Federal Ministry
for Economic Cooperation
and Development

Benefits of a Green Economy Transformation in Sub-Saharan Africa

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Abbreviations

A4P	Agenda for Prosperity (Sierra Leone)
AEAFFB	L'Agence d'Exécution des Activités de la Filière Forêt-Bois (Gabon) *Executive Foresty and Timber Agency (Gabon)*
AfDB	African Development Bank
BAU	Business as Usual
BMZ	German Federal Ministry for Economic Cooperation and Development
CDKN	Climate and Development Knowledge Network
CRGE	Climate Resilient Green Economy (Ethiopia)
DfID	Department for International Development (United Kingdom)
EFR	Environment Fiscal Reform
FDI	Foreign Direct Investment
FIT	Feed in Tariff
FONERWA	Environment and Climate Change Fund (Rwanda)
FSC	Forest Stewardship Council
GDC	German Development Cooperation
GDP	Gross Domestic Product
GGBP	Green Growth Best Practice
GGCR	Green Growth and Climate Resilience (Rwanda)
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
ICT	Information and Communications Technology
IIED	International Institute for Environment and Development
IMF	International Monetary Fund
LED	Light Emitting Diode
LEDS	Low Emissions Development Strategies
MRV	Measurement, Reporting and Verification
MW	Megawatt
NCCPF	National Climate Change Policy Framework (Ghana)
NGO	Non-Governmental Organisation
PPP	Purchasing Power Parity
R & D	Research and Development
REMA	Rwanda Environment and Management Authority (Rwanda)
SAGEM	South Africa Green Economy Model
SLMP	Sustainable Land Management Programme (Ethiopia)
SSA	Sub-Saharan Africa
UN	United Nations
UNCSD	United Nations Conference on Sustainable Development
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UN ECOSOC	United Nations Economic and Social Council
UNEP	United Nations Environment Programme
UNU-WIDER	United Nations University World Institute for Development Economics
USD	United States Dollar

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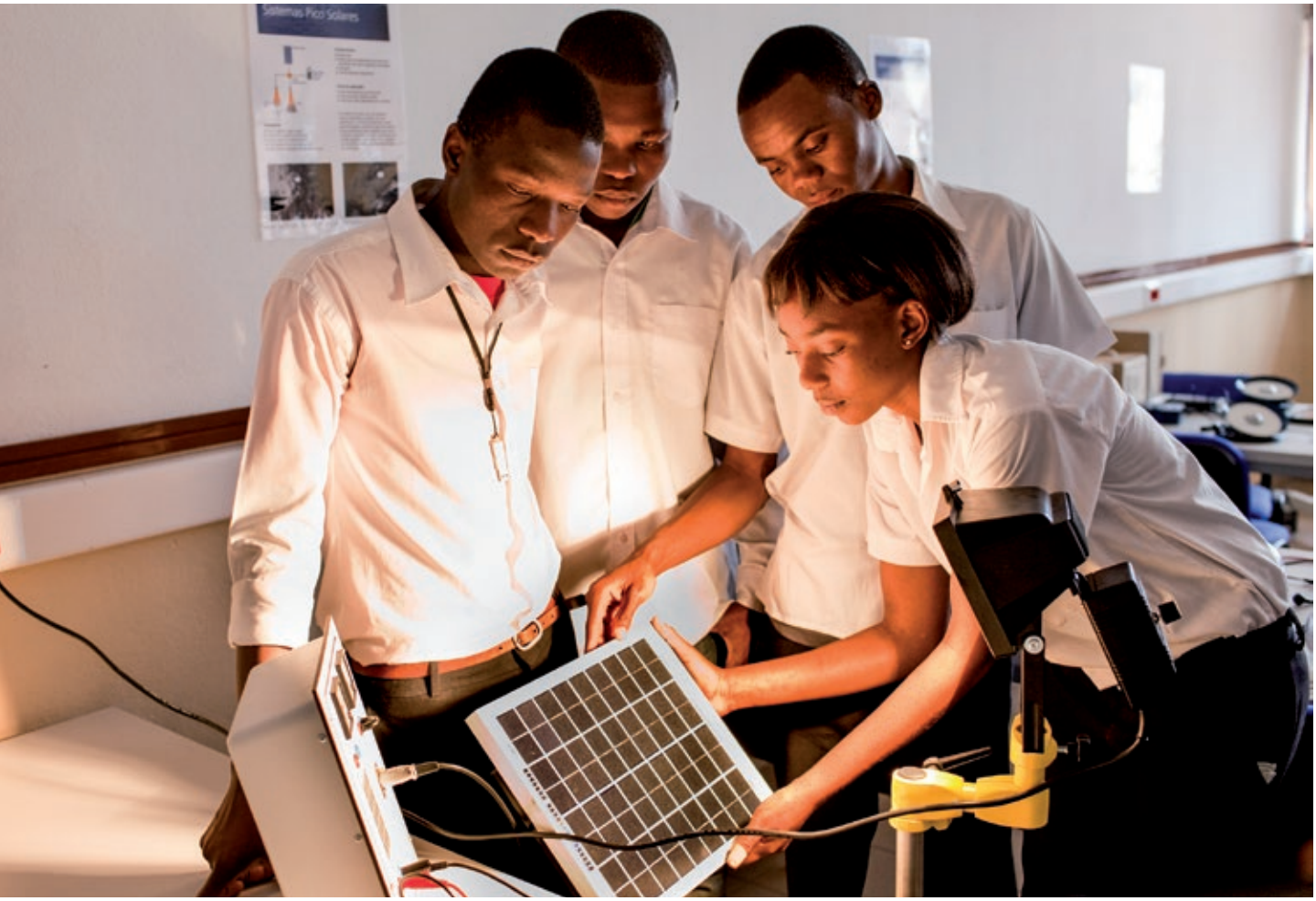


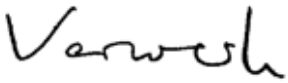
Preface

Our current path of economic development puts our continued survival at risk. Unsustainable patterns of production and consumption, high economic dependencies on finite resources and the rising impact of climate change, put severe stress on our environment and thus on our livelihood. It is our urgent task and responsibility to conceive sustainable ways of economic development within our planetary boundaries. Green growth and green economy have emerged as central concepts in this context. Fostering a low-carbon, resource efficient and socially inclusive development pathway is a central aim of the support of German Development Cooperation (GDC) to our partner countries. The Federal Ministry for Economic Cooperation and Development (BMZ) therefore promotes inclusive green growth, not least because of Germany's long-standing experience as a social and ecological market economy and its associated multi-dimensional benefits.

Pursuing a green economy transformation is particularly relevant for our partner countries. They are among those worst affected by climate change, but also have fewer resources at their disposal to adapt to its impacts. Many countries in Sub-Saharan Africa (SSA) rely on the extensive exploitation and use of natural resources for production and for maintaining livelihoods. For example, forests, topsoils and fisheries are often being consumed at alarming rates. These circumstances render sustainable management of natural resources and land critical to ensure sustained economic growth in the future. Developing countries in particular urgently require new economic growth models that integrate environmental considerations into economic decision making and development planning.

A growing number of developing countries are trying to embark on inclusive green growth strategies to achieve sustainable economic development, but these efforts are still limited in time and outreach. Especially countries in SSA do not yet consider a green economy a viable development objective, mainly due to the perceived high short-term costs associated with such a transformation. Efforts are also limited by concerns over whether green growth can deliver sustained growth, higher incomes and wide-ranging social benefits, including for the very poor. Despite these concerns the pursuit of a green economy is of particular relevance to this region. Reasons for that are the exposure to persistent environmental degradation, the vulnerability to climate change and the high incidence of poverty. It is thus of critical importance to present compelling arguments and practical advice as to how the transformation towards a green economy can be implemented in a socially inclusive and economically viable manner.

I am very pleased that this study can now provide you with a comprehensive account of green economy benefits and green growth strategy initiatives. It draws on recent research and practitioner insights and comes with a broad range of illustrative case studies from across the region. I hope you enjoy reading it and that when you turn the last page you will be just as convinced as I am of the relevance of inclusive green growth to achieving lasting development impact.



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Executive Summary

Countries in SSA have experienced dramatic economic growth in the past decade, with six of the ten fastest-growing economies in the world found in SSA between 2000 and 2010. Economic growth is critical to continued development and poverty reduction, but can have, as has already become visible in the region, significant environmental costs and can even hinder further long term economic growth and development, if environmentally unsustainable growth paths are continued. Ignoring these environmental costs, particularly climate change and natural resource depletion, can threaten the gains that are being made and have significant economic, social and environmental consequences for African countries. Greener growth is needed to allow SSA countries to continue to develop, while avoiding or reducing negative environmental impacts.

In this paper, drawing on recent research and practitioner insights and supported with illustrative case studies from across the region, we explore the relevance, potential benefits and key arguments for countries in SSA to pursue inclusive green growth to achieve sustainable development.

We begin by outlining the development challenges for countries of the SSA region and how a green economy approach can help to address these, thus demonstrating the relevance of a green economy transformation (Chapter 2). We then outline the progress already being made in the region including examples from Ethiopia, Gabon, Ghana, Kenya, Mozambique, Namibia, Rwanda, Sierra Leone, South Africa and Zambia (Chapter 3). We go on to highlight many of the key economic, social and environmental benefits which a green economy can potentially offer to SSA countries (Chapter 4). These include:

Table 1: Benefits of a Green Economy transformation

Economic benefits	Social benefits	Environmental benefits
• Reduced poverty and inequality* • Increased economic growth and employment* • Improved training and skills* • Development of new markets and specialisation • Increased productivity, and increased commodity and agricultural yields • Improved energy security • Improved competitiveness and trade balances	• Reduced poverty and reduced social inequality* • Increased employment* • Improved training and skills* • Better public services • Improved health outcomes	• Sustainable management of natural assets and resources • Reduced greenhouse gas and other emissions • Better adaptation to climate change and resilience to natural disasters • Improved environmental quality

Source: Own compilation

* Benefits marked with an asterisk can equally be assigned to economic and social benefits, which is why they are listed twice in this table. Later on, in Chapter 4 these are explained in detail in sub-section 4.1. Economic benefits.

In the following chapter we outline key arguments which policymakers can use to make the political and economic case for pursuing a green economy in order to convince stakeholders and the public in the face of (sometimes also uncomfortable) decisions that need to be taken (Chapter 5). These arguments include how a green economy can:

- strengthen medium and long term economic prospects;
- reduce exposure to the risks of existing economic growth pathways;
- ensure natural assets and resources provide both short and long term development gains;
- improve quality of life (and as a result secure votes); and
- attract investment and provide political prestige.

Finally, we make recommendations on the range of potential areas for intervention where donors and technical assistance organisations such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH can best support countries in the region to make the transition to a green economy effectively (Chapter 6). Recommendations include providing: policy advice; building institutional and human capacity; establishing cooperation, partnerships, and supporting participation and communication; and technical/methodological support.

