Chapter 9

Conclusions

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Peter King, Robert Kipp and Hideyuki Mori

Throughout this White Paper a number of important conclusions are drawn. This chapter is intended to consolidate and suggest possible linkages between these findings.

A key question addressed by the White Paper is whether the old governance arrangements that oversaw the failure to operationalize sustainable development over the past two decades are now up to the task of maintaining and accelerating the renewed push for a transition to a low carbon, resilient society, or if a more radical transformation is required.

One clear conclusion is that Asia-Pacific cannot rely on global UN reforms alone, but must generate its own innovative approaches to governance reform to the multiple challenges of a transition to a green economy, climate change, biodiversity loss, sustainable cities, and sustainable production and consumption. In fact, the Asia-Pacific region must provide global leadership in addressing these challenges, not only because the region is most vulnerable to the consequences of inaction but also because of its emerging economic and geo-political dominance on the global stage. The common thread among the cases, analysis, and recommendations in this White Paper is the need for information sharing and capacity development, and that many of the solutions to the identified problems are readily available within the region. What is missing is a wellcoordinated regional institutional arrangement for meaningful and useful information sharing and effective and accessible capacity development. This paper recommends establishing a platform to address these needs as a first step towards a regional environmental organization.

The transition to a green economy must move from being viewed as a convenient way to kick start economies in cyclical financial crises to become the primary economic and social development paradigm. In the same way that societies moved from their relationship to horses to automotive horsepower, nothing less than a fundamental shift to living within the constraints of natural systems and conserving natural capital is needed.

Such a transition, however, is not a case of moving from "black" to "white" overnight, as countries within this region have already made tremendous progress in sustainable development governance over the past decades, albeit sporadically, and much can be gained by sharing this experience more widely—a primary objective of this White Paper. Simply insisting on better implementation and enforcement of existing agreements, legislation, regulations, and policies already in place would rapidly advance regional progress—again, an implementation gap that is addressed throughout the White Paper.

While the international focus has been on global institutional reform there is no

overarching environmental or sustainable development organization at the regional level in Asia-Pacific, although regional arms of UN agencies such as UNEP attempt to fill this void. The experience of the European Environment Agency and its information collection and dissemination through EIONet suggests, however, a potential way forward provided it aligns with other regional integration efforts on economic and social fronts. Improved environmental information management at the national and local levels is also essential for increased public participation and community-based management of natural resources and could be facilitated by development of a regional information hub and/ or a regional agreement on access to information as a first step towards a formalized regional organization or agency similar in function to those found in other regions such as the EU. Currently this function is being served in some areas guite well, but is spread out over numerous networks. The Asia-Pacific Adaptation Network (APAN), Secretariat of the Pacific Regional Environment Programme (SPREP), and the Asian Environmental Compliance and Enforcement Network (AECEN), for example, all serve useful functions for information sharing and capacity development, and although on a limited scale these are important institutions and relevant to the future overarching Asia-Pacific regional institution. Further studies on policies and institutions should be the next step in order to support decision making and planning with sound research. To support this transition we must also understand and build on integration and regionalization efforts made in other sectors and align them with environmental institutions.

National environmental governance in the Asia-Pacific region has improved substantially over the past three decades, but many challenges remain in ensuring effective implementation of national laws, regulations, policies, and action plans. Accordingly, it is heartening to witness the emergence of activist judiciaries and "green benches" in the courts which are attempting to ensure increased environmental justice and holding government agencies to their compliance and enforcement duties. On the other hand, environmental quality continues to degrade and more honest performance reviews and assessments are needed. Assured public access to environmental information, along the lines of the Aarhus Convention, would help to monitor the performance of environmental agencies as well as prompt changes in corporate and individual behaviour that is damaging to the environment.

Possibly of the highest priority for changing governance in Asia-Pacific is the issue of climate change. As greenhouse gas (GHG) emissions are embedded in the fibre of the region's economic success, nothing less than fundamental change is needed. GHG emissions are influenced by climate-related policies, production and consumption choices, and the development paths along which these policies lead. Several counties, such as South Korea and China, have embarked on significant efforts to control GHG emissions will undermine their prospects for economic growth and poverty reduction and they need strong evidence that greening their economy towards a low carbon, resource efficient, socially inclusive, resilient society is their best policy choice. In this sense, learning and information-sharing are critically important for building further confidence in the region.

