Center for International Private Enterprise
ECONOMICREFORM
Feature Service®

September 28, 2012

Green Growth: A Market-based Opportunity

Anna Nadgrodkiewicz
Program Officer, Global Programs
Center for International Private Enterprise

Article at a glance

- While a global agreement on how to advance green growth is not imminent, individual countries and companies recognize the benefits of making the economy more sustainable.
- Although economic growth and environmental protection are often perceived to be at odds, there are potential synergies between market approaches and environmental goals provided that a consensus on green growth is built through open public-private dialogue.
- Many firms in industrialized countries and emerging markets alike are already taking advantage of the win-win opportunities of green growth.

To comment on this article, visit the CIPE Development Blog: www.cipe.org/blog

Introduction

The building momentum for "greening" the global economy offers unique opportunities for capitalizing on innovative technologies and business strategies. Countries around the world struggle with issues such as pollution and overreliance on non-renewable energy sources. Developing countries in particular face the challenge of rising populations and natural resource depletion through excessive mining or unsustainable agricultural practices. As their economies become a larger share of the global total, the pressure to act mounts and the promise of green growth captures the attention of policymakers and businesses alike.

The Organisation for Economic Co-operation and Development (OECD) points out that non-OECD economies are likely to account for almost 60 percent of global Gross Domestic Product (GDP) by 2030, compared to just 40 percent in 2000.[1] Such fast pace of growth could lead to significant poverty reduction in developing countries. At the same time, though, it raises concerns over the ability of these countries to meet the rising demand for energy, water, land, and transportation in a way that does not exhaust natural capital and cripple long-term development prospects.

The "business as usual" approach does not provide credible long-term solutions. Instead, countries and companies are increasingly looking into options for investing in greener infrastructure and innovative business practices. One reason for the country- and firm-driven approach is the fact that no global consensus exists on how to proceed, as illustrated by the recent Rio+20 Conference in Brazil. The summit ended with a "lackluster agreement" of nearly 100 heads of state and government unable to establish specifics and measurable targets of sustainable development goals.[2] This leaves the initiative in the hands of individual governments, but above all in companies that see green growth as an opportunity to explore a new way of doing business.

Although significant impediments exist to the transition toward green economy, there are also many examples around the world of how green growth can be achieved from the bottom up without placing undue top-down restrictions on how countries can develop. IBM translated its mission to build a smarter planet into a number of areas where its technology brings real change, including transportation and communications, the use and preservation of natural resources, and the development of smarter cities.[3] General Motors' recycling program, where the company's worldwide facilities combined recycle more than 90 percent of their waste, generated $2.5 billion in revenue in just five years.[4] And a leading Brazilian company, Beraca, built a sustainable supply chain among the Amazon communities in a way that preserves biodiversity.[5]

To multiply the impact of such efforts, public-private dialogue is needed that goes beyond partnering on particular green projects. Instead, decision-makers, the private sector, and other stakeholders in each country must be able to openly and democratically debate the cost-benefits of policies that impact green growth, and work together to promote the best solutions.

Green growth is not a panacea and cannot substitute a good business environment; green growth strategies are simply growth strategies that have the additional goal of environmental responsibility.[6] Such strategies are only going to be effective in an environment that encourages free enterprise and provides security of property rights and rule of law where businesses have incentives to innovate and invest. As United Nations Global Compact (UNGC) Executive Director Georg Kell put it, "We are in a world of bottom-up social change. We hope that Rio+20 will mark the beginning of a new movement toward sustainability, a movement that is led also – and especially – by business through innovation but where all stakeholders: civil society, trade unions, the academia, investors in particular have a critical role to play to provide the incentives.

(…) We need a long-term perspective to change the incentive structure toward sustainability."

Green Growth, GDP, and the Quality of Growth

Although there is no current single definition of green economy, United Nations Environmental Programme (UNEP) describes it as "a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human wellbeing over the long term, while not exposing future generations to significant environmental risks and ecological scarcities."[7] In other words, green growth means economic growth that is environmentally sustainable and responds to the "growing recognition that achieving sustainability rests almost entirely on getting the economy right."[8] Sustainability, though, can be difficult to quantify. Therefore, advancing green growth calls for improved macroeconomic indicators and tools to evaluate the potential for growth to be sustainable over a long period of time – a task in which conventional indicators such as GDP fall short.