1 Introduction

1.1 The Sub-Saharan Africa context

The countries which make up SSA have experienced dramatic economic growth over the past decade. Between 2000 and 2010, six of the world's ten fastest-growing economies were in the sub-Saharan region[1]. During this period, many of these countries also experienced steady development gains across numerous indicators including health, education and access to clean water[2]. Despite such economic success in the region, questions now arise for many countries about how such growth can be replicated and/or sustained without impacting on the environment in a way that undermines future growth. In other words, how can the high growth rates that are necessary to address economic and social development challenges be combined with environmental sustainability? This is to be viewed also in the context of looming challenges such as changing demographics, increasing resource scarcity and disruption caused by the impacts of climate change.

Continued economic development is also threatened by the impacts of growth on natural resources and the environment. The recent growth has led to overexploitation of natural capital in SSA and to a huge increase of Greenhouse Gas (GHG) emissions (+35 % in the last ten years). The most serious consequences concern accelerated land degradation (reducing global food production by 12 % over the next 25 years), loss of forest cover (net forest loss amounted to 3.4 million hectares per year), increased water scarcity (important aquifers are depleting faster than the rate of recharge) and serious declines in fish stocks[3].

Countries in the region vary considerably but many continue to also face multiple development challenges and SSA remains the only developing region globally where the number of people living in extreme poverty continues to rise[4]. These challenges are further exacerbated by localised or regional disruption caused by military conflict or infectious disease outbreaks like Ebola and HIV, which as well as having tragic humanitarian consequences, also threaten the economic and social development of many of the countries affected[5].

For many countries in the region, important strategic decisions must now be taken to future-proof their economies against existing and emerging challenges. For countries in the earlier stages of economic development, this represents an unprecedented opportunity to leap-frog many of the mistakes made by others (e.g. through short-term growth strategies which eroded the underlying natural resource base) by instead steering economic and development paths towards a more stable and ecologically sustainable growth path. For countries looking to sustain and lock-in the development gains they have already made, mounting evidence suggests that making the transition to a Green Economy, while not without challenges, represents an effective approach to achieve this. This paper summarises key points around each of these issues, identifying the rationale, necessity and benefits of Green Growth and a Green Economy and reviewing the progress already made in SSA. The challenges that are faced are also examined and evidence provided that shows how to overcome these challenges.

1.2 Green Economy and Green Growth

In 2011, the United Nations Environment Programme (UNEP) defined a vision of a Green Economy as one which results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcity[6]. It is often defined as an economy which successfully balances a trade-off between responsible management of non-renewable natural capital and sustainable management of renewable resources[7]. This is characterised by effectively reconciling economic development with environmental and social sustainability, something which is particularly important for

1 The Economist (2011): Africa's impressive growth.

2 United Nations (UN) (2014): Steady progress on many Millennium Development Goals continues in sub-Saharan Africa.

3 African Development Bank (AfDB) (2012): African Development Report 2012 – Towards Green Growth in Africa, pp. 14–16.

4 UN (2014).

5 Surprisingly, no serious study has been conducted on the macro-economic consequences of the HIV in Africa. According to the ILO, SSA countries lost between 0.5 and 2.5 % growth per year from 2012 because of HIV. See Group SOS (2007): L'impact économique du VIH en Afrique.

6 UNEP (2011): Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication, p. 16.

7 AfDB (2013): Transitioning towards Green Growth in Sierra Leone, p. 14.

low-income countries undergoing rapid growth[8]. Since resource efficiency and low carbon development are key elements of all green economy strategies, UNEP concludes: *"In its simplest expression, a Green Economy can be thought of as one which is low carbon, resource efficient and socially inclusive."*[9]

The transition to a Green Economy is frequently associated with or defined in terms of a process of 'Green Growth', which has also gained increasing international recognition as a way to reconcile the need for economic growth and social development while staying within environmental limits and maintaining healthy ecosystems[10]. In 2012 the United Nations Conference on Sustainable Development (Rio+20) further refined this definition of Green Growth as a process which *"should contribute to eradicating poverty as well as [achieving] sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the earth's ecosystems"*[11]. The social dimensions of economic growth, such as poverty reduction, reduced inequalities and improved social conditions are important, and can be complementary to sustained and greener economic growth. It is much more difficult to address the issue of environmental sustainability without at the same time actively addressing these social issues (see Chapter 4 for more details on the benefits of so doing). Therefore it is important that development in all three dimensions, economic, social and environmental, go hand-in-hand, as inclusive green growth. There will inevitably be some trade-offs between the different dimensions and managing these trade-offs should be part of the decision-making process. This study points out possible arguments for promoting an approach that maximises economic, environmental and social benefits.

In summary, economic growth is still needed to achieve development goals, but by implementing and pursuing an inclusive green growth strategy, growth can be achieved with reduced environmental impacts and with improved social conditions.

The promotion of inclusive green growth and fostering sustainable development are central objectives for GDC. In these efforts, GDC is guided by the principle of the social and ecological market economy, which can provide a macroeconomic regulative framework to achieve green and inclusive growth. Initiatives to support partner countries transition to inclusive green growth also build on Germany's far-reaching experiences, such as in the renewable energies sector, recycling, resource-efficient technologies and organic farming.

1.3 Overview of this paper

In this paper, drawing on recent research and practitioner insights, we explore the relevance, potential benefits and key arguments for countries in the SSA region to pursue inclusive green growth to establish a Green Economy.

We begin by stating clearly the relevance of a green economy transformation, particularly for the countries of the SSA region, highlighting the development challenges they face and that a green economy approach can help to address these challenges (Chapter 2). We then outline the progress already being made in the region (Chapter 3). In the following chapter (Chapter 4) we highlight many of the key economic, social and environmental benefits which a green economy can potentially offer to SSA countries. We then go on to outline key arguments, drawing on the evidence presented in the previous chapter, which can be used to make the political and economic case for pursuing a green economy (Chapter 5). Finally, we make recommendations on the range of potential areas for intervention where donors and technical assistance organisations such as GIZ can best support countries in the region to make the transition to a green economy effectively (Chapter 6). Moreover, we include in the appendix a number of case studies from across the region which are referred throughout to illustrate key points.

8 Schmitz, H. / Becker, B. (2013): From Sustainable Development to the Green Transformation – A Rough Guide.

9 UNEP (2011), p. 16.

10 Green Growth Best Practices (GGBP) (2014).

11 United Nations Conference on Sustainable Development (UNCSD) (2012): The Future We Want – Outcome Document.

2 Relevance of Green Economy for SSA Countries for Addressing Development Challenges

As countries around the globe are fast realising, ignoring the growing environmental challenges which they face has increasingly serious implications for economic and social stability, and future prosperity. With their economies highly dependent on their natural asset base, countries of the SSA region already have a good understanding of the importance of these assets to their economies (and societies). Increasingly they are also realising the importance of better management of these assets both now and in the future. With the impacts of climate change, population growth and global resource scarcity further increasing pressure on the natural assets in SSA, a green economy approach offers a pragmatic way forward for many countries in the region. A green economy can help to future-proof economic and social development by maintaining and enhancing the natural assets which are, and will continue to be, a crucial source of jobs, income and livelihoods for the vast majority of the African people in both the medium and long term[12].

In this chapter, we discuss the key range of economic, social and environmental challenges faced by countries in the SSA region and suggest how a green economy approach can help to address these. We also summarise some of the main barriers which prevent the transition to a green economy.

2.1 Economic development challenges

- **Poverty and inequalities** – Poverty is still the main challenge that SSA countries face and the overarching driver of policy. This leads to a strong focus on economic growth at any cost and consequent environmental degradation. Starting from very low average per capita GDP, we have seen relatively high growth rates in the last few years. To reduce poverty, sustained high growth rates and much better distribution of income need to be achieved. Despite rapid economic growth rates in many countries, its reduction remains slow, falling only by an average 0.84 percentage points per year compared to the 1990s[13] to around 48 % of the population[14]. The benefits of economic growth have not been shared equally, with a large part of the benefits going to the richest groups in SSA societies, leading to growing inequality and reduced social cohesion. In 2011, six of the world's ten most unequal countries were in Africa: Namibia, South Africa, Lesotho, Botswana, Sierra Leone and Central African Republic.[15] Green economy strategies focus on inclusive green growth pathways which aim to address social inequalities so that all can share the development gains. The benefits of this approach include increased social and economic stability.

- **Business conditions** – While government has a key role to play in creating the conditions for green growth, success will also be a matter of encouraging private businesses to engage and invest in the green economy. In many SSA countries this is challenging because the public sector and state-owned firms dominate the economy. More generally, business conditions are often also difficult, with complex bureaucracy, delays, taxes, corruption and other barriers to new investments and entrepreneurs. Improving these framework conditions is an important development challenge, not only for green growth.

- **Lack of employment and low skill levels** – As noted above, demographic changes in the region create an overall economic challenge to provide sufficient employment for the population. The particular demographics in the region will bring about increasing challenges from youth unemployment[16]. In addition innovative economic sectors with important value-added activities often rely on a highly skilled labour force. With school enrolment weaker than

12 United Nations Economic Commission for Africa (UNECA) (2012): A Green Economy in the Context of Sustainable Development and Poverty Eradication: What are the Implications for Africa?, p. 3.

13 The World Bank (2013a): World Development Indicators.

14 Based on a poverty line income of USD 1.25 / day (PPP).

15 AfDB (2012), p. 13.

16 African Economic Outlook (2008): Youth Unemployment.

anywhere else in the world (even if SSA is closing the gap)[17] and a growing population, ensuring a supply of skilled labour will be an increasing challenge. The demographic growth creates an economic and green growth opportunity, providing a natural growth impulse as young people become consumers and begin to earn incomes. Usefully employing these young people and using this opportunity to support green growth should be a key part of a green economy strategy. Stimulating innovation and the development of new markets coupled with investments in education and skills are two important ways to channel this demographic impulse.

- **Weak infrastructure** – Lack of, and low quality, infrastructure is a crucial challenge for SSA economic development[18]. Power, transport, buildings, water, sanitation, waste management and natural infrastructure are essential to support improved economic development and social conditions. Decisions need to be taken concerning the type of infrastructure SSA countries want and need (roads or railways? Coal plants or solar energy plants?). This development stage, where there is greater freedom for infrastructure choices as the starting point is often low[19], presents a unique opportunity for SSA countries to leap-frog and learn from experiences elsewhere. This can help avoid risky and expensive lock-in, for many decades, to unsustainable infrastructure, e.g. rather than investing in fossil fuel based power infrastructure, which may become subject to greater regulation and higher prices, to focus on investment in energy efficiency and renewable energy[20]. It also requires improved institutional and technical capacity which is vital for improving social and economic conditions, for example through deployment of energy efficient lighting, enabling access to information and communication technology, the mechanisation of production, or enabling refrigeration which in turn helps to improve food security and healthcare conditions[21]. A green economy approach embeds these more sustainable infrastructure choices, not always choosing the cheapest approach in the short term but more fully considering the long-term costs and risks such as lock-in and stranded assets.