At the international level, the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol have been highly influential in changing national governance arrangements. The clean development mechanism (CDM), with its emphasis on promoting sustainable development while achieving emission reductions, has been a key influence on national level governance, especially through the establishment of the designated national authority (DNA), which approves CDM projects and certifies that sustainable development goals are also being achieved. The CDM has enhanced

additional investments of over USD 1.3 billion globally over the past decade. More recent developments include the emergence of nationally appropriate mitigation actions (NAMAs) and the Durban Platform (to adopt a protocol, another legal instrument, or an agreed outcome with legal force applicable to all Parties by 2015, with implementation by 2020). In the meantime, non-Annex 1 parties to the Kyoto Protocol are submitting NAMAs to the UNFCCC Secretariat as voluntary pledges.

Some of the institutional responses in the Asia-Pacific region include the Republic of Korea's Presidential Committee on Green Growth and the Framework Act on Low Carbon Green Growth, creation of the Global Green Growth Institute, as well as hosting the United Nations Office for Sustainable Development. India has issued its National Action Plan on Climate Change, designed to simultaneously address climate change and sustainable development. China is committed to reducing the energy intensity of its economic development, partly through market mechanisms, and in 2009, the National People's Congress adopted a Standing Committee Resolution on Actively Tackling Climate Change. Direct access to various climate change funds, such as the Adaptation Fund and the new Green Climate Fund, may also require governance changes to allow a national implementing entity to be certified.

Despite these many positive signs, unintended consequences of global approaches to climate change, such as emission trading and the CDM, have also influenced national level governance, especially due to unequal distribution of CDM-financed projects across sectors and host countries. A funding mechanism that should have furthered the sustainable development agenda in all developing countries, the CDM has been dominated by China, India and Brazil, with least developed countries left on the margins. Most countries in the Asia-Pacific region have used an assessment scheme, where the DNA evaluates proposed CDM projects based on sustainable development criteria and its indicators. China and India go a step further and require a percentage of the carbon emission reductions revenue to be earmarked for sustainable development. In China, this has required setting up a China CDM Fund and associated Management Centre to provide grants for sustainable development activities. A preferred approach would be for each CDM project to be certified as fulfilling a sustainable development standard (i.e. "gold standard"), an approach which has been adopted by Thailand's Greenhouse Gas Management Organization. This would create a powerful incentive to internalize the benefits of sustainable development in the carbon market.

Observing the achievements and limitations to enable sustainable development in the region through the international framework as well as institutional reforms progressed at the domestic level, the chapter argues the necessity to create a "regional platform" as a complimentary role to international and domestic institutions to facilitate the information sharing for policy linkages and capacity building for NAMAs/LEDS and the market mechanisms to realize the low carbon development and towards the Green Economy in the region.

Climate change is also providing renewed attention to the forest sector in Asia-Pacific, both for mitigation and adaptation, and the role of community forest management (CFM). Under the UNFCCC, Parties are negotiating a global agreement on reducing deforestation and forest degradation, while maintaining and enhancing forest carbon stocks (REDD+). For many years, CFM has been important for the wellbeing and livelihoods of many forest-dependent communities and now REDD+ offers a potential way to internalize the economic value of this form of forest management and provide a sustainable source of revenue. There is a concern that community managed forests may become more valuable under REDD+ and currently weak forms of CFM governance

could be overtaken by new state institutions and/or elite capture. It should be possible, however, to design more robust forms of governance of CFM explicitly targeted at capturing the benefits of REDD+.

Climate change is also driving renewed interest in low carbon technology transfer to, and within, Asia, as these technologies can play a key role in achieving sustainable development in the region. Deployment and diffusion of existing and new low carbon technologies could reduce projected GHG emissions to about half the 2007 levels by 2050. Technology transfer from one country to another involves not only physical assets but also technical knowledge and skills. This form of technology transfer can be regarded as successful if the recipients can not only effectively use the technology but over time assimilate and possibly improve on it.

Technology transfer provisions under the UNFCCC have made some progress but agreement has yet to be reached on intellectual property rights, financing, and measurement, reporting and verification. These negotiations are likely to drag on, and given the need for urgent action to respond to the risk associated with current world environmental and economic conditions there is scope for promoting the deployment and diffusion of commercially available technologies which are associated with fewer barriers. Some of the most relevant technologies for Asia and the Pacific are clean coal technologies, energy efficiency technologies, fuel cells, geothermal, micro-hydropower, small wind turbines and solar power, many of which are already at their deployment and diffusion stage of maturity.

Currently, various mechanisms and initiatives are focusing on low carbon technology transfer. For instance, the Global Environment Facility (GEF) has been particularly influential as a funding mechanism for technology transfer to developing countries, allocating more than USD 2.5 billion for climate-friendly technologies in more than 50 countries since 1991, along with about USD 15 billion in co-financing. Although not originally envisaged as a technology transfer funding mechanism the CDM has also contributed positively to technology transfer. Of the 2,100 registered CDM projects, about 36% claim to have involved technology transfer. In addition, there has been a wide range of bilateral and multi-lateral initiatives on technology transfer, such as the Methane to Market Partnership, International Partnership for the Hydrogen Economy, and the Asia-Pacific Partnership for Clean Development and Climate, among others. Foreign direct investment in low carbon technologies is also large, with private investment in clean energy in developing countries already reaching more than USD 22 billion by 2007.

