



UGANDA GREEN GROWTH  
DEVELOPMENT STRATEGY:

**IMPLEMENTATION ROADMAP –  
FROM STRATEGY TO ACTION**



***"Sustainability is about simultaneously looking after the three Es;  
the Environment, the Economy and Everyone".<sup>1</sup>***

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1 Sustainable Business Team, Government for South West, UK, 2000.

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## FOREWORD

As we continue to implement the Uganda Vision 2040 through medium term five-year National Development Plans to achieve the envisaged transformation, it is increasingly important to identify various efficient approaches to development that not only generate conventional economic benefits, such as increased per capita income, poverty reduction, employment and macroeconomic stability, but also bring social and environmental benefits for all. The main reason for this paradigm shift is to ensure equity and inclusiveness to avoid leaving any one behind, as the 2030 Agenda stipulates. The green growth development model therefore presents a sustainable approach that can be adopted to accelerate the transition to middle income status while conserving the integrity of our environment and natural resources.

The Government has developed the Uganda Green Growth Development Strategy (UGGDS) to operationalize the principles of green growth espoused in the 2030 Agenda (SDGs), the Uganda Vision 2040 and the second National Development Plan (NDP II) (2015/16-2019/20). The strategy identifies catalytic investment areas for prioritization in the transition towards a green economy. These are; sustainable agriculture production; natural capital management with a focus on tourism development; sustainable forestry, wetlands and optimal water resources management; green cities (planned urbanization); and sustainable transport and energy for green growth.

To operationalize the UGGDS, the Global Green Growth Institute has partnered with Government to develop a National Implementation Roadmap: an action plan that sequences interventions for the short, medium and long term. The short-term interventions will be implemented over the NDP II period while the medium-term and long-term interventions will be incorporated into subsequent NDPs in line with the Uganda Vision 2040.

I wish to rally all sectors to integrate green growth interventions into their expenditure decisions through incorporation in their budget framework papers, to foster the implementation of this roadmap and the strategy at large. Indicative costs indicate that implementation of the Uganda Green Growth Strategy and its Roadmap will cost about US\$11 billion. I also urge all development partners who intend to supplement Government financing of green growth initiatives in the country to follow the guidance provided by UGGDS and its roadmap.

The Government of Uganda is committed to following a green growth path in pursuit of its development goals and aspirations. We are also glad to partner with the Global Green Growth Institute in actualizing plans and priorities. We shall continue to work together in advancing the green growth agenda during the implementation of the Uganda Vision 2040.



Kisamba-Mugerwa (PhD)  
Chairperson, National Planning Authority (NPA)

## 1

# INTRODUCTION

## National Development Goals

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Uganda aspires to transform itself from a largely peasant to a modern and prosperous country by 2040. This is to be achieved through strengthening fundamentals to harness developmental opportunities in the tourism, agriculture, water resources and industrial sectors, among others. Given that all these opportunities are related to natural resources, a model that spurs inclusive economic growth while conserving the natural environment is an area worth exploring.

Increasing the number of rich people with enormous wealth can significantly increase GDP and propel Uganda to middle income status regardless of the implications of such growth for the environment and its social impact. While there are several countries that have achieved middle income status through pursuit of this development path, they still grapple with challenges of rampant income inequality, poor socioeconomic and physical infrastructure and a relatively degraded environment. This has compounded the poverty of the most vulnerable groups of society through climate change impacts and loss of livelihoods and has impeded overall national socioeconomic transformation through imposing high dependence burdens on the Government and a few productive individuals.

To avoid such an outcome, Uganda plans to pursue an inclusive, resilient and environmentally conscious low carbon development path through implementation of the UGGDS. The green growth model provides the ideal path to sustainable development. The purpose of this roadmap therefore is to provide a sequence of interventions and project ideas that can be implemented in the short, medium and long term to achieve green growth in line with the UGGDS. But first, it is necessary to define green growth.

## Defining Green Growth

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There are a number of green growth definitions from several international green growth stakeholders. The Global Green Growth Institute defines it as a growth paradigm characterized by a balance of economic growth and environmental sustainability. For green growth to be relevant to Uganda, it must seek to counter existing socioeconomic and environmental challenges that have been partly compounded by the conventional development path. The green growth model should therefore be packaged to accelerate economic growth and resilience, balanced development, resource efficiency and equity in development. Consequently, green growth in Uganda's context is defined as:

*“An inclusive low emissions economic growth pathway that emphasizes effective and efficient use of the country's natural, human, and physical capital while ensuring that natural assets continue to provide for present and future generations.”*

## Context of the Road Map

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Nationally, this roadmap is nested in the UGGDS. The UGGDS seeks to implement the green growth tenets espoused in the Uganda Vision 2040 and in NDP II (2015/16-2019/20). These provide the macro national strategic direction for green growth. Accordingly, the UGGDS has been developed to unpack the macro green growth principles in the Uganda Vision 2040 and the NDP II. This roadmap seeks to operationalize the green growth strategies and thematic areas of the strategy through sequencing of actionable areas for the short term, medium term and long term.

The Global Green Growth Institute (GGGI)'s Country Planning Framework (CPF) for Uganda provides another context for the roadmap. The GGGI CPF is a blueprint of envisaged strategic goals, objectives and interventions to be pursued by the GGGI in Uganda. Other global commitments and frameworks that guided the roadmap include the 2030 Agenda on Sustainable Development and the RIO +20 outcome document on the future we want. The “Future We Want” document underscores the transition to green growth as a means towards sustainable development. It emphasizes that transitioning to green growth will contribute to alleviating poverty, sustained economic growth, enhancing social inclusion, improving human welfare while creating opportunities for employment and decent work for all within planetary limits.

## A Glance at Uganda's Green Growth Landscape

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Uganda's green growth landscape has been shaped by the global landscape and commitments on green growth, most notably the outcome document of the Rio+20 Conference, which directed parties to pursue principles of green growth. However, Uganda has phrases and sections in its National Constitution that resonate with green growth principles in addition to other national communications and reports on global commitments ratified.

This suggests that whilst Uganda has just developed its green growth development strategy, the concepts of green growth and a green economy have been reflected in various planning documents and several green growth strategic interventions have been implemented by at sectoral and local government level. This is indicated by a myriad of policies and legal instruments with green growth references. It is also important

to note that several green growth initiatives on green jobs, sustainable consumption and production, inclusive green growth and poverty alleviation are under implementation by several government Ministries, Departments and Agencies in the absence of a roadmap to guide the sequencing of implementation.

At the institutional level, the National Environment Management Authority (NEMA) is Uganda's focal institution on sustainable development and has spearheaded national reporting on sustainable development globally. Given the multi-faceted nature of green growth, it is increasingly becoming clear that there is a need for concerted effort from all stakeholders, both state and non-state actors. As such, the National Planning Authority (NPA) coordinates national green growth planning and other institutions undertake implementation.

## Rationale for a Green Growth Development Path

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Uganda is a developing country with a wide spectrum of development priorities in the face of tight budget constraints. One might wonder therefore why such an economy ought to shift away from the seemingly cheaper conventional growth paradigm characterized by tradeoffs between economic growth and natural capital sustainability, or alternatively referred to as “develop first” and “clean up later” to a green growth pathway. This question is answered by the growing empirical evidence drawn from countries such as South Korea that have simultaneously attained inclusive economic growth and environmental sustainability.