- **Inequalities between countries** – Inequality between countries in SSA has increased as some countries have high rates of economic growth (like Uganda, Rwanda, Angola and Ethiopia) while others (like Côte D'Ivoire and Zimbabwe) have only achieved relatively low growth rates[22], with important consequences for regional markets and integration. Increasing economic growth in low growth countries will help convergence, but a green economy transformation with a focus on political and economic regional integration, can also mitigate such inequalities and reduce environmental impacts on a larger scale than one country alone. The rationale here is multiple: first, a bigger market for innovative green technologies (solar energy, wind energy, etc.) can be created which will lead to lower prices. Second, some natural resources cross national boundaries like forests in the Great Lakes region, or important rivers (Nile river, Zambezi, Congo) and regional integration can improve their management. Third, regional integration can also facilitate the switch towards a Green economy transformation by creating a favourable environment for decision-makers: it is easier to endorse (sometimes costly) new policies as part of a group, or while neighbours (and competitors) are doing the same. This is the mass effect that also applies at the international level (i.e. with respect to international climate mitigation policies where countries are looking towards others to pursue similar goals and policies). Regional integration can also foster wider infrastructure improvements to increase economic links across countries, which is particularly important in SSA given that many countries are quite small and/or land-locked.

- **Dependence on international agricultural and primary commodities markets** – Alongside the inequalities outlined above SSA countries' dependence on natural resources, agriculture and primary commodities as sources of income and foreign currency means that entire SSA economies and growth pathways are highly exposed to international markets and fluctuations in import/export prices[23].

17 AfDB (2012), p. 11.

18 Ibid., p. 29.

19 In 2008 just 42 % of the African population had access to electricity. While this rate is projected to increase to 66 % by 2040 (AfDB et al. (2011): Programme for Infrastructure Development in Africa.).

20 The World Bank (2012): Inclusive green growth: the pathway to sustainable development. p. 133.

21 AfDB (2012), p. 71.

22 Ibid.

23 Ibid., p. 31.

As volatility in these markets is often high, price fluctuations can have large consequences for the stability, resilience and efficient functioning of local economies. These short term fluctuations can have serious impacts on people, firms and fiscal balances, which requires management by governments and makes implementing structural economic policies more challenging. A green economy transformation can potentially enable the development of more diversified and robust economic models, enabling greater stability and autonomy (for example through increased domestic renewable energy generation, thereby reducing dependence on energy imports, or introducing more sustainable and resilient agriculture practices leading to diversification with positive effects both on the environment and the economy).

- **Lack of access to finance** – SSA countries often face higher country risk rates to obtain international loans on the market. Foreign Direct Investment (FDI) constitutes 39 % of external financial flows in Africa[24] which is mainly attracted to extractive industries in SSA economies. This often contributes to further degradation of natural assets, and can reduce the scope of economic development to simply supplying the primary resources, rather than supporting moves up the value chain into refining, manufacturing and services. A green economy strategy, by looking to access different types of investors, can help to provide more diversified investment opportunities and by providing longer-term price signals (e. g. for renewable energy investments – see Case 3 for example) can help reduce uncertainty and policy risk which strengthens investor confidence.

- **Lack of access to technology** – Economic success is linked closely to productivity and efficiency. To increase resource efficiency, land productivity or address water scarcity, greater use of existing and innovative technologies is needed. A green economy transformation can stimulate transfers of technology, in particular for green technologies from developed countries, using existing mechanisms. A green economy strategy should also include an innovation element, supporting greater investment in research, development and deployment of more sustainable innovations and technologies by SSA countries.

24 AfDB (2012), p. 131.

2.2 Social challenges

Some of the economic challenges mentioned above could equally be assigned to social challenges, such as poverty and inequalities, unemployment and low levels of education and skills. To avoid duplication, these challenges have only been listed once.

- **Public services – education and health** – SSA has achieved improved social indicators over the past 15 years, but strong challenges in terms of social development are still undermining economic and social stability. Education is an important challenge, not least to address the lack of skilled labour, but to ensure basic numeracy, literacy and, increasingly, information and communications technology (ICT) skills for the modern work environment. As noted previously, waste and pollution are a challenge, and can have severe health impacts with high associated social and economic costs, manifesting in treatment costs for already stretched public systems, lost work days, and lower productivity. Green economy approaches which address such risks (e.g. regulations for vehicle emission limits and industrial pollution treatment and management) can reduce some of these key threats to public health, resulting in numerous social and economic benefits.

2.3 Environmental challenges

- **High dependence on finite resources and unsustainable exploitation of renewable natural resources** – Recent economic growth has gone hand in hand with an *"increased exploitation of renewable natural resources beyond their regenerative capacity and by increasing GHG emissions."*[25] Natural-resource based sectors are the largest job providers (agriculture, the mineral sector, forestry and fisheries account for 80 % of employment[26]), and agriculture accounts for 1/3 of total African GDP. Recent growth successes in the region have largely been based on consuming and/or exporting natural resources (i.e. forests, topsoil, and fish stocks), sometimes at alarming rates[27]. Sustainable resource management approaches (e.g. Case 5) implemented as part of a Green Economy have a key role to play in decoupling economic growth from increasingly degraded and scarce natural resources.

- **Demographic growth** – Rapid population growth across much of SSA poses significant socio-economic and environmental challenges. Putting pressure on the government to provide essential services such as health and education, and on the economy to provide jobs. Without very high rates of economic growth this can lead to a country making very slow progress in raising living standards and high levels of unemployment. High population growth also puts increasing stress on local natural resources such as water, fuel and food. Large families can also pose problems, particularly in rural communities as land is shared so the individual claims become smaller, increasing social tensions or leading to new land being brought into agriculture, with sometimes damaging environmental impacts. Demographic growth does provide opportunities, a new generation of consumers will increase economic activity and may also have new ways of looking at the world, which can be steered in a greener direction.

- **Environmentally harmful subsidies** – Over-exploitation of resources often goes hand-in-hand with subsidies for environmentally harmful activities. Subsidies for fossil fuel and food subsidies are among the main challenges in SSA countries and there is now growing evidence of the economic benefits of the reform and removal of such subsidies, particularly in improving government fiscal balances and national trade balances. Reform is challenging though, generating winners and losers each with their political representatives that can resist reforms. A green economy strategy needs to address these subsidies and the political resistance to reform to help reduce the perverse incentive towards non-green investments.

- **Climate change impacts** – Many SSA countries are highly vulnerable to climate change impacts[28] with higher potential risks and intensity of weather-related natural disasters such as droughts, storms and flooding, and only limited capacity to manage and adapt to these changes. This has wide ranging consequences, often directly destroying or limiting

25 AfDB (2012), p. 14.

26 United Nations Economic and Social Council (UN ECOSOC) (2011): A Green Economy in the Context of Sustainable Development and Poverty Eradication: What are the Implications for Africa?, p. 9.

27 AfDB (2012), p. 2.

28 Ibid., p. 22.

the gains from economic growth, as infrastructure is damaged, homes destroyed, crops damaged and yields reduced. These damages lead in turn to greater water and land consumption, deforestation and food insecurity. Green economy strategies are increasingly providing the economic case for addressing mitigation and adaptation and helping policy-makers and economic planners to effectively understand and manage the risks and opportunities of climate change in the short, medium and long term (see Case 1).

- **Waste and pollution** – Current modes of economic growth in SSA are in many places outstripping the capacity for local systems to deal with the consequences. Sanitation and waste collection services cannot cope with the volumes, leading to significant water and urban pollution. Where manufacturing and extractive industries have developed, the environmental safeguards are often weak, and/or poorly enforced, so that water, air and land around these sites is polluted, damaging local people and ecosystems. The challenge is to improve upon these approaches, to green this economic activity, with significant opportunities for environmental, and also social and economic, improvements.

2.4 Barriers to a Green Economy transformation

In addition to the challenges outlined above there are also a variety of economic, political, technological and financial barriers to pursuing a green economy transformation. These include the general barriers to economic and social development, such as: low institutional capacity and governance issues; gaining and maintaining political support for reforms; managing the trade-offs, winners and losers of reforms; problems related to resource management; and changing behaviour. Green Growth faces dimensions of each of these barriers too, but it also faces some barriers specific to Green Economy, such as:

- **Upfront and specific costs, long term and diffuse benefits** – Green Growth provides long term benefits, but to achieve these requires policy and investment decisions with short term costs to specific groups, particularly government and industry.
- **Perception of 'green' as a luxury** – While action on climate change is generally seen as positive, policy, fiscal and regulatory measures with short-term impacts such as price increases quickly become unpopular and can lead to the perception among decision makers and the electorate that a green economy approach is more of a luxury rather than pragmatic necessity.
- **Lack of green economy knowledge and skills** – As noted above, lack of skills is a wider economic challenge, but green economy skills are a particular issue, especially for decision makers in government and business, where there is typically limited awareness of what Green Growth means in practice and what are its benefits. This makes it more difficult to move Green Growth onto the agenda in the first place. In the wider economy this is also an issue, as the skills, knowledge and expertise required to lead the transformation are often missing.

Addressing these specific (and general) barriers is important and approaches to do this can take a variety of forms, such as: (1) the use of compensation mechanisms and instruments; (2) convincing the public, industry and or decision makers using the arguments described in this paper; or (3) calling upon outside funding or assistance (such as that provided by GIZ). Each of these options is discussed in the later sections of this paper.

3 Emerging Examples of Green Economy in SSA

The potential benefits of a green economy transformation are increasingly recognised across a range of SSA countries, with a number of economies already taking steps to pursue this goal. Developing a Green Economy is already helping countries in the region striving to strike the right balance between conservation and use of their natural resource assets to develop a more resilient economy which can support and maintain the countries' development and secure the prosperity of future generations.