In the last 20 years a significant amount of global economic growth has come at the expense of the environment and natural capital. From 1990 to 2008, for example, GDP in China, the United States, Brazil, and South Africa grew by 422 percent, 37 percent, 31 percent and 24 percent respectively.[9] However, a recent study conducted by the United Nations (UN) illustrates how an increase in GDP can be deceiving since GDP fails to take into account natural and human capital, among other things. To address these limitations, the UN has created a holistic tool for measuring growth and wellbeing of nations: the Inclusive Wealth Index (IWI).[10]

The IWI evaluates 20 countries that represent over half of the world's population and almost three-quarters of the world's GDP. Using this index to assess the aforementioned countries, the study found that their long-term increases in growth were nearer to 45 percent, 18 percent, 13 percent, and in the case of South Africa, a decrease of 1 percent. While by many measures the economies of these countries have grown, IWI paints an alternate picture where natural resources per capita have declined appreciably. This is not to say that the importance of economic growth should be dismissed. The point is that raw GDP growth figures simply do not tell the whole story and the quality of growth that matters for a country's long-term development prospects.

Another key consideration in evaluating the quality of economic growth is the institutional environment in which growth occurs, and that framework includes both political and economic institutions. The spurts of growth are common, for instance, in countries where authoritarian leaders exploit natural resources for short-term gain without proper consideration of environmental impact and without strengthening the economic fundamentals that would create broad-based opportunity for the population.

To be sustained in the long-term and socially inclusive, growth requires good governance that entails a transparent and accountable democratic rule and an equally transparent and accountable market economy where rule of law prevails, property rights are protected, and contracts are enforced. High quality growth is sustainable, inclusive, market-driven, depends on a strong institutional framework, requires good democratic governance and incentives for long-term investment, and flows from increases in productivity.[11] Green growth, if properly pursued, can fulfill these criteria.

Growth always entails changes in economic structures such as sectoral contributions to GDP or corresponding employment and investment levels. These shifts are not just a byproduct of growth but rather its key drivers since "development is nothing other than the capacity of an economy constantly to generate new dynamic activities."[12] Therefore, all economic growth to some extent is rooted in Joseph Schumpeter's idea of "creative destruction." Green growth simply aims to tilt the mix of factors

Synergies between market approach and environmental goals

- Well-established property rights encourage sustainable use of land and resources
- Market economies foster entrepreneurial ecosystems that can generate innovation and new solutions to environmental challenges
- Markets encourage efficiency, limiting waste of resources
- Markets raise productivity, not just intensive use of factors of production
- Corporate governance instills the values of fairness, accountability, transparency and responsibility in how companies operate
- Corporate citizenship, properly implemented, integrates sustainability into a company's strategic planning and daily operations

driving economic growth toward one that supports long-term development prospects.

In that context green growth is an important aspect of sustainable, high quality growth in the new reality where all countries will need to do more with less in order to push the productivity curve in a way that does not their diminish long-term prospects. At the same time, as the World Bank emphasizes, there is no single green growth model and strategies will necessarily vary across countries reflecting local contexts and preferences.[13] Greater sustainability requires that various actors in a country work together to address the challenge of "greening" economic growth.

Green Growth and Corporate Citizenship

Corporate citizenship is a concept often used in the discussion of green growth, with conducting business in an environmentally responsible way seen as one key approach to Corporate Social Responsibility (CSR). It is important to keep in mind, however, that the two terms are not equivalent and green growth is only one possible aspect of good corporate citizenship, and not necessarily the defining one. Instead, corporate citizenship is a broader concept that encompasses not only environmental care, but also fair treatment of employee, and contribution to community development. Crucially, good corporate citizenship starts with good governance and ethics.[14]

"Sustainability is not sustainable without board-level leadership," Calvert Investments CEO Barbara Krumsiek noted at the Rio+20 Corporate Sustainability Forum. OECD Guidelines for Multinational Enterprises,[15] for one, spell out principles along which boards of directors can integrate environmental considerations into strategy and operations of their company. They include establishing a system of environmental management to collect and analyze relevant information; providing training to workers in environmental, health, and safety matters; engaging in a dialogue with workers and communities; contributing to the development of environmentally meaningful and economically efficient public policy; and seeking to improve environmental performance within the enterprise and its supply chain.

