



MULTIPLE PATHWAYS TO SUSTAINABLE DEVELOPMENT:

INITIAL FINDINGS FROM THE GLOBAL SOUTH



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**MULTIPLE PATHWAYS TO SUSTAINABLE DEVELOPMENT:
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LIST OF ACRONYMS

- ANC African National Congress (South Africa)
- BOI Office of the Board of Investment (Thailand)
- BRICS Brazil, Russia, India, China, and South Africa
- COD Chemical Oxygen Demand
- COMSERBO Incentive Program for Strategic Conservation and Sustainable Management of Forest Resources (Bolivia)
- CPC Communist Party of China
- CPE Constitution of the Plurinational State of Bolivia
- DA Democratic Alliance (South Africa)
- DBSA Development Bank of Southern Africa
- DEA Department of Environmental Affairs (South Africa)
- EGSS Environmental Goods and Services Sector

- ETB UNEP Economics and Trade Branch
- FAO Food and Agriculture Organization
- FYP Five –Year Period (China)
- GCBC Greater Cederberg Biodiversity Corridor
- GDP Gross Domestic Product
- GEP Green economy Plan (South Africa)
- GHG Greenhouse Gas
- KZN KwaZulu Natal Province (South Africa)
- LEED Leadership in Energy and Environmental Design
- MDZ Minhang Development Zone
- MEP Ministry of Environmental Protection (China)
- MOHRUD Ministry of Housing and Rural-Urban Development (China)
- MOF Ministry of Finance (China)
- NBP National Biocultural Programme (Bolivia)
- NCPC-SA National Cleaner Production Centre of South Africa
- NDP National Development Plan (South Africa)
- NDRC National Development and Reform Commission (China)
- NESDB National Economic and Social Development Board (Thailand)
- NFSD National Framework for Sustainable Development (South Africa)
- NRM Natural Resource Management
- PM Particulate Matter
- RPET Recycled PET
- Rio+20 United Nations Conference on Sustainable Development
- RPET Recycled PET
- SANBI South African National Biodiversity Institute
- SCG Siam Cement Group
- SFA State Forestry Administration (China)
- SSME Small, medium and micro enterprises
- TAT Tourism Authority of Thailand
- TEEB The Economics of Ecosystems and Biodiversity
- UNEP United Nations Environment Programme

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INTRODUCTION

In June 2012, twenty years after the landmark Earth Summit in Rio de Janeiro, world leaders gathered again to re-examine the global environmental agenda at the United Nations conference on Sustainable Development (Rio+20).

The conference concluded with an outcome document entitled “The Future We Want, which recognized the existence of a number of “different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development”, and identified Green Economy as an important tool for sustainable development. The outcome document also recognized the importance of South-South Cooperation, and urged the international community to support South-South Cooperation to achieve sustainable development.¹

In February 2013 the United Nations Environment Programme Governing Council took note of Rio+20’s emphasis on the different pathways leading to inclusive and sustainable economies. The Governing Council acknowledged the plurality of approaches and requested that UNEP “collect such initiatives, endeavours, practices and experiences on different approaches, visions, models and tools including green economy in the context of sustainable development and poverty eradication and to disseminate them, and facilitate information sharing among countries, so as to support them to promote sustainable development and poverty eradication.”²

This report serves as a starting point to address the calls from Rio+20 and the Governing Council to share the South’s various experiences and national-level initiatives for transitioning to sustainable and socially inclusive economies. Four unique national initiatives – all taking place in countries in the South, and at

different stages of implementation - are highlighted: Ecological Civilization in China, Sufficiency Economy in Thailand, Green Economy in South Africa, and Living Well in Bolivia.

The four national approaches to sustainable development reflect the particular experiences, circumstances, and priorities of the countries that adopted them. They are representative of the broad spectrum of sustainable development approaches that exist today. Sufficiency Economy in Thailand, for example, serves as a high-level guiding principle for the nation’s sustainable development policies as well as for the lives of its citizens. Similarly, Living Well in Bolivia emphasizes a holistic development path, but is focussed on the intrinsic values and rights of indigenous peoples and of Nature; China’s Ecological Civilization approach uses clearly defined targets and indicators to achieve resource efficient economic growth that stays within the carrying capacity of the environment. South Africa is using inclusive Green Economy to improve the well-being of its most vulnerable citizens and to progress towards a resource efficient and low carbon economy. In doing so, it implements policies that shift public and private investments towards green sectors of the economy.

The four national approaches highlighted in this project are based on nuanced visions of sustainable development. These reflect their unique national contexts and worldviews, and use different tools to achieve their goals. They nonetheless offer valuable lessons for other countries wishing to embark on their own sustainability pathways. By emphasizing their common economic, environmental and social aspirations, as well as challenges and available resources, this report aims to benefit countries by sharing experiences that they may find relevant to their own particular challenges. In addition to providing

concrete examples, such exchanges can empower countries to share and learn from home-grown responses to sustainable development challenges.³

The following sections describing four national sustainable development approaches are drawn from contributions from the four project countries themselves. While they have been edited for length, a maximum effort has been made to ensure that they accurately represent the original contribution, both in tone and content.

CHINA: ECOLOGICAL CIVILIZATION

1. Overview: Concept and definition

“Ecological Civilization” is a Chinese concept for a sustainable development framework. China’s former leader, Hu Jintao, defined it as: “a resource efficient and environmental-friendly society, based on the carrying capacity of the environment, observing the law of nature and aimed at realizing sustainable development”. The concept has received high-level political attention in recent years, and in 2012 it was incorporated, together with economic, political, cultural and social progress, into the country’s overall development plan.⁴

The concept is indicative of the Chinese government’s intention to address environmental concerns and protect nature while pursuing economic growth. This is a significant change from the previous approach, which prioritized economic prosperity over the environment. Rather than being limited to solving environmental and resource issues, it is expected that China’s Ecological Civilization will be integrated into every aspect of China’s development path, especially when it comes to the philosophy of high-level policymakers.

2. Context

The concept of the Ecological Civilization was a response to China’s growing environmental crisis, which resulted from its traditional development path. As the world’s largest economy in transition, China has maintained annual GDP growth of around 10 per cent over the past 30 years and has lifted over 500 million people out of extreme poverty⁵. However, the “economic miracle” also encountered a number of ecological and environmental challenges. These include:

Resource constraints. China has to support approximately 22 per cent of the world’s population with only 9 per cent of the world’s arable land and 6 per cent of the planet’s water resources.⁶ The per capita share of coal is 55 per cent lower than the world average. The share of oil is 11 per cent lower and for natural gas, it is 4 per cent lower than the world average.⁷ When it comes to natural resources, accelerated industrialization and urbanization have led to unsustainable consumption. The energy and water consumption per unit of GDP in China is about 2.5 and three times higher than the world average.⁸

Environmental pollution. Air pollution is a major problem, particularly in eastern, northern and central China.⁹ The annual mean PM₁₀ (Particulate Matter) averages in China’s provincial capital cities were among the highest worldwide from 2008 to 2010.¹⁰ The annual mean PM_{2.5} in Beijing, Tianjin and Hebei was four to six times higher than cities in high income countries.¹¹

Ecological deterioration. In the last decade, China has lost a significant portion of its wetland areas, and approximately 30.7 per cent of China’s surface area suffers from soil erosion,¹² which impacts agricultural production and leads to increased frequency of floods and eutrophication.

These issues have led to a number of collateral problems. For example, the country is forced to invest an increasing percentage of the national GDP in pollution control. Conflicts between heavily polluting companies and local residents over incidents that damage the environment raise serious security issues. Other problems include acid rain and desertification.

3. Key political processes

The Chinese government's approach to identifying and addressing the ecological crisis has been a gradual process (Figure 1). China began its first steps towards environmental protection in the 1970s. By 1983, environmental protection was considered to be a basic national policy that should be adhered to over the long term, but there were no legal documents available at the time to support the policy. From 2002 onwards, however, the government began placing a heavy emphasis on the importance of a harmonious relationship between man and nature and this became one of the goals for enhancing the well-being of Chinese society.

In November 2013, the 18th National Congress of the CPC highlighted four areas that China should focus on in the next five years and afterwards to achieve an Ecological Civilization.¹³

Smart development of the national land space

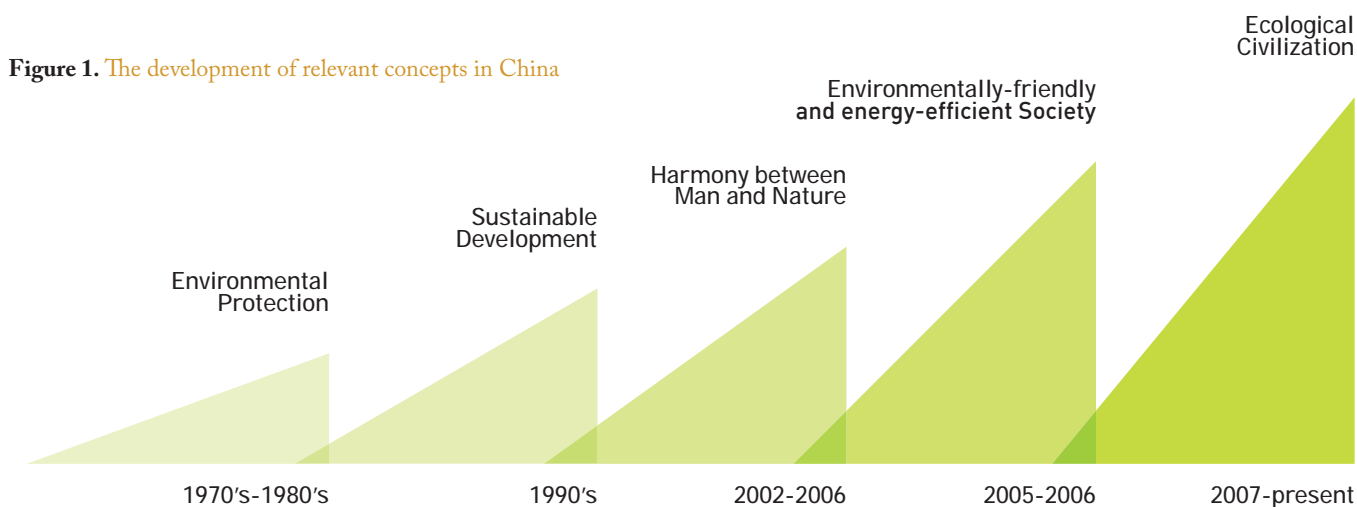
– to maintain balance between population growth, resources exploitation and environmental protection, by synchronizing economic, social and ecological

benefits. The key measures include improving land use efficiency, optimizing spatial structure, boosting the marine industry sustainably, and safeguarding marine rights.

Conservation of natural resources – by reducing energy and water consumption, enhancing resource use efficiency, supporting renewable energy development, and strengthening land use management.

Ecosystem conservation and environmental protection – large-scale ecological restoration projects to prevent desertification and soil erosion, enlarge the areas of forests, lakes, and wetlands, and protect biodiversity.

Institution building to promote an Ecological Civilization – Resource consumption, environmental damage and ecosystem services should be included in the evaluation system of social and economic development. Moreover, relevant target systems, evaluation methods, and a reward and punishment system should reflect the requirements for building an Ecological Civilization.



CASE STUDY: *Guiyang – City in the Forest*

Guiyang, in Southwest China, is a city whose natural resources provide both advantages and challenges. While blessed with an abundance of biodiversity and mineral wealth, Guiyang's economy was for a long time based heavily upon the extraction and processing of these resources, which had a negative effect on the environment. Inefficient production methods and lack of environmental controls resulted in a high degree of resource waste and pollution, including decreasing quality of the drinking water supply and very poor air quality. At one point, Guiyang was labelled "one of the ten most polluted cities in the world" and "one of the three cities hit the hardest by acid rain in China".¹⁴

Realizing that there was still an opportunity to adopt a more sustainable form of development, the government of Guiyang began using Ecological Civilization as a key tool to change its economic growth pattern.¹⁵ The promotion of sustainable agriculture and the recycling industry are key components of a strategy to transform traditional industry. Mineral processing has moved towards clean non-ferrous, metallurgical, chemical, pharmaceutical and other processing industries that have less impact on the environment. Guiyang has also invested considerable resources into controlling water pollution, increasing forest coverage, and building various wetland parks in and around the city. Ecotourism is also being promoted as a way to turn the area's natural beauty into sustainable economic growth.

Institutional support has been key to Guiyang's transformation, and a number of bodies have been established to enforce environmental regulations. Over 500 criminal and civil cases have been brought before the courts. This has helped promote public awareness and shared responsibility for environmental protection and green lifestyles.