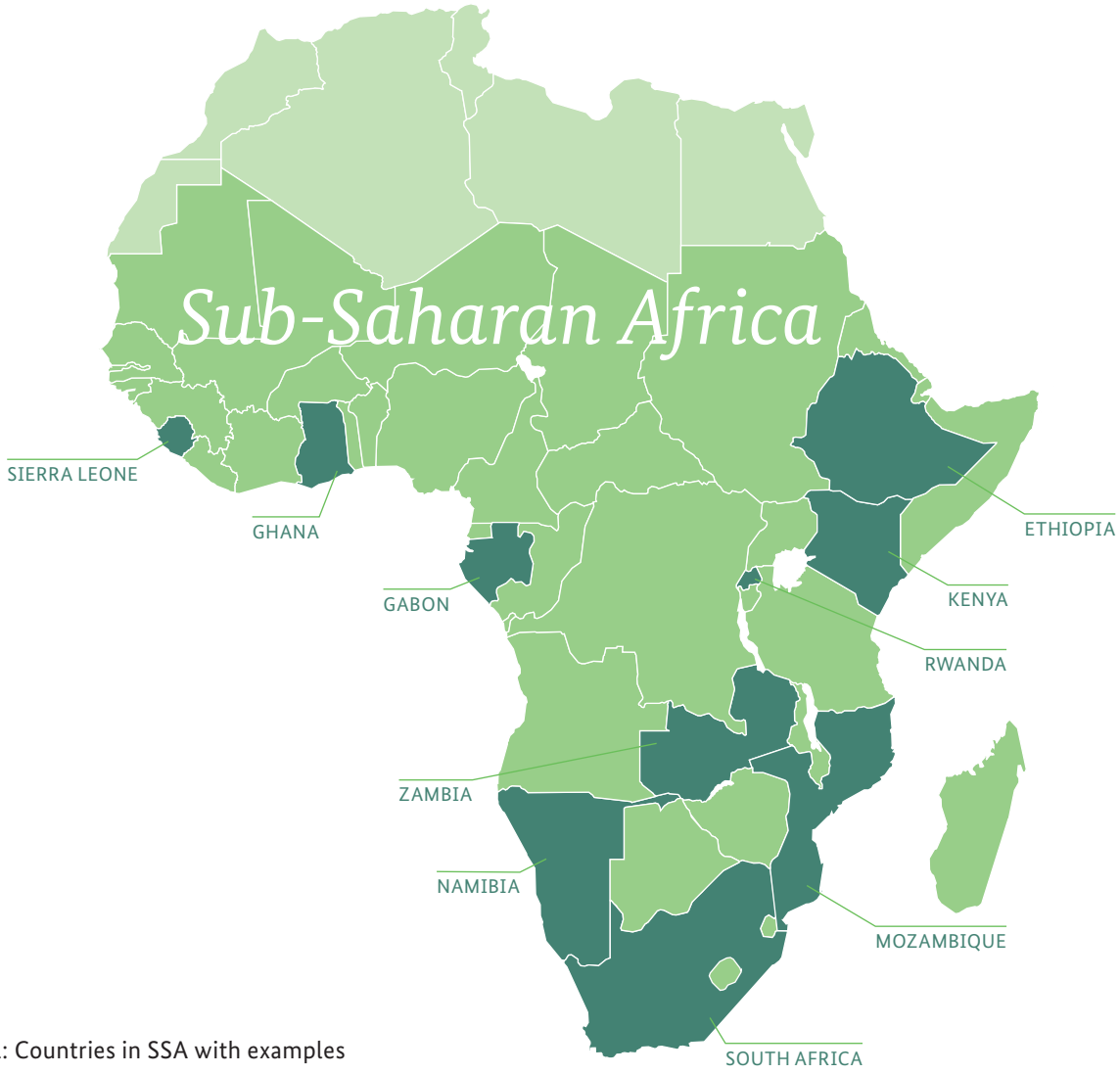

Figure 1: Countries in SSA with examples of green economy activities

Source: Own compilation

Although many are in the early stages of implementation, some key examples, in alphabetical order, include:

- **Ethiopia** set out its strategy for a 'Climate-Resilient Green Economy (CRGE)' in 2011[29]. This provides a national vision for economic development, with the goal of achieving middle-income country status by 2025 through Green Growth. The pillars of the strategy are the key economic sectors of agriculture, forestry, power and transport, with options for emissions reduction or low carbon growth identified in each. The action plan in the strategy already selected priority actions in these sectors and sources of potential funding. The strategy has strong support in government, particularly from the Prime Minister's office and Ministries, with CRGE offices established in each ministry. Finance has also been mobilised through a single funding facility to which development partners have contributed and to which 2 % of the federal budget is allocated[30]. Please also see Appendix: Case 2.

- **Gabon** is one of the few francophone countries having designed and already started implementing a green economy transformation, based on the enormous potential of its forest, which covers over 200,000 km² (85 % of its territory). Since 2009, the 'Green Gabon'[31] strategy has been driven by the political leadership and vision of the country's president, Mr. Ali Bongo Ondimba, to transform Gabon into a strong emerging economy through the programme 'Emerging Gabon'. The main objective is to diversify the economy, to rely not only on gas and oil revenues but on other sectors like forestry, ecotourism and agriculture, to be developed in a sustainable way and with a strong focus on environmental protection. The expected benefits include: a reduction of CO_2 emissions by 50 million tons per year by 2015; to improve Gabon's capacity for carbon sequestration/storage (by better managing forest assets between sustainable exploitation and long-run protection); to increase employment potential in two key sectors (the timber industry through local activity development and ecotourism with protected areas and government support); the diversification of agricultural production based on higher quality processes (i. e. switching from intensive agriculture to high quality production for coffee, sugar and cacao for example); shifting the economy from raw natural resource exports to a value-added industry (see Appendix: Case 5 for how this is being achieved through certificates and labels in the timber industry); achieving food self-sufficiency by stimulating the yields of existing productions; becoming a regional leader by showing the way (especially in the forestry sector which is crucial in the region); developing better infrastructure, in particular to support the ecotourism development framework (in cooperation with NGOs); improving international attractiveness through all of the above activities; and improving training and education for developing the skills needed in the various sectors.

- **Ghana** began in 2010 to articulate a national approach in a discussion paper titled 'Ghana's National Climate Change Policy Framework (NCCPF)', based around three key objectives: low carbon growth; effective adaptation to climate change; and social development. While no further information related to the framework is available, Ghana has continued to make progress in the area of environmental fiscal reform (EFR), creating an action plan for EFR and a design for a green fund[32]. It has also undertaken fossil fuel subsidy reform in 2013, which after setbacks in earlier reform attempts, seems to have been maintained.

- **Kenya** has, since introducing feed in tariffs (FIT) for renewable energy in 2008[33], taken a range of steps to embed Green Growth within its economic development strategy (Case 3). In 2010, it amended its constitution to include an article stressing the right to a healthy environment and sustainable natural resource management[34]. A National Climate Change Response Strategy was developed in 2010[35], and has been followed in 2012 by a National Climate Change Action Plan 2013 – 2017[36], setting out the specific

29 The Federal Democratic Republic of Ethiopia (2011): Ethiopia's Climate-Resilient Green Economy.

30 International Partnership on Mitigation and Measurement, Reporting and Verification (MRV) (n. d.): Design and implementation of a climate resilient green economy strategy.

31 Le Gabon (n. d.): Protection and uses of natural resources.

32 GIZ (2013): Environmental Fiscal Reform: A Practice-Orientated Training for Policy Makers, Administration Officials, Consultants and NGO Representatives.

33 Kenya Ministry of Energy (2012): Feed-in-tariffs Policy on Wind, Biomass, Small-hydro, Geothermal, Biogas, and Solar Resource Generated Electricity.

34 Centre for Multiparty Democracy Kenya (n. d.): The Constitution of Kenya.

35 Government of the Republic of Kenya (2010): National Climate Change Response Strategy – Executive Brief.

36 Kenya Ministry of Environment and Mineral Resources.

activities to be taken to achieve low carbon, climate resilient development with a focus on energy, water management, forestry, agriculture and infrastructure. This was based on the results of an economy-environment-energy modelling exercise of reference and low carbon scenarios to 2030 (Case 1). The Kenyan medium term plan 2013 – 2017[37], mainstreamed a variety of green growth aspects into the overall development strategy, such as development of energy generation capacity with a focus on renewable energy. The medium term plan sits alongside the long term development vision of achieving middle-income country status by 2030. In 2014, at the request of the Kenyan government, the UNEP published a Green Economy Assessment Report for Kenya[38], which assessed the benefits of a green economy compared to a business as usual development path (see also section 3).

- **Mozambique** adopted a 'Green Economy Action Plan for the transition period 2013/14'[39], supported by the United Nations Development Programme (UNDP) in the context of the Rio+20 summit. This followed on from earlier approval of a green economy roadmap by the Mozambique government. The action plan is based on a vision for inclusive growth towards middle income status by 2030, with opportunities and actions for 2013/14 identified and plans to link to the longer term national development strategy.

- **Namibia** published a first 'Green plan' as far back as 1992, although progress since then has been limited. More recently, in 2012 through the UNEP Green Economy sector initiative, funded by GIZ, work has been carried out into development of a specific sector, Biotrade, i. e. economic activity associated with utilising the local biodiversity, as a catalyst to green economy development in Namibia. For example, the Marula fruits are harvested for their oil by a women's cooperative which is then sold to Body Shop and used for making cosmetics. This identified the significant potential in Namibia for this sector and for it to drive Green Growth. The biotrade sector was identified as contributing around 4.5 % of GDP, but with the potential to increase this to 7 % within ten years, and with the growth in this sector being particularly relevant to addressing issues such as poverty and inequality while utilising natural resources in a sustainable way. The Namibian government has also started to increase activities in this area, hosting a workshop on 'Unlocking the employment creation potential of the emerging Green Economy in Namibia' in April 2013 and is following this up with further research into the current and potential job opportunities in the green economy.

- **Rwanda** published its national strategy 'Green Growth and Climate Resilience' in 2011[40]. The strategy aims to mainstream low carbon development and climate mitigation and adaptation goals into the broader economic strategy, which sets the goal for Rwanda to become a middle-income country by 2020. The strategy is based around a vision for Rwanda to be a developed, climate-resilient, low carbon economy by 2050. It is defined in terms of guiding principles and strategic objectives, which both frame what should be achieved and how, such as through integrated soil fertility management. The strategy identified 14 specific sector-level programmes of action and 5 key enabling pillars focusing on governance, finance, capacity, innovation and planning. It also set out a roadmap to implement the strategy with big wins, quick wins and further work identified. This strategy has subsequently formed one of the key pillars of Rwanda's second Economic Development and Poverty Reduction Strategy (2013 – 2018)[41]. Following creation and capitalisation of the Fund for Environment and Climate Change (FONERWA)[42] funding instrument, the strategy is now being implemented at the project level (Case 2).

- **Sierra Leone** has integrated Green Economy as a key part of its macroeconomic development strategy for 2013 – 2018 'Agenda for Prosperity (A4P)' published in 2014. This is a development from a green economy study in 2013 led by the African Development Bank titled 'Transitioning to Green Growth: Stocktaking and the Way Forward'. The A4P sets the goal for Sierra Leone to become an 'inclusive, green, middle-income country by 2035'. The strategy has eight key pillars, including diversified economic growth, managing

37 Government of the Republic of Kenya (2013): Second Medium Term Plan (2013–2017) – Transforming Kenya: Pathway to devolution, socio-economic development, equity and national unity.

38 UNEP (2014): Green Economy Assessment Report Kenya.

39 GGBP (2014): Green Growth in Practice Lessons from Country Experiences.

40 The Republic of Rwanda (2011): Green Growth and Climate Resilience – National Strategy for Climate Change and Low Carbon Development.

41 The Republic of Rwanda (n. d.): Economic Development and Poverty Reduction Strategy 2013–2018.

42 FONERWA.

natural resources, accelerating human development and international competitiveness[43]. A range of specific interventions are planned and matched to the pillars, these have been costed and funding gaps identified as a first step in attracting finance.