Corporate leadership makes business the driving force in environmental innovation and brings results. For example, since 1990, the U.S. GDP grew 61 percent but CO2/GDP ratio dropped 34 percent, indicating that the economy grew faster than CO2 emissions thanks to more efficient energy use. Corporate commitment from the top to more sustainable growth is also visible in these figures: since 1996, the number organizations with ISO 14001 environmental management certification has increased to over 200,000 and since 1999, the number of companies filing CSR reports has grown from 500 to 3,500.[16]

The benefits of corporate citizenship achieved through good governance and environmental innovation are not limited to industrialized countries. Developing economies and emerging markets are also well – or in some cases even better – poised to reap the benefits of green growth. In 2011, for instance, global investment in new renewable power plants (USD 187 billion) for the first time ever surpassed that of power plants fuelled by natural gas, oil and coal (USD 157 billion), and the expenditure on renewable energy in developing countries, driven by China, was higher than in industrialized countries.[17]

Green Growth in Emerging Markets

In leading emerging markets that will be decisive to the future of greening the global economy – Brazil, China, and India – domestic and foreign firms alike are increasing their efforts toward sustainable growth. This shows that green growth is not a luxury limited to countries with high per-capita income but rather an opportunity for different countries to seek and implement solutions uniquely fitting their markets and local needs.

China's growth in recent decades has been burdened with pollution and waste that made the country the world's biggest greenhouse gas emitter, setting the correction of these negative trends as a priority going forward. Success is already visible in many areas. A study by the World Economic Forum and Boston Consulting Group identified 16 emerging market firms that are turning eco-consciousness into a source of competitive advantage, with two Chinese firms among them.[18] Board Group, producer of non-electric air-conditioning technology, has won 50 percent of the Chinese market for energy-efficient air conditioners and saw a compound annual growth rate of 80 percent from 2005 to 2008. Zhangzidao Fishery Group, which employs 4,300 people and has a market capitalization of USD 2.7 billion, invented techniques that create a balanced marine ecosystem while increasing long-term sustainability and profitability.

In Brazil, already 85 percent of electricity generation is hydroelectric and the county possesses 90 percent of the world's reserves of silicon, the key raw material used in photovoltaic panels.[19] As a result, Brazilian companies have less than half the environmental impact of emerging market peers and Brazil's electricity mix is 10 times more efficient than the global average.[20] This emphasis on green growth creates new markets and opportunities for companies not only in Brazil but also for their business partners abroad. The Brazil-U.S. Business Council, for instance, has been successfully helping U.S. small businesses access the Brazilian market for green goods and services ranging from wind power to wastewater management.[21]

In India, where 364 million people still live without electricity, the emphasis is on cleaner and more abundant energy sources. Today the country's energy supply is dominated by coal (42 percent) and oil (27 percent) with the risk of carbon emissions rising 132 percent by 2030 if the current patterns persist.[22] In response the government launched the National Solar Mission in 2009 and started investing heavily in solar technologies to deliver power in rural areas. The challenge going forward is not to create a policy environment that encourages more private sector investment to scale up solar projects and attract foreign capital without fueling unsustainable public spending.

These examples show that green economy is about more than just reducing carbon footprint. Instead, it must focus on other country priorities such as water use or food production. What is more, these examples show that green economy is about more than the environment – it is fundamentally linked to development. In order to deliver results, green growth strategies must respond to particular economic needs of countries. They need to make growth more inclusive and boost the value that the poor derive from the ways in which they earn livelihood such as agriculture and fisheries – activities that depend heavily on a sound natural environment.[23]

The Importance of Public-Private Partnership and Dialogue

Public-private partnerships (PPPs) in the context of green growth are among the common approaches to delivering green infrastructure and getting various green initiatives off the ground. Such partnerships entail endeavors that combine resources from the public and private sector toward achieving a public good objective. In the case of green growth, they typically involve companies creating new technology in areas such as energy or transportation and implementing projects based on that technology with the help of government financing. However, this project-based understanding of PPPs carries the risk of picking "winners" and "losers" in a given sector and does not take into account a broader type of partnership on policy dialogue that is needed between governments and businesses for sustainable growth.