The conventional growth model not only generates unsustainable growth but also raises environment risk and constraints on future generations' ability to meet their development needs. With the increasing demand for energy, water, high levels of urbanization and climate change vagaries, ***a green growth path is a must rather than an alternative for Uganda.***

Today like never before, there is empirical evidence that the green growth path is more sustainable, profitable and inclusive than the conventional economic growth development path. According to a comprehensive study: 'Achieving Uganda's Development Ambition - The Economic Impact of Green Growth – An Agenda for Action' undertaken by the Government of Uganda in partnership with the Global Green Growth Institute and the New Climate Economy, by 2040, transition to a green growth path will result in accelerated economic growth, earlier achievement of development targets, faster socioeconomic transformation and a cleaner environment than the Business as Usual scenario (conventional development path). The study also enumerates the following benefits arising from the green growth transition:

**Gross Domestic Product (GDP):** Several green interventions are identified in the agriculture, energy and urban infrastructure sectors which when fully implemented have the potential to boost economic activity by an additional 10 percent of GDP by 2040 as compared to the conventional development path. This implies benefits of US\$3.4 billion in 2020 and US\$ 11.5 billion by 2040.

**Employment:** a green growth transition will also deliver an additional four million jobs in green agriculture, waste management and recycling, renewable energy equipment assembling and installation among others. The transition will support up to 1.3 million new jobs by 2020, rising to 4 million by 2040. This is key to a country like Uganda that is grappling with youth unemployment.

**Green House Gas Reduction:** the report also reveals that a green growth scenario will reduce the effect of greenhouse gas emissions by 28 percent relative to a conventional growth pathway.

**Reduced Monetary Cost of Development:** while the transition requires an estimated expenditure of US\$ 1.8 billion annually up to 2020, three quarters of the investment required is already included in the government's current plans. Although certain areas require enhanced investment, some interventions like smarter urban development could reduce infrastructure costs by an estimated 11 percent while improving access to basic services. The rate of return on most new investments makes economic sense and leads to sustainable development benefits.

### Secondary Justification for Green Growth in Uganda

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Developing countries such as Uganda are natural resource-based and as such, their development is dependent on the stock and quality of available environment and natural resource capital. In light of the country's economic transformation prospects, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency and prevent the loss of biodiversity and ecosystem services, improving the livelihoods of poor people who are dependent on nature. The Uganda Vision 2040 highlights many core infrastructure and industrialization projects that must be implemented over the vision period. However, implementation of these projects without paying attention to green growth principles will have adverse impacts on the environment and undermine sustainable development.

Globally, the world is moving towards green growth in the face of resource constraints and the need to reduce environmental risks and scarcities. In September 2015, the World adopted the 2030 Agenda on Sustainable Development at the 70th United Nations General Assembly. The SDGs, particularly SDGs 7 – 15, are closely aligned with green growth principles. They emphasize affordable and clean energy, decent work and economic growth, industrial innovation and infrastructure, reduced inequalities, sustainable cities, responsible consumption and production, climate action, life below water and life on land respectively. These are the intended outcomes of green growth. Similarly, the Paris Agreement on Climate Change signed in December 2015 also aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

Green growth advocates for low carbon development and therefore presents a pathway for Uganda to contribute to the implementation of the global climate change goal. As of 1 November 2016, Uganda and 86 other Parties had ratified the Paris Agreement on Climate Change. Uganda's emissions are among the lowest in the world, but green growth provides an opportunity for Uganda to be part of the global solution to increasing temperatures driven by high greenhouse gas emissions.

According to the Uganda Vision 2040, Uganda intends to urbanize by 60 percent by 2040 and increase the share of manufactured exports as a percentage of total exports from 4.2 percent in 2012/13 to 50 percent by 2040. This entails large scale industrialization and production over the Vision period. It is also noteworthy that one of the development strategies mentioned in the Uganda Vision 2040 is leapfrogging in terms of technology. Green growth strategies are the most suitable in pursuit of this strategy. Green technologies, innovations and ecofriendly technologies spur growth and innovation with minimal impacts on the environment. Developing innovative green solutions to address climate change, food and energy shortages requires strengthening science, technology, research and development capacities for sustainable development.



## Key Challenges Linked to The Transition to Green Growth

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Uganda is a developing country with numerous physical and socioeconomic challenges such as poverty and unemployment. Addressing these partly rests on undertaking activities that directly contribute to greenhouse gas production. For instance, one of the ways of alleviating the enormous unemployment problem is through extractive industries and exploiting the 27 commercially viable minerals outlined in the Uganda Vision 2040. Although most developed countries are shifting away from oil and gas, Uganda has huge economic prospects in its oil and gas sub-sector. In addition, the government is committed to building 22 industrial parks by 2020 to increase the percentage of manufactured products as a percentage of total exports and help solve the rampant unemployment problem. There is a high possibility of focusing on the end benefits of industrialization while losing sight of whether the approach to industrialization conforms to green growth principles or not. In such a scenario, embracing green growth principles may meet some resistance from key policy makers.

The Uganda Green Growth Development Strategy is cognizant of these challenges and identifies energy efficient interventions and potential job sources in green production, renewable energy, organic agriculture and planned urbanization, including solid waste management through reuse and recycling. It also emphasizes the issue of decent work with associated requirements such as occupational safety. Uganda may also need to provide incentives and subsidies to local producers to encourage them to embrace green growth principles since greening production may imply additional production costs in the short term.

The transition by producers to green production processes and eco-labelling requires the acquisition of new clean technology which is costlier than highly greenhouse gas emissive technology. Since these are business oriented people, rallying them behind the green growth agenda requires the Government to mobilize resources for incentives and subsidies.

A transition to green growth and development also calls for funding of science, research, technology and innovation to come up with appropriate, efficient and affordable green technologies. The funding of research and development in Uganda is still minimal, estimated at a paltry 0.8 percent of the national budget annually. If funding for research and development continues to be this meagre, it is likely to derail Uganda's transition to green growth. Additionally, the country should import and source clean technologies from developed countries to aid this transition. The technologies also require a Uganda to put in place a set of skills that are still lacking. The availability of various global funds earmarked for technology transfer under climate change mitigation and low carbon development, however, provides some hope in this venture.

