

A decorative graphic consisting of a grid of grey dots of varying sizes, with several dots highlighted in red. The dots are arranged in a pattern that roughly outlines the shape of the Asian continent.

# Green Growth Strategies in Asia

## Drivers and Political Entry Points

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December 2013

- Despite their relatively poor environmental performance in recent decades, many Asian countries are beginning to develop green growth strategies.
- These strategies utilize different entry points for promoting continued economic growth and employment generation, while improving living conditions and addressing the imperatives of resource efficiency and environmental protection.
- The incentives and drivers vary across countries and depend on the respective development models, resource endowments, financial resources and technological capacities.
- Success depends crucially on the development of a new, broader set of state capacities. These include not only capacities to develop and consistently enforce a robust set of environmental policies, but also to ensure their coherence with other policy domains, in particular innovation and industrial policies.
- In order to scale-up these emerging initiatives into broader transition strategies, the development and further strengthening of corresponding political discourses and societal coalitions is needed. Such strategies will have to consider the political economy of reforms, incorporate questions of social justice and address the interests of key stakeholders.



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## 1. Pathways to a Green Economy

The threat of irreversible climate change is but one of the mounting environmental challenges caused by current models of production and consumption. The increasing scarcity of resources, mounting levels of deforestation and desertification, the challenge of globalized flows of waste or the growing fallout from deep sea oil extraction represent other pressing problems in a long list of environmental challenges. Despite the Western economic and financial crisis and the continuing fears of economic recession, ambitious measures to develop a greener, more sustainable economy are needed.

It is increasingly recognized that the transition to a green economy is not only vital from an environmental perspective but also promises important economic potentials. Not only can it help to address the challenge of rising resource prices, it has also been identified as an important market opportunity. In fact, markets for green technologies are growing rapidly and at a much faster pace than many traditional sectors. Already today, Germany's environment ministry estimates that green economic sectors account for approximately 1,4 million jobs in the country (BMU, 2012). But is this a role model for the rest of the world, in particular for the developing and emerging economies in Asia?

The dominant pathways of economic development and the related macro-level indicators in Asia do not suggest that a transition to a green economy is taking shape. Asia's rapid economic development over recent decades has gone hand in hand with disproportionately high levels of resource and energy use. Compared with the rest of the world, Asian countries require three times the input of resources to generate one unit of GDP. Among other things, this development reflects the regional trend that industrial production has increasingly shifted from more efficient centres of production, such as Japan, to more resource-intensive production centres, including China and other lower income countries in the region (UNESCAP et al., 2012). These Asian production centers are to a large extent export-oriented and put strong emphasis on reducing costs to compete in the global market place. Moreover, especially at the local level, immediate needs for housing, energy, nutrition, employment and mobility have priority over environmental concerns. Overall, improving the environmental

performance of industry, increasing resource efficiency and cutting emissions do not appear to influence economic development strategies.

But is it inevitable that Asian economies have to pursue resource-intensive pathways of development before tackling mounting environmental challenges? Is the green economy only a concept of post-industrial Western societies or could it also fit the context of the rapidly industrializing Asian economies? In addressing this question, this paper goes beyond the relatively bleak macro-level picture alluded to above. Instead, we explore emerging policies to support a green economy and the related economic trends. On this basis, we assess the broader potential and entry points for promoting a green economy in an Asian context. Finally, we relate emerging green growth strategies to the social and political context in Asia. We highlight the importance of a responsible and responsive state in setting the appropriate framework conditions for the definition and protection of public goods in the effort to enable a transition towards socially just, economically stable and ecologically dynamic societies.

This paper (and the related background study) identifies emerging approaches to promoting a green economy taking shape in selected Asian countries. On this basis, it explores possible entry points for their further development in the region. The study draws on a series of country and regional studies, as well as presentations and discussions at a regional forum on »Green Jobs in Asia«. <sup>1</sup> Furthermore, it is embedded in a regional project promoting the building of the »Economy of Tomorrow«, a platform for discussing new development paradigms between European and Asian economic thinkers and policymakers, with the aim of overcoming the current social, financial and ecological challenges. <sup>2</sup>

Country-specific studies were conducted in the following countries: Korea, India, China, Indonesia, Vietnam and the Philippines. Each study provided an overview of economic performance and resource consumption

1. The project has been a cooperation between the FES Department of Asia and the Pacific and the Environmental Policy Research Centre, Freie Universität Berlin. The mentioned background study authored by Klaus Jacob, Wu Libo and Rainer Quitzow (2013) is available at the FES regional website: [http://www.fes-asia.org/media/Economy\\_Of\\_Tomorrow2013\\_EoT\\_Green\\_Jobs\\_in\\_Asia.pdf](http://www.fes-asia.org/media/Economy_Of_Tomorrow2013_EoT_Green_Jobs_in_Asia.pdf).