What is more, the facilitating role of governments is often overlooked when it comes to creating a supportive business environment for green growth through, for instance, introducing tax benefits for companies that "green" their operations and supply chains, or improving access to private sources of finance for innovative firms. Instead, the relationship between business and governments is frequently perceived as adversarial when it comes to green growth, with businesses in industrialized and developing countries alike fearing that "green" rhetoric of policymakers is a veiled attempt at overregulation or playing favorites.

The debate on green growth is often framed as an either-or proposition, implying that a country can either implement policies that fuel economic growth or protect the environment. For the most part, that is a false dichotomy, not accounting for the third possibility of a win-win scenario where businesses can operate in line with greater environmental sustainability while reducing costs and maximizing profits at the same time.

To avoid the situation of mutual suspicion, unclear intentions, and above all inadequate cost-benefit analysis of legislative and regulatory solutions, establishing a robust public-private dialogue on green growth issues is a must. That dialogue is really no different from keeping the communication channels open between the government, the private sector, and other societal stakeholders on any other important policy issue. Whether through legislative advisory, public forums, or sectoral consultations, policymakers must reach out to the constituencies affected by their actions in order to meaningfully consider their suggestions and address their concerns.

More sustainable modes of production and consumption can begin to take shape through a deeper public-private dialogue on green growth. Still, the transition to green economy remains a challenge with an estimated $1.3 trillion investment needed, three-fifths of which would go into energy efficiency (buildings, industry, and transport) and renewables.[24] With this large scale of required investment, scarce public funds are not enough and a significant influx of private sector financing is needed. This begs the question: will countries be able to stimulate the flow of private investment into green projects? The answer is closely tied to building a business case for green growth.

A Business Case for Green Growth

The World Bank and others make the argument that green growth strategies can create sizeable economic benefits in terms of increased efficiency and productivity, job creation, and poverty alleviation.[25] Yet, making a business case for green growth must go beyond aggregate macroeconomic benefits and focus on the cost-benefit calculation of individual businesses. After all, profitability is a key part of every company's performance calculation and must be the indispensable element of any green business model as well.

All too often the debates on how to best stimulate green economy focus on the criticism of business casting it as antithetical to environmental and social causes. Such thinking ignores the fact that the private sector, as a driver of economic performance, is crucial to achieving any type of growth, green or otherwise. It also ignores the fact that business is not a monolith. Some segments that William Baumol et al. consider the backbone of an entrepreneurial economy – namely innovative individuals and business entities that provide a new product or service or develop and use new methods to produce or deliver existing goods and services at lower cost[26] – will be more receptive to exploring new business models than others and better able to capitalize on the opportunities of green transition.

For such companies, the business case for green growth to a large degree has already been made. As UNEP Executive Director Achim Steiner pointed out at the Rio+20 Corporate Sustainability Forum, strategically thinking businesses understand very well the need for sustainability to be at the heart of economic decision-making and see the benefits of sustainability when it comes to resource management, license to operate, and growth opportunities in new markets. These companies understand that one-off green initiatives are insufficient and they integrate sustainability into their strategy and daily operations. Developing metrics for tracking progress and linking improved sustainability to strong financial returns is crucial to making this business case to other, still skeptical, firms.