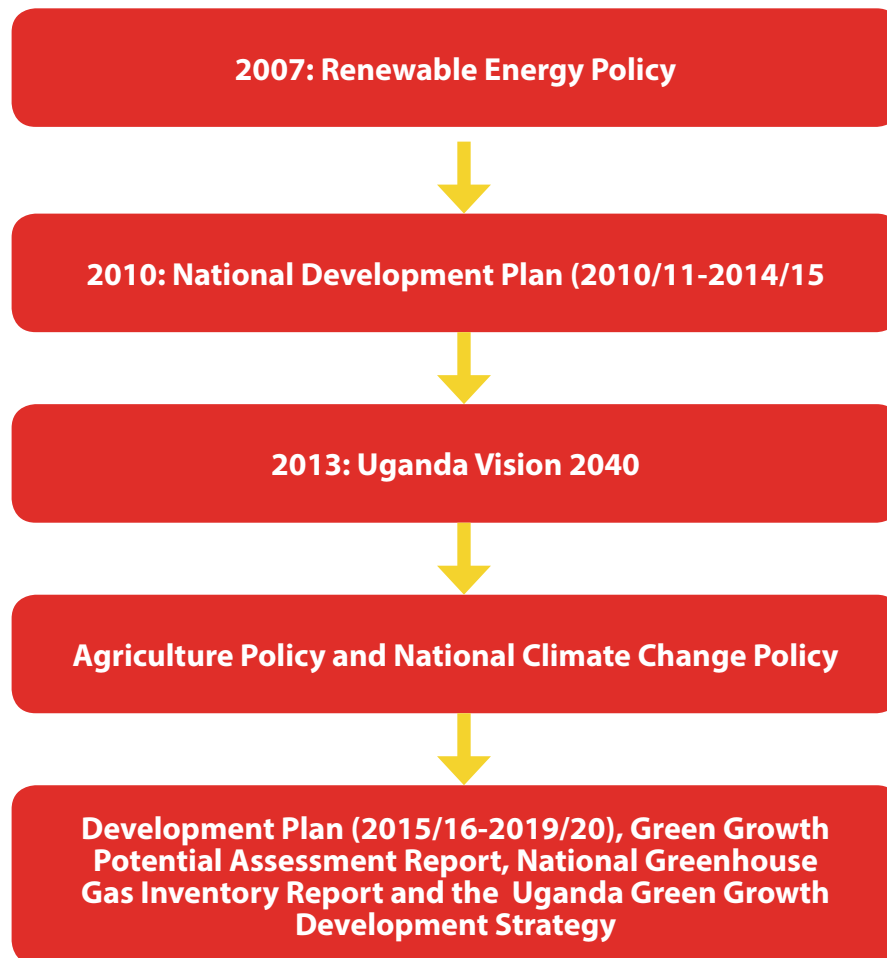
Lastly, the transition to green growth requires regulations that may result in an increased cost of living. For instance, environmental taxes on old vehicles that are highly emissive, taxes on public and private cars as an incentive to encourage mass transportation, and the already proposed payments for usage of some highways by motorists as well as green design building codes all have implications on the cost of living. These however can potentially generate revenue that can fund the green growth transition infrastructure, such as integrated transport systems, non-motorized transport, walkways and solar street lighting among others.

It therefore clear that embracing green growth has some trade-offs but what stands out is that the benefits of the transition realized in both the short, medium and long term are enormous and outweigh the costs.

## Past Government Efforts to Green the Economy

The government of Uganda has demonstrated significant enthusiasm in pursuing green growth at planning, policy, institutional and intervention level. Figure 2 portrays past government efforts in the form of plans and policies in advancing the green growth agenda.

**Figure 1: The Green Growth Agenda**



Source: Compiled by the author.

- Other government efforts to green the Ugandan economy include the massive campaign of distribution of free energy saving bulbs to households to enhance energy efficiency.
- The charcoal project under the Ministry of Energy and Mineral Development provides charcoal saving stoves to households. It is evident that biomass accounts for about 98 percent of energy use for cooking in Uganda. A sudden transition to other forms of cooking energy is impractical, calling for a gradual shift and improving efficiency in the use of charcoal to reduce the pressure on forests. It also saves time spent by women collecting firewood while reducing adverse health effects associated with using firewood to cook. It also reduces poverty since efficient cooking stoves imply fewer charcoal-collecting trips and financial resources spent on charcoal.

- The distribution of free agriculture seedlings and livestock, especially to rural areas where the most vulnerable people reside, is a green growth initiative since it ensures inclusiveness. Others include inclusive social protection grants such as the UGX 20,000 given to the elderly monthly. The tree planting programme implemented by the National Forestry Authority, where free tree seedlings are distributed to interested individuals, is one of the few green growth initiatives under implementation. The Switch Africa Green project, under implementation by the National Environment Management Authority, with a focus on small and medium scale industries, is implementing the principles of sustainable consumption and production.

## How to Measure Progress Towards Green Growth

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It is pertinent to assess progress towards green growth to evaluate strategies employed and also measure the transition. As such, transitioning towards green growth will require indicators of development that go beyond the conventional economic development indicators such as the GDP growth rate and per capita income. These indicators give a blurred image of development since they do not reflect the degrees of inclusiveness and equality in sharing the benefits of economic growth and development.

An equally important factor is that the conventional indicators of development do not account for the manner in which production and consumption processes are drawing down natural capital and the extent to which economic activities are reducing the ecosystems' functionality and ability to provide functions such as support, provision and regulation. Some of the remarkable economic growth of recent years in some countries has been achieved through inefficient methods of extraction that severely reduce the natural capital.

Measuring progress towards green growth may among other things require converting the natural capital stock changes emanating from economic activities into monetary terms and incorporating them in the natural accounts. Natural resource accounting is still a new concept in Uganda and will be embraced further as the country transitions to green growth. Therefore, measuring progress requires not only an assessment of economic indicators such as GDP growth and per capita income but also explicitly recognizing their impact on employment, resource intensity, emissions per unit of GDP, equity and ecological repercussions.

## Guiding Principles of Green Growth Implementation Roadmap in Uganda

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### 1. Inclusive Growth and Equity

This implementation roadmap will be governed by equity, balanced and inclusive growth. This will be characterized by holistic growth and development in sectors that employ the majority, the most vulnerable and the group minorities that are at the risk of being left behind.

### 2. Job Creation and Resource Efficiency

Resource efficiency not only reduces costs but also releases resources for other ways to drive the economy. Increased efficiency in the use of fuel, water, energy and natural capital within planetary limits will deliver sustainable development to Uganda. Sustainable Consumption and Production principles are vital in this context. All green growth interventions should lead to job creation.

### 3. Science, Technology, Engineering and Innovation (STEI)

One of the fundamentals earmarked for strengthening existing development opportunities in the Uganda Vision 2040 is the sphere of Science, Technology, Engineering and Innovation (STEI). Green growth in Uganda will be driven by an intense STEI effort to come up with appropriate, efficient green technologies in manufacturing, waste management, irrigation through water harvesting in the agriculture sector and building national resilience to climate change through adaptation and mitigation.

### 4. Environmental sustainability

Pursuing national economic growth and development within planetary limits is critical in ensuring sustained economic growth, inter-generational equity and inclusiveness, particularly for minorities that have an intricate relationship with their environment.

### 5. Good Governance

Governance is an important factor not only in the transition to green growth but also in conventional development. Good governance in the form of transparency, accountability, legislation and participation of all citizens in the development process should be at the core of the transition to green growth.

### 6. Partnerships

Green growth is a multidimensional phenomenon that cuts across all sectors and calls for a paradigm shift by all players in the economy. Partnerships between government, the private sector and civil society are crucial. Additionally, bilateral and multilateral partnerships with development partners are required in the financing aspect.

### 7. The 2030 Transformative Agenda on Sustainable Development

Whilst all SDGs have connotation of green growth, SDGs 7 – 15 directly emphasize its principles. It is important to note that green growth will not replace sustainable development but deliver Uganda to a sustainable development path in line with the SDG principles.

**Figure 2: Sustainable Development Goals**



# 2 STRATEGIC DIRECTION

The strategic direction of the Uganda Green Growth roadmap is shaped and informed by the Uganda Green Growth Development Strategy and the overall national strategic direction as espoused in the Uganda Vision 2040 and NDP II. It is therefore important to note that this roadmap not a substitute for the Uganda Green Growth Development Strategy. Rather, it seeks to accelerate the implementation of the UGGDS by identifying and sequencing programme and project areas that should be implemented to deliver a green economy.

The green growth roadmap strategic direction is defined by Goal, Strategic Objectives and Green Growth Strategic Pillars which inform projects and programmes identified in subsequent chapters.

## Green Growth Roadmap Goal

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*“To pursue an inclusive, resilient and efficient development path within planetary limits for a green upper middle income country by 2040”*

## Strategic Objectives

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Achieving the National Green Growth Roadmap will hinge on the pursuit of the following broad strategic objectives:

1. Accelerate inclusive, resilient and sustainable economic growth through restoration and valuation of natural capital and ecosystem services;
2. Build and enhance sustainable infrastructure and green cities to harness existing economic, environmental and social opportunities;
3. Strengthen climate change resilience, restoration and protection of ecosystems and their services for current and future generations;

4. Harness balanced development opportunities that contribute to poverty reduction, creation of green decent jobs and equity in access to socioeconomic services by all;
5. Enhance social equity in the distribution and sharing of the benefits of natural capital and its corresponding ecosystem services.