2. More background information, conference reports and publications are available at the FES regional website: <http://www.fes-asia.org/pages/shaping-the-economy-of-tomorrow-in-a-sustainable-way.php>.

and emerging policy frameworks for the promotion of a green economy and resulting achievements. The countries represent different levels of economic development and varying political framework conditions. The primary purpose of this paper is thus not to compare the countries. Rather it seeks to identify policy innovation and its underlying economic and political drivers and derive related policy implications for transferring or adapting the related approaches to other countries.

In addition, the paper relates these findings to international debates on the green economy, green growth or green development. On one hand, developing countries are increasingly voicing their fear of trade barriers, additional costs or additional obligations, which go along with the international move towards promoting a green economy. Hence, the concept of a green economy is perceived with a degree of scepticism. On the other hand, critics in the Western industrialized countries argue that green economy strategies are vulnerable to rebound effects. Their focus on market-driven improvements in resource efficiency does not offer a remedy to increasing consumption and continued economic expansion. Consequently, increases in disposable income resulting from efficiency improvements merely fuel new demands for consumption without consideration of finite planetary boundaries. These critics, therefore, suggest the need for a post-growth economy, which serves basic needs, but entails a cultural transformation towards a new paradigm of more moderate consumption in a so-called sufficiency economy (for example, Jackson 2009).

Furthermore, international debates on climate change and the need to transform traditional development paths have focused increasing attention on questions of social justice. On one hand, the implications of climate change and environmental degradation are directly influencing the living and working conditions of many communities in developing countries. On the other hand, structural reforms that might be needed for greening economies could result in changing the quantity and quality of jobs in more resource-intensive industrial sectors. Therefore, trade unions and civil society organizations have expressed demands to find ways and instruments to ensure a »just transition« towards green economy models.

Green economy strategies need to take these and other political debates into account. However, these challenges to the green economy concept should not lead to inac-

tion. There is no silver bullet for the development of a sustainable economy. Numerous uncertainties regarding technology development, but also the development of human and natural systems, make experimentation in the effort to promote a green economy inevitable. Moreover, such experiments are embedded in country-specific socio-economic and political conditions. This means that each strategy process represents a unique learning ground, offering lessons for other countries and regions. This paper seeks to contribute to this process of global experimentation and learning by highlighting emerging trends in Asia and synthesizing lessons for use by policymakers and practitioners in both Asia and Europe.

## 2. Green Growth Strategies in Asia: Approaches and Drivers

The following section provides an overview of the identified green economy strategies and policy frameworks and distinguishes them by their primary driver and motivation. The central drivers identified in the paper are the following:

- export opportunities;
- concerns about energy security;
- the motivation to exploit domestic potential for renewable energies;
- the need to create fiscal revenues;
- concerns about climate change;
- international climate policies and related funding opportunities.

The section begins with a brief overview of strategies to promote green growth and tackle climate change in the selected countries. Following this, each of the drivers and the related policy patterns are explored.

### 2.1 Overview: Strategies and Plans to Promote Green Growth and Tackle Climate Change

Among the selected countries, Korea has been at the forefront of developing a green growth strategy, in keeping with its leadership position in terms of economic development and technological sophistication. It has not only launched its National Strategy for Green Growth for 2009 to 2050 and its corresponding Five Year Plan