From 2006 to 2011, Guiyang experienced an improvement in environmental quality, as well as rapid improvements in education, health, culture, employment and social security. This has resulted in better living conditions for the residents of Guiyang.¹⁶ During this time the city's economy also grew considerably, with an average annual GDP growth rate of 14.7 per cent. In 2012, above-scale industrial output value in Guiyang was RMB 180.3 billion, 62.5 per cent of which was attributed to ten industrial parks that incorporated Ecological Civilization. During the same period the GDP per capita also rose from RMB 15,731 to RMB 31,712.¹⁷

However, a number of challenges remain. Guiyang requires significant upgrades to its transportation infrastructure to further develop its tourism industry, and measures are needed to reduce human capital flight and also to attract a well-trained and educated workforce.

The Third Plenary Session of the 18th Central Committee of CPC identified four systems as integral to the promotion of the Ecological Civilization.

Natural resources property rights and use control system – Rights to all natural ecological spaces, including watersheds, forests, mountains, grasslands, and wetlands, should be registered and clearly defined by the government. Strict spatial planning should be applied for industrial, residential, and ecological space in order to limit development activities.

Ecological bottom line system – China’s land space will be divided into different functional zones, with each zone given an ecological bottom line that is based on its environmental carrying capacity.

Resource pricing and ecological compensation system – The natural resources valuation system should be reformed to fully reflect resource scarcity as well as ecological costs and benefits, and expand the areas of resource tax. Other goals include improving the ecological compensation system for key ecological functional zones, promoting compensation for ecological damages across different regions, and improving environmental market instruments including the emission trading, water rights trading, and carbon trading schemes.

Ecological and environmental protection management reform system – This should monitor pollutants and lead to better enforcement of environmental laws.

4. Institutional coordination mechanisms

The development of the Ecological Civilization is a complex and systematic process that calls for the cooperation of 22 governmental departments and agencies.¹⁸ However, as a detailed plan has yet to be developed, each of the 22 departments has its own understanding and practices for achieving the Ecological Civilization, and for some overlapping areas, it is still not clear who will be the leading authority. These ambiguities make cross-departmental cooperation difficult. The main duties of some relevant departments are described in Figure 2.

It became clear during the Third Plenary Session of the 18th National Congress of CPC that the environmental protection management system needs urgent reform. One suggestion is to create a high-level steering committee, composed of relevant government departments and agencies, to strengthen top-level policy design. Although the institutional coordination mechanism needs further clarification, some policies have already been implemented (see Table 1).

Figure 2: Relevant governmental departments and their roles in the Ecological Civilization

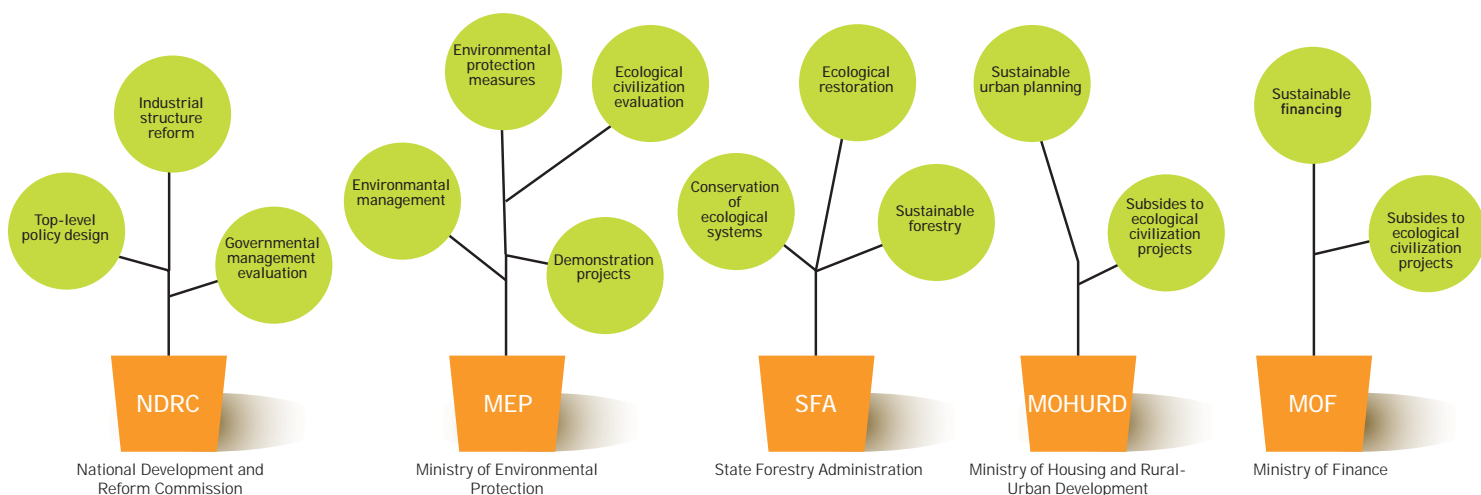


Table 1: Policies on Ecological Civilization since the 18th CPC National Congress in November 2012¹⁹

SECTOR	TIME	POLICY	RELEVANT DEPARTMENTS	MEASURES AND TARGETS
Resource conservation	2013. 1	The Green Building Action Plan	NDRC and MOHURD	With the implementation of green building standards as well as integration of the economic instruments of price, taxation and finance, 20% of new urban constructions are expected to meet green building standards by the end of 2015.
	2013.6	Six measures to promote healthy development of the photovoltaic (PV) industry.	The State Council	Expanding the distribution of PV applications should be prioritized, grid companies should purchase full amounts of PV power generation, and PV electricity price support policy should be improved.
	2013.7	Provisional Rules on the Management of Distributed Power Generation	NDRC	This is to promote the development of renewable energy by implementing policy measures that include prioritizing grid access for excessive distributed power, purchasing all available distributed power, and granting financial subsidies.
	2013.10	Guidance on Resolving Excess Capacity in Key Industries.	The State Council	It has been suggested that the efficiency of resources will be improved by eliminating outdated production capacity and providing proper control over the capacity of industries such as iron and steel, cement, electrolytic aluminium plate glass, and shipbuilding.
	2013.11	The National Plan for Sustainable Development of Resource-based Cities in China (2013-2020)	The State Council	Promote the transformation to more sustainable economies, their development, industrial upgrading, and energy conservation and emission reduction.
Environmental Protection	2013.6	Ten Measures for Air Pollution Prevention	The State Council (initiated by MEP)	These measures include: enhancing the constraining function of the energy-saving environmental protection index; increasing the penalty fee for pollution discharges; making amendments to emission standards for major industries; and amending the air pollution control law.
	2013.7	Policy measures to speed up the development of energy saving and environmental protection industries	The State Council	This aims to promote economic transformation and improvement, so as to encourage new mechanisms and social capital to participate actively.
	2013.9	Air Pollution Prevention Action Plan in order to strictly control fine particulate matter concentrations in the Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions	The State Council (initiated by MEP)	The aim is to improve air quality across the nation by controlling total coal consumption through measures such as eliminating out-dated production capacity, industrial transformation, and increasing the use of clean energy.

5. Embedding Ecological Civilization in the national policy framework

Ecological Civilization was established as a guiding principle at the 18th National Conference of CPC in 2012. The intention is for it to be mainstreamed into China's overall development plans, including the political, economic, social and cultural sectors.

Political sector

At the 18th National Conference of CPC, Ecological Civilization was, for the first time, included in the Constitution of the Communist Party of China, indicating that Ecological Civilization has become one of the management strategies and basic principles of communist leaders and the Chinese government.²⁰

A major reform in the political sector is the greening of the management performance evaluation system for local governments and government officials. This involves adding environmental indicators to the system that is used to measure the performance of government officials (GDP is currently the dominant indicator) and increasing accountability for ecological damage and pollution, with offenders being held responsible even after they have left office. These measures have been implemented in some areas, and will be broadly adopted in the future.

Economic sector

The concept of Ecological Civilization is being mainstreamed into the economy with the transition to a green economy. Two important elements of this are the expansion of the traditional service sector and the development of an environmental goods and services sector (EGSS), which is more environmentally friendly than traditional heavy industry. EGSS has been classified as one of China's Seven National Strategic Emerging Industries and is an essential part of the nation's economic reform programme.

China has also recognized the need for traditional industrial sectors to become cleaner and more resource-efficient, and is undertaking a number of policies, including the following:

- For several years, China has been increasing its efforts to eliminate lag-behind production activities, overcapacity, and outdated technologies, with local and provincial governments responsible for meeting reduction targets in the steel, cement, electrolytic aluminium, flat glass, and shipbuilding industries, among others.
- The government has implemented pollution control and clean production audit policies that are meant to implement Ecological Civilization at the corporate level. These policies are mandatory for companies that produce hazardous waste or cannot comply with the emission discharge standards, and voluntary for companies that can comply with relevant standards. The framework for these two policies is relatively well defined; however, implementation needs further monitoring and enforcement.
- Developing a circular economy is another vital approach to improving resource efficiency. Since 2005, the State Council has set targets and guidelines for promoting a circular economy. Two groups of national demonstration zones for a circular economy have been piloted in major industries and areas, leading to 60 different case study models for building a circular economy. The Circular Economy Promotion Act was established in 2008, and it provides strong legal support for the concept.²¹ In a newly issued strategic and near-term plan for circular economy development, China aims to increase resource efficiency by 15 per cent during the 12th Five-Year Period (FYP) compared to the 11th FYP.²²

CASE STUDY: *Shanghai Minhang Development Zone*

China's Economic Development Zones were designed to boost local economies through the creation of industrial clusters, and the Minhang Development Zone (MDZ) was established in southwest Shanghai in the 1980s.²³ The MDZ has attracted over US\$3.7 billion in investment, but at 3.5km², it is the smallest national-level development zone in China, and the lack of space means that environmental planning and resource efficiency must be optimized. As the MDZ is situated on the upper stream of the Huangpu River, which is the main water source for the city of Shanghai, water management is of particular importance, and water treatment standards are much more stringent than in the downstream areas.

The MDZ has managed to successfully balance economic growth with strong environmental performance,²⁴ and is designated a National Demonstration Zone of Ecological Industry. Some of the key strategies include a transition towards lower carbon manufacturing, greening the supply chain through circular economy, resource efficiency (e.g. optimizing the power grid, greening the lighting system, retrofitting industrial boilers, and reusing the leftover heat from industrial processes), reducing water consumption by using reclaimed water in industrial processes, implementing hard caps on carbon emissions, and a pioneering soil protection program. Strong institutional support from the government, reputational benefits of joining the MDZ's Corporate Environmental Network, and public awareness of environmental issues have all been fundamental to the success of these strategies.



Social and cultural sectors

The integration of Ecological Civilization in social and cultural sectors can be achieved in part through the following measures:

- **Improving the environmental information disclosure system.** The general public has the right to be informed of governmental and corporate environmental issues. All the listed companies in China are requested to reveal their environmental information; however, as for other areas, China still needs to refine its information disclosure system, especially regarding underground water and soil contamination incidents.
- **Strengthening the environmental legislation hearing and public interest litigation system.** As part of the development of Ecological Civilization, the general public should be able to file charges against those who have caused environmental damages. However, while progress has been made in some places like Guiyang – where the first ecological court in China was established – the policy framework to support widespread realization of this goal is far from complete.
- **Enhancing environmental awareness among the general public.** Both the central and local governments have been working on improving environmental awareness through media publicity and educational activities. For instance, the importance of protecting the environment is being taught in a growing number of middle schools in major cities, and ecological and environmental stories are receiving increasing coverage on television, newspapers, weibo (Chinese twitter), and other media.

6. Demonstration projects

Demonstration projects are an effective incentive to facilitate Ecological Civilization at local level.

In the 1990s the Ministry of Environmental Protection (MEP) began selecting villages, counties, districts, cities, provinces, and industrial parks that had strong environmental performance to be designated National Ecological Construction Demonstration Zones (later renamed Ecological Civilization Construction Demonstration Zones).

Prospective Ecological Civilization Construction Demonstration Zones must meet a number of criteria based on a five-part indicator system that covers: ecological economy, ecological environment, ecological living, ecological management, and ecological culture. The prerequisites and assessing indicators are slightly different between counties (districts) and cities.

In a separate initiative from the one brought forward by MEP, the National Development and Reform Commission (NDRC), together with five other ministries, drafted the Construction Plan for National Ecological Civilization Pilot Demonstration Zones in December 2013. The plan aims to choose 100 areas nationwide and explore Ecological Civilization construction models. As a newly issued initiative, no concrete implementation plan has been made yet.

7. The way forward

Despite the significant environmental problems resulting from China's rapid economic development, the country is actively seeking solutions. Ecological Civilization is considered to be the most important approach to moving forward. A series of financial and political support policies for Ecological Civilization has generated positive results nationwide. The total

CASE STUDY: *The Oil City of Karamay*

Karamay City is located in northwest China, in the Xinjiang Uygur Autonomous Region. With a total jurisdiction area of 7,700km², there are over 400,000 people of 38 different nationalities in Karamay.²⁵ As Karamay's name suggests, oil is the basis of the local economy (the name Karamay comes from a Uygur word meaning 'black oil'). In 2012, Karamay accounted for 5% of China's total oil production, producing 11.3 million tons of crude oil and 3.1 billion cubic meters of natural gas.²⁶ This productivity has naturally come with a cost, and energy consumption and pollution related to oil and natural gas extraction and refining are major problems. This, along with the fact that the economy is overly dependent on the oil industry, has led the city to try and shift its economy towards renewable resources. In 2010, Karamay City set the goal of building an environment-friendly and resource-conserving oil city. Numerous efforts have been made to apply Ecological Civilization to coordinated economic and social development, coupled with environmental protection.