## Green Growth Strategic Pillars /Areas

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The Uganda Green Growth Roadmap is defined by five areas of focus for implementation. They include; sustainable transport, Green Cities (planned urbanization), natural resources management, sustainable agriculture and energy for green growth.

### **Sustainable Transport**

The strategies for sustainable transport development are:

- i. Support planned multi-modal and mass transport systems for urban areas comprising of the Bus Rapid Transport system (BRT) and the Light Railway Transport (LRT).
- ii. Support development, utilization and interconnectivity of the planned national, regional transport connectivity and the Standard Gauge Railway (SGR).

#### **1. Planned Green Cities**

The UGGDS interventions for planned green cities are:

- i. Support comprehensive economic physical planning and efficient waste management (solid and wastewater) for at least five cities and 15 municipalities.
- ii. Promote sustainable procurement and interlinkage between the rural raw materials production base and industrial production in cities.

#### **2. Energy for a Green Economy**

The planned strategies are:

- i. Support an increased focus on renewable energy investments including:
  - a. Biomass energy for electricity through co-generation by sugar companies and other modern technology options by 2030;
  - b. Improved technology for enhanced efficiency in using biomass for domestic cooking and industrial uses by 2020;
  - c. Enhancing solar power potential especially for on-grid and local supply over the transitional period for the country from the current 10MW to 5,000MW by 2040;
  - d. Exploitation of geothermal energy based on current plans from base capacity of 450MW by 2030 to 1,500MW by 2040;

- e. Support capacity utilization for large and mini-hydropower plants, and encourage efficiency in evacuation of generated power. The efficiency of capacity utilization can be increased from about 50- 60 percent to 80 percent and evacuation to 95 percent by 2020.
- ii. Support development and/or reinforcement of environmental, health and economic safeguards for energy generation in the country.

### 3. Natural Capital Management and Development

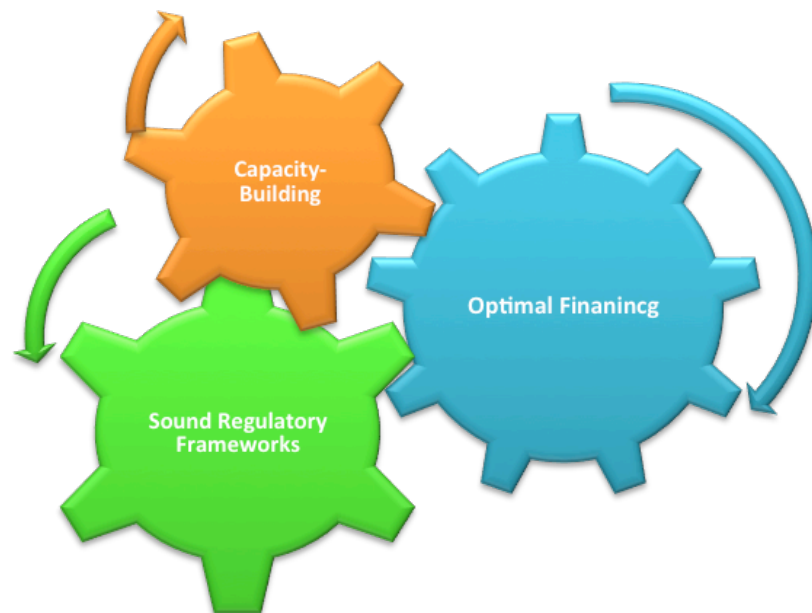
The planned strategies are subdivided by area and are the following:

- i. Tourism development through:
  - Investing in an increased number of higher value tourism packages and benefit sharing with communities surrounding protected areas (PAs).
  - Improved physical planning and quality enhancement for hospitality investments in nature-based tourism.
- ii. Sustainable Forestry Management:
  - Undertake forest landscape restoration especially on private land through agro-forestry and afforestation actions.
  - Support incentive programmes oriented towards livelihoods enhancement, environmental stewardship and landscape management for climate change adaptation, mitigation, food security and sustainable energy.
- iii. Sustainable wetlands including:
  - Strengthening regulation of wetlands management, especially for District Local Governments and Urban Authorities;
  - Harness opportunities from sustainable use of wetlands including provisioning, regulating and fostering aesthetic ecosystem services.
  - Restoration of degraded wetlands and maintaining the regulating ecosystem, such as hydrological services, effluent treatment.
- iv. Sustainable and optimal water resources management:
  - Support the development and implementation of catchment management across the country.
  - Support development of sustainable financing, financing mechanisms and their governance.
  - Support sustainable, feasible and viable utilization of water resources through increased efficiency and optimal allocation.

#### 4. Sustainable agriculture

- Increased access to irrigation facilities starting with 10 percent of smallholder households in 2020 and cumulatively increasing to at least 60 percent of smallholder farmers by 2030.
- Integrated soil fertility management with implementation of appropriate soil fertility improvement through soil mapping and land use planning and introducing sustainable agriculture for all 10 farming systems in the country.
- Undertake actions to upgrade the value chain for strategic enterprises with a focus on product quality and quantity, market diversification, excellence in agro-processing and effective use of knowledge acquired from within the value chain.

**Figure 3: Requirements for a smooth transition to Green Growth**



#### Key Enabling Conditions

1. **Optimal Financing:** the Green Growth transition will require financing from the public sector to meet the initial costs. It will also require the prioritization of public spending and investments in areas that stimulate the greening of economic sectors. The government ought to provide incentives to the private sector that stimulate green growth investments.
2. **Establishing a sound regulatory frameworks:** Given the large role of the private sector in implementing and financing the green growth transition, robust standards and regulations that promote green growth and remove barriers to green investments are critical. Regulations that disincentivize activities that may impede the green growth transition are equally imperative. Additionally, functional regulations reduce business risk and increase confidence of investors since well-enforced regulations and standards reduce uncertainty and prevent unfair competition.



3. **Investment in capacity-building, education and training of all players along the Green Growth transition value chain.** Leapfrogging to clean green technologies calls for re-skilling and training of the existing labour force to enable it operate the new technologies. It is also evident that the transition will create jobs which require appropriately skilled labour. Skilling should also extend to policymakers, the private sector and civil society if they are to mainstream green growth in their activities.
4. **Use of taxes and market-based tools to stimulate green innovations and investments.** The financial resources required to fund the transition can only result from innovative financing mechanisms at the local and global stage.
5. **Valuation of natural capital stock and services and their incorporation in national accounts is vital.** Green growth calls for an eco-friendly development path that incorporates the natural capital stock changes in the overall national accounts GDP figures. This is one of the ways of measuring progress made towards green growth and a green economy.
6. **Strengthening governance is a strong enabling pillar.** Transparency, participation and accountability should be the hallmark of all green growth activities. Financial resources mobilized for green growth investments should be used for the intended purposes and their benefits shared inclusively in a way that reflects social equity.

