

Copenhagen: The Global Green Growth Forum

The government of Denmark is launching a new initiative on Global Green Growth to accelerate the transition to a greener global economy. The Global Green Growth Forum will bring together 200 of the world's leading green decision makers in 2011, all proven minds and actors in the green economy. They include CEOs and top executives from the world's major companies, policymakers and politicians, private and institutional investors, leading researchers and opinion makers.

Transition to a green economy

The transition to a global green economy represents the single largest opportunity for economic growth in generations and, crucially, at the same time offers a solution to the pressing challenge of energy security and climate change.

This transition has already begun. Governments around the world are beginning to engage. Companies are transforming their businesses. Consumers are increasingly focussed. Innovative solutions are being developed and tested -- not only in the developed countries but also in emerging economies.

The Global Green Growth Forum

The Global Green Growth Forum will serve as a main international catalyst for the development of those policy decisions, investments and partnerships that will set the pace for the global transition to a green growth economy. The Forum will serve as a global broker providing a unique opportunity for the principal actors of the green economy of the future -- business, investors, governments and researchers -- to engage on the critical decisions necessary for a transformation:

- developing green business
- financing and investments
- policy formulation
- making innovative green R&D viable

The Global Green Growth Forum will demonstrate that pro-green policies and investments create win-win-situations. It will focus on two key drivers for a global green marketplace:

- **Predictable policies** - national, regional and global policies - how to create enabling frameworks to strengthen or create markets for clean technology, green business and a green economy.
- **Private investment in green growth** - how to further engage and incentivise businesses and investors to help in driving green technology forward.

The key objective with the Global Green Growth Forum is to produce actionable, relevant and tangible outcomes and viable solutions that governments and business can implement after the forum that will spearhead the transition to the green global economy.

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The Potential of Green Growth

The crucial transition to a global green economy¹ represents a huge economic growth opportunity². Governments around the world have already realised the enormous potential for growth and jobs in green technologies and most of the national stimulus packages introduced to combat the 2008 financial crisis featured a green component. China has demonstrated its ambitions to become a global leader in renewable energy technologies. It is currently the world's largest manufacturer of solar panels and wind turbines. Private sector investments in green technologies have also risen across the world, as businesses realise the market potential for green technologies. As the global green technology market becomes increasingly competitive, national governments and the global business community may confront protectionist measures aimed at setting up barriers to the free trade of green technologies.

A key factor will be green investment and low-carbon innovation in the emerging economies led by China, South Korea, India and Brazil.

Although the transition to a green economy will require governments to take a leading role, it cannot be done without a strong partnership with the business community.

The Pillars of Green Growth

In our current world, green growth cannot happen spontaneously and often faces a number of obstacles:

- externalities;
- spillovers; and
- habits.

Each of these obstacles, however, can be addressed with a combination of policy, consumer choice, innovative financing, and creative approaches to providing goods and services.

¹ UN Environment Programme defines a green economy as "a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long-term, while not exposing future generations to significant environmental risks and ecological scarcities."

² The International Energy Agency (IEA) estimates that meeting energy demand in a way that supports the goal of cutting energy-related emissions in half by 2050 will require investments of approximately \$750 billion per year by 2030 and more than \$1.6 trillion per year between 2030 and 2050. Moreover, the IEA states that 80% of the financing for the green transformation towards 2050 must come from private investors.

Externalities

Almost any consumption decision entails economic externalities (a cost not reflected in the price) of some kind, but in many cases these are small. However, in the case of consumption of energy-intensive goods and services, or of products that rely heavily on natural resources, it is possible that the individual benefits but does not bear the full cost of that decision -- leading to a classic "tragedy of the commons". Since people usually do not pay the full societal costs of their consumption decisions, market forces alone are often not sufficient to support the transition to a greener suite of technologies. While it is true that small market niches can help drive a market forward -- witness the interest in hybrid vehicles or organic foods -- economic theory would state that as long as there is a premium for the 'greener' option, it may be chosen less frequently than would be the societal optimum. In such cases, it is an appropriate role for policy to reset the playing field so that the externalities are borne by the consumer, allowing for a more comprehensive choice between traditional and greener options. This constitutes the first pillar of green growth: a level pricing field.