- **South Africa** is one of the strongest proponents of green economy in SSA and has one of the most developed approaches. National renewable energy and energy efficiency strategies were set out in 2003[44] and 2005[45], and Long Term Mitigation Scenarios were developed in 2007[46] which marked the first movements towards a Green Economy. A national 'Green Economy Accord', an agreement between government, business, trade unions and civil society, hosted by the Economic Development Department, was reached in 2011[47]. This targets the creation of 300,000 direct green jobs by 2020, as part of a wider goal of five million new jobs, and is to be achieved through 12 commitments to the Green Economy. These commitments cover actions such as installing solar water heating systems, increasing investments in the Green Economy, promotion of renewable energy and energy efficiency, skills development, expansion of electrification and improved waste management. The Green Economy Accord built upon a national green economy summit held in 2010[48], and has been incorporated into national strategies for sustainable development[49], growth paths to 2020[50] and the national development plan to 2030[51].

  In addition, since 2012 South Africa has operated a Green Fund[52], managed by the Department for Environmental Affairs, which is disbursing funds up to R800 million (~€60 million) aimed at promoting innovative, high impact projects that contribute to climate policy objectives, provide evidence to expand the Green Economy and which attract additional finance. In 2013, at the request of the South African government, the UNEP published the South Africa Green Economy Modelling (SAGEM) report[53] outlining the benefits of a green economy approach to the National Development Plan (see also section 3).

- **Zambia** has begun scoping to incorporate inclusive green growth into its national development plans, starting with hosting an international African conference on the issue, and followed by further inter-ministerial meetings in 2013. A paper, funded by the UK Department for International Development (DfID)[54], was published in 2014 which reviewed the potential and needs for inclusive green growth in Zambia. A revised national development plan published in 2014 highlights further steps towards inclusive green growth, with a greater focus on inclusive, rather than green, growth.

43 Robin-Coker, O. (n. d.): Mainstreaming Green Growth into Sierra Leone's Agenda for Prosperity 2013–2017.

44 The Republic of South Africa (n. d., a): Renewable Energy Overview.

45 The Republic of South Africa (2005): Energy Efficiency Strategy of the Republic of South Africa.

46 Department of Environment Affairs and Tourism South Africa (2007): Long Term Mitigation Scenarios – Strategic Options for South Africa.

47 The Republic of South Africa (n. d., b): Green Economy Accord.

48 The Republic of South Africa (2010): Green Economy Summit Report.

49 The Republic of South Africa (n. d., c): National Strategy for Sustainable Development and Action Plan.

50 Agricultural Business Chamber (2010): The New Growth Path: The Framework.

51 The Republic of South Africa (n. d., d): National Development Plan 2030.

52 The Green Fund.

53 UNEP (2013): South African Green Economy Modelling Report.

54 International Institute for Environment and Development (IEED) (2014): Inclusive green growth in Zambia – Scoping the needs and potentials.

4 Evidence of Green Economy Benefits

4.1 Introduction

Chapter 2 clearly pinpointed the development challenges being faced in SSA and how a green economy transformation can address these issues. It highlighted how countries are already taking steps to support this transformation and the barriers they may face. To overcome the barriers it is important to be able to make a positive, evidence-based case for Green Growth, to state clearly the benefits.

Understanding practical experiences of countries' efforts to develop a Green Economy was a focus of the recent Green Growth Best Practice assessment[55] and some key lessons can already be taken from this. Among the lessons is the fact that typically the social, economic and environmental benefits of developing a Green Economy are linked (through the pursuit of Green Growth). Therefore while benefits are identified individually in this chapter they are, in reality, interlinked, with Green Growth often resulting in multiple benefits. Another important lesson is that the benefits vary in relevance and importance per country and its specific circumstances. Therefore, while this chapter will give a broad overview of the key benefits, application of this framework to specific countries will require deeper thinking and, wherever possible, benefits should be linked to national development goals and priorities. It is crucial that benefits are targeted, analysed and tracked, and that communication on Green Growth must provide credible evidence which reassures affected parties and addresses the benefits alongside their trade-offs and timings in a balanced way.

The remainder of this chapter presents a summary of some of the key benefits of a Green Economy, with reference to the short case study examples presented in full in Appendix of this paper.

4.2 Economic benefits

Economic development is essential for a country to achieve its development goals. It is perhaps also where many of the biggest questions and doubts about Green Economy are raised, with some questioning its ability to deliver on development priorities. There is now a growing body of evidence which shows that a Green Economy can deliver economic benefits equal to or exceeding business as usual, for example on GDP and employment. It can also offer a range of other benefits as discussed below.

Reduced poverty and social inequality

While increased GDP can address poverty by raising per capita incomes, assuming economic growth is faster than population growth, the distribution of the benefits of economic growth remains important to reducing poverty and social inequality. Green Growth not only targets economic growth and reduced environmental impacts, but it also targets social goals both directly and indirectly. Many green growth initiatives and actions are targeted at natural resources and agriculture, two predominantly rural sectors in which the great majority of people in SSA countries live and work (for example 80 % of people in Ethiopia work in agriculture). This gives Green Growth great scope to improve the lives of people in these areas and situations, addressing poverty in some of the places where it is most keenly felt. Initiatives that help to improve the efficiency of production, provide greater access to modern technology and increased productivity can all change people's day-to-day costs and income, and the lives that they can lead, directly lifting many people out of poverty and reducing income inequality. When these impacts were modelled for Kenya (see Case 1) it was shown that Green Growth was significantly better at reducing poverty, reducing poverty rates by almost 2 percentage points more than a business as usual (BAU) scenario.

55 GGBP (2014).

Increased economic growth and employment

Developing a Green Economy can contribute to increased GDP growth and employment compared to a BAU economic strategy (see Case 1). Case study 1 provides a summary of economic modelling work in South Africa and Kenya which shows that in the long term a green growth strategy can significantly outperform a business as usual economic approach. In Kenya, for example, it results in a 12 % higher GDP than the baseline business as usual scenario by 2030, and in South Africa, Green Growth results in 300,000 extra jobs over the same time frame. This is largely achieved through improvements in economic efficiency for example via: increased yields in agriculture, reduced need for energy imports, improved efficiency of land, water and natural resource use and more efficient infrastructure; while at the same time also reducing the economic costs of pollution and preserving the long term sustainability of natural assets. The issue of timing is important, as often the up-front investment costs of green growth mean that at first it shows no discernible advantage over a BAU approach. The payoff however comes later, in the Case 1 examples after approximately 5 – 7 years. A further important issue is the distributional impact of a green economy strategy. By switching the focus of economic drivers of a country, some sectors will undergo disruption (see Case 5) and there will inevitably be winners and losers between sectors and with regard to employment. Therefore it is important that while economic growth is the goal of green growth strategies, measures are put in place to address the concerns of, or compensate, the 'losers' of such changes (see also Chapter 5).

Improved training and skills

As taking a green economy growth path involves new ways of working and thinking, this requires the work-force to be trained in new skills. This can include entirely new techniques, for example in construction, water management and renewable energy. It can also involve more incremental change, expanding and modifying existing knowledge and skills in agriculture, forestry and fishing. Sometimes it can be as simple as teaching traditional craft skills to help create new sources of income and freeing up time to be spent productively elsewhere. Green Growth can therefore be a valuable catalyst to improve training and skills in an economy, enhancing the human capital within a country to help create a virtuous cycle of knowledge and growth. Sometimes at the start of this transition these skills must be learnt outside the country, which can be expensive, but once developed have the potential to be quickly propagated.

An example of such training can be found in Ghana[56], where in support of its industrial development activities GIZ[57] has supported the Government to implement training on 'Profitable Environmental Management'. This training focuses on resource efficiency and safety to increase companies' profitability. Through focusing on issues such as environmental hazards firms were able to improve their safety on-site and attract new customers, increasing overall business performance.

Development of new markets and specialisation

Pursuing a green economy strategy involves tailoring an approach appropriate to a country's development needs and situation, making best use of its natural assets in a sustainable manner. Green economy investments targeted in this way can help to open up new markets or lead to new and improved economic opportunities through specialisation related to natural assets. Examples of this include the transformation of the timber sector in Gabon (see Case 5) or the Biotrade initiative in Namibia[58] which has identified the bio-sector as a key contributor to the economy with significant further growth potential. The Biotrade initiative is targeting further specialisation and expansion of this sector to increase its share of GDP from 4.5 % to 7 %. In addition, the economic benefits of such an initiative arise in some of the least developed rural communities, helping to reduce overall poverty and inequality. Wider examples of Green Growth opening up new markets for products and services include investments in energy efficiency, renewable energy or sustainable natural resource management, such as LED light bulbs, solar installers and agroforestry. For example, GIZ is also supporting the South African government to develop this new market through the implementation of green skills, such as solar installation, as part of a 'vocational training for climate and environment related occupations'[59].

Increased productivity and increased commodity and agricultural yields

Investments in Green Growth involve doing things in different ways, using new technologies and training people to be more productive. Sometimes the changes may only be incremental, other times more radical, and this can often be a challenge, as it requires identification of alternatives, having the knowledge and skills to implement them, to change existing behaviour and to risk operating outside comfort zones of accepted practice and routine. Yet the end result of green growth initiatives is that they should increase efficiency and sustainability, translating into higher industrial and services productivity and increased agricultural and commodity yields – where you can get more output for the same input. This is important in improving competitiveness and managing resources such as land, water and energy. In SSA, agriculture is one of the key sectors in which to prioritise such improvements. Ethiopia in its CRGE strategy (see Case 4) identified a number of ways in which this can be achieved, such as better residue management, irrigation improvements and organic fertilisers, which could reduce its emissions by 40 Mt CO_2e by 2030 compared to BAU. At the same time, yields from crops would increase from 19 to 22 quintal per hectare and export income from cash crops from USD 0.5 billion today to more than USD 2 billion in 2015. This strategy aims to emulate the successes in places such as Brazil, Thailand, India and China, where significant reductions in poverty have been achieved by focusing on increasing agricultural productivity through green measures. Brazil for example, reduced poverty from 20 % to 7 % between 2004 – 2010 through measures which included green agriculture which was supported through research and development (R & D) and knowledge diffusion, access to finance, trade policies and farm-level capacity building[60].

Improved energy security

Energy security is a big problem for many SSA countries, with significant reliance on imported fossil energy. This means that many countries are faced with high energy bills, are left vulnerable to international price volatility and supply constraints and have high GHG emissions per unit of energy. Green Growth offers ways to reduce these problems in both the short and long term relative to a BAU strategy – although it should be noted that the necessary economic growth in SSA to reduce poverty

56 GIZ (2012): Green Economy in Sub-Saharan Africa – Lessons from Benin, Ethiopia, Ghana, Namibia and Nigeria.

57 On behalf of BMZ.

58 UNEP (2012): Biotrade – A catalyst for transitioning to a green economy in Namibia.

59 GIZ (n. d.): Investing in the future – vocational training for climate and environment.

60 GGBP (2014).

and raise living standards will still require an absolute increase in energy use. Focusing on efficiency measures reduces the imported energy requirements and greening the energy supply with greater use of indigenous fuel or energy sources – especially from renewable energy sources – can improve overall energy security. A further energy security issue of importance is access to energy, with many areas still having no, or limited, access to energy or an electricity grid. Expansion of infrastructure and decentralised generation options such as solar energy can help achieve this is in a sustainable way and with a range of economic and social benefits.