**Table 1: Green Growth Priority Areas**

Priority Area	Strategies in the UGGDS
Planned Green Cities	<ol style="list-style-type: none"> <li>i. Support comprehensive economic physical planning and efficient waste management (solid and wastewater) for at least five cities and 15 municipalities.</li> <li>ii. Promote sustainable procurement and interlinkage between the rural raw material production base and industrial production in cities.</li> </ol>
Agriculture	<ol style="list-style-type: none"> <li>i. Increase access to irrigation facilities starting with 10% of smallholder households in 2020 and cumulatively increasing to at least 60% of smallholder farmers by 2030.</li> <li>ii. Integrated soil fertility management by development and implementation of appropriate soil fertility improvement through soil mapping and land use planning and sustainable agriculture for all 10-farming systems in the country.</li> <li>iii. Undertake actions to upgrade the value chain for strategic enterprises with a focus on product quality and quantity, market diversification, excellence in agro-processing and effective use of knowledge acquired from within the value chain.</li> </ol>

Priority Area	Strategies in the UGGDS
Energy for green economic development	<ul style="list-style-type: none"> <li>i. Support an increased focus on renewable energy investments including: <ul style="list-style-type: none"> <li>■ Biomass energy for electricity through co-generation by sugar companies and other modern technology options by 2030;</li> <li>■ Improved technology for enhanced efficiency in using biomass for domestic cooking and industrial uses by 2020;</li> <li>■ Enhancing solar power potential, especially for on-grid and local supply, over the transitional period for the country from the current 10MW to 5,000MW by 2030;</li> <li>■ Exploitation of geothermal energy based on current plans from base capacity of 450MW by 2030 to 1,500MW by 2040;</li> <li>■ Support capacity utilization for large and mini-hydropower plants, and encourage efficiency in evacuation of generated power. The efficiency of capacity utilization can be increased from about 50 - 60% to 80% and evacuation to 95% by 2020.</li> </ul> </li> <li>ii. Support development and/or reinforcement of environmental, health and economic safeguards for energy generation in the country.</li> </ul>
Sustainable Transport	<ul style="list-style-type: none"> <li>i. Support planned multi-modal and mass transport systems for urban areas comprising of the Bus Rapid Transport system (BRT) and the Light Railway Transport (LRT).</li> <li>ii. Support development, utilization and interconnectivity of the planned national, regional transport connectivity, the Standard Gauge Railway, for the country.</li> </ul>
Natural Capital Management	<ul style="list-style-type: none"> <li>i. Tourism Development through: investing in higher value tourism packages and benefit sharing with communities surrounding PAs; and improved physical planning and quality enhancement for hospitality investments in nature-based tourism.</li> <li>ii. Sustainable Forestry Management: forest landscape restoration especially on private land through agro-forestry and afforestation actions; incentive programmes oriented towards livelihoods enhancement: environmental stewardship and landscape management for climate change adaptation, mitigation, food security and sustainable energy.</li> <li>iii. Sustainable wetlands including: strengthening regulation of wetlands management, especially for District Local Governments and Urban Authorities; harnessing opportunities from sustainable use of wetlands including provisioning, regulating and aesthetic ecosystem services; restoration of degraded wetlands; maintaining the regulating ecosystem, such as hydrological services and effluent treatment.</li> <li>iv. Sustainable and optimal water resources management: development and implementation of catchment management across the country; sustainable, feasible and viable utilization of water resources through increased efficiency and optimal allocation; and development of sustainable financing, financing mechanisms and their governance.</li> </ul>

## 3

## IMPLEMENTATION FRAMEWORK AND ROADMAP

This chapter breaks down the strategies highlighted under the five priority areas into strategies and interventions that will inform project ideas for implementation. These have been sequenced as short term, medium term and long term interventions that will inform green growth interventions for prioritization of subsequent national development plans. Short term interventions are envisaged for implementation over the remaining NDP II period (2017/18 – 2019/20), medium interventions will be implemented over the NDP III period (2020/21-2024/25) while long term interventions will be implemented over the NDP IV period (2025/26 - 2029/30). Long term interventions whose implementation stretches over ten years will be incorporated into the 10-year National Development Plan 2020 – 2030.

### Key Interventions for implementing the Uganda Green Growth Development Strategy

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This section unpacks the key strategies espoused in the Uganda Green Growth Strategy into key interventions and actions for implementation over the short, medium and long term.

Besides the UGGDS, the roadmap interventions enumerated in the subsequent section were also informed by the green growth potential assessment report published in 2016, undertaken by Government of Uganda, led by the Ministry of Finance, Planning and Economic Development and the Economic Policy Research Centre in partnership with the New Climate Economy, the Global Green Growth Institute and other expert stakeholders from Government. The Report enumerated the key policy shifts required for green growth to support the NDP II and Uganda Vision 2040. It further recommended immediate actions to drive implementation by listing 23 interventions arrived at through analysis, macroeconomic and sector modeling. This report guided the priorities of the UGGDS. Additionally, the Costed Implementation Strategy of the National Climate Change Policy also informed the phased interventions in the subsequent section.

## Planned Green Cities

### Short Term Strategies and Intervention areas

#### *Achieve Integrated Urban Planning*

- i. Prepare district spatial plans for priority regional cities.
- ii. Develop national cities green growth roadmap.
- iii. Mainstream climate change into urban planning.
- iv. Citywide slum upgrading.
- v. Enact and implement regulatory reforms for green housing.

#### *Undertake biomethane production from landfill sites*

- i. Promote Waste sorting at household and institutional level to minimize landfills.
- ii. Upgrade national sewerage system

#### *Climate proof urban transport and infrastructure development strategies*

- i. Scale up solar street lighting across the country.
- ii. Regulate and enforce traffic exclusion from walkways.
- iii. Add and budget for green belts on major roads.

#### *Provide safe water facilities to urban communities*

- i. Increase access to and availability of safe water in urban areas.
- ii. Undertake water stress vulnerability mapping.
- iii. Build local community capacity to recycle water.
- iv. Build rainwater harvesting infrastructure.
- v. Adopt a Bus Rapid Transit system.

#### *Medium Term*

- i. Implement best practices on urban planning.
- ii. Formulate and implement urban standards for tree cover.

#### *Long Term*

- i. Construct affordable housing estates outside flood plains.
- ii. Promote investments in clean energy generation.
- iii. Install energy efficiency measures in building codes.

## Sustainable Transport

### Short Term

- i. Adopt and procure a Bus Rapid Transit system (BRT).
- ii. Undertake city planning for integrated mass transport systems.
- iii. Establish incentives for preference of public transport over private transport.
- iv. Undertake solar
- v. street lighting on transport and rail infrastructure

### Medium Term

- i. Implement the planned Light Rail Transit (LRT).
- ii. Commission a feasibility study on inland water transport.
- iii. Impose green taxes on private cars to enhance usage of public transport.
- iv. Formulate and implement private to public transport incentives.
- v. Introduce Vehicle emission standards.

### Long Term

- i. Develop multi-modal urban transport in urban areas and promote walkability through pedestrian-friendly streets.

## Energy for Green Economic Development

### Short Term Interventions

- i. Undertake a nationwide distribution of energy saving lightbulbs.
- ii. Carryout an energy audit of all public institutions to assess efficiency and advise accordingly.
- iii. Increase availability and access to charcoal-efficient energy saving stoves, prioritizing women and the rural poor.
- iv. Plant plantation forests for biomass fuel to reduce pressure on natural forests.
- v. Undertake household sensitization campaigns on efficient and effective use of and the operations of solar and all forms of energy at household and industrial levels.
- vi. Establish product demonstrations of renewable energy to build consumer confidence.

### Medium Term

- i. Increase the proportion of renewable energy as a percentage of Uganda's energy mix.
- ii. Commission an assessment on the potential for large scale power plants.
- iii. Identify and implement tax exemptions for renewable energy equipment and technology.
- iv. Formulate targeted renewable energy incentives to lobby the private sector.
- v. Institute interest rate subsidies to loans for energy access businesses and district energy projects.