In an effort to diversify the economy, the local government has targeted the financial, information technology, and tourism sectors as critical to Karamay's transition from an industrial economy to a service economy. A number of key infrastructure construction projects have also been implemented in to enhance the quality of life for residents, including road construction and renovation, river regulation, clean drinking water supply and landscape greening projects.

In addition to promoting new sectors of the local economy, Karamay is also undertaking measures to "green" the oil industry by establishing an effective mechanism to include energy conservation and emission reduction in its enterprise performance appraisal systems, and raising awareness about energy conservation and emission reduction. Clean operation technologies have also been developed to facilitate environmental protection, energy conservation and emission reduction, especially in refining and chemicals, oilfield production and natural gas desulfurization. PetroChina has made efforts to mitigate their responsibilities for CO₂ emissions through afforestation by launching a program in the Karamay Oilfield to create a 26,700-hectare forest for carbon sequestration over the course of the next 10 years.





environmental investment²⁷ in the 11th Five-Year Period (2006-2010) amounted to RMB 1.6 trillion. This was 70 per cent higher than the 10th FYP, and is expected to reach RMB 3.4 trillion in the 12th FYP. The ecological compensation fee, mainly from financial transfers from the central government, grew from RMB 2.3 billion in 2001 to RMB 78 billion in 2012.

The implementation of Ecological Civilization has brought about considerable positive outcomes in recent years. One of the concrete results has been an increase of vegetation in grasslands by 2.6 per cent from 2011 to 2012. This was closely related to a compensation policy that restricted grazing in certain lands. In addition, emissions of COD dropped 12.45 per cent and SO₂ decreased 14.29 per cent from 2006 to 2010.²⁸ This met the 11th FYP targets. In addition, the urban wastewater treatment rate

increased from 40 per cent in 2002 to 82.6 per cent in 2011.²⁹ According to the latest Environmental Industry Survey in 2012, the turnover of China's environmental goods and services sector is about RMB 3 trillion, with an annual growth rate of 30 per cent.³⁰

In spite of the aforementioned achievements, the development and implementation of Ecological Civilization in China remains an ongoing process and will take time to achieve. Some regions, such as Karamay, Guiyang, and the Minhang Development Zone, have been leaders in the implementation of the Ecological Civilization development model, and their experience offers valuable lessons for other regions in China as well as for other developing countries.

THAILAND: PROMOTING A “SUFFICIENCY ECONOMY”

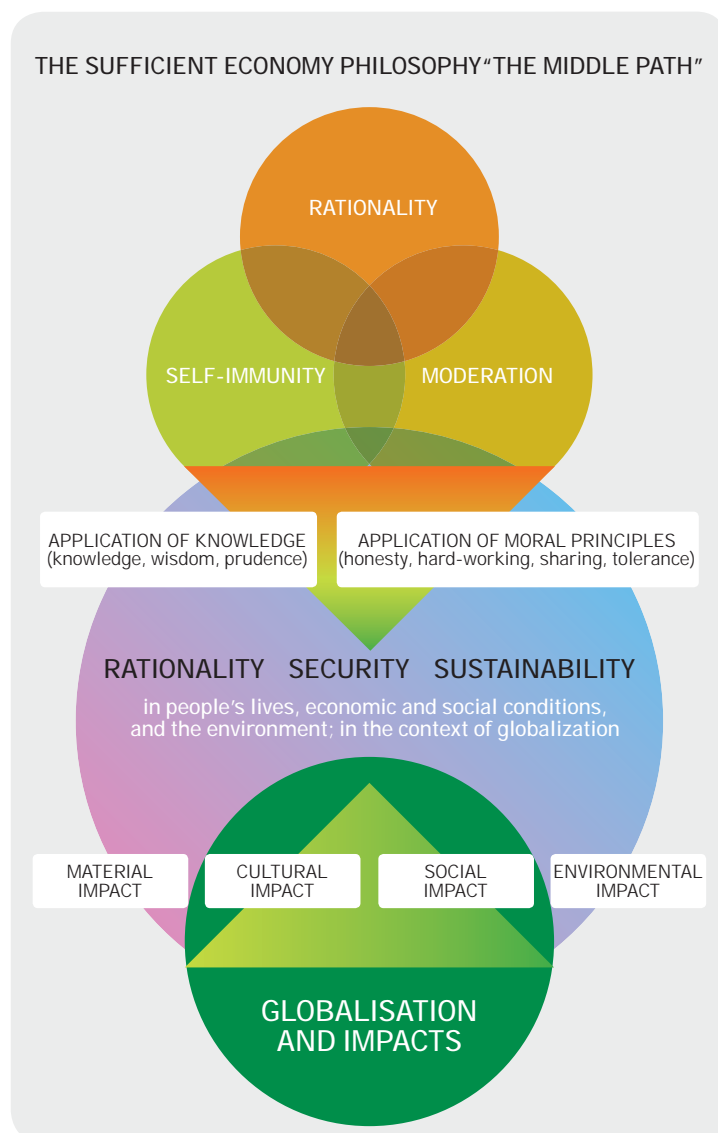
1. Overview and context

The concept of Sufficiency Economy is widely accepted in Thailand. It guides policy and is embedded in the national development plan, which aims to promote sustainable and balanced economic, social and environment development. Achieving the principles of a Sufficiency Economy is designed to lead the country to a more resilient economic structure better able to cope with emerging challenges – such as globalization, depletion of natural resources, and environmental degradation.

The development paradigm of the Sufficiency Economy originated with Thailand’s King Bhumibol Adulyadej. It calls for modernizing Thailand’s administration and development policies to meet the challenges of globalization, and it is comprised of three major tenets: moderation, rationality, and the need for self-immunity. “Moderation”, as it relates to the economy, means producing and consuming at a moderate level. “Rationality” means making rational decisions concerning the levels of production and consumption while carefully anticipating the possible outcomes. Finally, “self-immunity” means preparing in advance to be ready for adverse impacts or changes arising from internal and external shocks, and maintaining a national resilience.³¹

Sufficiency Economy has wide-ranging applications to daily life, community development as well as policy-making by government institutions. The concept can be applied towards establishing appropriate policies in all spheres of development at the local, national and global levels. Indeed, the three main tenets can be applied towards major challenges such as poverty reduction, environmental sustainability and green economy. The main linkage between

Figure 3: Conceptual Framework of Sufficiency Economy Philosophy³²



Sufficiency Economy and UNEP’s Green Economy (defined as “an economy that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities”)³³ is the shared emphasis on promoting sustainable use of resources – with “moderation” and “rationality” as the precepts for environmental awareness. Furthermore, Sufficiency Economy seeks to promote “self-immunity” to build resilience from the impacts of environmental

risks. Sufficiency Economy and Green Economy also share similar objectives in enhancing social well-being, reducing poverty and social inequality, as well as addressing environmental concerns.

In Thailand, the 9th National Economic and Social Development Plan (2002-2006) formally adopted Sufficiency Economy as the guiding philosophy for the country's development and administration. It emphasized a balanced approach toward issues of social, economic, natural resource and environmental development. The main goal was to improve the quality of life for Thai people and adhere to the principle of moderation. The Plan was also designed to support Thailand's recovery from the 1998 Asian financial crisis and secure long-term development for the country that is sustainable and of high quality. The planning process was shifted from "for the people, by the government" to "people's participation" in choosing the direction for progress. The 10th National Plan reiterated the vision of the Sufficiency Economy, and placed more emphasis on social harmony and sustainable co-existence between Thai society, the environment and natural resources. At present, the 11th National Plan continues to implement the key elements of the Sufficiency Economy philosophy. It focuses on five key areas, namely (1) sustainable agriculture and preservation of natural resources; (2) energy sustainability; (3) eco-friendly production and consumption; (4) liveable and sustainable cities; and (5) creative economy.³⁴ These focus areas are explored in the following sections.

2. Sustainable agriculture and preservation of natural resources

Thailand's forests and oceans are crucial sources both for income and for the richness of the country's culture. Deforestation and overfishing are nonetheless prevalent. Thailand's forest cover decreased drastically

from 53 per cent in 1960 to 37.2 per cent in 2014.³⁵ The output from ocean fishing declined from 2.7 million tons in 1992 to 1.6 million tons in 2014.³⁶ In response, Sufficiency Economy principles have been applied to the management of natural resources. Attention is now paid to strengthening the capacities of farmers and fishermen while promoting sustainable uses of resources and environmental conservation. Some of these initiatives are described in more depth below.

A new direction for Thai agriculture

King Bhumibol Adulyadej's Agricultural Theory, initiated in 1992, is strongly linked to the Sufficiency Economy concept³⁷ and emphasizes the need for farmer self-sufficiency; for cooperation in production, marketing, management, educational welfare and social development; and for establishing connections within various occupational groups (private sector, NGOs and the government) in order to expand businesses and assist the farmers in the areas of investment, marketing, production, management and information management.

Since 2008, Thailand has adopted the Good Agriculture Practices³⁸ as proposed by the Food and Agriculture Organization of the United Nations (FAO). These are a collection of on-farm and post-production process principles that encourage and assist farmers, food processors, food retailers, consumers, and governments to assume their responsibilities in achieving sustainable agricultural production and consumption. Thailand has adopted the FAO's guidelines by establishing the Agricultural Standards Committee to formulate a Good Agricultural Practices framework in accordance with the Agricultural Standards Act B.E. 2551 (2008).³⁹ The new law covers eight aspects of good agricultural practices: water sources management; plantation

CASE STUDY: *The Royal Development Study Centres*

Since 1974, King Bhumibol Adulyadej of Thailand has established a number of Royal Development Study Centres across Thailand as a means of implementing his concept of Sufficiency Economy and improving standards of living in rural areas. Today there are six regional centres⁴⁰ intended to research and disseminate knowledge on sustainable agriculture and rural livelihoods (cultivation techniques, propagation of crop varieties, animal husbandry, and fisheries) in accordance with the region's local characteristics, geography and socio-environmental priorities. The centres also research means for farmers to participate in forest conservation while, accruing benefits from the forest as well as from the crops planted.



area management; pesticides application; pre-harvest quality management; harvest and post-handling; holding of produce: moving and storage of produce within the plantation; personal hygiene; as well as data collection and traceability.

Soil resources and land use

Soil resources are a crucial input to the Thai agricultural sector. Arable soil is, however, low in abundance and areas of saline, sandy, acid soil account for as much as 54.4 per cent of the entire country.⁴¹ In addition, areas suffering from soil erosion account for another 33 per cent of Thailand's total landmass.⁴² To alleviate the problem, the Land Development Department made soil conservation a national priority in 2007. The 10th and 11th National Land Development Master Plans are intended to promote projects that engage farmers in soil conservation practices and promote the exchange of knowledge among all relevant stakeholders. For example, an alliance of small-scale farmers and agricultural groups called the "Soil Doctors", consisting of more than 65,000 volunteers nationwide, has helped more than 3.6 million farmers to reduce their reliance on chemical fertilizers.⁴³

Promoting sustainable forest management

Thailand's forest reserves are regulated by the National Park Act B.E. 2504 (1961) and the National Reserved Forest Act B.E. 2507 (1964). Currently there are 127 national parks (including 22 national marine parks) in the country. One of the king's initiatives has been to create several Forestry Development Study Centers to promote public awareness and participation in forestry conservation among local residents and visitors. These centers support community forest management, bio-economic development, eco-tourism development, as well as reforestation and cultivation by small-scale farmers.

The scheme also enables the private sector to provide financial support for community forests, while the Royal Forestry Department and conservation groups remain in charge of their management.

New era in sustainable fisheries

Thailand is one of the world's top five exporters of fish and fish products. Excessive exploitation of ocean resources has resulted in a declining fishery harvest and according to the latest official statistics, several Thai fisheries are at risk of collapse. Naturally-captured fish stock declined from 2.2 million tons in 1992 to 1.2 million tons in 2011.⁴⁴ In response to these trends, the Thai government established a legal framework for local communities and fishermen to participate in marine resource management, conservation, and restoration.⁴⁵ Moreover, laws banning some fishing instruments in the spawning season and nursery stage in the Gulf of Thailand have been enacted. GAP Standards have also been introduced to the fishing industry. For example, the certification requirements of shrimp farm registration have helped address the problem of shrimp farms operating in mangrove and other high value conservation areas.

