calls for greater investment in life-supporting services such as biodiversity conservation and climate regulation.

Although the green economy concept is neither mature nor unanimously popular, its growing relevance to world affairs is difficult to deny. In a world where policymaking is largely driven by the pursuit of a balanced budget, the economic contributions of nature are in urgent need of greater recognition. By emphasizing the economic significance of modern society's impacts and dependencies on the environment, the green economy brings the prospects of sustainable development one step closer to realization.

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The use of the concept of a green economy can be a good way to raise policy actions towards sustainable development. This is particularly the case in the countries that depend mainly on natural resources. One of the challenges in a sector such as forest and related activities is how to enable many smallholder farmers to be part of the process and to receive a good price from payment for ecosystem services schemes (PES). Some parts of the world, like the Congo Basin, provide ecological services such as biodiversity conservation, carbon storage, climate change regulation, etc. Communities and states of the Congo Basin may wish to be part of the worldwide efforts towards a green economy. The willingness can be there, but at the same time they want to be sure that forest products, while performing in the green market, can still provide income and help bring people out of poverty. Thus, the

challenge will be how to make those countries feel that they are not the losers in the game. In a context like that of the Central Africa Region, such a green economy needs to be pro-poor oriented. Another important issue is understanding the money flow from PES. One way could be to channel it towards climate change adaptation initiatives so that it helps to buffer negative effects of climate change on communities and natural resources (such as forests).

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The concept of a 'green economy' is meaningful in contextualizing policy debates and policymaking to promote sustainable development, particularly in Caribbean small island developing states (SIDS). These biodiversity rich islands are among the top 8 of the world's 25 hotspots, that is, relatively small regions containing high percentages of endemic species. Caribbean SIDS account for 0.15% of the Earth's surface and are host to 2.3% of the global original primary vegetation and 2.9% of the world's vertebrates (Myers *et al.*, 2000). However, the high dependency of the economies of these islands on natural resources utilization and the long historical practice of unsustainable land use activities such as mono-crop agriculture; slash and burn cultivation; over-harvesting of tropical rainforests for lumber and fuel wood; mass tourism that degrades beaches and coral reefs; and poorly regulated fishing techniques, including trawling, all compromise the achievement of sustainable development. Direct valuation of the islands' diverse natural capital and ecosystems services and an estimation of the external costs of degrading them are necessary. With knowledge of these estimates, steps can be taken towards promoting a green economy in all the key sectors, which will improve human well-being and inter-generational and intra-generational social equity, while lessening environmental risks and ecological scarcities associated with unsustainable resource exploitation to promote rapid economic growth. The concept of the green economy should inform Caribbean SIDS policy reform in the areas of renewable energy, green architecture and building construction, clean transportation, integrated water resources management, waste management and sustainable land management.

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## Reference

Myers, N., Mittermeier, R.A., Mittermeier, C.G., Da Fonseca, G.A.B. and Kent, J., 2000. Biodiversity hotspots for conservation priorities. *Nature*, 403: 853–858.

The literature and politics on the green economy frequently focus on efficiency without considering absolute levels of emissions and notions of carrying capacity. Let us use the example of the negotiations on the post-Kyoto emission reduction target in Copenhagen and since. Many European Union countries have proposed targets of absolute emission reductions in 2050 compared to the levels in the 1990s. Many developing countries, led by China and India, have used a more relative measure — carbon intensity — to define their green economic development path. For example, China has proposed to reduce 40-45 percent of its carbon intensity by 2020 relative to the 2005 level, but absolute emissions will continue to grow at a high growth rate. China has replaced many small-scale producers that have poor production technologies with much larger scale production units that have advanced technologies in carbon-intensive production sectors such as cement, steel production and coal-fired electricity generation. The carbon intensities in these sectors have been greatly reduced; however, the absolute level of emissions keeps increasing at alarming rates due to the large expansion of carbon-intensive production. Thus, without a focus on the overall level of emissions, greening the economy might just not be green enough.

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The concept of a green economy is an extremely useful way of framing policy discussions and policymaking to promote sustainable development. First, it neatly frames the issue in a way that can easily be understood by the public — an essential requirement for tackling unsustainable development. To many, “green” means environmental stewardship in both small and big ways. It means economic and social well-being for all generations within the limits

set by the environment. Second, the concept of a green economy provides a broad framework for viewing the problems related to sustainable development. Consider the fisheries sector, for instance, greening the sector is much broader than stopping overfishing, it means that: (i) we must recognize that there are limits to what the oceans can provide; (ii) we must acknowledge that rebuilding depleted fish populations is necessary to meet the food security needs of both current and future generations of people; (iii) essential habitats for living marine fish species need to be protected and preserved; (iv) fishing and other activities involving ocean fish populations are organized to minimize the release of greenhouse gases; (v) we recognize that marine fish populations are important to many ecological processes, including, serving as an effective carbon sink; and (vi) fisheries benefits should be equitably shared among and between generations.

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The concept of a green economy clearly conveys the basic ideas on which strategic sustainable planning should be established (sound economics). Nevertheless, the concept of a green economy fails to capture at least one key element that is fundamental to ensure a sensible agreement on how to deal with environmental problems: the widespread acceptability of sustainable policies in order to guarantee the global viability of a green economy. Consequently, the concept of a green economy appears as the right way to frame green oriented policy discussions (framing the problem) but it lacks the necessary elements to ensure sound policymaking (framing the solution). Therefore, the goal-oriented concept is very powerful in depicting the overall aims, but fails to encourage a comprehensive debate of path-oriented solutions concerning the necessary steps needed to build said economy. As a result, the concept of a green economy promotes the idea of a very complete toolbox for analyzing the problem and for testing a wide array of solutions but it does not convey the idea of ensuring that the solution be not only efficient, but also effective (the foundation of sound policymaking).