### *Long Term*

- i. Establish energy efficiency demonstration projects.
- ii. Increase the percentage of renewable energy access and use.

## **Resilient Agriculture Systems**

### *Short term*

- i. Implement water saving irrigation techniques.
- ii. Integrate green agronomic practices such as agroforestry in extension services.
- iii. Undertake resource recovery and reuse through organic waste composting and waste water irrigation.
- iv. Construct water capture and storage infrastructure.
- v. Undertake research to enhance sugarcane productivity as a measure to curbing forest loss.
- vi. Generate drought resistant breeds.

### *Medium Term*

- i. Build resilient efficient water harvesting infrastructure.
- ii. Establish appropriate irrigation systems in water stressed areas.
- iii. Stimulate access to and production of climate resilient nutritious foods.
- iv. Develop green growth safeguards for development projects.
- v. Accelerate Research and Development of weather insurance schemes.
- vi. Design measures to encourage production and use of enriched nutritious foods.

### *Long Term*

- i. Increase the percentage area of arable land under irrigation.
- ii. Increase the land areas under organic agriculture.
- iii. Train farmers in intensification small scale-farming.
- iv. Construct gravity floor irrigation schemes in range lands.

## **Sustainable Natural Capital Management and Development**

This comprises tourism, forestry, fisheries, water resources and minerals and oil and gas.

### **Tourism**

#### *Short Term*

- i. Spatially zone tourism hot spots.
- ii. Enhance private sector community partnerships.

### *Medium Term*

- i. Implement the community benefit sharing mechanism.
- ii. Identify innovative funding for ecotourism hotspots.
- iii. Reduce pressure on natural tourism hotspots.

## **Forestry**

### *Short Term*

- i. Implement the National Biodiversity Strategy Action Plan (NBSAP 2015–2025).
- ii. Adopt a landscape approach to forestry management.
- iii. Scale up tree planting through provision of free seedlings.
- iv. Scale up existing reforestation efforts to secure the Uganda Vision 2040 target of 24 percent forest coverage.
- v. Regulate sustainable charcoal production.

### *Medium Term*

- i. Expand forest plantations for biomass supply and reduced encroachment on natural forests.
- ii. Develop a national agroforestry strategy.

### *Long Term*

- i. Incorporate reforestation costs into the extraction fees.
- ii. Undertake the payments for ecosystem services (PES) programmes.

## **Fisheries**

### *Short Term*

- i. Implement an ecosystem approach to fisheries management.
- ii. Enhance regulatory capacity of local governments.
- iii. Restock existing water resources.

### *Medium Term*

- i. Construct and expand community processing facilities.

### *Long Term*

- i. Implement PES for fishery nurseries.

## Water Resources Management

### Short Term

- i. Build local capacity for water resource management.
- ii. Implement the East African Community protocol on natural resources.
- iii. Implement transboundary water resource programmes.
- iv. Strengthen the participation of the private sector in water resources management.

### Medium term

- i. Establish watershed committees.

### Long Term

- i. Implement the landscape approach to water resources management.

## Minerals, Oil and Gas

### Short Term

- i. Implement best practices approach to development.
- ii. Embrace value addition.
- iii. Adopt clean technologies.
- iv. Utilize electricity from renewable energy sources.
- v. Establish local revenue sharing mechanisms.
- vi. Adopt full cost accounting.
- vii. Employ water efficient management practices.
- viii. Conduct Strategic Environment Assessments for the extractive industry.
- ix. Enforce work and safety standards.
- x. Develop a spatial plan to minimize adverse effects of mining.
- xi. Support the artisanal mining sector.

### Medium Term

- i. Implement watershed buffer zones.
- ii. Develop a national water security plan.



## Cross-Cutting Interventions

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There are interventions that will cut across all sectors in the transition to green growth.

### Increasing Resilience and Reducing Risk

#### Short Term

- i. Undertake social protection schemes.
- ii. Support employment opportunities for vulnerable groups.
- iii. Launch integrated hydro meteorology early warning systems.
- iv. Incorporate climate science in education curricular.

#### Medium Term

- i. Strengthen the use of climate data for health and agriculture.
- ii. Undertake Green Community campaigns.

#### Long Term

- i. Integrate local content into development projects.

### Education, training and Skills Improvement

#### Short Term

- i. Integrate sustainable development into ongoing curriculum review.
- ii. Design inclusive education projects.
- iii. Mainstream green growth into on-job training.
- iv. Formulate green jobs standards.
- v. Promote the use of e-governance.

#### Medium Term

- i. Invest in green growth learning material.
- ii. Identify alternative livelihoods and safety nets during the green growth transition.
- iii. Build skills and capacity to absorb green jobs with focus on equity and gender equality.

#### Long Term

- i. Develop technological incubation centers across the country.
- ii. Develop modules for re-skilling and retraining.

## Strengthen Public Health Systems to respond to the impacts of climate change.

### Short Term

- i. Improve access to family planning.
- ii. Strengthen health sensitization programmes.

### Medium Term

- i. Establish resilient health infrastructure.

## Means of Implementation

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### Finance

Some green growth interventions may be achieved within the existing projected planning framework finance requirements; some additional costs may be required in the transition. For instance, the National Green Growth Potential Assessment Report indicates that 44 percent of the required green growth transition costs are already captured in the second National Development Plan.

Nevertheless, identification of innovative financing mechanisms is not an option. Some of the innovative mechanisms for mobilizing green finance for the transition include changing market prices to reflect social and environmental costs of resource consumption. Use of economic instruments such as fiscal reforms in the form of increased taxes on private vehicles and increased parking fees are some of the ways to deliver the implementation of green growth options. Well thought out regulations and incentives that are fairly enforced can also direct private investment to flow into eco-efficient investments.

It is, however, important to note that although a great deal of green finance is expected to emanate from the private sector, there is a need to have public finance especially in the short run to catalyse the transition and create an enabling environment for the private sector to invest accordingly. The public sector undertakes the biggest proportion of procurement in the country and as such, green public procurement can accelerate the creation of markets for environmentally friendly goods and services. This can directly provide green business initiatives with initial profits and flows for expansion.

Other forms of finance such as payment for eco-system services and provision of financial rewards and incentives to communities that conserve the ecosystem is another way of accessing green growth transition finance.

International finance from development partners is another critical source of finance for the transition to green growth. International partnerships funding technology transfer are critical since green growth transition calls for a shift from the conventional technologies which are emissive. International agreements on climate change, biodiversity, the 2030 sustainable development transformative agenda all offer funding opportunities for Uganda. Particularly, the Paris Agreement on climate change requires developed countries to extend climate finance to developing countries. Uganda should position its self to access this global finance window.

### Capacity-Building

The transition to green growth represents a paradigm shift in the way of doing business, planning and production among other changes. Capacity-building is therefore supposed to be an ongoing process in the short, medium and long term to enable all stakeholders to contribute to the transitions. Capacity-building can be done at several levels, including institutional, local governments, communities and individual levels. Undertaking a capacity needs assessment is critical to design and package capacity solutions tailored to the needs of the recipients.

Institutional capacity-building entails the respective institutions enhancing capacity in green policy and planning at sectoral and local government levels. There are various capacity gaps in implementation and enforcement which partly emanate from human and financial resource constraints coupled with financial resource mobilizations.