3. Sustainable energy

Over the years of rapid economic development, Thailand's energy consumption increased significantly. From 1986 to 2013, Thailand's overall energy consumption as percentage of GDP increased drastically from 7 to 18 per cent.⁴⁶ As early as 1985, the King began exploring renewable energy sources and established the Experimental Fuel Production Unit. The Thai government later adopted the concept and translated it into policies to promote renewable energy. The state energy enterprise, PTT Public Company Limited, was directed to invest in bio-fuel and ethanol production, and other projects were implemented in the solar and wind energy sectors. These involved

CASE STUDY: *Siam Cement Group* – *a leader in CSR*

Siam Cement Group (SCG) is a leading business conglomerate in Thailand and a major regional company in ASEAN. It has three core lines of business – cement and building materials, chemicals, and paper. It employs 49,000 people over 200 subsidiary companies. Under its 2015 vision, SCG aims to become a regional business leader that is committed to sustainable development in ASEAN and the communities where it operates.⁴⁷ It focuses its green activities in three key areas as outlined below.⁴⁸

Sustainable water management:

The company developed a system to recycle water in the paper manufacturing process; upgraded its wastewater treatment system; and developed infrastructure for municipal wastewater management and for ensuring a sustainable supply of water for the agricultural needs of local communities.



Energy and climate change:

The company is engaged in efforts to reduce greenhouse gas emissions per ton of product and increase renewable fuel consumption; installing highly efficient burners to reduce process demand for natural gas; using community wastes as an alternative fuel; and installing a system to recover waste heat from cooling systems.

Green building:

The company renovated its office to meet the international Leadership in Energy and Environmental Design (LEED) standards (thereby reducing energy and water consumption and improving employee well-being); and is now offering green building consultation services to external organizations.

cooperation among various government agencies and private sector organizations.

These projects spurred interest in various relevant sectors and provided the policy framework of the 20-year National Energy Conservation Plan (2011-2030) for promoting the production and usage of sustainable energy. Today, Thailand's energy policy is geared towards greater self-reliance through two parallel approaches: (a) increasing the proportion of alternative energy usage; and (b) increasing energy efficiency. The targets include increasing the proportion of alternative energy use from 19.4 per cent in 2011 to 25 per cent of total energy consumption by 2021 and reducing energy usage per unit GDP by 25 per cent by 2030, compared to the 2005 base year.⁴⁹

4. Eco-friendly production and consumption

Resource efficient and cleaner industry

In 2011 the industrial/manufacturing sector accounted for 36 per cent of total energy consumption in Thailand.⁵⁰ The public and private sectors have collaborated closely in their efforts towards production that is less energy-intensive. For example, the Thai Ministry of Industry has created mechanisms and incentives to promote sustainable industrial development via improvements in production technology, reduction of resource consumption, and reduction of greenhouse gas emissions.

In another example, the Office of the Board of Investment (BOI) offers a reduction in corporate income tax and lower import duties on clean production technology. The Ministry of Finance has offered soft loans to industries using green technology, while the Ministry of Industry offers a waiver in the application fee for factory operating permits for manufacturing plants that qualify for clean

technology certification.⁵¹ The Ministry of Industry is also promoting the development of eco-industrial areas and in 2011 it initiated the Green Industry Certificate awarded to companies for their achievement of environmental standards.

Sustainable Consumption

In 2008 the Thai government took the lead in encouraging sustainable consumption by mandating that all government entities procure environmentally-friendly products and services. Green public procurement policies are expected to induce the emergence of new green products, services and markets. Moreover, campaign activities to promote public awareness have been initiated by various government agencies – including the “Uniting to Reduce Energy Consumption by Half” project by the National Energy Policy Council; the “Unifying Thais in Reducing Energy Consumption” project by the Ministry of Energy; and the promotional campaign to reduce solid waste and plastic bag usage implemented by the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment. Recently, the Thai government also began to engage with the private sector in the “Reduce plastic bags, reduce global warming” collaboration project between the Ministry of Natural Resources and Environment and various department stores and convenience stores.⁵²

Shifting to greener transport

Thailand's national agenda is strongly focused on promoting a world-class, environmental-friendly infrastructure that will establish the country as a key trade and investment centre in Indochina. To this end, the government intends to achieve a modal shift towards more energy-efficient transport. The first key initiative is the Thai government's approval of the US\$75 billion logistics infrastructure development plan (2015-2022) that focuses primarily on creating an

CASE STUDY: *Eco-tourism Development of Chantaboon Waterside Community*

Chanthaboon waterside community is a 300 year-old historical town in Chantaburi Province. It is located on the banks of the Chantaburi River, which in the past served as a regional trade, transportation and local government administrative centre. With the mainstreaming of road transport the town's importance as a center of trade and transportation began to decline. Severe flooding in 1999, pollution of the Chantaburi River, as well as environmental degradation from gem-mining (and a decline in the gem business) caused many local people to move away.

In early 2009, the Chanthaburi Provincial Commerce Office began to revive the waterfront under the theme "Culture comes before commerce." A non-government group, the Chanthaboon Waterfront Conservation Committee, was established to preserve community activities, art, architecture and waterfront history.⁵³ The scheme promotes community awareness for local environmental conservation and showcases exhibitions on good environmental practices. The scheme promotes eco-tourism and showcases the community as an exemplary Sufficiency Economy. The development of Chanthaboon Waterside Community offers unique cultural experiences to visitors while maintaining traditional livelihoods and a clean environment for local residents.



energy-efficient rail system that will increase capacity and speed while reducing the cost of logistical operations in the country.⁵⁴

5. Liveable and sustainable cities

Thailand's urban population accounts for 33.9 per cent of the country's 64.4 million population.⁵⁵ In the coming years it is expected that urbanization will continue, particularly within provincial urban centres. Creating sustainable urban centres is therefore crucial to Thailand's overall sustainable development. Recognizing the impact of urban development schemes on the quality of life, King Bhumibol Adulyadej developed various programmes for wastewater management (technologies for rehabilitation of polluted water through oxygen ventilation) and flood management (systems of water drainage and retention, flood walls and dikes, as well information and early warning systems).⁵⁶ In the capital, Bangkok, the government has also begun transforming unused public land into public parks under the "one district, one park" programme. The current plan is to construct nine parks creating an additional 534 acres of green space in the city by 2016.⁵⁷

6. Creative economy

Creativity in the design of products and services not only contributes to economic growth, but also protects the environment. The National Economic and Social Development Board (NESDB), a pioneer in the promotion of Thailand's creative economy, has defined "creative economy" as economic development based on knowledge, education, creativity, and intellectual property interlinking cultural values, social learning, technologies, and modern innovation. The concepts of "creative economy" and "green economy" are very closely related.

Thailand has a strong focus on developing eco-tourism as a branch of creative economy with significant potential for sustainable economic and human development. The Tourism Authority of Thailand (TAT) has been working with relevant stakeholders in this area since 1998. Local administrations and the Department of Environmental Quality Promotion have for example established a long-term collaboration with a group of hospitality businesses and formulated the "Thai Green Hotel Project" that promotes eco-friendly practices and standards (design, layout, electricity and water conservation, waste management, use of local products) and which has already attracted 334 member hotels. Furthermore, the private sector and local communities have remarkable successes in applying knowledge and creativity to existing physical capital. For example, Chantaboon Waterside Community in Chantaburi Province has recently been developed as a destination for cultural tourism that showcases traditional ways of living in an historic riverside town.

7. Conclusion

Over the past few decades, Thailand's economy, society, and environment have undergone a dramatic transformation. Thailand's stakeholders in both public and private sectors have chosen to follow the Sufficiency Economy philosophy of the King of Thailand as a paradigm for tackling the country's key socio-environmental challenges, especially in the areas of agricultural development, natural resource management, energy, production and consumption and urbanisation. Under the core principles of moderation, rationality and self-immunity, this philosophy is instrumental in creating and guiding a framework for improving environmental well-being and social welfare as well as transitioning from a growth-driven policy framework to one that is in line with the principles of a Green Economy.

SOUTH AFRICA: A GREEN ECONOMY TRANSITION

1. Introduction

South Africa is the African continent's most industrialised economy and it is a member of the group of emerging economies known as the BRICS (Brazil, Russia, India, China, South Africa). As a member of BRICS, international attention is on South Africa when it comes to addressing the key global challenges associated with resource intensive economies, such as climate change. South Africa must respond to these challenges while meeting the demands of the disadvantaged part of its population that seeks urgent redress for historically-based inequalities. All of this is against the backdrop of a global economy that has yet to recover from the effects of the 2008 financial collapse. This combination of factors adds an additional dimension to the 'normal' triple challenge of environmental management, social development and economic growth and development. The green economy transition presents one of the many platforms upon which these challenges may be simultaneously addressed.⁵⁸

South Africa's engagement with the process of green economy transition thus serves the multiple purposes of (1) mitigating and adapting to climate change, (2) transitioning to a resource efficient and low carbon economy, (3) reacting and proactively anticipating change that may affect its integration into various global supply chains, and (4) improving the well-being of its citizenry through sustainable and acceptable economic growth and development. The country's commitment to a transition to a green economy is demonstrated by a focused policy regime and the implementation of programmes and projects at the national, provincial and local government level.

One of the challenges that South Africa faces in implementing its green economy transition is to

efficiently and coherently coordinate and drive this agenda vertically and horizontally through local, regional, and national levels of government. There is a need to develop capacity to address the technical, policy formulation and implementation challenges associated with the green economy transition both within and outside of government structures, and for a coordinating body to do so. The major challenges to be addressed include: moving towards a common understanding of the green economy concept; ensuring policy coherence within the government, both vertically and horizontally; defining the role of the private sector in the transition process; developing green economy indicators to measure progress of current projects and programmes; and instituting a green economy 'think tank' to scientifically ground efforts and advise key stakeholders.

2. Policies, institutions and practices

South Africa continues to take substantial strides through the development of a series of key policy frameworks, institutions and practices. Since hosting the Green Economy Summit of 2010, all the three spheres of government, as well as the private sector, have engaged in the deployment of green economy policy frameworks, institutions and implementation plans.

One of the key contributing factors in the progress towards a green economy transition agenda is the unequivocal support received from the highest level of government including the support of the political leadership across key political parties: the African National Congress (ANC) and the opposition, the Democratic Alliance (DA). Such high-level support has ensured that the concept of green economy is now entrenched in South Africa's National Development Plan: Vision for 2030 (NDP)⁵⁹, which outlines

the country's development philosophy and sets a trajectory with specific targets for both the social and economic development to be realised by the year 2030. The plan seeks to create a "virtuous cycle of growth and development" that will eliminate poverty and reduce inequality measured by the reduction of the Gini coefficient from 0.7 to 0.6 by the year 2013.⁶⁰ The NDP further articulates the need for a growth and development trajectory that acknowledges environmental concerns. Explicitly, the NDP has a vision that by the year 2030, South Africa will be fully engaged in the transition towards becoming an environmentally sustainable, climate-change resilient, low-carbon economy and a just society. A key tenet of this transition is a reduction of the country's greenhouse gas (GHG) emissions below a baseline of 34 per cent by the year 2020 and 42 per cent by the year 2030.⁶¹ The reduction of GHG emissions can be achieved by moving from a coal dominated energy sector to much cleaner and renewable sources – a transition that is expected to also create some 300,000 green jobs.⁶²

One of the earliest policy initiatives was the development of South Africa's White Paper on Renewable Energy,⁶³ which highlighted the central role that renewable energy can play in reducing CO₂ emissions, and developing small, medium and micro enterprises (SMMEs). While the government was developing its renewable energy strategy in 2008, the cabinet approved the South Africa National Framework for Sustainable Development (NFSD).⁶⁴ The framework was meant to express South Africa's national vision for sustainable development and indicate current and future strategic interventions undertaken to re-orient South Africa's development path. The framework gave birth to the National Strategy for Sustainable Development and Action Plan (NSSD I, 2011 to 2014), which was approved by

Cabinet on 23 November 2011.⁶⁵

To date the government of South Africa continues to move towards a green economy through the formulation of enabling, supporting, and reinforcing policies, strategies and plans. A range of sectoral policies which expressly address the green economy transition are available within specific national departments. For example, there is the National Sustainable Development Strategy III, Long Term Mitigation and Adaptation Scenarios, the National Climate Change Strategy White Paper and the South Africa Green Economy Modelling administered by the Department of Environmental Affairs; Green Economy Accord and the New Growth Path (Economic Development Department); Integrated Resource Plan (Department of Energy); Industrial Development action Plan II (Department of Trade and Industry); the National Development Plan (National Planning Commission); and the 10 Year Innovation and Global Change Research Plan (Department of Science and Technology).

3. Coordination and implementation

Policy effectiveness is determined by a number of factors including coordination of the implementation process, which is critical in avoiding conflicts and ambiguity.⁶⁶ The Department of Environmental Affairs (DEA) is one of the South African national Departments contributing to green economy action in the context of sustainable development. The DEA continuously seeks to entrench the green economy transition agenda and its practices horizontally and vertically across all government functions and tiers. The department acknowledges that green economy transition activities cut across almost all aspects of the economy including housing, water, energy, mining and manufacturing. To this end, DEA has set a broad frame of green economy key focus areas and related programmes (Table 2).