Green economy measures to help reduce energy imports and increase energy self-sufficiency can also have important fiscal and trade balance implications given the issue of energy subsidies. Energy subsidies are often a significant constraint on a governments' ability to take action, swallowing up a large part of public budgets while also being politically difficult to remove without significant opposition as the subsidies are seen as a poverty reduction measure. In reality it is typically the richest groups in society that benefit most from the subsidies, as they already use the most energy. Thus, more targeted payments or social programmes can be much more effective at addressing poverty. Green economy measures include subsidy reform as a crucial element, with large potential positive impacts. Green economy initiatives that don't tackle subsidies directly, but address the wider issue of energy use, can also have a significant impact.

Rwanda, in its green economy strategy 'Green Growth and Climate Resilience', identifies a number of renewable energy projects that can deliver energy independence for the country. Development of its significant geothermal power potential, estimated at 700 MW, could power the entire country in 2020, at a quarter of the price of the oil-fuelled power commonly used at present.

Improved competitiveness and trade balances

Pursuing a green growth strategy can have a variety of positive effects on competitiveness and trade balances. Competitiveness in the short and long term is improved through reducing the cost of production and improving the quality of goods being produced. Green growth focuses on sustainable management of natural resources to ensure their stable and continued supply, it also focuses on efficiency and increasing productivity and yields. Improving infrastructure, reducing and/or greening energy supply and use, adopting innovation, developing domestic markets and industries to reduce the need for expensive imports are all ways in which green growth approaches could improve competitiveness and trade balances. Yet sometimes making these changes to improve competitiveness can involve disrupting the status quo, as it may make a previous investment or skill obsolete or require reforming harmful subsidies which insulate domestic firms from international competition, such as energy subsidies. In Kenya the Green Economy Assessment highlights a number of ways in which the government plans to tackle these issues, from a greater focus on R&D for export-oriented crops to increase exports, to incentivising renewable energy and energy efficiency to reduce energy imports. In Ethiopia (see Case 4) the CRGE programme is planned to increase value added from exports, such as organic agricultural products.

4.3 Social benefits

Goals of development are often strongly social in nature. Economic growth is not intended for its own sake, but to improve the quality of life and to address social challenges of poverty, inequality, exclusion, education and health which exist, to varying degrees, in every country.

Some of the above mentioned economic benefits could equally be assigned to social benefits, such as reduced poverty and reduced social inequality, or increased employment, improved training and skills. To avoid duplication, these benefits have only been listed once.

Better public services

Green Growth will contribute to improved economic success and different aspects of it can contribute to improved fiscal balances for the government as the tax base grows, i.e. through general economic expansion and also specific green growth (e.g. pollution, carbon) taxes or subsidy reform. These specific green growth measures may create some of the initial investment capital to sustain Green Growth. This enables further government spending and investment in public services such as education and health. Harnessing these benefits involves political choices in favour of additional spending in the selected areas.

Improved health outcomes

Green Growth can also contribute directly to health improvements by supporting changes in production that reduce pollution and improve the natural environment, a classic example being the implementation of sustainable transport policies which reduce roadside air-pollution in urban areas. Another example is the transition to more efficient clean cooking stoves which reduce the severe indoor pollution and health impacts of traditional charcoal based cooking. Studies have shown that these can reduce fuel use and serious air pollution emissions (e.g. carbon monoxide and particulates) by between 20 – 70 %[61].

4.4 Environmental benefits

Green economic development takes the environmental impacts of growth into consideration. Its goal is to reduce the environmental impact of economic activity compared to a business as usual approach to economic growth and, where possible, to enhance the natural resource base. Environmental impacts include not only GHG emissions, but also other pollutants released to ground, air or water; local environmental conditions; natural resources; ecosystems; and biodiversity. Green Growth can deliver a range of environmental benefits, including:

Sustainable management of natural assets and resources

Countries in SSA have a range of important natural assets and resources from which life is sustained and people derive their livelihoods. Sustainable management is often as much about preserving the benefits these assets and resources provide, as it is about delivering additional benefits. If done well, Green Growth can deliver on both of these objectives.

Natural assets can be as simple as landscapes, lakes, mountains and rivers, while resources include both renewable and non-renewable natural resources. Natural assets often have important economic, social and environmental characteristics, for example acting as a tourist attraction, spiritual or cultural symbol or fulfilling important ecosystem functions.

Renewable resources can often be equally as valuable as non-renewable resources. Water, forests, soil, fish and biodiversity all provide a range of functions either essential for life or with significant potential for economic benefits. Yet when overexploited these resources decline in quality and quantity, eroding the benefit they deliver. Sustainable management is important to ensure that these resources continue to provide benefits, that water is available for all, that forests still provide wood and other ecosystem services, that soil supports agriculture, that fish stocks are managed sustainably and that biodiversity is preserved.

Green Growth is based around sustainable management of assets and resources to maintain or improve their benefits. Rwanda has clearly identified this within its Green Growth and Climate Resilience' strategy with programmes for integrated water resource management and resource recovery in agriculture, both part of its plan to improve agricultural yields, reduce uncertainty and improve climate resilience.

Reduced GHG and other emissions

Countries in SSA have a mix of responsibilities and laws on the emission of a variety of pollutants. GHGs are among the most important emissions. While SSA countries are among the world's lowest emitters in terms of absolute emissions released[62], they can, by pursuing a green growth strategy, continue to develop and still play a nationally appropriate role in reducing the magnitude of climate change, which is increasingly and particularly affecting SSA countries. Most green growth strategies identified in SSA countries have a strong GHG emission reduction focus as one of their key benefits. For the Ethiopian plan, for example, this is at the heart of the 'green' element, with full implementation of their CRGE plan enabling the country to both meet their economic development goals and to reduce their total GHG emissions.

61 Smith, K. et al. (2007): Monitoring and evaluation of improved biomass cookstove programs for indoor air quality and stove performance: conclusions from the Household Energy and Health Project. Energy for Sustainable Development, 11 (2), pp. 5–18.

62 Aside from some notable emissions 'hotspots', for example from deforestation or high coal use in South Africa.

Green Growth also entails reduction, both relative and absolute, of other emissions to air, soil and water, and better handling of waste in general. This can have significant health benefits to the local population and contribute to improved environmental quality for all. To put these benefits in context, in China, air and water pollution was estimated to cost around 5.8 % of GDP in 2007[63], adding significant drag to actual growth figures, economic potential and government spending as people lived shorter, unhealthier lives than necessary. Pollution also puts more strain on health systems. The biggest problem in reducing these costs and capturing the benefits of growth comes from the often higher upfront cost of green production, which requires better technology and/or management and investment by business or government. While these measures typically deliver a high net benefit in the medium-long term, and sometimes also in the short term, the benefits flow to everyone in society, not only the businesses or governments that invested, this balance of costs and benefits often requires government support to achieve the benefits.

Better adaptation to climate change and resilience to natural disasters

The benefits of a Green Economy can also contribute to building a countries' resilience to environmental change or shocks. The environmental benefits combine to improve the physical resilience of economic and natural assets and systems to climate change and natural disasters. Wider resilience is supported by the economic and social benefits of Green Growth, with improved education, health and income all enabling people to better adapt to and survive such events or changes. This can also be an area of new product and market development such as through insurance or micro-credit. An example of a green growth product supporting adaptation is agricultural insurance in Ghana where a drought-index based crop insurance product has been launched to protect individual crop farmers, and rural banks and lenders to farmers[64].

Improved environmental quality

Local environmental quality forms an important part of daily life and wellbeing. Waste and pollution in the local area can have both a demoralising effect as well as serious physical consequences in terms of damaging infrastructure (i. e. blocked drains) and affecting human health (poor sanitation). Green Growth can help to address some of the root causes of these problems, improving the systems to deal with local pollution and waste by encouraging greater waste collection, treatment, re-use and recycling and preventing the generation of pollution or waste in the first place. It often has a low priority in development and faces particular difficulties if it is necessary to generate an economic case for providing a service when people are too poor to pay for it. Yet the longer term health benefits, the reduction in infrastructure maintenance costs and the general increase in well-being can all lead to an overall benefit. Sometimes measures also require only a small amount of action, for example plastic bag bans or charges have been highly successful at reducing plastic waste. These have been implemented in a variety of SSA countries such as Botswana, Cameroon, Kenya, Malawi, Mali, Mauritania, Nigeria, Rwanda, Tanzania and Uganda. One of the most successful and earliest examples is found in South Africa where thin plastic bags were banned in 2003 and a charge introduced for thicker bags, this immediately reduced bag use by 90 %, although this has slowly increased again since.

63 The World Bank (2007): Cost of pollution in China – economic estimates of physical damages.

64 GIZ (2012).

5 Key Arguments for Green Growth

For countries in the SSA region, a full green economy approach to development would be a departure from business as usual. The countries highlighted in Chapter 3 are already making progress on greening their economy, by taking a more incremental approach. Larger moves towards green economy often require redesign of national development strategies in ways that might initially seem inconsistent with the countries' current economic advantages and planned investments[65]. The transition to a Green Economy is unlikely to always be straight-forward, and will require strong leadership, particularly from government[66]. In the SSA context, proactive government intervention is essential to implement such an economic transformation.

Addressing poverty, stimulating economic growth and development, and addressing resource scarcity and climate change requires the negotiation of trade-offs between multiple stakeholders and sometimes radical policy choices[67]. Leadership for such a transition is unlikely to be driven by the private sector and cannot be left to markets alone, so government leadership is necessary to make and enforce potentially unpopular decisions where benefits may not be immediately evident in the short term[68]. To do this, government must make a strong case for action.

In this chapter we build upon the evidence presented in the previous chapter and draw upon the case examples in the appendix to outline some of the key arguments which can be used to support the case for making the transition to a Green Economy.

Strengthen medium and long-term economic prospects

There is now growing evidence which demonstrates how a green economy can outperform business-as-usual in the medium and longer term[69] (see Case 1). New or redirected investments, which support the development of a Green Economy, can have strong leverage effects and create many win-win situations and consolidated benefits to overcome the development challenges faced by SSA countries. For example, sustainable land-use and farming methods can quickly reverse environmental degradation, create added value and open access to new markets, boost productivity and improve long term food security[70]. Improved productivity increases earnings, stimulates job creation and reduces the rate of conversion of grassland and forest which preserves biodiversity[71] (see Cases 4 and 5).

Reduce exposure to risk in existing economic growth pathways

SSA countries face increasing challenges to their current model of economic growth and a green economy approach can help to reduce exposure to these risks. According to the International Monetary Fund (IMF) favourable factors that have supported growth in the region have already begun to weaken. In particular changes in global demand are causing commodity prices to weaken and tighter global financial conditions have raised the cost of financing for many countries. If these trends continue, they are likely to act as a drag on growth in many countries in the region[72]. Therefore inaction is likely to have a high cost as current levels of growth are unlikely to be sustained in their current form over the medium to long-term. Furthermore, climate change impacts will lead to increasing risks of disruption, particularly in the land-based sectors of the economy where crop, livestock and forest yields are increasingly at risk. A green economy transformation can help transform and diversify the economy to build a more resilient

65 Resnick, D. et al. (2012): The Political Economy of Green Growth – Illustrations from Southern Africa. UNU-WIDER Working Paper 2012/11.