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The green economy is a useful concept for conveying a broader understanding of policy intentions to the citizenry and building public support for policies designed to

promote environmental protection. Yet, the green economy lacks the specificity needed for a policy practitioner and for academic application. Better descriptions of its component parts, such as renewable energy, green building and construction, and public transit, among others, would better frame the specific areas of policy application. Additionally, the use of the term may serve to overstate the economic and employment impacts of the existing economy when potential economic sectors may be included in the green economy despite particular businesses in that sector not engaging in a green activity. For example, metal fabricators may be capable of producing windmill parts and fall within the appropriate industry sector, yet these are not part of the green economy unless actually producing the components. The greatest danger in framing sustainable development through the lens of the green economy is the declining focus on social equity, one of the three legs on the sustainability stool. Recasting sustainable development as the green economy may further dilute the focus on social justice in favour of economic and environmental factors.

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One limitation of the green economy concept for sustainable development is that the development benefits may tend to accrue disproportionately to urban areas, further marginalizing the rural. This is so for two key reasons: (1) urban municipalities are more likely to have the capital necessary to jumpstart green economic development; and (2) urban municipalities are more likely to have the workforce development programmes in place through which to begin the massive workforce training programmes necessary to generate a sufficient green-collar workforce.

Many advocates of the green economy model erroneously assume that the private sector alone will develop the green economy. In fact, significant investment from the state is necessary to launch green economic development. Initiatives such as the renewal of municipal electric utilities using smart grid technology, increasing the efficiency of municipal waste and water systems, incentivizing green building through tax breaks, and the enforcement of regulations are state responsibilities and are all necessary to propel the green economic transition. Much of this state involvement takes place at the municipal level, and better funded city governments are at a significant competitive advantage. Cities like Chicago and Los

Angeles, for example, have the most developed green economies in the United States.

The irony is that rural communities are disproportionately hurt by global market integration, yet stand to benefit less than urban communities from the promise of green jobs. States must recognize the urban bias of the green-collar economy and institute policies to incentivize green industry investment in rural areas.

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Complex problems in the contemporary world cannot be solved by segmented academic formats, marketplace interests or mass-media headlines; they demand a critical appraisal of current patterns of production and consumption, governance and policies, environmental and cultural linkages, civic engagement, and democratic participation. Policy discussions and policymaking to promote a green economy requires a comprehensive ecosystem approach embedded into and promoted by the cultural, social, political and economic institutions (more critical than individual motives and morals). Changing the dominant perspective of powerful political and economic actors, in view of new paradigms of growth, power, wealth, work and freedom, requires a comprehensive framework for problem solving, encompassing the dynamic and complex configurations intertwining, as donors and recipients, four dimensions of being-in-the-world: intimate, interactive, social and biophysical. The process of change must take into account the singularity of each dimension and their mutual support, as they combine to induce the events (deficits and assets), cope with consequences (desired or undesired) and contribute to change (diagnosis and prognosis). Instead of dealing with taken for granted issues (the apparent bubbles in the surface), problems should be detected and worked with deep inside the boiling pot, where the real problems emerge.

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With regard to the issue, kindly allow me to quote a wake-up call to the world recently given by Joseph Stiglitz, a Nobel prize winner in economics, "A fetish for GDP has to go! An undue focus on GDP has led to the current economic recession". Added to the problem of the current economic recession are the pressures of climate change, widening inequity in resource utilization by the rich and the

poor, malnutrition and hunger on a mass scale, deforestation and loss of biodiversity, unsustainable population growth, etc. I think the current economic models have failed to deliver the goods, i.e. welfare and happiness for the present generation and have failed to ensure it for future generations.

Alternative economic models are required that promote holistic development in all parts of the world and that are not merely geared to speed up GDP growth, which has been counter-productive. The green economy concept (based on local actions with global concerns) will not merely be useful; it is most desirable and important to promote sustainable development. Policies based on a green economy will lead to genuine progress; reflected through better health and environmental harmony, self-reliant communities, economic efficiency with equity, as well as a decrease in population growth and military conflicts.

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Until recently, economic development has been based heavily on exploitation of natural resources and the environment. This approach has already started to show negative impacts such as global warming and extreme weather, and there is no doubt that in the long run, the accumulation of such effects would make sustainable development impossible for future generations. To prevent this global disaster, there is no other option than to accept the concept of a green economy. It is about the use-value of natural resources, environment, and achievements of development. It is about the quality, not quantity, of development. It is about regeneration of livelihoods, not the accumulation of wealth. It is about clean, not modern, technologies. It is about environment-friendly, not sophisticated, tools. Certainly, it is about the harmonization of three aspects: environmental, economic and social that guarantees sustainable development. Therefore, a green economy is a useful way of framing policy discussions and

policymaking to promote sustainable development. With this concept, in planning any development activities or projects, ways, tools or approaches to be used for the implementation should be selected that generate no or minimum trade-off between the three aspects.

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Using the concept of a green economy can be a first step towards a real decoupling of social well-being and growth on the one side and resource consumption and environmental degradation on the other. But a green economy in itself (defined as producing “more with less”) remains a hollow phrase if it is not backed by political signals, incentives and possibly taxes.

Calling for a green economy can only work if companies and individuals have strong incentives to save resources and energy and avoid any environmental degradation. In this respect it is the role of any responsible policymaker to define clear targets and indicators with the aim to punish polluters and reward environmentally friendly behaviour — overall this can be a no-cost solution by raising taxes for extensive resource use and cutting taxes in support of environmentally friendly employment. A general precondition for the up-take of a green economy is that the real value of environmental services and the real costs for environmental externalities are included in national policies. If the environment were to be properly valued in monetary terms, a green economy would develop quite naturally.

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