Table 1: Climate change-related targets in the selected countries

China	India	Indonesia	Korea
Reduction of carbon intensity by 17 % and energy intensity by 16 % by 2015; Reduction of carbon intensity by 40–45 % by 2020	Reduction of energy intensity by 20–25 % by 2020 over the 2005 levels	Reduction of greenhouse gas emissions by 26 % below BAU by 2020; 41 % with international assistance	Reduction of greenhouse gas emissions 30 % below BAU by 2020
Thailand	Vietnam	Philippines	
Reduction of energy intensity by 25 % from 2005 to 2030	Reduction of greenhouse gas intensity by 10–15 % by 2020; reduction of greenhouse gas emissions by 2–3 % per year until 2030	No specific target	

for Green Growth (2009–2013), but it has been instrumental in promoting discussions on green growth at the international level. It has launched the Global Green Growth Institute with the participation and support of a diverse set of governmental and non-governmental stakeholders, and it has played an important role at the regional and global level in establishing various multilateral initiatives on green growth. Among the other selected countries, only Vietnam and Indonesia have launched dedicated national green growth strategies. In both cases, these are closely aligned with the countries' climate change strategies and are coordinated by the related institutional arrangements, for example, Vietnam's National Committee on Climate Change and Indonesia's National Council on Climate Change. In Korea, policies addressing climate change are fully integrated into the country's green growth strategy, which is overseen by the Presidential Committee on Green Growth.

The remaining countries have all created climate change strategies or programmes and, with the exception of the Philippines, all the selected countries have formulated emission reduction or other climate change-related targets (see Table 1). These refer mainly to reductions in energy intensity or emission reductions in reference to a business-as-usual (BAU) scenario. Only Vietnam has committed itself to a net reduction of greenhouse gas emissions. In addition, all the selected countries have embarked on some form of renewable energy policy and have implemented corresponding instruments, such as feed-in tariffs, quota systems or other types of investment incentive.

## 2.2 Green Growth as Export-Oriented Industrial Policy

In China and Korea, policies to promote green economic development are strongly intertwined with the countries' innovation and industrial policies. Green technologies have been identified as strategically important industries, in which these countries aim to capture leadership positions. In both countries, green growth is, therefore, partly a continuation of their export-oriented development strategies and builds on ambitious goals in the development of their technological capabilities.

In Korea, the »creation of new growth engines« is one of the three pillars of the country's National Strategy for Low Carbon and Green Growth for the period of 2009 to 2050. Moreover, its renewable energy policy is led by the Ministry of the Knowledge Economy and not only sets deployment targets, but also includes the goal of attaining 15 percent global market share and 36.2 billion US dollars in exports by 2015 (InvestKorea, 2013). Similarly, in China, an important element of its 12<sup>th</sup> Five Year plan (2011–2015) is the promotion of seven so-called »strategic emerging sectors«, including the energy conservation and environmental protection industries, the new energy industry and the new energy automobile industry (Boyd and Copsey, 2011). As pointed out in the China 2030 report, published jointly by the World Bank and China's Development Research Center of the State Council, they represent high-value added sectors with significant export potential (World Bank and Development Research Center of the State Council, 2012).

### 2.3 Renewable Energy and Energy Efficiency Policy as Energy Security Strategies

A second important driver of ambitious renewable energy and energy efficiency policies in the region is the growing awareness of energy security concerns. As pointed out by a UNESCAP report (2008), increasingly volatile prices for oil and other fossil fuels coupled with rapidly rising demand for energy has brought the issue to the attention of policymakers in the region.

In India, in particular, energy security concerns are closely interlinked with pressing economic development issues. The supply of reliable energy has been identified as one of the key bottlenecks for sustaining the country's rapid process of economic growth (Dubash 2011). To tackle these supply constraints, the Indian government has stepped up its commitment to enhancing energy efficiency, in particular in the industrial sector. Building on India's Energy Conservation Act passed in 2001, the country recently launched an innovative trading scheme, called »Perform, Achieve and Trade« (PAT) to promote energy efficiency. This is complemented by its Integrated Energy Policy launched in 2006, which identifies the need to draw on »all available fuel options and forms of energy, both conventional and non-conventional« to meet the rising energy needs of the country (Dubash, 2011). Similar ambitions are formulated in Thailand's Renewable and Alternative Energy Development Plan (AEDP) for 2012 to 2021, which highlights the expansion of renewable energy as a means of reducing the country's high dependence on fossil fuel imports. In China, energy security concerns may have taken a back-seat to the industrial policy ambitions attached to the renewable energy sector. However, Boyd (2012) argues that over the past ten years recurring blackouts resulting from coal shortages have driven the country's increasingly ambitious targets to reduce energy intensity.