### Technology, Science and Innovation

A transition to green growth requires a technology transfer to leap frog the conventional technologies that brown the economy to more resource efficient and less emissive technologies. This calls for increased funding of the research and development component to spur innovation. Additionally, regulations and enforcement of patent rights is also an incentive for innovation and should be prioritized by government. The Government of Uganda should tap into existing global technology transfer funds to supplement the public finance geared towards technological change.

### Preparation of pipeline/bankable projects

One of the areas of support extended to governments by the Global Green Growth Institute is the development of pipeline/bankable projects to harness existing financing windows. In this regard, preparation of bankable proposals and project concepts will be instrumental in ensuring the implementation of the Uganda Green Growth Development Strategy and the accompanying roadmap. This roadmap has identified several phased interventions which are project ideas that can inform project development.

# 4 COSTING AND FINANCING MECHANISMS

## Financing

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### Current Local Green Growth Financing Landscape

A number of national funds such as the Environment Fund and the proposed climate change fund will be some of the financing mechanisms for the Uganda Green Growth Development Strategy.

It is however important to note that public budgetary allocation to ecologically related activities has been meagre over the years. Implementation of green growth interventions will require exploration of external financing windows to supplement the existing meagre public finance.

Development of robust national financing vehicles is critical for the implementation of green growth interventions. There are a number of low hanging fruit, such as climate change related funds like the Green Climate Fund, the Global Environment Facility and other potential bilateral agreements hinged on financial resource transfer.

The National Green Growth Potential Assessment report undertaken by the New Climate Economy and the Global Green Growth Institute in partnership with the Ministry of Finance indicated that about US\$1.8 billion will be needed annually up to 2020 (from both public and private sources). The report also stated that current plans cover about three quarters of the required investment, of which 44 percent is expected to be from public sources.

On the other hand, total additional annual investment needs (beyond those indicated in the National Development Plan) are estimated at US\$450 million per annum, of which US\$ 200 million would be expected to come from the public sector, indicating an uplift of the budget by 3 percent. The good news is that these new investments could generate three dollars of economic benefit for every dollar invested, excluding broader benefits.

### Other Innovative Sources of Finance

Several innovative sources of finance for the green growth transition exist nationally and regionally. For instance, concerted pools of financial resources such as those owned by development banks and pension funds whose payment can be undertaken in the long term are areas worth exploring. The Uganda Comprehensive Planning Framework recommends the merging of the environment fund and the proposed climate change fund to come up with a green fund. It is paramount to ensure that financial resources collected through economic instruments developed to finance green growth are ploughed back into funding the green growth transition priorities as opposed to being diverted to undertake other activities.

Uganda should also position itself to benefit from the global development funding institutions such as the World Bank, the African Development Bank and the East African Development Bank among others. The mandated stakeholders ought to assess the requirements for accessing finance from these financing institutions.

### Costing of the Green Growth Implementation Roadmap

#### Estimated Cost of the UGGDS

It is important to note that the implementation roadmap is an implementation tool of the Uganda Green Growth Development Strategy 2017 – 2030. The interventions and actions presented herein are informed by the development areas of the draft Uganda Green Growth Development Strategy. Additionally, the interventions are phased as short term, medium term and long term. Short term interventions are envisaged to be implemented over the NDP II (2015/16 – 2019/20) period. The medium-term interventions will be implemented over the NDP III (2020/21- 2024/25) while the long-term interventions will inform the green growth actions of NDP IV (2025/26 -2029/2030).

For the above reason and sequencing, Uganda needs to significantly increase its budget for green growth interventions over the NDP III period when most of the initial investments will be undertaken. The cost is less in the NDP IV period since the country will have started reaping the benefits of the transitions to a green economy.

Indicative estimates of the cost of implementing the strategy indicate that the implementation of the Uganda Green Growth Development Strategy will cost in the region of US\$ 11 billion over its fifteen-year tenure. The table below breaks down the estimated costs over the various phases of the NDPs.

**Table 2: Public Investment Costs required to Implement the UGGDS**

	Short term interventions	Medium term Interventions	Long term Interventions
	F17/18 – FY19/20 (NDP II) US\$ millions	FY 20/21- FY 24/25 (NDP III) US\$ millions	FY25/26 – FY 29/20 (NDP IV) US\$ millions
Totals by period	2,607	4,972	3,443
Annualized by period	869	994	689

### Basis of the Costing/Methodology

This costing was informed by the Green Growth Potential Assessment Report described above. The Report identified the potential of the green growth model to accelerate the achievement of Uganda's development targets. Additionally, economic modelling clearly indicated the sectors with the highest green growth potential multiplier effect and constructed green growth scenarios in comparison with the business as usual scenarios. This aimed at demonstrating to policymakers the economic, social and environmental benefits that may emanate from the transition to a green economy and the financial implications thereof. The costs attached to the various identified interventions by sector informed the costing of the draft Uganda Green Growth Development Strategy and the Implementation Roadmap.

Besides the above, the costing was also informed by the Costed Implementation Strategy of the National Climate Change Policy which also runs for 15 years and has sequenced interventions as short term, medium term and long term. Some of the interventions and strategies in the UGGDS were also found in the National Climate Change Costed Implementation Strategy with accompanying costs in US dollars. These were factored into the costing with the accompanying costs.

The NDP II integrated green growth principles and as such, it has some green growth interventions in some sectors with accompanying costs in its costed implementation strategy. This green growth related expenditure informed the costing of most of the short-term interventions lined up for implementation over the NDPII period

### Costing of the five Development Areas of the Uganda Green Growth Development Strategy

The Uganda Green Growth Development Strategy is composed of five priority/development areas which have been unpacked into sequence interventions by the roadmap. The five development areas are: Agriculture, Natural Capital Management, Planned Green Cities, Sustainable Transport, Energy for a Green Economy and Cross Cutting Interventions such as capacity-building, health outcomes, education and skilling and building resilience for sustainable livelihoods among others. The costs of these development areas are indicated in the Table 3.

**Table 3: Public investment costs for each of the Core Areas of the UGGDS**

Core Area of UGGDS	FY17/18 - FY19/20 (NDP II)		FY 20/21 - FY 24/25 (NDP III)		FY 25/26 - FY 29/30 (NDP IV)	
	US\$ millions	% share	US\$ millions	% share	US\$ millions	% share
Agriculture	176	7%	496	10%	677	20%
Natural capital management	104	4%	266	5%	366	11%
Planned green cities	360	14%	670	13%	906	26%
Sustainable Transport	1,842	71%	3,194	64%	1,051	31%
Energy for a green economy	100	4%	164	3%	161	5%
Cross-cutting actions	24	1%	182	4%	281	8%
<b>Totals</b>	<b>2,607</b>	<b>100%</b>	<b>4,972</b>	<b>100%</b>	<b>3,443</b>	<b>100%</b>

The indicative costing of the Implementation Roadmap consists of fifty targeted interventions highlighted in Chapter 3. The interventions are aligned to the different UGGDS areas that they contribute to as indicated in Table 4.