Sustainability is not purely an aspirational goal. Entrepreneurs with big ideas compete on how to address energy, environmental, and economic challenges.[28] Similarly, many companies around the world see the benefit to their bottom line and already make sustainability a core part of their business, employing international best practices and standards such as the United Nations Global Compact's Ten Principles[29] or Social Accountability International's SA8000 workplace standard.[30] Sustainable business conduct can also help boost access to capital given the rising global interest in socially responsible investment. As of April 2012, more than 1,000 investment institutions have become signatories of the United Nations-backed Principles for Responsible Investment, with assets under management of about USD 30 trillion.[31]

In the age of globalization companies must also look beyond their immediate operations and work with business partners around the world to incorporate sustainability into their value chains. Studies show[32] that management practices such as engagement with suppliers and distributors, organizational culture that emphasizes sustainability, and incentives rewarding business partners for sharing expertise and knowledge around sustainability not only increase a company's sustainable value chain effectiveness but also reduce operating costs.

These results point to a correlation between greater sustainability and decreased value chain costs, challenging the view that sustainability adds to the cost of business operations. Firms with value chains stretching around the globe are especially aware that it is not enough to make their internal operations sustainable: the value chain is where sustainability matters most.

At the Rio+20 Corporate Sustainability Forum, Siemens Chief Sustainability Officer Barbara Kux shared some data on how Siemens is integrating green philosophy into its value chain. Last year the company's "green revenue" amounted to EUR 30 billion, or 40 percent of the total. With the technology Siemens sold its customers can reduce CO_2 emissions by over 300 megatons annually, which is roughly one third of Germany's yearly CO_2 output. Meanwhile, Siemens's own CO_2 output in 2011 was only 4 megatons, which means that most of its environmental impact happens in the supply chain and at the customer level.

Challenges to green growth persist. Even the most innovative businesses operate in economies for the most part structured in a way that makes green transitions difficult. Over the course of decades, significant investments were made in older technology, "grow now, clean up later" thinking prevailed, and regulatory frameworks reinforcing both these trends were put in place in most industrialized countries, not to mention developing ones. Therefore, as UNEP's Achim Steiner noted, "the focus on business case today is not about the basic economics of business anymore: the question is how we accelerate and scale up this transition." Interestingly, it may be easier in developing countries that do not always have to deal with the same technological and economic legacies that industrialized countries do.

If a critical mass of like-minded companies work together to "walk the walk" of making the green economy a reality, they can help shape the legal and regulatory environments in their countries to be conducive toward that transition in a way that fuels, and not undermines, economic growth. It is a challenging transition too big for any single company or industry to tackle alone, and can only be achieved through closer cooperation between governments, private sector, NGOs, and other social actors.

Conclusion

While the promise of an environmentally friendly global economy is a coveted goal, many questions persist on whether attaining such an economy would constrain growth and social development in the short term and how to balance such trade-offs. Many are concerned that developing countries may be disadvantaged by overemphasizing green growth over other aspects of development. Others argue over what the appropriate roles of the state and the private sector are in green economy, and how to handle the transition toward a greener economy, especially when it comes to removing subsidies for carbon-intensive energy (controversial in many countries) and creating government incentives for green projects (also not without caveats).[33]

Moreover, there are risks of misuse of the green economy concept.[34] It can be applied in a one-dimensional way focused purely on the environmental preservation and without proper consideration for other dimensions of development. It can be reduced to "one-size-fits-all" approach in diverse countries that require strategies tailored to the structure of their economy. It can be used as an excuse for greater trade protectionism by imposing tariffs on goods deemed less environmentally friendly, or a disguised method for gaining market access.

All these concerns are valid. However, one should not ignore the experience of the last two decades when the interest in green growth really took off and its potential became clearly visible. Green growth offers a strategy for addressing the problem of depleting natural capital in countries around the world and both the economic and environmental crises this entails. It offers a new paradigm that can foster economic growth while protecting the global ecosystem and aiding in poverty alleviation. Green growth is a new reality here to stay even if broad international agreements on the subject may not be forthcoming. As the Rio+20 Summit showed, even though few tangible outcomes were produced at the intergovernmental level, the change is happening from the bottom up with the private sector emerging as a leader in achieving sustainable development.

In order for a business to be responsive to market demands for greener operations, its leadership must be attuned to the needs and concerns of shareholders and stakeholders. Incorporating them into a company's long-term strategy requires more than public relations efforts or charitable donations. It requires leadership from the board of directors, management capable of translating the board's vision into action, and dedicated staff. In other words, achieving grassroots-led green growth starts with good corporate governance.