Spillovers

The second obstacle is the existence of so-called 'spillovers' from innovation. A 'spillover' refers to the inability of a researcher, inventor or innovator to fully capture the financial benefits from his or her discoveries. While patent and other intellectual property laws remedy this

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problem for the later stages of the innovation cycle, the benefits of basic research and fundamental technological discoveries remain very difficult for private investors to capture. A classic example is the development of the transistor -- while it certainly made money for its inventors and host corporation (AT&T Bell Labs), the ubiquitous presence of this technology implies that the benefits to society far outweigh what they were able to capture as direct profits. Conversely, spillovers can be thought of not only in terms of capturing profits but also in terms of risk. The chances that any single basic and early stage research project will lead to a commercial success are fairly low. As such, this kind of research is much higher risk than end-stage commercialisation. These characteristics mean that for any individual actor, the incentives to engage in basic or early stage research are too low; the risks that the returns are either not useful or impossible to be recouped in the market, are simply too high (the difficulty of crossing the so-called 'valley of death' in technology development). However, from a broader societal perspective, a large basic research portfolio is very likely to produce benefits, hence the argument for government-sponsored R&D and public-private risk sharing mechanisms. A key step in the process is to better understand the ways that the transition from bench prototypes to commercially viable products could be encouraged by new policy and private sector approaches. The existence of spillovers from basic research and development provides a second major pillar: risk sharing for research and commercialisation.

Habits

A third obstacle to green growth is conventional habits and consumer behaviour. Habits are not inherently good or bad, but conventional habitual approaches to consumption can slow the rate of change to a new approach. For example, it is well-known that energy efficiency measures are often very profitable investments from a financial (net

present value) perspective: such investments often pay back their initial investment within a few years with almost no risk. A typical energy efficiency investment with a five-year payback time provides a risk-free internal rate of return of approximately 19%. Realising the potential of energy efficiency could result in substantial cost savings, but often institutional and behavioural obstacles can slow the rate of change. While policy can encourage some efficiency through standards, codes and zoning, consumer behaviour and preferences can limit a transition to a green market. Innovative approaches to encouraging 'green' behaviour change will be an essential contribution to the green economy. Thus the third pillar of the green economy is 'greening behaviour'.

The Diversity of Innovation

Because of historical patterns in development and government funding levels, many technological breakthroughs of the past century have happened in the OECD countries. In addition, these countries' well-capitalised and profit-oriented corporations, as well as a highly trained technical workforce, have enabled sequential refinements of new products and processes. In part because of these patterns, technology adoption was seen largely as a unidirectional flow from these areas to developing countries, and international policy wrestled endlessly with mechanisms to 'transfer' technologies from the rich to poor countries. For two reasons, however, this model is defunct and indeed counterproductive.

First, and more obviously, is the evolution in capacity in emerging economies and even less-developed economies. The technical expertise in China, South Korea, Brazil and India is already substantial and continues to grow as these countries invest in their workforce development. In addition, the growing multinational corporate culture in many of the emerging economies is bringing scale economies in the ability of corporations to finance innovation and development.

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Second, the diversity in innovation will also be stimulated by an expanded scope of opportunities. The challenges faced by Japan in reducing environmental impacts are clearly not the same as those faced by a mid-sized Chinese city or a large metropolis in India or Brazil. Each context faces specific and concrete challenges in developing energy infrastructure, transportation and catering to an expanding middle class with culturally embedded preferences. The foundations for creative innovations to address these challenges are already in place, and the subsequent question is what can be done to facilitate this innovation – in both the private and public sectors. Perhaps most interestingly to the global community is the degree to which such locally targeted innovations might be scaled up and adapted for use in other countries – including the richer ones. Studies of technological innovation often show that those companies willing to manufacture lower-margin products to a broader audience can end up building new markets, coming to dominate them, and then superseding the companies that were restricted to catering to their high-margin clients. The distinct prospect therefore exists for technological innovations to begin to flow in the direction opposite from the historical experience and conventional expectation: from the emerging economies to developed countries.