### 2.4 Domestic Potential for Renewable Energy Development

Another important factor shaping renewable energy policy is the domestic availability of natural resources, as well as their potential to contribute to domestic economic development. Frequently, this complements considerations on the current cost-effectiveness of a particular renewable energy option, though not always.

In Thailand, for instance, solar energy has taken precedence over the deployment of wind energy, typically the more cost effective of the two alternatives. Given similar development potential for both energy sources, a focus on wind, the more mature and cost-effective technology option, might be expected. The focus on solar energy may, therefore, be explained by the existence of an emergent solar module manufacturing industry, including production of modules and cells. The promotion of bio-fuels is another area in which Thailand and other South-east Asian countries – including Indonesia and the Philippines – have put substantial emphasis. Biofuels represent not only an option for reducing independence from fossil fuel imports, but they also offer significant potential for economic development, particularly in rural areas.

Both Indonesia and the Philippines have also shown a strong commitment to exploiting their geothermal resources, corresponding to the important potential for this energy source in both these countries. Indonesia has an estimated 27 GW of geothermal potential, which amounts to approximately 40 per cent of global resources (World Bank, 2011), while in the Philippines experts believe that almost 4.5 GW of geothermal resources are available. The Filipino efforts date back to the 1970s and geothermal energy production currently stands at almost 2 GW, placing it second only to the United States (World Bank and AusAID, 2010). Indonesia has lagged behind the Philippines, due to weak implementation capacities and lack of finance. Nevertheless, it remains committed to developing almost 10 GW of geothermal power by 2020.

### 2.5 Fiscal Incentives for Green Growth Strategies

Additional incentives for ambitious green growth strategies can be found in their potential to relieve budgetary pressures. Environmental taxation and the reduction of environmentally harmful subsidies offer a resource for additional tax revenue and the reduction of fiscal deficits, respectively. Given the limited revenue from income-based taxes in many Asian countries, this fiscal dimension of green growth policies provides an additional motivation for governments to take action, although political resistance make progress particularly challenging. Nevertheless, the first signs that governments are recognizing the fiscal benefits of environmental taxation are emerging.

Vietnam, for instance, introduced an environmental protection tax in 2012. The tax revenue will supplement state budgets at both the central and the regional level and has met with strong public support (Rodi et al. 2012). Strong fiscal arguments for greening the state budget are even more apparent in Indonesia. In its Green Paper *Economic and fiscal policy strategies for climate change mitigation in Indonesia* (Ministry of Finance, 2010) the Ministry of Finance promotes a carbon tax/levy on fossil fuels in conjunction with a gradual removal of energy subsidies. Similarly, in India fossil fuel subsidies represent an important fiscal burden, inducing the government to install an »Expert Group on a Viable and Sustainable System of Pricing of Petroleum Products« (Government of India, 2010).

## 2.6 Climate Change Policy as a Driver of Green Growth

As we have seen, progress in advancing a green growth agenda in Asian economies is being driven by a number of economic, fiscal and energy policy objectives. Climate benefits have been portrayed primarily as co-benefits rather than as the primary motivators of policy action. That said, the international debate on climate change has clearly also had a substantial influence on the framing of policy debates and has provided impetus to the development of corresponding national targets and strategies.

Korea has passed legislation for a nationwide greenhouse gas emission trading scheme, which is to go into effect in 2015 (O'Donnell, 2012). China is currently experimenting with a number of provincial and city-level emission trading schemes (National Development and Reform Commission, 2012), and Thailand is planning a voluntary carbon market (IGES and Thailand Greenhouse Gas Management Organization, 2012). As already mentioned, Vietnam was the first country to introduce a tax on all types of fossil fuel-based energy sources. In addition, forestry preservation and afforestation schemes represent an important entry point for climate change mitigation in the majority of the selected countries. The most ambitious schemes are closely linked to the international REDD framework (for example, Indonesia).

The emergence of these policies and strategies indicates that the international debate on climate change

and the related pressure to contain increases in greenhouse gas emissions represent increasingly relevant policy drivers. The domestic impacts of climate change represent an additional policy driver, which appears to be gaining in importance. The challenge of climate change adaptation is an important element in all the climate change strategies, including Korea's green growth strategy.