But it does not stop there. A broader business-enabling environment is needed to provide companies with mechanisms necessary to raise funds for R&D, protect intellectual property, enforce contracts, and conduct a constructive dialogue with the government on relevant policy issues. Countries should understand that green growth entails challenges and risks, and blindly pursuing policies with a loosely defined "green" label can be counterproductive. Therefore, thorough cost-benefit analysis is needed for such policies and it can only be effectively performed if private sector has a voice in shaping them. In other words, green growth cannot be considered in separation from the larger context of democratic and market institutions.

The transition to a sustainable green growth economy is too much for either the public or private sectors to achieve on their own. Instead, it requires joint and interdependent action. The public sector shapes the policy environment in which businesses operate, creating institutions and incentives that either promote green growth or discourage it. The private sector, in turn, can help guide policy analysis in the area of green growth just like in any other economic policy sphere.

If allowed to operate in an open and competitive environment, the private sector is a key driver of innovation that responds to increasingly environmentally conscious preferences of consumers by creating new products, services, and internal processes. Pursued in this cooperative manner, green growth can demonstrate that economic growth and environmental stewardship are complementary objectives where the overall synergies prevail over tradeoffs.[35]

Endnotes

[1] "Perspectives on Global Development: Shifting Wealth," OECD, 2010, http://www.oecd.org/document/12/0,3343,en_2649_33959_45467980_1_1_1_1,00.html.

[2] Paulo Prada and Valerie Volcovici, "Rio+20 ends with weak text, emboldened observers," http://www.reuters.com/article/2012/06/22/us-un-climate-idUSBRE85H19320120622.

[3] See: http://www.ibm.com/smarterplanet/us/en/overview/industries/index.html.

[4] See: http://bclc.uschamber.com/citizens2012/best-business-neighbor-finalist-general-motors.

[5] See: http://www.beraca.com/ingles/sustentabilidade.php?portugues=sustentabilidade.php.

[6] World Bank, 2012, pp. 12-13.

[7] UNEP, "Green Economy Context and Definition," http://www.unep.org/civil-society/Portals/59/Documents/greenroom2010/Presentation%20Ben%20Simmons%20-%20Green%20Economy.pdf.

[8] United Nations Environment Programme, UNEP, 2011, *To-wards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers*, p. 2, http://www.unep.org/greeneconomy/Portals/88/documents/ger/GER_synthesis_en.pdf.

[9] United Nations University, "World's resources being depleted says Inclusive Wealth Report 2012," http://unu.edu/news/2012/06/worlds-resources-being-depleted-says-inclusive-wealth-report-2012.html

[10] UNU-IHDP and UNEP, *Inclusive Wealth Report 2012: Measuring progress toward sustainability.* Cambridge University Press, 2012, http://www.ihdp.unu.edu/article/iwr.

[11] Kim Eric Bettcher, Ph.D. and Aleksandr Shkolnikov, Ph.D., "Democratic Governance and the Quality of Growth," CIPE Discussion Paper, October 17, 2009, http://www.democracythatdelivers.com/conferencepaper_final.pdf.

[12] Ocampo, Jose Antonio (2005), "The Quest for Dynamic Efficiency: Structural Dynamics and Economic Growth in Developing Countries", in Jose Antonio Ocampo (ed.), Beyond Reforms: Structural Dynamics and Macroeconomic Vulnerability, Palo Alto: Stanford University Press, ECLAC and World Bank, chapter 1.

[13] World Bank, *Inclusive Green Growth: The Pathway to Sustainable Development*, Washington, DC: The World Bank, 2012, http://siteresources.worldbank.org/EXTSDNET/Resources/Inclusive_Green_Growth_May_2012.pdf.

[14] Association of Development Financing Institutions in Asia, *Corporate Citizenship Manual for Development Finance Institutions*, 2012, http://www.adfiap.org/arc/rcc/wp-content/uploads/2012/03/CORP-CITIZENSHIP-MANUAL-Revised-2.pdf.