66 GGBP (2014), Chapter 1.

67 UN ECOSOC (2011), p. 2.

68 Smith, N. et al. (2014): Transitioning to a Green Economy – Political Economy of Approaches in Small States, p. 10.

69 The New Climate Economy Report (2014).

70 UN ECOSOC (2011), p. 4.

71 Salami, O. A. / Ajao, O. (2012): Analysis of Agricultural Productivity Growth, Innovation and Technological Progress in Africa. Paper presented at the American Economic Association (AEA) / Allied Social Science Associations (ASSA) Annual Meeting, Chicago, USA, January 5–8, 2012, quoted in AfDB (2012), p. 65.

72 International Monetary Fund (IMF) (2014): IMF Projects Robust Growth in Sub-Saharan Africa, Amid Shifting Global Forces.

economic pathway to mitigate such risks in the medium and long term. Ensuring natural assets and resources provide both short and long-term development gains

Natural capital assets (renewable and non-renewable) are key to future wealth creation, employment, livelihoods, and poverty reduction in the SSA region and currently account for 24 % of the SSA's total wealth[73], as calculated by the World Bank[74]. These assets are under increasing pressure from sustained exploitation, putting at risk their ability to support future economic activity. For example, the fishing industry is already reaching its limits in terms of healthy fish-stocks[75]. Green economy approaches could offer new solutions to ensure long-term conservation (i. e. via regulation and sustainable management and certification to prevent fish-stocks collapsing) and creation of new markets for capital and labour displaced by such regulation (e. g. through the development of sustainable aquaculture). Natural assets also have aesthetic value important for tourism (which counts for 7.3 % of the SSA GDP[76]). Preserving and enhancing natural assets such as wildlife, and bio-diverse habitats such as forests (e. g. Case 5) can ensure an important source of income, livelihood and jobs for many SSA countries and provides a good starting point for a transition towards a Green Economy[77].

Improving quality of life and securing votes

A Green Economy can create distributed benefits which improve quality of life and confer political and economic benefits in the short and longer term. For example, making the transition to more efficient domestic cook-stoves leads to improved health outcomes and household energy costs which can have direct short-term benefits for quality of life and economic productivity. Similarly, bringing sustainable electricity to the rural poor can be a powerful mechanism for growth and poverty reduction[78] and can help improve satisfaction with government and secure votes for political leaders. A healthier living environment and access to electricity can then create the conditions for further development gains such as improved education which offers the potential for longer-term benefits to the economy through development of a healthier, more educated future workforce.

Political prestige and attracting investment

Embarking on a green economy transition can bestow on a country a degree of regional or international prestige, generating political support and international donor finance to support such efforts (see Cases 2 and 3). Such support, together with the communication of a clear green economy policy framework can also help create attractive conditions for foreign investment.

73 UN ECOSOC (2011), p. 7.

74 The World Bank approach places a value on the three key wealth categories Natural Capital, Produced Capital and Intangible Capital and provides a view on the assets of a country (equivalent to its balance sheet), while GDP measures the flows (value) generated by these assets.

75 AfDB (2012), p. 15.

76 The World Bank (2013b): Tourism in Africa – Harnessing Tourism for Growth and Improved Livelihoods, p. 3.

77 GIZ (2012), p. 12.

78 UN ECOSOC (2011), p. 17.

6 Opportunities for Technical Cooperation to Support a Green Economy Transformation in Sub-Saharan Africa

Recent reviews of national green growth, green economy, low emission, low carbon and climate resilient development plans confirm that there is no single successful model, but rather a range of common process elements which countries are using to develop and implement their strategies[79].

In this final chapter, we suggest a number of areas for technical cooperation and assistance, such as that provided by GIZ, could provide helpful interventions in such processes to support the progress of green economy transformation across the SSA region. We distinguish between four assistance areas: policy advice; institutional and human capacity development; cooperation, partnerships, participation and communication; and methodological support.

6.1 Policy advice

- **Designing and implementing reform** – Providing direct assistance in reforms, drawing on international best practice of successful reform processes, can be very helpful in various areas, for example in energy subsidy reform, agricultural land reforms, building code reforms, appliance efficiency measures, and many other fiscal and policy areas. Reforms should also support the creation of appropriate political, legal and regulatory frameworks for inclusive green growth. GIZ has experience in helping develop policy frameworks that mobilise the capital needed for investment in environmentally sound production processes, technologies and services, for example through the use of suitable financing instruments. Advice can also draw upon the results of the methodological assistance described in section 6.4.

- **Selecting and supporting investment policies** – With limited public funds available for green growth projects, public investments will need to target projects and programmes that are likely to have the greatest possible impact in terms of stimulating economic growth and reducing negative environmental impacts, especially to leverage private financing[80]. In addition to that GIZ advises at policy level on how an appropriate political, legal and regulatory framework can help mobilise the capital needed for investment in environmentally sound production processes, technologies and services and make it available to businesses via suitable financing instruments.

- **Establishing new fiscal policies** – Policy reforms, such as in the area of subsidies, can free up significant new budget, and using this fiscal benefit wisely is important. Assistance in fiscal planning and policy can help, for example many fiscal stimulus packages can plan large investments to boost the development of new green industries and businesses. Fiscal policies can also involve changing the incentives and financial framework for firms, for example by modifying subsidies or introducing new taxes. GIZ can assist in this, for example in the minerals sector, designing reform of subsidies and taxes on pollution so that these reforms are fiscally neutral but incentivise and reward more environmentally-friendly production methods[81].

79 GGBP (2014).

80 AfDB (2012), p. 146.

81 UNECA (2012), p. 13.

6.2 Institutional and human capacity development

- **Strengthening institutions** – For example to more effectively manage natural assets and carry out target-oriented implementation of a green growth strategy. Public services as a whole, but especially the justice and legal systems, are important foundations of an enabling business environment for the green economic transition. Businesses and people need their rights to be respected and protected by an effective justice and legal system, for businesses especially this increases their confidence to invest. Increasing the capacity of the government to enforce its own rules is also crucial to successful green growth, to create a level playing field for businesses and to ensure sustainable use of resources. GIZ can support capacity development in these vital areas.

- **Human capacity development** – Goes hand-in-hand with strengthening institutions and creating an enabling business environment. This should specifically encompass fundamental development in the areas of education and health. Education, as the transition progresses, and institutions, will require an educated workforce, with better basic skills and new knowledge. Health, as a healthy workforce is important to maintain productivity and healthy children who are able to attend school will create the workforce of the future. Support to improve the provision of these services in a sustainable way can aid the green economy transition.

- **Skills and knowledge development** – For using new information tools or developing and implementing green technology and resource efficient practices such as sustainable farming methods or the deployment of energy efficiency and renewable energy technologies. Support can include assisting in standards development, vocational training courses, national certification and qualification organisations.

6.3 Cooperation, partnerships, participation and communication

- **Promoting international and regional cooperation** – Facilitating collaboration with international partners (e.g. donors and investors) and neighbouring SSA countries, for effective trans-boundary investment and management of common resources such as rivers, lakes, forests and wildlife.

- **Supporting technology transfer, innovation and R&D** – For example through enabling international partnerships to support effective technology transfer and advising on how to encourage innovation, and to most effectively administer and implement research and development activities.

- **Facilitating stakeholder involvement** – Implementation of new green economy policies will often require the engagement of diverse stakeholder groups (government, private sector, civil society and academia). Such groups will require effective facilitation, e.g. bringing various government ministries and other stakeholders together in strategy development. More specifically, improving links and information-sharing between practitioners and scientists can also be important, e.g. the Green Economy Stakeholder Dialogue that started in 2011 in Namibia, facilitated by GIZ, with national and regional representatives from ministries, international and non-governmental organisations, unions and journalists and which provided specific inputs for the National Development Plan.

- **Communication campaigns** – helping to design effective social marketing and communication campaigns to support green economy measures and encourage behaviour change. Targeted and efficient messages in public campaigns, can lead to change in attitudes and consumption habits with less impact on the environment. Responsible advertising and green marketing are also tools to help consumers make informed choices on products and services.

6.4
Methodological support

- **Diagnostics** – Upstream diagnostics can determine which approach is most appropriate for a particular country from an economic, social and environmental perspective, helping to provide an evidence base for policy makers. Moreover, targeted analytical advisory and economic sectoral work can support countries in improving their knowledge base for investment planning e. g. for identifying least cost mitigation options within or across development sectors as in the example of the CRGE in Ethiopia (see Case 4)[82].

- **Tool design and use** – Many new tools are needed for implementing green economy measures, for example in spatial planning to map land use; in water management to more effectively use and treat water; and also in economic planning, to mainstream green growth principles into development plans and sectoral strategies.

- **Monitoring and evaluation** – helping to design indicators and systems and processes for collecting, analysing and communicating data. Using indicators as a tool for identifying priority issues, formulating and assessing green economy policy options, and evaluating the performance of policy implementation. This is important to effectively monitor and evaluate progress towards achieving green economy outcomes.

82 AfDB 2012, p. 155.

Appendix: Case Studies

CASE 1:
Creating the evidence base for a green economy transition: modelling green growth benefits in South Africa and Kenya

Higher GDP growth	✓	Reduced emissions	✓
Higher employment	✓	Improved agricultural yields	✓
Reduced poverty	✓	Sustainable water resource management	✓

Context

One of the key supporting arguments for Green Growth is the economic benefits that it provides. Modelling in South Africa and Kenya have demonstrated that economic growth and employment are higher in a green economy scenario than in business as usual economic approaches.

Policy intervention details

Economic modelling was carried out in South Africa and Kenya as part of UNEP green economy assessments. In both cases the system dynamics Threshold 21 economic model was used, and was tailored to the specific national circumstances in these countries. The model allows for different development strategies to be compared by their economic, societal and environmental impacts. Two business as usual (BAU) scenarios and their green economy equivalents were modelled, both differentiating the types of economic investments made. One pair of scenarios compared continuing current trends and the second scenario compared trends under a BAU versus a green economy scenario, where in both cases an additional 2 % of GDP was invested in the economy.

Barriers and trade-offs

The main limitations of the model is its focus on only a few key sectors, such as agriculture, transport and energy; and that the 2 % scenarios assume an increase in investment but do not address where these additional funds come from. Additionally, in the short term, green economy scenarios perform approximately the same as BAU scenarios, their advantages only becoming evident after 7 – 10 years.

Benefits

The modelling results in both cases show significant additional benefits of Green Growth, with both higher GDP and employment in 2020 and 2030 compared to equivalent BAU scenarios. For example in South Africa a green economy scenario delivers 300,000 more jobs than the BAU scenario by 2020, and R3 billion more GDP. In addition the green growth scenarios result in lower emissions, less water stress and higher shares of renewable energy than their BAU equivalents. These results were also evident in Kenya, with the green economy – 2 % scenario significantly outperforming a BAU –2 % scenario on measures of GDP (+12 % above baseline by 2030), emissions (9 % lower than BAU), poverty reduction and crop yields (+15 %).