## 2.7 International Climate Finance as an Incentive for Green Growth Strategies

An additional motivating factor for Asian countries to embark on green growth strategies is the promise of international climate finance, in particular in smaller countries with lower income levels. In Vietnam, for instance, gaining access to international climate finance is an explicit goal of its climate change strategy (Government of Vietnam, 2011). Correspondingly, Vietnam's National Target Programme to Respond to Climate Change, a medium-term action plan that is aligned with its long-term climate strategy, has been closely coordinated with the international donor community. In Indonesia, climate change rapidly gained in prominence on the national policy agenda when Indonesia hosted the United Nation's Bali Climate Change Conference. Since then Indonesia has formulated its climate target as a function of international financial support – 26 per cent emissions reductions from the business-as-usual scenario without support and up to 41 per cent with international support. In Thailand and the Philippines, climate financing strategies appear to be less developed than in Vietnam and Indonesia. Nevertheless, the Filipino Climate Change Action Plan emphasizes the need to access international donor finance, while Thailand has targeted Clean Development Mechanism (CDM) and the international carbon market to finance climate policy measures.

## 3. Opportunities and Challenges for Future Action in Support of Green Growth

Having identified the most important empirical trends, this section discusses a number of possible policy implications and sketches out opportunities and challenges for a broader transition process to a green economy in the region.



### 3.1 An Ecological Industrial Policy for Asia

The examples of Korea and China are proving to other Asian countries that the aims of industrial development and the promotion of a green economy can be combined in certain areas. In fact, as the example of the solar energy industry has shown, emerging green industries may offer Asian countries the opportunity to go beyond catching up and leapfrog into a position of industrial leadership. This, however, entails important environmental and industrial policy challenges. An ecological industrial policy requires a government with capacities for mid- and long-term planning, as well as the inclusion of ecological and social factors into the economic calculations. One of the key elements of successful industrial policies is the creation of domestic innovation systems, which are able to develop products and technologies according to the needs of domestic and global markets. In particular, it implies the creation of demand for new products and services. Identifying the most promising arenas for the local development of such markets is a particular challenge.

The academic literature has been stressing that increased international mobility, global competition and the changing structure of economic value chains have resulted in new challenges for industrial policy (Meyer-Stamer, 2009). Providing an enabling environment for innovation and processes of knowledge generation and management is increasingly moving to the center of industrial policymaking. Moreover, with the advent of system-based approaches to innovation policy, the scope of policy interventions has significantly broadened, spanning different policy domains and encompassing a broader set of policy interventions. Finally industrial clusters are developing rather within cities and regions than at the level of nation-states, resulting in a changing distribution of responsibilities across the different levels of government.

These ongoing shifts require a broader understanding of industrial policy, including the integration of different policy areas, as well as close coordination with relevant target groups and private actors. To achieve this, the state needs to find adequate instruments and create platforms for coordinating its strategic objectives and setting the right political framework. This includes reforms in the areas of governance, not to mention the need to integrate sustainability aspects into the institutional landscape of education, research and innovation policies. Debates about the twenty-first century devel-

opmental state also emphasize that the challenge lies in defining the most important collective goods in close interaction between government agencies, private sector elites and civil society groups (Evans, 2008). For successful industrial policies, the state must create an institutional framework and invest in the production of knowledge, so that entrepreneurs can take risks and engage in economic activities, which will contribute to innovation.

Complementing this, research and development funds have to be channelled to future-oriented and sustainability-related sectors of the economy, and a fruitful coordination between public and private actors is needed. As some international examples have shown, smart ecological industrial policies can also lead to the creation of more employment opportunities in the context of growing green markets. If combined with responsible education, labour and social policies, this can enhance the provision of decent jobs, which are desperately needed in many Asian countries.

### 3.2 Enabling Domestic Markets for Environmental Innovations

The economic model of most of the countries selected for this study has been strongly influenced by its export orientation. However, as a result of the economic crisis since 2008, as well as growing middle class populations, this is beginning to shift. It has been recognized that future economic development will require the stimulation of domestic demand in order to reduce the dependence on exports and to better serve the needs of the domestic population. To date, however, this has not had a major influence on the development of markets for environmental goods and services.