Table 2: Green economy key focus areas and related programmes

SECTOR/ SUB-SECTOR	PROGRAMME
Buildings and the built environment	Greening private and public buildings and the environment
Transport and infrastructure	Promoting non-motorised transport and mass transport systems
Resource conservation and management	<ul style="list-style-type: none"> – National payments for ecosystem services – Sustainable infrastructure and ecosystem integration – Wildlife management
Clean energy and energy efficiency	<ul style="list-style-type: none"> – Expand off-grid options in rural and urban areas – REFIT optimisation for large scale renewable and localisation – Up-scale Solar Water Heater rollout
Sustainable waste management practices	<ul style="list-style-type: none"> – Zero waste community programme for 500,000 households – Waste beneficiation
Water management	Water harvesting <ul style="list-style-type: none"> – Alternative technology for effluent management – Comprehensive municipal water metering (Demand Side Management) – Reduce water losses in agriculture, municipalities and mining
Agriculture, food production and forestry	Integrated sustainable agricultural production system
Sustainable consumption and production	<ul style="list-style-type: none"> – Industry specific production methods – Industrial production technology changes
Cross-cutting	Research, awareness, training, skills development and knowledge management.

Source: DEA, 2011

4. Financing the transition

The National Treasury is responsible for managing South Africa's national government finances and ultimately for the funding of the green economy transition process. The National Treasury does this by allocating funds directly to the relevant departments, indirectly, through state-owned enterprises, and a combination of the two. An example of the interaction between direct and indirect funding is the Green Fund, which remains one of the key funding instruments in South Africa's green economy transition.

The Green Fund was established in 2012 through the DEA with an initial R800 million seed fund, which is administered and implemented by the Development Bank of Southern Africa (DBSA). The bank's role is "to provide catalytic finance to facilitate investment in green initiatives that will support poverty reduction and job creation".⁶⁷ Critically, the Green Fund supports

those initiatives that would not have been implemented without this kind of resource. To this end, the Green Fund responds to market weaknesses that hinder the country's transition to a green economy by promoting innovative and high impact green programmes and projects, reinforcing climate policy objectives through green interventions, building an evidence base for the expansion of the green economy, and attracting additional resources to support South Africa's green economy development. Its guiding principles include relevance, innovation and scale up and/or replication.⁶⁸ To facilitate the development of a diverse range of projects to be financed under the Green Fund, it focuses on three thematic funding windows: Green Cities and Towns, Low Carbon Economy and Environmental and Natural Resource Management (NRM).⁶⁹

5. Green economy transition at the provincial level

Although these national government efforts are

commendable, a policy document by Deloitte & Touche argues that the provinces are really the best conduits for policy implementation.⁷⁰ The provinces are therefore critical to South Africa's green economy transition, with the Western Cape, Limpopo, and KwaZulu-Natal (KZN) provinces leading the way.

Western Cape Province

The Green Economy agenda of the Western Cape Province is articulated in its provincial green economy strategy framework known as 'Green is Smart'.⁷¹ The framework identifies five interrelated socioeconomic transition smart drivers: (1) smart living and working, (2) smart mobility (3) smart ecosystems, (4) smart agri-production and (5) smart enterprise. Financing, institutional arrangements, capabilities, managing knowledge and the state of infrastructure are seen as key enabling factors in each of the smart factors.

The "Green is Smart" framework has given rise to a number of projects and programmes including: (1) a successful retrofit of four administrative buildings that reduced their electricity consumption by 17 per cent; (2) the use of Homebug, a household energy efficiency system; (3) the development of the MyCiti bus rapid transit system, a major upgrade planned for the commuter rail system in the City of Cape Town; (4) the establishing of eco-adventure businesses and the creation of the Greater Cederberg Biodiversity Corridor (GCBC); (5) the Woolworths' Farming for the Future programme, which looks at the farming value chain, including soil management, pest management, plant management, water management, biodiversity management and waste water management; and (6) as part of the smart enterprise drive, the City of Cape Town is home to the country's first photovoltaic (solar cell) manufacturers.⁷² In addition, the province has earmarked the development of a renewable energy and advanced manufacturing Special Economic Zone at Atlantis, located 40 km outside of Cape Town.

The provincial government has set the ambitious goal of establishing the Western Cape as the lowest carbon province in South Africa and the green economic hub of Africa.⁷³ While constraints do exist (poverty and lack of infrastructure in some parts of the province, for example), the government seeks to use its legislative control and to leverage its power as a consumer of goods and services to stimulate markets for green goods and services.

Limpopo Province

In Limpopo, the provincial government released the Green Economy Plan (GEP) in 2013. The plan prioritizes the creation of green rural jobs.⁷⁴ It also emphasises enabling policies, an enabling legal and regulatory environment, technology and resource choices (including research and innovation), localization of strategy, building capacity through skills transfer, sustainable ownership models, stimulation of competition for positive growth, ensuring labour intensive jobs and sustainable financing as important drivers of the provincial green economy transition.

Agriculture and energy are seen as key green economy sectors, and the GEP targets a 50 per cent reduction of carbon emissions by the year 2020 (by increasing the portion of renewable energy to 30 per cent of total energy). It also calls for improving water security by ensuring that agricultural water consumption is reduced by technology and through water efficiency plans by the year 2050. However, the plan does not state specific targets. Specific initiatives in the agriculture sector involve organic agriculture, local production projects, appropriate crops, and feedlot regulation. An important initiative in the energy sector involves the installation of biofuels production and off-grid renewable energy solutions at 50 per cent of the provinces' licensed waste disposal sites. In addition to reducing carbon emissions, such initiatives have also been shown to contribute to poverty alleviation.⁷⁵

CASE STUDY: *The Wastepreneur Programme*

The Wastepreneur programme is a green economy programme that promotes the recycling, re-using and recovery of waste in a manner that creates job opportunities for under employed segments of the South African workforce, such as youth and women. The Wastepreneur programme is partially government funded, but is implemented by the non-governmental organisations Wildlands Trust, and is currently operational in Kwa Zulu Natal and Gauteng Provinces, with some small-scale operations in areas bordering Mpumalanga Province.

The Programme operates by linking buyers of various types of waste material with waste collectors and sorters (i.e. sellers). For example, in the Midlands in KZN, Wildlands Trust has identified and engaged buyers for waste glass, aluminium cans, cardboard, white and coloured paper, newspapers, polystyrene and plastics.⁷⁶ The wastepreneurs serve to collect and sort the waste to supply to the buyers. In 2011 the Midlands project was reported to be collecting an average of 120 tonnes of waste per month through a network that has recycling depots at 52 schools and 100 businesses. A total of 600 “wastepreneurs” collect recyclables in exchange for goods such as groceries, building material, bikes and education support.⁷⁷ Up to 48 communities are involved in the Wastepreneur⁷⁸, and 17 eight-tonne trucks (14 bought with the Green Fund support and three with Unilever support) are operational, with support equipment having been purchased as well. To date, approximately 2,400 green jobs have been directly created through the recruitment of wastepreneurs, with a current project target of 4,400 jobs in total.

Since its inception in January 2013, some wastepreneur members have reported significant annual increases in income (approx. SAR 6'000 in 2013)⁷⁹ that has been used to fund their children's educations, professional skills training (e.g. driving lessons), and improvements in living conditions (e.g. home improvements), among other things. The project has also empowered women and other minorities. For example, seven of the 10 management positions are occupied by women. In addition to the more obvious environmental benefits of lengthening landfill life spans by reducing the volume of waste input, conserving resources by promoting the reuse and recycling of existing waste material, and the creation of community green jobs, the Wastepreneur project helps reduce carbon emissions, which fits well South Africa's focus on low carbon development.

KwaZulu Natal Province

The development and implementation of KwaZulu Natal's green economy strategy is still in its early stages. While KZN's Green Economy Strategy does not contain specific numerical targets, it does aim for competitive and resilient economic growth through increased resource efficiency, increased supply of renewable energy and reducing environmental and climate related risks.⁶⁰ The strategy also seeks to create sustainable jobs for local people, reduce poverty, and improve social equity by utilising the province's comparative advantage of good natural, social and built capital. The provincial government will implement the green economy transition by creating an

enabling legislative regime and green markets. The government aims to invest in and purchase projects and green goods and services that seek to increase resource efficiency, increase generation of renewable energy and reduce environmental and climate related risks. The provincial government also undertakes to assist local governments and the private sector to overcome the barriers of the transition through outsourcing turnkey green projects.

6. Green economy transition at the local government level

Local government engagement with the green economy transition process has until now occurred

Table 3: Green growth transition through the policy landscape

CITY OF CAPE TOWN	CITY OF JOHANNESBURG	CITY OF TSHWANE
2012: Information and Guideline Document on the Implementation of Green Procurement in the City of Cape Town.	2013: City of Johannesburg Integrated Development Plan	2014: City of Tshwane Green Economy Strategy
2011: Environmental Awareness, Education and Training for City Staff and Councilors	2011: City of Johannesburg Integrated Waste Management Plan	2013: City of Tshwane Integrated Development Plan
2011: Public Environmental Awareness, Education and Training Strategy	2011: Johannesburg 2040 Growth and Development Strategy	2010: Green Buildings By-Law
2010: Report on Energy and Climate Change – what the City is doing	2009: City of Johannesburg Biodiversity Strategy and Action Plan	2009: Green Buildings Development Policy
2010: Energy and Climate Change Action Plan	2009: Climate Change Adaptation Plan	2007: The Tshwane Integrated Environmental Policy (TIEP) Implementation Plan
2009: Local biodiversity Strategy and Action Plan	2008: City of Johannesburg State of Energy Report	2006: City of Tshwane: State of Energy Report
2009: City of Cape Town environmental Agenda (2009-2014)	2008: City of Johannesburg Economic Development Policy and Strategy Framework	2006: State of the Environment Report for the City of Tshwane
2008: Framework for a Strategy and Action Plan for the Management of Invasive Alien Species	2006: Climate Change Programme	2005: Air Quality Management Plan for the City of Tshwane Metropolitan Municipality
2007: Energy and Climate Change Strategy	2003: State of the Environment Report	2005: Sustainable Energy and Climate Change Strategy
2003: Coastal Zone Management Strategy		2005: Environmental Noise Management Policy
2001: Integrated Metropolitan Environmental Policy		2005: Tshwane Environmental Education Awareness Strategy

Source: Nhamo and Mjimba (2014: 26)

CASE STUDY: *Groen Sebenza Jobs Fund Partnership Project*

In a 2014 report the South African National Biodiversity Institute (SANBI) highlights a clear link between (green) jobs creation and the country's green economy transition drive.⁸¹ Although South Africa's public sector experiences skills shortages at many levels, SANBI reached the conclusion that the biodiversity and natural resource management sector is the worst affected. Given this background, Groen Sebenza was implemented by SANBI as a multi-stakeholder partnership 'incubator' programme to bridge the gap between education and job opportunities in the biodiversity sector as part of a contribution to the new green economy. In addition to the key competencies in the biodiversity area, Groen Sebenza identified five other key training areas: computer literacy, project management, communication and networking, leadership and career guidance. A total of 43 public, private and non-governmental organisations in the South African biodiversity sector partnered with SANBI on the Groen Sebenza programme.⁸² A total of 800 unemployed youths from previously disadvantaged backgrounds, mainly from rural South Africa, were recruited for a three-year training and skills development programme.⁸³ The project is committed to unlocking opportunities for young people to secure permanent jobs in the sector beyond the project period, with the intention that some of these young people will establish their own enterprises in the sector.

As of July 2014, SANBI reported that Groen Sebenza had created 862 job opportunities for unemployed youth across the country.⁸⁴ Although this number may be small relative to the country's total number of unemployed youth, a positive outcome thus far is that 81 of the pioneers have found permanent jobs within the environmental sector (both inside and outside the programme).



mainly in the large metropolitan areas, with three (of eight) of the major metropolitans – City of Cape Town, City of Johannesburg and City of Tshwane – actively engaged in the process. A quick audit of green economy related policies from these three metropolitan municipalities is shown in Table 3.

7. Green economy transition in the private sector

South Africa's private sector has responded to the previously discussed green economy public policies. Its focus ranges from energy to resource efficiency to waste recycling. The National Cleaner Production Centre of South Africa (NCPC-SA), a state funded organisation, has been working with the private sector in this drive.

On the recycling front, a leading food and clothing retail chain group Pick'N Pay, has implemented a number of programmes to improve environmental performance.⁸⁵ One of the most notable is a move to encourage recycling and to reduce packaging with a transition to recycleable and biodegradable packing materials. The programme has resulted in the introduction of 25 per cent Recycled PET (RPET) in its range of packaging materials. The group is also using lightweight boxes for packing some of its house-brand products. An important point is that the groups recycling programme involves waste management service providers and aims to reduce waste loads destined for land-fills. As of 2014 the group was recycling over 6,000 tonnes of wastes from all its branches.⁸⁶

8. Future challenges

Among the fundamental challenges in mainstreaming the green economy transition agenda in South Africa is the complex nature of the national economy that has reached its current structure through a resource

intensive growth process. Although there has been a strong political commitment and good progress has been made, a number of challenges still need to be addressed. These include: capacity development, the need to clarify roles and responsibilities of the three spheres of government and promotion of a common understanding of what green economy transition means for South Africa. It is also necessary to avoid the setbacks due to downsizing when departments are collapsed at provincial and local government levels. Enhancing the role private of business in the transition process is also important.