**Table 4: Estimated Public investment costs for each intervention**

	<b>Title of Intervention</b>	<b>FY17/18 - FY19/20 (NDP II) US\$ millions</b>	<b>FY 20/21 - FY 24/25 (NDP III) US\$ millions</b>	<b>FY 25/26 - FY 29/30 (NDP IV) US\$ millions</b>
1	Development of solar irrigation for the most vulnerable	3.2	5.3	10.5
2	Improved agricultural knowledge and cultivation techniques	84.1	252.6	372.3
3	Increased access to sustainable agricultural inputs	51.5	171.6	278.8
4	Climate resilient, adaptive and productive crops widely used	5.5	7.1	11.8
5	Community-based climate resilient agricultural systems implemented	2.8	2.9	3.9
6	Innovative insurance to protect farmers against crop failure due to extreme weather	29.4	56.4	-
	Agriculture	176.5	495.9	677.3
7	Tourism industry revenue is used to improve the livelihoods of local populations	0.7	2.0	-
8	Tourism industry is made more climate resilient through diversification	1.4	2.0	3.6
9	(Estimated implementation cost of US\$10.6 million/year)	31.8	53.0	53.0
10	Strengthened national forestry policy to reduce forest loss	0.4	2.3	-
11	Sustainable forest management practices strengthened	0.4	1.1	-
12	Introduction of agroforestry practices	55.1	146.8	201.9
13	Payment for ecosystem services system functioning	0.4	1.1	-
14	Efficient biomass energy production & consumption technologies & practices expanded	0.7	2.3	-
15	Climate change resilient fishing practices promoted	3.7	20.9	44.8
16	Sustainable fish farming practices promoted	-	-	-

	<b>Title of Intervention</b>	<b>FY17/18 - FY19/20 (NDP II) US\$ millions</b>	<b>FY 20/21 - FY 24/25 (NDP III) US\$ millions</b>	<b>FY 25/26 - FY 29/30 (NDP IV) US\$ millions</b>
17	Improved trans-boundary cooperation in fisheries and aquatic ecosystem management	-	-	-
18	Integrated water resource management systems in place	8.3	30.5	61.5
19	Conservation and protection of watersheds against degradation	-	-	-
20	Institutional and human resources in water resource use developed	0.9	2.7	-
21	Regulated oil and gas sector to reduce GHG emissions	-	1.8	1.5
	Natural capital management	103.8	266.5	366.3
22	Integrated urban planning achieved	51.0	85.0	75.0
23	Flood risk management made effective	81.3	135.5	135.5
24	Biomethane production from landfill sites	-	-	-
25	Climate proofed transport and infrastructure development strategies	84.6	144.8	336.8
26	Climate proofed structural building codes enacted	1.1	1.0	-
27	Safe water facilities provided	11.4	28.4	-
28	Increased water harvesting and efficient water utilization	0.7	4.2	6.1
29	Housing development policies support low-income communities	-	-	-
30	New and enhanced green spaces in urban centres	-	-	-
31	Improved building energy efficiency	130.4	271.4	352.9
	Planned green cities	360.5	670.3	906.3
32	Introduction of bus rapid transport system	30.7	92.0	-
33	Implementation of light rail transit system	-	193.1	965.6
34	Strengthened public transport system	76.3	-	-
35	Implementation of all standard gauge railway lines	1,684.4	2,807.3	-
36	Introduction of vehicle emission standards	3.0	1.0	-
37	Promote reduction of GHG emissions from transport sector	47.6	100.4	85.3



	<b>Title of Intervention</b>	<b>FY17/18 - FY19/20 (NDP II) US\$ millions</b>	<b>FY 20/21 - FY 24/25 (NDP III) US\$ millions</b>	<b>FY 25/26 - FY 29/30 (NDP IV) US\$ millions</b>
	Planned green cities	1,842.0	3,193.8	1,050.9
38	Increase household energy efficiency	10.6	17.6	17.6
39	Improved cookstoves	-	-	-
40	Enhanced focus on off-grid renewables	84.5	140.8	140.8
41	Reduction in GHG emissions from energy generation	-	3.1	1.1
42	Diversification of energy generation sources	5.2	-	-
43	Increased private sector involvement in clean energy generation	-	0.6	0.4
44	Developed domestic hydroelectric and geothermal power resources	-	1.8	1.5
	Energy for a green economy	100.3	163.9	161.4
45	Gender considerations mainstreamed in climate change issues	1.4	2.9	4.5
46	Climate change education, public awareness & knowledge management promoted	1.2	3.2	3.7
47	Climate smart population policies and programmes put in place	3.9	10.2	9.9
48	Health workforce uses climate change information to improve health practices	17.1	-	-
49	Contingency plans in place for climate resilient health systems	-	23.7	23.7
50	Strengthen public health systems to respond to impacts of climate change	-	141.8	239.3
	Cross-cutting	23.6	181.8	281.1

### Existing Green Growth Related Expenditure

Uganda has been implementing various green growth related interventions at various levels, supported by both local and external finances. Estimating the financial implication of transitioning to a green economy therefore called for a rapid assessment of green growth related expenditure in the short term. Accordingly, an assessment for the budget for the first period of the financial year (2017/18 – 2019/20) is made, specifically for short term interventions.

An estimate of green growth related expenditure from current sources raised through the national budget and external finance channelled was made through an analysis of the Approved Estimates of Revenue and Expenditure (Recurrent and Development) for the Financial Year 2016/17 (the 'Approved Estimates') to provide

an indicative net (additional) cost estimate for the implementation of the UGGDS over the first phase (for short-term interventions).

This analysis reduced the initial cost estimate of US\$ 869 million per year for the short-term interventions of the UGGDS to US\$ 840 million per year. This 3 percent reduction suggests that many of the UGGDS investment costs have yet to be incorporated into the budgeting process of the implementing ministries. However, there are some areas of the UGGDS where Government spending already exceeds the indicative UGGDS cost estimates, due to methodological and definitional differences. Overall, a total of US\$ 521 million of relevant spending was identified in the Approved Estimates for 2016/17. Major capital spending projects (such as the Isimba and Karuma hydroelectricity projects) made up a large percentage of this total.

### Contribution of External Finance

Uganda is a developing country with a plethora of development challenges that take a high proportion of the national budget. External financing is expected to play a key role in supplementing government expenditure in its pursuit of green growth. A review of relevant external project financing in the approved estimates of Revenue and Expenditure, FY 2016/17 indicates that the implementation of the Uganda Green Growth Development Strategy and its implementation roadmap will be enhanced by continuing external support. Table 5 indicates the external financing relevant to the UGGDS and its roadmap for the FY 2016/17.

**Table 5: List of external project financing relevant to the UGGDS for FY2016/17**

No.	ECT Code Project	Name	External Financing (US\$ millions)
4	1139	ATAAS (Grant) EU, WB and DANIDA funded	5.0
4	1139	ATAAS (Grant) EU, WB and DANIDA funded	18.5
4	1316	Enhancing national food security	5.6
5	1363	Regional Pastoral Livelihood Improvement Project	8.8
10	1102	Climate change project	0.5
10	1301	The national REDD+ project	0.4
10	1417	Farm income enhancement and forestry conservation phase II	14.3
14	137	Lake Victoria Environmental Management Project	6.2
18	165	Support to Water Resource Management	0.9
18	1074	Water and sanitation development facility - North	4.4
18	1075	Water and sanitation development facility - East	2.1
18	1130	Water and sanitation development facility - Central	11.1
18	1359	Piped water in Rural Areas	11.1

No.	ECT Code Project	Name	External Financing (US\$ millions)
40	1023	Promotion of renewable energy and energy efficiency	4.2
44	1026	Mputa Interconnection project	24.6
44	1143	Isimba hydroelectricity power plant	130.6
44	1183	Karuma hydroelectricity power project	226.2
44	1350	Muzizi hydro power project	3.8
		<b>Total</b>	<b>478.4</b>

## Monitoring And Evaluation

The Monitoring and Evaluation (M&E) strategy of the Roadmap will allow the overall robust monitoring and evaluation system of the Uganda Green Growth Development Strategy defined by the Key Results Framework.

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based on a decision of the German Bundestag



*Empowered lives.  
Resilient nations.*





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