Given the important role of environmental policy in stimulating these markets, governments have a key role to play in this context. To meet domestic challenges, governments may have to put more emphasis on developing policy approaches that take into account the particular needs and preferences of their domestic populations. Differing cultural practices, income levels and very different urban environments require new, Asian approaches to environmental policy. It no longer suffices to adopt existing Western models of environmental management, but it may require the development of novel approaches, which are more suitable for stimulating the kinds of environmental goods and services that are required to meet domestic needs.



In some cases, domestic markets might simply require the adaptation of existing technologies to meet the requirements of a particular climatic or socio-economic context. In this case, an important entry-point for policy might be the support for innovative business or service delivery models, which enable the adoption of environmentally-friendly technologies in an emerging-country context. To date, however, many policies to promote environmental technologies have been oriented towards the export sector or the development of technological expertise. (Financial) support for start-ups focused on business model innovations is not a priority.

In other cases, the development of new, less costly technologies represents a more appropriate solution than simply adopting an adapted version of an existing solution. The private sector has identified such »frugal innovations« or »resource-constrained innovations« as an important new business area with large (export) potential in rapidly growing emerging markets (Radjou et al. 2012; Sehgal et al. 2010; Sharma and Iyer, 2012). In the sphere of environmentally-friendly technologies, supportive government policy represents a key factor for enabling the development and diffusion of such frugal innovations, requiring corresponding policy innovations.

Finally, it is likely that those emerging economies that are able to develop success stories in the realm of environmentally-friendly, frugal innovations will serve as role models for other emerging countries. Once cost-effective solutions are found, these are likely to become important export products in their own right (Quitow, 2013). Already today, emerging economies represent the bulk of global economic growth, so that solutions tailored to these markets have strong growth potential. Moreover, domestic businesses from emerging economies enjoy an important competitive advantage in this area of business vis-à-vis their rivals in the West who are physically and culturally more distant from these markets.

### 3.3 Green Growth as Driver of Traditional Environmental Policy?

As this paper has argued, increasing (international) resources are being invested in building capacities for the introduction and implementation of climate policy measures and for promoting green growth. In many cases, however, green growth is being equated with low-car-

bon growth without sufficient attention being paid to traditional environmental policy issues. Although environmental policies have been developed and improved in coherence over the past few decades, environmental ministries and their implementing agencies frequently lack the capacity to enforce existing policies and regulations. In particular at the local level, institutions charged with overseeing environmental regulations and standards remain weak and are frequently unable to counterbalance powerful economic interests (Quitow et al. 2013).

Nevertheless, further efforts are required to ensure that traditional environmental challenges also receive the attention they deserve. In many cases, addressing traditional environmental challenges – such as air and water pollution, soil degradation and so on – will also bring important economic benefits, which should be highlighted accordingly. In a recent report published jointly by the World Bank and the Development Research Center of China's State Council (2012), the costs of environmental degradation amount to almost 9 per cent of gross national income in China and India.

An important entry point for achieving environmental improvements might be to integrate a traditional environmental policy agenda more actively with the climate change agenda. A promising example is the Vietnamese ecological tax reform, where eco-taxes covered not only fossil fuel resources but also a (limited) number of additional products. In some cases, on the other hand, climate change policy may in fact reveal potential contradictions with traditional environmental policy goals or may be accompanied by potentially negative side effects. For instance, low-carbon technologies may require pollution-intensive production processes. Addressing these potential conflicts or side effects and developing corresponding mitigation efforts should be fully integrated in climate change and green growth strategies.

### 3.4 Leveraging Fiscal Incentives for Green Growth

In general, environmental fiscal reform may offer important potential synergies between fiscal and environmental policy objectives. This is especially true for the removal of fossil fuel subsidies, which not only promote excessive consumption of fossil fuel resources but also represent a significant burden on state budgets, especially in India and Indonesia. Similarly, raising additional

state revenue via the taxation of natural resources offers the potential of increasing tax revenue while curbing resource use.

As already argued, environmental taxation might be an incentive for some governments. However, effective implementation will require a strong role of the state able to engage societal actors not only in the economic but also in the social and environmental spheres. While some Asian countries can build on a solid framework for economic management, others have a very weak and fragmented tradition of state institutions. The former may actually require the state to relinquish some of its power in order to allow civil society players to articulate a progressive environmental policy agenda. In some of the latter cases, it implies a shift from a post-colonial »patriarchal state« towards a more inclusive »caring state« model. In either case, revenues generated from environmental taxation could be used to further strengthen needed state capacities, be it in the build-up of environmental administrations, the construction of welfare state functions or the development of public infrastructure.