The Next Generation of Green Cooperation

Key players such as corporations, governments and the research community concerned with both environmental and economic vibrance have approached 'green growth' in multiple ways. Concepts of sustainable development and market-based environmental regulation have infused attempts to set a course toward a sustainable future. But the new multipolar world economy changes both the obstacles and the opportunities for reaching this future. In addition, some past approaches have been less effective than hoped: for example, the Kyoto approach to international emissions limitations has proven to be a difficult, if not intractable, approach to encouraging low-carbon transitions. Looking to the future, it appears that countries will be relying primarily on domestic policies to encourage green growth. But this locus of action at the domestic level will still require harmonisation and cooperation at international levels. However, instead of setting specific targets, this harmonisation may well be more productive if it focuses on enabling the pillars of green growth and setting the stage for the transition to a low-carbon, green economy.

Drivers for a Global Green Marketplace

The Forum will focus on two key drivers for a global green marketplace:

- **Stable and predictable green growth policies at all levels** – how markets for clean technology and green business can be created or strengthened by policy and legislation; and
- **Private investment in green growth** -- how to further engage and incentivise businesses and investors to help in driving green technology forward.

PREDICTABLE GREEN GROWTH POLICIES - AT ALL LEVELS

Governments play a crucial role in providing the private sector with a long-term and reliable policy framework that will:

- support the early phases of technology development; and
- provide a stable regulatory environment that supports the commercialisation of vital green technologies.

They need to create the right 'enabling environment' for investors by identifying technology niches and competitive advantages, and providing policy frameworks for the market. Support for science and technology research can form the basis for creating the domestic expertise upon which green domestic industries can be built.

Governments face a number of challenges -- different governments have different time horizons and capacities for initiating change. Moreover, establishing ambitious, long-term and effective transition policies will not be easy and poorly designed policies could create unpopular new burdens for industries and individuals alike. Only by learning about what is already proving successful in other countries and developing best practices can national governments maximise their chances of getting these policies

right. If they can, the reward will be a strong domestic market for home-grown green technologies and the chance to participate in a new and vibrant global market.

PRIVATE INVESTMENT IN GREEN GROWTH

While the right government policies will be crucial to a successful transition to a green economy, they will not be sufficient: the private sector must be fully involved. But progress has been slow and the low-carbon technology market is still immature. Investing in green technologies, particularly in those that have not yet proven commercially viable, is still considered a high-risk investment by many investors. If the business community is to commit the amounts of money necessary over an extended period, investors will need long-term price estimates for fossil fuels, long-term energy policies that guarantee a certain level of government co-spending, and a long-term price mechanism for renewable energy that ensures it remains competitive with fossil fuels.

Governments, on the other hand, are looking for a more active and longer-term role on the part of the international investment community. While governments can secure some of the financing, testing and marketing of low-carbon technologies, it is vital that technology companies and investors share the undertaking of creating and disseminating new green technologies and solutions. To do so, however, a stable policy environment must be put in place.

There is an obvious need to bridge the gap between business and policy makers and for a deeper understanding of the way in which energy policies can accelerate green growth through the support of innovation and technology. Designing a more effective policy framework is key to supporting businesses to make better investment decisions.

The Global Green Growth Forum

Our vision with the Global Green Growth Forum is to create a partnership between businesses and governments for creating a new basis for green growth. We will explore the ways that an international community of actors can create the conditions necessary for the private sector to drive forward this next generation of green growth. By disseminating recommendations in green policy formulation, innovative R&D and viable green financing, the Forum will support that aim. We will also explore the barriers that are currently hindering more ambitious investments in clean technology industries, as well as identifying the incentives and framework conditions that businesses and investors believe will drive a global strengthening of green investments.

The key objective with the Global Green Growth Forum is to produce actionable, relevant and tangible outcomes and viable solutions that governments and business can implement after the forum. Businesses and policy makers will take away a deeper understanding of the way in which energy policies can accelerate green growth through the support of innovation and new technology.

The key objective is to produce actionable, relevant and tangible outcomes and viable solutions.

The Forum will address both cross-cutting issues and provide an opportunity for specific sectors and approaches to convene. Example sessions include:

- public and private financing mechanisms for R&D support in emerging economies;
- innovative approaches to crossing the 'valley of death' in technology development; and
- how to overcome obstacles of green growth; externalities, spillovers and habits.

Members of the partnership will be given the opportunity to shape the Global Green Growth Forum by providing substantial inputs prior to the Forum as well as opportunities to lead certain parts of the Forum. This will help to ensure that their particular issues and challenges are addressed throughout the process and that the Forum will be successful in promoting green growth for the future.