Other examples

Previous economic-energy-environment modelling was also carried out in Kenya as part of the National Climate Change Action Plan. More limited modelling work has also been carried out in Ethiopia and Rwanda, focusing on modelling emissions growth and qualitatively assessing the expected economic and social impacts of green economy initiatives or projects.

Sources:

UNEP (2013, 2014)

CASE 2:
Financing the Green Economy: the FONERWA fund in Rwanda

Attracted foreign and private investment	✓	Reduced emissions	✓
Sustainable natural resource management	✓	Increase in sustainable energy	✓
International recognition and visibility	✓	New markets identified	✓

Context

Attracting finance for green growth in Rwanda through the creation and operation of a national fund for the environment and climate change (FONERWA) has been successful in enabling a variety of projects to progress and in raising the country's profile as an early mover in implementing a Green Economy.

Policy intervention details

The FONERWA fund is an initiative of the Rwandan government and followed from the creation of their national strategy for 'Green Growth and Climate Resilience (GGCR)' in 2011. The FONERWA fund was designed by a team of local and international experts and launched in pilot form in June 2013 following a USD 37.4 million grant from the UK government.

Barriers and trade-offs

The fund managed to overcome some of the biggest barriers such as access to finance through the attraction of foreign direct investment from the UK. It successfully overcame political barriers by rooting the development of the fund within Rwandan law (Organic law 4/2005). It was also important that the design team for the GGCR secured buy-in and ownership from a wide range of stakeholders including 10 Rwandan cabinet ministers from the outset, creating a solid platform for FONERWA. Finally, the fund, by having joint management by both the Ministry of Finance and Economic Planning and the Rwanda Environment and Management Authority (REMA), ensured green goals were aligned with the national development vision.

Some problems in terms of over-ambition of objectives, small-scale applications, and delayed disbursement have been faced, but these are being addressed as the programme learns lessons from the pilot phase.

Benefits

FONERWA has since funded 18 projects in the areas of sustainable energy (i. e. supporting mini-hydro in Gaseke), waste management (i. e. supporting creation of a national e-waste strategy), integrated sustainable water management (i. e. rainwater harvesting and watershed protection projects), green planning, environmental rehabilitation and new market development (i. e. a project to identify Rwandan mushroom species with export potential). FONERWA has attracted further financing totalling around USD 18.3 million from project developers, partners and other donors. The success of this pilot stage has led to the Government of Rwanda announcing full establishment of the fund in October 2014 with the intention for it to be the engine of green growth in the country.

Other examples

Similar funds are active in other African countries, such as the successful South African Green Fund (www.sagreenfund.org.za).

Sources:

FONERWA, Climate & Development Knowledge Network (CDKN) (2013)

CASE 3:
Incentivising sustainable energy: the feed-in-tariff in Kenya

Reduced emissions	✓	Improved competitiveness	✓
Increased energy security	✓	Job creation	✓
Insulation from volatile global prices	✓	Learning and skills development	✓

Context

The Kenyan FIT is a policy instrument which supports renewable energy production as part of Kenyan sustainable energy policy to supply affordable and reliable power, and to increase supply from 1,750 MW in 2013 to 5,000 MW by 2016 to provide energy for industry and to help households that are still reliant on traditional biomass or kerosene and to increase electrification from only half of the population.

Policy intervention detail

The FIT was introduced in 2008 to address energy supply problems. As part of the energy policy it enables priority grid access to renewable energy and long term (15 – 20 years) power purchase agreements at guaranteed prices per kWh of approximately USD 0.08 – 0.20/kWh, compared to USD 0.22/kWh for diesel generated power. The FIT is expected to trigger the generation of an additional 1,300 MW of electricity from renewable energy sources over the next five years. It is supported by other policies and regulations, such as VAT reductions for renewable energy equipment and solar water heating regulations.

Barriers and trade-offs

The FIT policy has begun to overcome barriers of financing, by providing guaranteed returns to investors, but take up has been slow. Regular policy reviews (every three years) have helped to revise tariffs and streamline a complex process. Kenya is somewhat fortunate to have significant renewable energy potential, for example in geothermal and hydro power, and limited fossil fuel resources. Success of the FIT scheme may cause problems with affordability further in the future, much as they have in countries such as Spain and Germany. It is unclear exactly how the FIT policy is incorporated in national budgets, although budget allocations for energy are significant. This also involves an element of trade-off with other public spending, though it can also help reduce subsidy and import costs.

Benefits

Some projects are already operational, including three small hydro plants and 26 MW from the Mumias sugar co-generation plant. Further large geothermal, wind and hydro power projects also have government commitment. For example the 300 MW Lake Turkana wind power project has reached financial completion and should be fully commissioned by mid-2016, while at least 810 MW of geothermal power is being developed by the Kenyan Geothermal Development Company. These successes are expected to reduce emissions, improve energy supply, generate employment, particularly rural employment, and improve the trade balance by reducing energy imports. A further benefit of reduced energy imports is insulation from volatile international commodity prices. Implementing these projects involves a mixture of international and local labour, providing excellent opportunities to learn and build local capacity, while also providing an opportunity for skilled local workers.

Other examples

FIT policies are also being used in other African countries including: Rwanda, Uganda and Tanzania.

Sources:

UNEP (2014), Energy Regulatory Commission of Kenya (2012), Mungai, O. (2014), Wang'ombe, E. (2014), Lake Turkana Wind Power, Geothermal Development Company Kenya

CASE 4:
Conserving natural assets: sustainable land management in Ethiopia

Sustainable land management	✓	International recognition and visibility	✓
Sustainable water resource management	✓	Attracted foreign and private investment	✓
Leading role in land restoration	✓	Local ownership	✓

Context

Ethiopia set out its strategy for a 'Climate-Resilient Green Economy' in 2011 which provides a national vision for economic development, with the goal of achieving middle-income country status and climate neutrality by 2025 through green growth. The pillars of the strategy are the key economic sectors of agriculture, forestry, power and transport and a strong focus is placed on sustainable land management, given its importance for the country's economy and its (largely rural) population. A dedicated Sustainable Land Management Programme (SLMP) has been established to support implementation of the strategy this area.

Policy intervention detail

SLMP aims to restore 15 million hectares of degraded and deforested land into productivity by 2025 (one-sixth of the country's total land area) via:

- Promoting sustainable land management (use of terracing, crop rotation systems, and improvement of pastureland and permanent green cover).
- Adopting irrigation and growing crop varieties able to withstand water shortages.
- Participation of local communities in the planning and implementation of activities.
- Using simple technological solutions.
- Learning from restoration success stories.

Barriers and trade-offs

Local community members provide several days of free labour per year, engaging in activities such as: planting trees and vegetation; building check dams and other structural soil and water management measures to control expanding gullies; creating and enforcing non-grazing/ protected areas and implementing other sustainable land management practices.

Benefits

The programme has so far demonstrated a range of benefits including:

- 250,000 hectares of degraded land in Ethiopia's highland areas of Amhara, Oromia and Tigray – in which over 50 percent of Ethiopia's 94 million people live – has so far been restored to productivity.
- Increase of water availability for agriculture: The area under irrigation increased from almost 5,000 hectares in 2000 to 30,000 hectares in 2008, and it's continued to expand since.
- Increase of agricultural productivity.
- Increased climate resilience of the rural population.
- In 2014, over 30 million people have benefited from the SLMP.
- Leverage effect for international support: The World Bank along with the government of Norway has expanded the programme from 45 to 135 watersheds in the six states under its second phase (SLMP-II).
- Raising awareness of the work done in Ethiopia (e. g. the Wold Bank documentary 'Greening Ethiopia's Highlands: A New Hope for Africa'); as a result of which Ethiopia is now recognised as a leading African country in relation to Green Economy, climate and land restoration.
- Increased added-value product exports including organic food.
- Bringing local communities together for creating, rehabilitating and managing a public good.
- Behaviour changes: Using recycled ground water to irrigate fields year round.
- Inclusion and targeting of marginalised communities in the programme: Women and youth who were part of the solution and beneficiaries of the success through a new redistribution of lands to address land shortages.

Sources:

The World Bank (2013c), Sustainable Land Management Ethiopia

CASE 5:
Economic diversification: sustainable forest management in Gabon

Sustainable forest resource management	✓	Reduced emissions	✓
Higher GDP – timber industry	✓	New and higher skilled jobs	✓
Positive outcomes for the tourism sector	✓		

Context

Initiated in 2009, the 'Green Gabon' strategy, driven by the vision and political leadership of the country's president, Ali Bongo Ondimba, aims to help transform the country into a strong emerging economy as part of the broader economic strategy 'Emerging Gabon'. Supporting the aim of diversifying the economy, reducing dependence on oil and gas revenues and developing potential in other sectors, the country is successfully transforming its forestry sector with some promising economic benefits.

Policy intervention detail

Key elements of implementation include:

- Adapting the regulatory framework: Encouraging investments for example via attractive tax policies.
- Financial support for the transition, such as to help the transformation of local companies towards more sustainable practices and for the extension and management of protected areas.
- Stimulating international cooperation: Gabon is leading regional cooperation to face international competition in the timber sector and is improving its inclusion in international networks to receive more support from international partners.
- Certification policy through the Forest Stewardship Council (FSC).
- Creation of an national executive agency (AEAFFB) to support the timber sector and make Gabon a world leader in the exploitation of tropical wood industry by 2020.

Barriers and trade-offs

- Lack of appropriate technologies to control deforestation and environmental impacts.
- Governance and skills challenges in the sector.
- Lack of investment: Creation of support funds to promote the national wood industry sector.
- The main trade-off took place in the complete restructuring of the timber sector. The introduction of an export ban on logs in 2009 (to encourage transformation of the sector) saw the loss of many companies and a fall in the timber sectors' contribution to GDP. In 2011, as transformation efforts began to take effect, the share of GDP then recovered, jumping from 0.9 % in 2009 to 2.3 % in 2013.

Benefits

Efforts under the Green Gabon strategy anticipate a range of benefits including:

- Economic: Increased added-value and growth in earnings, i. e. through certification and export of high quality timber.
- CO_2 Emissions: Forest protection will reduce emissions by 20 million tons of CO_2 a year, the aim being to reach 50 million tons in 2015. It could also lead to the development of the Gabonese forest as a strong carbon sink.
- Employment: By processing timber entirely at the local level, the increased added-value in the sector has led to increased employment (currently around 28 % of the economically active population) and presents significant potential for further growth.

- Regional leadership: Developing the wood transformation industry will make Gabon a leader in the region.
- Better infrastructure and the creation of a special economic zone for the sector.
- International attractiveness: Improved forest conservation is expected to improve tourism attractiveness, lead to improved infrastructure and attract foreign investors.
- Education: The timber sector is driving skills and knowledge development to support growth in the sector.
- FSC certification of timber opening new export markets.

Sources:

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