Compared to the magnitude of the technology transfer challenges necessitated by climate change, however, the above mentioned strategies, mechanisms and initiatives are still of modest significance. It may be particularly effective to promote the deployment and diffusion of low carbon technologies through new strategies such as a crediting mechanism, enhancing the proactive involvement of the private sector, and promoting low carbon foreign direct investment in the region. These are challenging strategies unless other complementary measures are taken. For example, the first strategy can build on the existing CDM approach. The second strategy necessities a stable framework of incentives, material and non-material measures, to leading companies willing to play a more proactive role in transferring low carbon technology in Asia. The third strategy requires that green governance processes be streamlined at company and government levels to attract low carbon foreign direct investment.

As urbanization continues at a rapid pace in the Asia-Pacific, cities are developing so fast that those responsible for environmental management are struggling to cope while urban

environments continue to degrade. An effective approach to improve the capacity of local governments is networking between cities to enable knowledge sharing and mutual learning. Examples in this region have included the Local Government for Sustainability (ICLEI), Kitakyushu Initiative for a Clean Environment, CITYNET, and Clean Air Initiative for Asian Cities. While climate change negotiations drag on at the global level, many city mayors have chosen not to wait and are making voluntary commitments to address global warming.

The main type of city networks are those open to many participants, more limited membership, and bilateral arrangements. Award programmes for the best performing cities also stimulate improved local actions. An Environmentally Sustainable Cities (ESC) Model Cities programme with links to existing city awards schemes is being promoted by the Association of Southeast Asian Nations (ASEAN) Working Group on ESC. A key factor in all such networks is to maintain relevance and develop a sustainable financial arrangement, possibly through membership fees. Recognition and revision of existing well-performing networks is needed to avoid duplication and overlap of multiple organizations.

Among the many management problems for the rapidly growing urban areas in Asia-Pacific is dealing with huge volumes of solid waste. Turning this "problem" into a new source of raw materials (sometimes referred to as "urban mining") or "reduce, reuse, recycle" (3Rs) not only requires local action but also international collaboration towards sustainable resource circulation and management. Developing and developed countries need to simultaneously increase resource efficiency and decouple economic growth and resource use, in order to achieve a low carbon economy.

Fortunately, there has been progress recently in policies promoting resource circulation and management in developing Asia at the national and international levels. At the same time, it has been realized that there are limitations in pursuing the resource efficiency approach, and stronger policy intervention is now needed to achieve absolute decoupling or material reduction. Such a transition, however, cannot be achieved suddenly and therefore a phased approach is needed moving from end of life recycling to improved product design and reduced material use.

The governance challenges in achieving such transitions should not be underestimated. These challenges can be grouped as follows: (i) government capacity and interagency coordination; (ii) industrial infrastructure and technology transfer; and (iii) a well-organized recycling market, supporting local markets and green jobs. A national resource recycling fund, collecting fees from product manufacturers and importers, could be a useful policy tool to implement sound resource circulation. At the international level, increased collaboration may also require a new funding mechanism to promote the 3Rs and sustainable materials management.

Final words

This White Paper has examined innovative approaches to environmental governance that have emerged from Asia-Pacific and produced recommendations for improving governance arrangements and policies in the region in order to achieve sustainable development. Recommendations were made for accelerating the transition to a green economy and the necessary changes in governance arrangements and policies that must be carried out over the next few decades. As mentioned in the first chapter and demonstrated throughout this publication, the likelihood of achieving global sustainability goals clearly depends on successful reform in Asia-Pacific. Without significant governance reform in Asia-Pacific we argue that global sustainable development will remain an under-implemented ideal rather than a new and persistent reality.

A trend among the cases and recommendations, and a major message of this publication overall, is the need for improved mechanisms for information sharing and capacity development and better coherence and coordination among the many policies and networks in the region. The solution proposed in this White Paper is to establish a regional environmental organisation, similar to other regions such as the EU, in a stepby-step process starting with a formalized centre for information sharing and capacity development.

Along with many other organizations around the world IGES was very active in the Rio+20 process, in particular in the Asia-Pacific region. Regardless of international level outcomes our message remains that regional action will be the critical factor for sustainable development and new institutions with a regional mandate will be necessary. Ultimately, it is what we do after Rio+20 that will make a difference.