[15] OECD Guidelines for Multinational Enterprises, 2011 edition, pp. 42-46, http://www.oecd.org/daf/internationalinvestment/guidelinesformultinationalenterprises/48004323.pdf.

[16] Stephen Jordan and Chris Ryan, "The Intersection of Business and Environmental Innovation," in: *The Role of Business in Environmental Innovation*, BCLC, 2011, pp. 4-5, http://bclc.uschamber.com/sites/default/files/documents/files/FINAL%20Role%20of%20Biz%20in%20Environmental%20Innovation%20Report.pdf.

[17] Alex Morales, "Renewable Power Trumps Fossils for First Time as UN Talks Stall," *Bloomberg*, 25 Nov 2011, http://www.bloomberg.com/news/2011-11-25/fossil-fuels-beaten-by-renewables-for-first-time-as-climate-talks-founder.html.

[18] World Economic Forum and Boston Consulting Group, *Redefining the Future of Growth: The New Sustainability Champions*, 2011, http://www.weforum.org/reports/redefining-future-growth-new-sustainability-champions.

[19] "Did you know that 85% of Brazil's electrical power generation comes from water?" http://www.fiesp.com.br/infra-estrutura/energia/downloads/energy-3-3.pdf.

[20] Henry Mance,"Brazil rates well in green stakes," *Financial Times*, Feb 20, 2011, http://www.ft.com/cms/s/0/51c7d7e4-3d10-11e0-bbff-00144feabdc0.html#axzz21lD2VfVp.

[21] See: http://www.brazilcouncil.org/exportgreen/export-green-technology-to-brazil.

[22] "India's National Solar Mission: Private Finance to Support Public Leadership," in: *Financing Green Growth in a Resource-Constrained World*, World Economic Forum, pp. 6-18, http://www3.weforum.org/docs/WEF_ENI_FinancingGreenGrowthResourceConstrainedWorld_Report_2012.pdf.

[23] Aaron Cosbey, "Trade, Sustainable Development and a Green Economy: Benefits, Challenges and Risks," in: *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*, Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development, pp. 40-68.

[24] UNEP, *The Transition to a Green Economy: Benefits, Challenges and Risks from Sustainable Development Perspective*, 2012, http://www.unep.org/greeneconomy/Portals/88/documents/research_products/UN-DESA,%20UNCTAD%20Transition%20GE.pdf.
[25] World Bank, 2012, p. 16.
[26] William J. Baumol, Robert Litan, Carl J. Schramm, *Good Capitalism, Bad Capitalism*, Yale University press, 2007, p. 3, http://sites.kauffman.org/capitalism.
[27] Rio+20 Corporate Sustainability Forum: The Business Case for the Green Economy, June 17, 2012.
[28] Clean Tech Open competition is one such example: http://www.cleantechopen.com/app.cgi/content/about/index.
[29] See: http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html.
[30] CIPE and SAI, *From Principles to Practice: The Role of SA8000 in implementing the Global Compact*, http://www.cipe.org/publications/detail/principles-practice-role-sa8000-implementing-un-global-compact.
[31] See: http://www.unpri.org/about/
[32] Selected Sustainable Value Chain Research Findings of a joint research project of the American Society for Quality, Corporate Responsibility Officers Association, & Institute for Supply Management with Deloitte Consulting LLP, 2012, http://www.croassociation.org/files/Sustainable%20Value%20Chain%20Overview%20of%20Top%20Practices.pdf.
[33] Martin Khor, "Challenges of the Green Economy Concept and Policies in the Context of Sustainable Development, Poverty and Equity," in: *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*, Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development, p. 69.
[34] Ibid., p.72-76.
[35] José Antonio Ocampo, "The macroeconomics of the green economy" in: *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*, Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development, pp. 16-39.

Anna Nadgrodkiewicz is a Program Officer for Global Programs at CIPE, where she works on projects involving democratic and market-oriented reform around the world. Prior to joining CIPE, she worked as a business consultant in her native Poland on the issues of competitiveness and market entry in Central and Eastern Europe. She holds a Master's degree in German and European Studies from Georgetown University in Washington, DC.

Matthew Williger, Global Programs Intern at CIPE, contributed to writing and research for this article.