Within this dimension of green growth policies, there is an important connection to broader discussions about the »role of the state« in the economy. The reconciliation of economic development with environmental protection requires innovative institutional frameworks with responsible and responsive governments, in order to protect the interests of both current citizens and future generations. As opposed to the West, where the state has been in retreat for several decades, many Asian countries are still in the process of constructing their welfare states and related state institutions. Moreover, a number of the East Asian states have developed well-functioning systems of economic governance where private sector actors are able to engage constructively with state bureaucracies in the effort to promote national economic development. These private sector actors represent powerful stakeholder groups, some of which stand to lose from environmental fiscal reform efforts. Moreover, the removal of subsidies or the taxation of natural resources may have negative impacts on certain vulnerable populations, frequently an argument against such policy measures. To be successful, state agencies may have to develop structures for the engagement of new types of actors in support of reforms. Both civil society actors and new private sector actors play a pivotal role in this context.

### 3.5 Supporting Decent Green Jobs and a Just Transition to Sustainability

Finally, it is important to keep in mind that green jobs are not necessarily fair and decent jobs. Moreover, the creation of new green jobs may go hand in hand with the disappearance of well-paying jobs in traditional sectors. It is essential that these social dimensions of greening economic development are adequately considered. This is not only an important question in its own right, but represents the key to ensuring that environmental policy measures enjoy the social acceptance that they require. Conducting systematic assessments of the socio-political dimensions of green growth policies can help in tailoring strategies that take into account country-specific challenges. The appropriate sequencing of reforms and the introduction of measures that mitigate negative social impacts represent important factors in making an ambitious environmental policy agenda socially sustainable.

The question of how to manage a »just transition« within the structural changes required for greening the economy has been addressed by various authors, but unfortunately a coherent approach is still lacking within the international climate change debates and the related academic literature (Galgóczi, 2012). Since the 2010 United Nations Climate Change Conference in Cancún, the main demands from the international trade union organizations regarding labour rights and the need to formulate a »just transition« have been incorporated into the official declarations. If trade unions and works councils are treated as equal social partners in industrial relations dialogues, they can become constructive stakeholders in modernization processes rather than blocking factors in structural reforms.

For instance, trade unions can become important partners in promoting needed education and vocational training programmes for the development of necessary skills for a shift towards a low-carbon economy. For many countries, this includes a general rethinking of education, training and research policies, but can also be developed within certain industrial sectors or even at company level by continued on-the-job-training programmes. Last but not least, it should also be mentioned that respect for human and labour rights is essential to ensure that the interests of workers and different communities are accommodated adequately at all levels.

In many cases, poor local communities in developing countries are the ones suffering most directly from environmental degradation. At the same time, they are very often the most vulnerable groups and lack the technical and financial capacities needed for developing strategies of adaptation and mitigation of climate change. In some Asian countries, due to the engagement of national and international NGOs, awareness of the challenge of strengthening the community level has increased. Furthermore, communities could directly draw social and economic benefits from the creation of jobs in environmental conservation and restoration programmes. Therefore, civil society actors also have to be considered and included when formulating and implementing just transition strategies, since very often they are better connected to the local communities and more aware of their specific needs and interests.

In European economies, the social impact of structural change related to the greening of its industries has been mitigated by varying, but in most cases very comprehensive welfare state systems. Many Asian countries either lack functioning public welfare programmes or are only beginning to develop basic systems of social security. Even if the destruction of existing employment is never an intended impact, within a functioning welfare state this will be compensated by an unemployment scheme. Ideally, it is followed by new vocational training schemes and support from a »caring state« in order to re-integrate people into the labour market. In a country without public social security systems or adequate unemployment and education programmes a just transition will be much more difficult to achieve. Once again, this leads to the conclusion that not only the social partners and civil society, but also the different state institutions have an important role to play in managing the structural changes needed in a fair, just and sustainable way.