Green economy capacity and capability development

Evidence indicates the need to develop a critical mass of human resources that can be utilized across all government spheres. Consequently, the National Skills Development Strategy III articulates the need for building institutional and organisational capacity to meet the labour and skill demands of the green economy sector.⁸⁷ Efforts to address this deficit extend to the introduction of specific green economy programmes in local institutions of higher education to the practical training in green jobs. For example, the Groen Sebenza Jobs Fund Partnership is a programme intended to develop practical skills and create jobs in the biodiversity sector. It is necessary to initiate, support and implement similar efforts in all sectors of the economy.⁸⁸

The widely demonstrated effectiveness of evidence-based decision making in transition processes highlights the benefits that a Green Economy Think Tank could bring to South Africa's transition process. Such an institution could provide value as an advisory committee and as a technical government structure for advising decision-making executives on key green economy programme interventions, as well as developing indicators to identify the progress

(or lack of progress) in the transition process. This is a key component to developing an appropriate and adequate capacity and capability base, and the establishment of this institution would ideally be led by the government.

Green Economy indicators

South Africa could benefit from more clearly established green economy indicators. Various groups, specifically the Council for Scientific and Industrial Research and the Western Cape Government, are developing indicators to measure transition progress, and also to direct the development of capacity and capabilities. Green economy indicators will complement the general sustainability indicators from the National Sustainable Development Strategy I.⁸⁹

The current indicators include: percentages of financial resources ring-fenced/streamlined and spent for green economy programmes; registered patents, prototypes, and technology demonstrators annually added to the intellectual property portfolio in the green economy space; and the share of gross domestic product of the environmental goods and services produced in the country.⁹⁰

A common and coordinated understanding of green economy transition

There is an urgent need to bring stakeholders in government, labour, industry and the general public to a common understanding of what green economy means for South Africa. Both national documents and experts (some of whom are government senior officials) have a different interpretations of the concept of green economy transition. This renders the implementation of policies problematic. Inter-departmental links and programmes as well as interactions with the private sector could lead to the narrowing of the diversity in understanding the green economy transition concept(s). This divergence

on the conceptualization of the process needs to be addressed to improve the focus, process and outcomes of the transition process.

Furthermore, two major issues make vertical mainstreaming of the green economy across the national, provincial and local government levels a major challenge. The first is the lack of a clearly defined government department or institution that can take the lead on green economy issues. Although the DEA appears to be the leading state agent during the transition, there are other Departments involved in the transition process including Economic Development Department, Department of Science and Technology, Department of Energy, Department of Trade and Industry, and National Treasury. To address this, clearly defined roles within and between the different spheres of government could be drawn up, while at the same time it must be recognized that the green economy agenda is bigger than any one government entity.

The second challenge is a phenomenon known as “lost in downsizing”, whereby government units at the provincial level received downsized mandates compared to those at the national level. While the merging of departments may present a number of advantages, it also presents risks. One such risk is that the mandate of a provincial department may be too big for a single department, thus compromising effective implementation of national policy mandates at the provincial level. Moving forward, there is need for vertical alignment down to the local government level.

Role of businesses

Given South Africa’s economic and political policy that encourages a mix of both public and private ownership of economic enterprises, the current public sector dominance of the discourse is not ideal for a holistic transition. Currently, the terrain for the Green Economy transition is dominated by public sector policies and

initiatives. For the Green Economy transition to be an integral part of the South Africa economy, the private sector needs to support this transition financially, as well as with leadership in ideas and technology.

Although top businesses, most of which are among the JSE top 100, have adapted well to climate change, sustainable development and the Green Economy agenda, the situation is different for middle and small enterprises, which tend to struggle with financing. Against this background, private sector-driven Green Economy transition leadership and localised Green Economy funding programmes as well as projects similar to those led by the National Business Initiative and Business Unity South Africa need to be expanded, both in magnitude and scope. This is the space that government can occupy in terms of public-private partnerships for Green Economy readiness.

9. Conclusion

There is no denying that the Green Economy discourse is now an integral part of South Africa's policy and strategy discussions, both within the three spheres of government and also extending into the private sector. The policy terrain at all government tiers is focused on this transition. The private sector has also made noticeable progress on that front. South Africa's progress provides important learning points for countries seeking similar or better transition results.

However, despite this progress, the transition still faces a number of challenges. For South Africa to achieve its green growth transition the country needs to: (i) further develop and strengthen the relevant technical capacities and capabilities; (ii) clarify the roles and responsibilities of the three spheres of government; (iii) promote and move towards a common understanding of what green economy transition means for South Africa; (iv) ensure that policy implementation effectiveness is not lost because

of downsizing from the collapsing of departments at provincial and local government levels; (v) enhance the role of private business in this space; and (vii) perhaps most importantly, move towards establishing national green economy indicators. Despite challenges, the government, the private sector, labour, civic local and international organizations, and local and international funders must continue to support the Green Economy transition.

BOLIVIA: THE ORDER OF LIVING WELL IN HARMONY AND BALANCE WITH MOTHER EARTH

1. Introduction

Since the industrial revolution, global economic development has been accompanied by patterns of production and consumption that increase pressure on the planet's natural resources and lead to social inequality. From the perspective of Bolivia, the only chance to reverse these trends for the benefit of the planet and mankind is through the construction of a new cosmo-centric paradigm for "Living well in harmony and balance with Mother Earth". This new paradigm looks at Mother Earth as a living and sacred being with whom humans unite to form a global system of life. This new order has its roots in the thoughts and visions of indigenous peoples and it can therefore only be truly understood by balancing Western knowledge and paradigms with those of indigenous societies and seeing the value in the multiplicity of local knowledge systems.

In 2006, after Bolivia's first indigenous president, Evo Morales, took office, the government initiated a process of interpellation at the national and international levels, promoting the establishment of the concept of "Living Well" – which translates as "Suma Qamaña" in Aymara, "Allin Kawsay" in Quechwa, and "Yaiko Kavi Pave" in Guaraní. The concept revives the traditional worldview of indigenous peoples that the ultimate goal is to live in harmony with Mother Earth, and thereby build a just society without discrimination and exploitation.

The Summit of Heads of States and Governments of the Group of 77 (and China) held in Santa Cruz, Bolivia in June 2014, concluded with the outcome document "For a New World Order for Living Well", which reflected the Group's views on developing an alternative paradigm to address emerging global issues by considering the Bolivian proposal of "Living

Well". The United Nations has also begun to recognize the "Living Well in harmony and balance with Mother Earth" as a paradigm that facilitates the eradication of poverty in the world.

2. Living Well: an alternative approach

There are two key visions of society that have historically been presented as contradictory, but are in fact continually interacting to create the multiplicity of views on the economy, society, and environment that we see today. On the one hand, we have societies that separate humans (subject) from nature (object), promote the strengthening of private property, build stratified political scenarios and consider the environment to be a source of services and benefits for individuals and societies. On the other hand, we have societies that promote the strengthening of collective ownership of natural resources, and in which nature is viewed as a self-regulating living being. In these societies political power is integral to society and is built on the basis of community consensus.⁹¹

The conceptual model of Green Economy based on the study of The Economics of Ecosystems and Biodiversity (TEEB), considers that the balance between humans and nature has been broken, as demonstrated by the on-going irrational exploitation of natural resources.⁹² The main problem is that natural capital and ecosystem services (water supply, pollination, etc.) are largely viewed as public services that collectively belong to all people. Urgent action is necessary to internalize the costs of production systems and incorporate the value of ecosystem services into decision making processes. This can be accomplished by assigning an economic value to these services. Incentivising those who make use of natural capital and its services to pay for the full cost of their actions appears to be one of the best

instruments for the conservation of environmental functions.⁹³

The Living Well approach proposes that we must overcome an economic view of nature and respect the diversity of development models. This paradigm proposes that in many societies the balance between human beings and Mother Earth has, in fact, never been broken. In these economies, humans have maintained their connection with nature not as a result of economic valuation of ecosystems and their integration into the marketplace, but instead because material wealth is reinforced by the ritual sense of connection between nature and society.

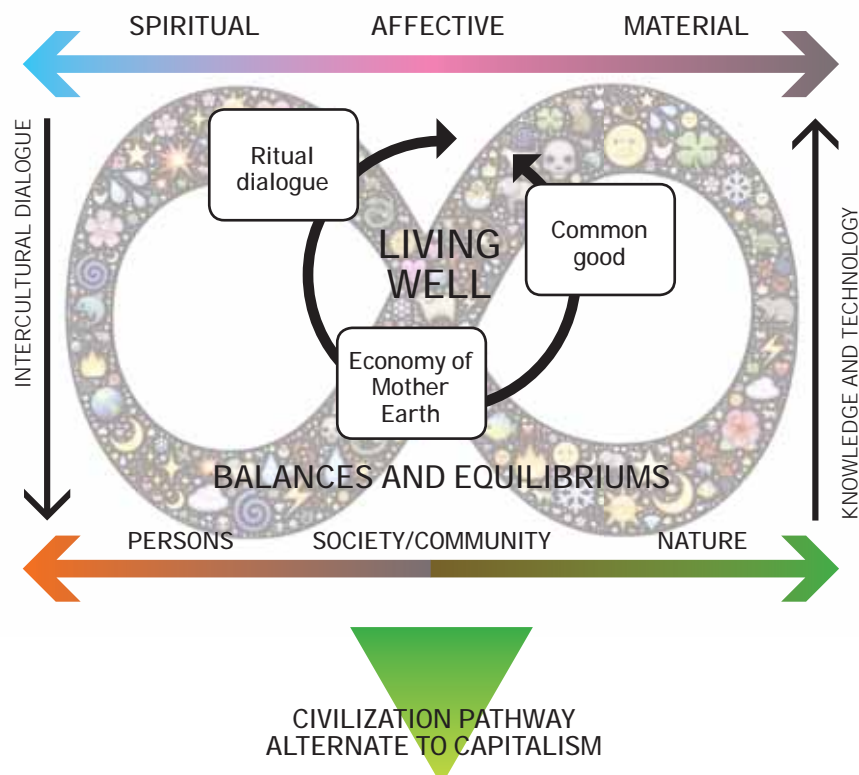
3. The general framework for Living Well in harmony and balance with Mother Earth

Living Well implies a civilization that is based on a cosmocentric rationale where human beings establish an organic relationship with nature, which means that

nature is not separated from society, but rather builds on the complementarity of relations between society and nature. It is defined as:

“[...] the civilizational and cultural horizon alternative to capitalism and modernity born in the worldviews of the nations of native indigenous peoples, intercultural, and Afrobolivian communities, and is conceived in the context of multiculturalism. It can be reached in a collective, complementary, and solidary manner, integrating in its practical realization, among others, social, cultural, political, economic, ecological, and affective dimensions, therefore allowing a harmonious encounter between all beings, components, and resources of Mother Earth. Complementarity means living in harmony and balance with Mother Earth and establishing equitable societies with no inequalities or mechanisms of domination. It implies living-well with oneself, living-well with all human beings, and living-well with nature” (Article 5.2, Law 300).

Figure 4: Living Well in harmony and balance with Mother Earth



Dimensions and cross-cutting elements of Living Well

Living Well has five dimensions that are articulated in an indivisible and interdependent manner:

- **Living Well as a set of knowledge and values**, which entails knowing how to eat, dance, work, communicate, learn, dream, listen and think.⁹⁴ It also implies following certain ethical and moral principles of the “ama qhilla, ama llulla and ama suwa” (do not be lazy, do not lie, and do not steal), which can be understood as individual and collective knowledge necessary for the formation of an integral human being.
- **Living Well as building balances and complementarities between human beings in harmony with Mother Earth**, among individuals with their immediate community, between men and women, between economies of exchange, and between material and spiritual aspects.⁹⁵
- **Living Well as the recognition of a civilization proposal based on the worldviews, knowledge, and practices of indigenous peoples of the world**, as an alternative to capitalism and modernity, and which is expressed in the construction of plurinational and decolonized States.
- **Living Well as a political dimension**, which is a step towards building integrated and comprehensive States in which values and principles prevail in its organization in addition to the enjoyment of social life and of the common goods.
- **Living Well as a geopolitical dimension**, considers that it is a philosophy of life and an alternative model to capitalism which has a universal goal to boost the “diplomacy of the peoples” and to build a “new world order for Living Well”.⁹⁶

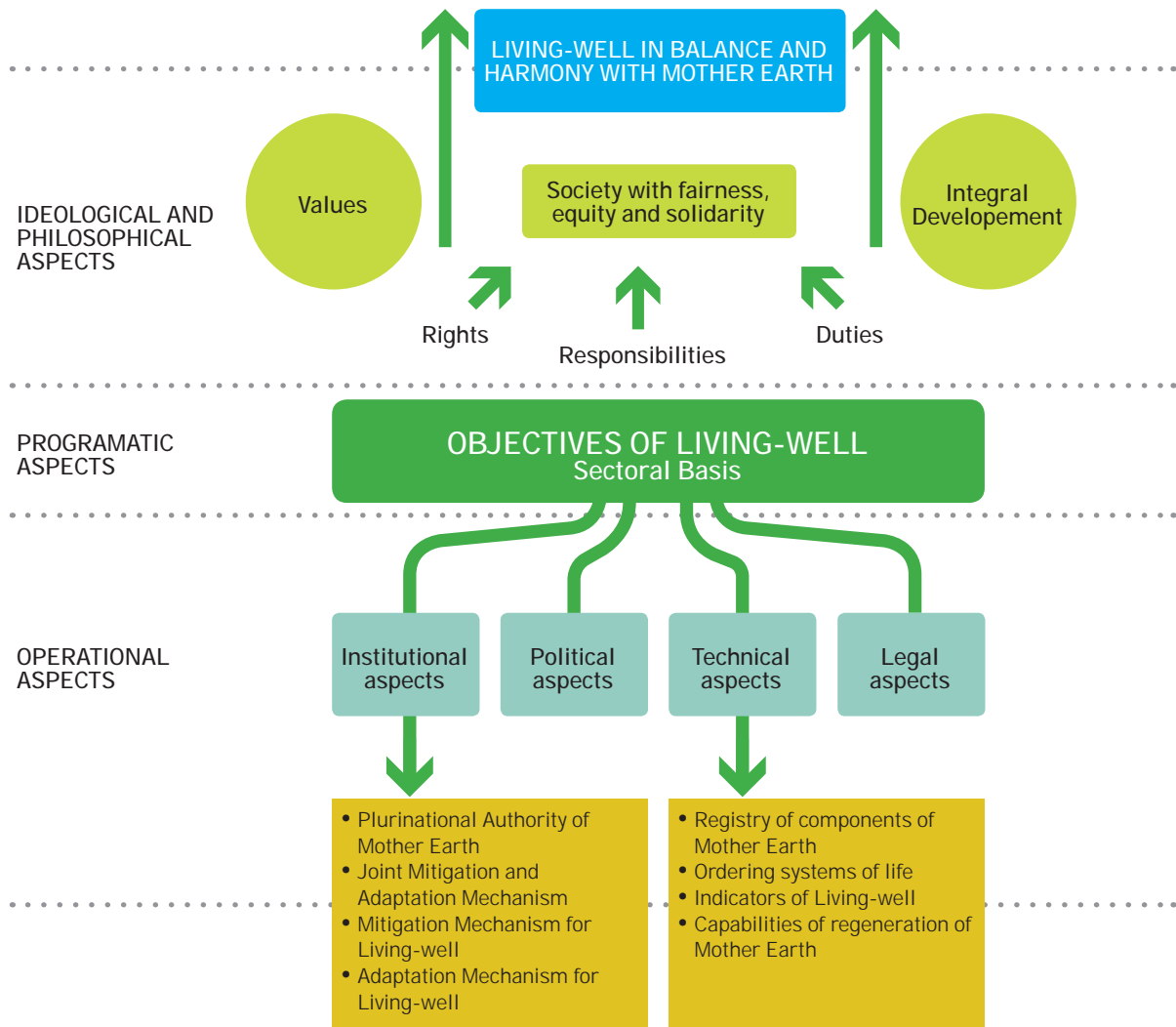
Living Well is based on a holistic and comprehensive vision that considers the relationship between the material, the emotional, and the spiritual. This means that Living well simultaneously promotes (i) the attainment of adequate resources for people to live with dignity, with essential needs and without economic hardship; (ii) the building of effective relationships between people and nature, including interaction with Mother Earth via rituals. It also promotes the harmonious relationship of people with themselves, with their family/society/community, and with nature. It promotes enriching lifestyles that maintain the regenerative capacity of Mother Earth.

Attainment of this scenario is dependent on access to knowledge and appropriate technologies for Living Well and dialogue between different cultures who have their own nuanced interpretation of this concept. To indigenous peoples, Living Well involves building a common good, thinking about the economy in the context of solidarity and complementarity, and engaging in continual dialogue with all the components of Mother Earth and with the supernatural.⁹⁷

Mother Earth (Pachamama) is seen as a living being that behaves with humans as humans behave with Pachamama. Thus, rituals at the beginning of the planting or harvesting seasons, visiting shrines or sacred sites and other festivities are an essential part of strong relationship with Mother Earth. Festivals and rituals provide opportunities to thank Mother Earth, form bonds and strong social networks, and ask for money or material goods from the supreme beings. The festivals thus act together as a space for the redistribution of wealth and for accumulation of social prestige.

From an economics perspective, Living Well encourages responsible stewardship of nature, while aiming to reduce the negative influence of markets on Mother Earth and alleviating social inequalities. In

Figure 5: Living Well objectives



the economy of Mother Earth, capital is redistributed equitably and there is a limit to its accumulation. In turn, having more financial resources does not depend only on a person's own efforts but also on the will of the Pachamama (Mother Earth) itself –as complemented by ritual dialogue with Mother Earth to ask for material goods or to thank her for the offerings received. In this way the economy of Mother Earth produces material, social, and spiritual wealth.

There are many instruments of redistribution in the economy of Mother Earth that have historically been developed in rural communities. These mechanisms of redistribution have emerged and developed in the Andean ancestral cultures, and there are other

similar practices in societies living in the Chaco and other tropical areas such as the *arete*⁹⁸ in the Guaraní region. In the urban world, as a result of rural migration to urban areas, these events have adapted into a new set of family and festive practices (e.g. *prestes*⁹⁹), celebrations of religious festivities (e.g. *Urkupiña*¹⁰⁰), local festive practices (Alasitas in the Andean region¹⁰¹) and economic practices (e.g. *pasanaku*¹⁰²). Many indigenous societies view money as a living being, and hence personal and communal economic growth is linked to rituals that constitute “payment” to the Pachamama – who ultimately is the source of all wealth.¹⁰³ Being manifestations of culture and society, these practices are not subject to the mandates of governmental structures.

4. Living Well in Bolivia's public policies

"Living Well" was integrated into the Constitution of the Plurinational State of Bolivia (CPE) in 2009. For Bolivia, the paradigm of "Living Well" is a guiding aspect in the establishment of the "Communitarian Socialism for Living Well", and it has been incorporated into the country's current legal and planning system.

- It is a socialist approach that promotes the mainstreaming of democratic processes in order to achieve a society that has eradicated material, social and spiritual poverty and all forms of social oppression, as well as a society that has reached the satisfaction of basic needs and fundamental rights;
- It is a community-based approach because it promotes the strengthening of political, social, and productive forces of the community and works to establish complementarity between individual and communal rights and the rights of Mother Earth;
- The approach is anti-colonial, anti-capitalist, anti-imperialist and anti-patriarchal.¹⁰⁴

Since 2009, Bolivia has established the constitutional foundations for a new political and legal structure. It has officially become the Plurinational State of Bolivia, based on respect and equality among all, under the principles of sovereignty, dignity, complementarity, solidarity, harmony and equality in the distribution and redistribution of social services.

The Bolivian people have taken on the historic challenge of collectively building a State of Communitarian Socialism based on plurinational rights, democracy, self-determination and respect for Mother Earth.

The new Plurinational State recognizes the existence of nations of indigenous peoples, Afro-bolivian communities and peasants, guaranteeing them their own autonomous government, culture and institutions, while also consolidating their territories. It is a State that is founded on the basis of the plurality of nations and the recognition of their traditional knowledge, medicine, languages, rituals, symbols and worldviews on living in harmony and balance with Mother Earth.

Law No. 300 of Mother Earth and Integral Development for Living Well, which constitutes the underlying arrangement upon which sectoral legislation (eg. concerning forests, water, environment, mining, hydrocarbons, etc.) will be issued under the new Constitution. This Law defines Living Well as the alternative to capitalism, which means building a new environmental, social, cultural, and economic order based on the historical views of indigenous peoples. The law considers integral development and Living Well as part of a single complementary process. Most importantly, Law No 300 consolidates the paradigm of Living Well as the basis of all activities guiding the governance system in Bolivia and articulates it with the recognition of the rights of Mother Earth, as provisioned in the Law No. 071.¹⁰⁵

5. Living Well in practice

The development of this model of civilization includes the implementation of multi-dimensional actions. Bolivia's efforts towards Living Well include an array of public policies and actions that will be discussed in this section.

Nationalization of natural resources and redistribution of financial resources

Bolivia's new economic model is based on the generation of income by State-owned enterprises that work towards economic redistribution in order

to address social priorities. The Constitution of the State of Bolivia recognizes the model of the plural economy, including its public, private, community, and social-cooperative economic forms and their combination. This means that ancient forms of economy that were previously denied by modern economic paradigms (such as the communal economy that strengthens values of reciprocity and solidarity), are now recognized. The new model is based on two pillars: (i) a strategic sector that generates high economic surplus (oil, energy, and environment); and (ii) a sector that generates substantial employment and that requires significant financial investment (such as agriculture and industry). In this sense, strategic sector surpluses are redistributed to the employment-generating sector. This creates a sovereign State that participates in regulating and planning production.

Bolivia's Plurinational State has also moved firmly to nationalize natural resources, remove power from oil companies, and return ownership of underground gas, as well as the control of pipelines, refineries, and storage processes to Bolivians. This has also been achieved with the nationalization of ENTEL (national enterprise of telecommunications) and with the company facilitating the production of major mineral resources.

Before 2006 Bolivia's revenues were leaving the country in the form of profits of foreign enterprises. Today the revenue remains in the country and is utilized in supporting the flow of income from strategic public enterprises to the most vulnerable sectors of the population. These changes in the structure of the economy have resulted in increased workers' wages, and the growth of investments in education, health and transport infrastructure.

Management of the Systems of Life of Mother Earth

The approach of the Systems Life of Mother Earth has been developed to implement Living Well, and is oriented around maintaining the regenerative capacities of ecosystems, developing sustainable production systems, providing universal access to basic services, and strengthening the socio-cultural visions of peoples. This approach has three stages:

- **Characterization of systems of life.** A system of life refers to the relationship between a zone of life (an ecosystem) and the people living in such a zone (a sociocultural unit) according to geographical and cultural diversity of a given territory.
- **Agreements of complementarity with Mother Earth.** Comprised of commitments by the public, community and private actors in given territorial areas show compliance with respect to the rights of human beings and of Mother Earth, and with the objectives and goals of integrated and sustainable management in each system of life with an approach of mitigation and adaptation to climate change, including monetary and non-monetary contributions for achieving those goals.
- **Harmonization of systems of life.** The previous stage is reinforced through actions to strengthen harmonious relations of systems of life, and to restore harmony, balance, and complementarity with Mother Earth in territories where the balance between humans and nature has been broken or disrupted.

Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth

Law No. 300 of the Plurinational State of Bolivia established the Plurinational Authority of Mother Earth

and the Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth. The mechanism is a non-market-based approach based on territorial management and the principles that the various environmental functions of forests should not be commodified, and that mitigation and adaptation should be synergistic. It is used to implement the approach of the “Systems of Life of Mother Earth”, which constitutes an alternative to the Payment for Ecosystem Services approach. It promotes the construction of territories that meet the needs of sustainable production systems, the regenerative capacity of environmental functions, and of processes for the eradication of poverty. This approach can also be applied broadly to different landscapes and across different scales (local, municipal, regional and departmental).

The mechanism seeks to foster a favourable institutional context for the integrated and sustainable management of forests and ecosystems; establish participatory territorial management processes; establish multi-actor territorial agreements for the development of sustainable production systems; offer support to sustainable management systems; and facilitate integrated monitoring of the components, functions and Systems of Life of Mother Earth. The mechanism also contributes to the policies of the Plurinational State of Bolivia by providing methodological experiences, techniques, and concrete investments built upon the autonomous territorial entities and local initiatives.

Many existing initiatives and programs are being transformed so that they are more closely aligned with the Joint Mechanism and the Systems of Life of Mother Earth. This allows for local initiatives to be articulated in national policies and contributes to the success of the Joint Mechanism by providing methodological experiences, techniques, and concrete investments built upon the autonomous territorial entities and local initiatives.

Adscription of Existing Programs to the Joint Mechanism

Example 1: The COMSERBO Program

The Incentive Program for Strategic Conservation and Sustainable Management of Forest Resources (COMSERBO) in the Bolivian Department of Pando, situated in the Amazon basin, was born as an initiative of the Autonomous Departmental Government of Pando to promote sustainable, integrated forest management/conservation through voluntary agreements between large agrarian property owners, forest users, and the local government.