#### 4. Outlook and Entry Points for International Policy Dialogue

Ultimately, the promotion of Green Jobs and the construction of the »Economy of Tomorrow« is a question of politics and political power structures (Saxer, 2013). In addition to the more policy-related questions highlighted above, building the Economy of Tomorrow requires a political debate on what the vision should be

for each country as well as for the region as a whole. Constructing an agenda for change requires the engagement of societal actors in a normative debate on what future society its members want to construct. What role should the market and the state play? What rights and responsibilities should civil society and the individual have? While each country will have to develop its own transition pathway, examples from neighbouring countries and international success stories can offer important inputs to this debate.

In this effort, the policy options as outlined above can be linked with ongoing and evolving discourses on pathways for the development of Asian economies and societies. While it has to be acknowledged that these discourses translate differently in the various national contexts, common elements can be identified.

The global economic and financial crisis has strongly challenged Asia's traditional role as an exporter of manufactured goods for Western Europe, Japan and the United States. It has revealed the overall fragility of the global economic system and its over-reliance on the United States as the main source of global consumer demand. In this context, a re-orientation of Asian economies towards their regional and domestic markets is an opportunity. In order to create more domestic demand, some governments have understood the need for incrementally increasing the wage structures and improving industrial relations between employers' and employees' organizations. If linked to a paradigm of frugal innovation and a vision of green and resource-efficient economic development, this could result in resource efficient products for local consumption and ultimately also lead to new export opportunities. Moreover, such a reorientation may alleviate concerns regarding green protectionism in Western countries.

The economic crisis is also having a considerable impact on public budgets. In many Asian countries, public finance is heavily constrained and taxation on labour does not provide a sufficient flow of incomes, given the high share of the informal sector. The international financing of climate policies and in particular the maintenance of ecosystem services as a sink for carbon is a potentially growing source of income. In addition, domestic measures, such as the environmental tax reform in Vietnam, may contribute to the generation of public funds.

A third important trend is the emergence of a new middle class and the new set of expectations and aspirations of this sector of the population. With the increasing income of private households, patterns of consumption and private property change. This is linked with changing expectations on the quality of the environment and is likely to lead to an increased environmental awareness and the willingness to purchase green products, as well as to oppose harmful environmental impacts. Eventually, such expectations can be linked and framed within a concept of well-being. Already today, values such as education are receiving increasing attention and eventually environmental quality can be integrated in the emerging storylines of prosperity and well-being in Asian countries.

Last, but probably not least, the availability and quality of labour remains high on the agenda. In a number of Asian countries, the formalisation of employment is only in its infancy and this may be an opportunity to link the agendas of green jobs with their specific requirements for qualifications and the concept of decent jobs. This would imply not only linking environmental policies with industrial and innovation policies, but also integrating environmental concerns in policies for education and training employees. Therefore, workers, farmers and peasants' representatives as well as other civil society groups have to be included in order to convince them of the necessity of the reforms, as well as the long-term benefits expected for them after the environmental modernization processes.

Finally, to identify appropriate entry points requires a sound understanding of the political economy of reforms. Political reforms and structural change always produce relative winners and losers compared with the status quo. To enable a successful transition, one has to deal with the potential losers and try to sensitize and include the winners. The problem might be that whereas the potential losers of such change are quite well aware of the risks involved for them, many potential winners are not well informed and may come from very diverse parts of society. Very often, they lack organizational and financial capacities which are needed in order to overcome those challenges and to start articulating their interests and fighting for their objectives. Trade unions, farmers, peasant and fishermen movements and other civil society groups in many Asian countries lack political influence: They suffer from fragmentation and lack

progressive platforms for the formulation of common goals. As a result, many groups focus their energy on defending their own, often narrowly defined interests, rather than developing broader, long-term oriented visions in the defence and provision of public goods. If those different, often marginalized groups join hands and start defining and defending their common objectives, there is a chance to convince the broader public that they are fighting for a positive, more inclusive vision of society. In order to create broader progressive coalitions for such a change, the aim should be to provide »full capabilities for all« – a vision of a »Good Society« that includes all the different dimensions of sustainability rather than focussing only on particular dimensions and aspects.<sup>3</sup>

3. The main author behind this school of thought is Amartya Sen, who combines the notions of freedom and equality into »capabilities« (Sen, 1999).



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## Imprint

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Hiroshimastr. 28 | 10785 Berlin | Germany

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This publication is printed on paper from sustainable forestry.



ISBN  
978-3-86498-738-0