The COMSERBO program is a structure of economic and technical incentives voluntarily agreed between forest users and the Government of Pando in order to preserve the socio-economic, cultural, and ecological functions of the forests. It aims to reduce illegal logging and uncontrolled burning of the Amazon Forest, distribute licenses/royalties for forest exploitation, develop community investment plans and technical assistance, and develop measures to combat climate change and the food crisis.

The process of adscription (in progress) of COMSERBO to the Joint Mechanism aims to make conceptual, operational, and institutional adjustments to the Program. As the COMSERBO program was originally framed in a structure of economic and technical incentives, the first conceptual challenge is to reorient the program to the approach of the Systems of Life of Mother Earth by replacing the incentive scheme with an approach based on rights, obligations, and duties. Among the first actions related to the implementation of the approach of the Systems of Life are the following:

- Characterization of the Systems of Life at the departmental level with inputs from existing territorial planning instruments.

- Establishment of a departmental territorial consultative platform involving public, private, and community actors performing the planning and monitoring of the actions of the Joint Mechanism.
- Approval of the Departmental Law of the COMSERBO Program to facilitate its implementation and inclusion into the Joint Mechanism.

The creation of a Departmental Fund linked to the Plurinational Fund of the Mother Earth is a process by which COMSERBO moves from being a departmental program to being established as a decentralized Joint Mechanism program. Thus, an operational institutional structure is established that allows effective progress in implementing the COMSERBO Program in the future.

Through this process, COMSERBO has moved away from being a program of providing incentives for forest conservation, to becoming a strategic approach for the management of forests and the Systems of Life of Mother Earth in the department of Pando. The programme seeks to establish a Joint Mechanism as a departmental, decentralized structure to allow articulation of the different agendas of public, community, and private actors in the Amazon region towards a comprehensive and sustainable forest management with a focus on mitigation and adaptation to climate change. It is involved in characterizing Systems of Life at the departmental level with inputs from existing territorial planning instruments and in establishing a departmental territorial consultative platform involving public, private, and community actors performing the planning and monitoring of the actions of the Joint Mechanism. It also aims to create a mechanism for allocating financial resources based on the differentiated needs of conservation areas, areas of sustainable timber management, agroforestry areas, as well as agricultural and pastoral areas with sustainable production systems.

Example 2: The National Biocultural Program

The National Biocultural Programme (NBP) was created as a joint initiative between the Ministry of Environment and Water and the Swiss Cooperation in Bolivia, aimed at contributing to the implementation of the State policy of “Living-Well”. The program was initiated in 2009 and its first phase ended in December of 2014 with plans to initiate the second phase in 2015 in the context of adaptation to climate change. The NBP has operated in 20 locations in six departments of the Andean region of Bolivia: Potosi, La Paz, Oruro, Tarija, Chuquisaca, and Cochabamba, covering 35 municipalities in the Andean region of Bolivia with approximately 300 communities and 11,000 families benefitting directly. From the point of view of conservation, the program worked with 8 protected areas of national importance.

The main objective of the NBP is to contribute to the conservation of the ecosystems in the context of “Living-Well”, through reducing poverty among the indigenous and peasant communities of the Andean region of the country. In order to achieve this, it encourages sustainable management of biodiversity and respect and appreciation of local cultures.

The specific objectives of the program are to: a) Enhance, build, and implement sustainable integrated biocultural endogenous systems; b) Promote institutional policies, regulatory frameworks and enable the implementation of models of endogenous and sustainable initiatives; c) Generate capacity and financial mechanisms of management, monitoring and evaluation that promote the sustainability of the programme.

At the level of municipalities and communities, actions are implemented under the concept of endogenous biocultural systems, allowing a comprehensive and systematic implementation of four components:

management of cultural diversity, territorial governance, ecosystem management, and economic and productive management with the aim of contributing to “Living-Well” in rural and indigenous communities.

The programme is looking to facilitate the integration of national policies (including Law 300) for managing systems of life at the departmental level, and once a municipality has absorbed the model of systems of life management, to facilitate institutionalizing this model in their planning process and public investments. At the same time it aims to scale up the implementation of the NBP from the local to the municipal and regional levels. Through these dual processes, municipalities will be more closely integrated into the Joint Mechanism and the Systems of Life for Mother Earth.

6. Conclusions

Bolivia has made significant efforts to promote the paradigm of Living Well in Harmony and Balance with Mother Earth within the multilateral processes of the United Nations, after having achieved significant incorporation of this paradigm into major decisions/ processes concerning the environment, biodiversity and climate change. Currently, a deeper and more systematic process of conceptualizing Living-Well is being developed, as well as the formulation of policy approaches and instruments for implementing this new paradigm.

Moreover, at the national level, Bolivia has managed to take important steps to raise an articulated vision of Living Well in public policies, thereby offering the global community a new approach and tools towards living in harmony with nature and eradicating poverty.





DISCUSSION

Each of the four approaches outlined in this report reflects a national context that is culturally and historically unique. Taken together they present a broad conceptual spectrum with varying structures and levels of institutionalization and development. At one end of the spectrum is Sufficiency Economy, which is almost a purely conceptual approach with few concrete policy or investment prescriptions. At the other end is Green Economy, which emphasizes technical tools and market instruments. On yet another axis, Ecological Civilization is more closely related to Green economy but takes a broader approach, while Living Well offers an alternative that puts the rights of nature at the center of its sustainability agenda.

For the people and government of Thailand, Sufficiency Economy serves as a guiding principle not only for sustainable development, but for all aspects of life, both in the public and private spheres. The concept and its place in Thai society reflect the strong leadership and moral guidance of King Bhumibol Adulyadej, who has reigned for more than six decades. The King has promoted the idea of Sufficiency Economy since the 1970s as a means by which Thailand can meet its development challenges. While providing philosophical guidance, the concept offers less in the way of concrete prescriptions for action, which makes it widely adaptable but also means that it must be complemented by more specific development policies in order to be effective.

At the other end of the spectrum sits China, where the ideas of environmental protection and sustainable development have been distilled over the last three decades, resulting in the concept of Ecological Civilization. This has been clearly established by the government and incorporated into the country's overarching development plans. While this approach strives to achieve a harmonious and balanced

relationship between nature and man, it also relies on specific indicators to measure progress towards well-defined goals, and it includes the creation of systems and institutions intended to strengthen its implementation. Ecological Civilization is strongly embedded in the national policy framework, especially in the social, cultural, economic, and political sectors, and China is taking steps to improve enforcement of its environmental laws and regulations.

In South Africa, Green Economy's focus on market tools and the implementation of policies that enable green investments is combined with a strong focus on poverty alleviation and equitable growth. It is the most market-oriented of the four approaches discussed in this report, and it takes a technical and tools-based approach to sustainability. The government has embedded Green Economy as an integral part of its national development framework. At the same time, it has identified key indicators and set firm targets intended to address environmental sustainability, climate change, poverty, and social justice.

Bolivia's Living Well approach is positioned between South Africa and China's focus on technical measures and Thailand's philosophical approach. Like Sufficiency Economy, Living Well has a strong philosophical element that reflects a Bolivian worldview that holds that Mother Earth is a living being with the same rights as mankind. This places paramount importance on a balanced relationship between man and nature in the material, emotional, and spiritual realms and it rejects a market-based approach when it comes to enhancing sustainability. While the tangible advances of Living Well are hard to demonstrate as fully as those of Ecological Civilization in China or Green Economy in South Africa, the legal basis for Living Well is well developed, and mechanisms have been created to facilitate

its implementation. These are based on a dialogue between different socio-cultural groups and levels of government that are intended to facilitate a two-way exchange of knowledge, practices, and experiences. As is the case with Ecological Civilization, the state plays a key role in this approach to sustainable development.

Regardless of the varying degrees of emphasis that each approach places on technical vs. philosophical elements, certain factors, such as political support, the level of pragmatism, the reach of education and the effectiveness of communication are key to successful adoption across the spectrum. All four of the national approaches received high level political support in their countries, but it is the more philosophical approaches that appear to have benefited the most from wider spread understanding and mainstreaming. Their malleability also makes them easier to mainstream into other policies and development plans. This is important, as successful approaches to sustainable development need to affect behavioural changes in consumers as well as in producers, investors, and policymakers.

Conversely, while the more technical approaches of Ecological Civilization and Green Economy may in some ways be harder to mainstream or communicate, they are often more effective in achieving concrete results, owing in part to the fact that they set clear goals and use well defined indicators.

The Rio+20 outcome document, “The Future We Want” and the UNEP Governing Council both recognize the various visions and tools used to work towards sustainable development. Although it is impossible to clearly categorise the four national approaches covered by this report, and they all contain elements of both visions and tools, it is fair to say that

Sufficiency Economy and Living Well, at this stage of their development, seem to focus more on presenting visions of sustainable development, whereas inclusive Green Economy and Ecological Civilization provide more concrete tools for achieving sustainable development. What is perfectly clear, however, is that successful sustainable development strategies need to combine a strong and coherent vision with the tools necessary to work towards that vision. This illustrates the fact that various sustainable development approaches, each with their own inherent strengths and weaknesses, can, and must, support and reinforce each other, and highlights the importance of their use as complementary, rather than competing concepts.

The one common element that unites all of these approaches is that they challenge and expand the definitions of progress and development. They all see sustainable development as much more than simply economic growth in the traditional sense, and they all place paramount importance on increased well-being, equitable (re)distribution of wealth, and the health of the environment.

So while market-based approaches may use market mechanisms to address the policy, governance, and market failures that have resulted in the most challenging environmental issues that we face today, conceptually, they nevertheless rest on challenging our most fundamental ideas of how the economy is configured to deliver social equity and human well-being. Inclusive Green Economy, for example, aims to change the very metrics we use to measure wealth and prosperity, moving beyond a narrow definition of GDP to track and define progress in the area of jobs, health, and social advancement. And perhaps most fundamentally, it requires a closer look at the institutions, rules and governance that underpin economic transactions and market outcomes.¹⁰⁵

Fundamental to ethics-based approaches is the idea that we need an “ethic of conservation,” a set of principles to guide our relationship with nature. If nature becomes more firmly rooted in our collective appreciation and value system, there will be less need for economic signals to guide markets to conserve and protect it. But on a global level, this conservation ethic is still a work in progress, and it needs to be cultivated and nurtured to be sustained. It is important that the strong voices calling out for ethics-based approaches and those wishing to embrace and encourage sustainability with market-based instruments join together. The two cannot be viewed as incompatible, but rather as an integral part of a holistic and balanced approach to sustainable development. For rather than selling out the rights of nature, market-based approaches can help safeguard them. That a green economy approach, for example, uses economic or market instruments to do so is merely a reflection of the world that we live in, in that economic choices can deeply affect the natural world. It is a case of providing the tools necessary to achieve the vision.

Similarly, there are many cases where economics cannot capture the intrinsic value of nature or culture, and framing strong sustainability around ethics-based concepts such as Living Well may be required. This is entirely consistent with market-based approaches that place human well-being and sustainability at the center of the economy. In the end, what is required is a holistic view of sustainable development and the pathways and tools used to achieve it. A holistic approach to sustainable development is one that acknowledges the effectiveness of market-based tools to change the allocation of resources in the economy, but at the same time recognizes the limits of economics in protecting the natural environment. So while each sustainable development approach may emphasize different things and have different conceptual underpinnings, we cannot see

development as being confined by conceptual boundaries. The goals to which these approaches ultimately aspire are universal.

A ‘one size fits all’ approach does not exist, and the intention of this report is not to offer prefabricated solutions or strategies. Rather, by sharing a small sample of the multiplicity of sustainable development approaches that exist across the global South, this report aims to help countries of the South benefit from the experiences of others, and to inspire them to develop their own responses to their unique sustainable development challenges.

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- ⁴⁰ The six Royal Development Study Centers are: (1) Khao Hin Sorn Royal Development Study Center in Chachoengsao Province, (2) Puparn Royal Development Study Center in Sakon Nakhon Province, (3) Huai Hong Khrai Royal Development Study Center in Chiang Mai province, (4) Huai Sai Royal Development Study Center in Phetchaburi Province, (5) Kung Krabaen Bay Royal Development Study Center in Chanthaburi Province, and (6) Pikun Thong Royal Development Study Center in Narathiwat Province
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¹⁰⁰ A festivity where a piece of rock of the virgin is collected as a loan in order for a wish to come true and it is then returned to the mountain of the virgin when the favor has been fulfilled.

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For further information, please contact:

UNEP

DTIE/Economics and Trade Branch
11-13, chemin des Anémones
1219 Châtelaine / Geneva
Switzerland

T: +41 (0)22 917 82 43

F: +41 (0)22 917 80 76

E: gei@unep.org

www.unep.org/greeneconomy

A decorative graphic on the right side of the page depicts a tree trunk and canopy. The trunk is a vertical green bar on the far right. The canopy is a large, triangular shape composed of many small, overlapping oval shapes in various shades of green, teal, and orange, creating a textured, leaf-like effect.

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