

Unleashing the Potential of the Private Sector to Drive Green Growth and Job Creation in Selected African Countries



By
Kelvin Khisa
Regional Consultant



Presentation Outline

- **Introduction**
- **The Green Transition**
 - **Enablers of the Green Transition at Company Level**
 - **Enablers of the Green Transition at Value Chain Level**
 - **Barriers to the Green Transition at Company Level**
 - **Barriers to the Green Transition at Value Chain Level**
 - **Potential Solutions**
- **Survey Results**
- **Forestry Sector Assessment**
- **Energy Sector Assessment**
- **Agricultural Sector Assessment**
- **Manufacturing Sector Assessment**
- **Waste Management Assessment**
- **Cross-cutting Recommendations**



Introduction

- The green economy approach is gaining traction in Africa as a reliable model for overcoming the challenges of climate change while also promoting the ideals of sustainability.
- The scope of the Survey was the Whole of Africa with special emphasis on six countries: **Cameroon, Cote d'Ivoire, Kenya, Rwanda, South Africa and Zambia**
- The Five priority sectors were **Energy; Agriculture; Manufacturing; Waste Management; and Forestry**
- **Methodology – Literature Review, Questionnaire based Interviewing, Expert Group Consultations**



Africa's Sustainable Development Priorities

- There is **slow progress in reducing poverty and inequality** in Africa owing to the continent's limited decent employment opportunities and weak social insurance mechanisms
- **Agricultural value added is rising but at a low pace**, due in part to limited irrigation coverage and declining investment in the sector
- Rising food insecurity and undernourishment are a growing concern in Africa (with the exclusion of North Africa)
- **Weak infrastructure and limited manufacturing value addition** are undermining overall job growth
- Limited investment in **research, development, and demonstration (RD&D)** obstructs prospects for innovation and technology development
- The need for significant increases in the coverage of **mobile cellular services** is an opportunity for social and financial inclusion in Africa



The Green Transition

- Accelerated **adoption of green and circular economy business models** will enable Africa address its challenges of **increasing scarcity and depletion of natural resources** with a view to assuring sustained economic growth, minimized environmental impacts and maximized social welfare;
- Transitioning from linear to green and circular economy business models is however **Not Easy**. There are numerous **obstacles at company and value chain levels** that need to be addressed as well as existence of **prohibitive policies and regulations** that will need to be reviewed for harmonization.



Enablers of Green Transition at Company Level

- **High-level commitment**, with long-term strategic business interests – will enable the much needed structural change;
- **Personal drive and supportive attitudes and mind sets of company staff** – capacity building, training and re-training;
- **The promise of enhanced productivity and competitiveness** – going green makes good economic and environmental sense



Enablers of Green Transition at Value Chain Level

- **Innovative ecosystems, partnerships and collaboration of both stakeholders and competitors** e.g. Triple Helix Collaboration
- **Standardization of requirements across the value chain** – tracking sustainability across the value chain;
- **The spillover effects of international corporations on local supply chains** – influencing subsidiaries
- Shared green economy vision across the stakeholders
- Strengthening .. **Infrastructure and Networks** ...



Barriers to the Green Transition at Company Level

- The financing of new business models coupled with taxation systems
- Resistance to change
- Perceived lack of consumer demand
- Awareness - association of circular economy with **waste only - other business transformation opportunities** may remain unexplored
- Current way of tendering based only on lowest price – criteria?



Barriers to the Green Transition at Value Chain Level

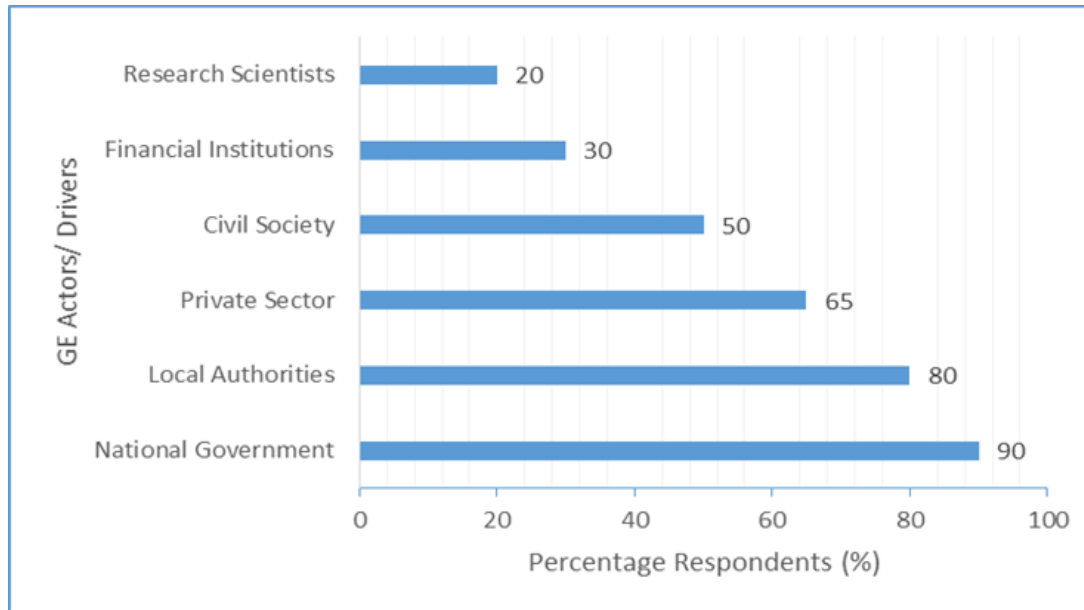
- Lack of a **supportive secondary raw material market**
- Dominant **current linear designs of products**
- Lack of **infrastructure**
- Absence of the **right price signals provided by the market**
- Lack of **trust and openness** to share and collaborate
- Lack of **knowledge** by industries on what other industries /companies offer as resources, recycled materials, discarded materials
- Lack of **industry guidelines and standards** for reuse and repair
- Lack of knowledge of **incentives** for companies to ensure product durability



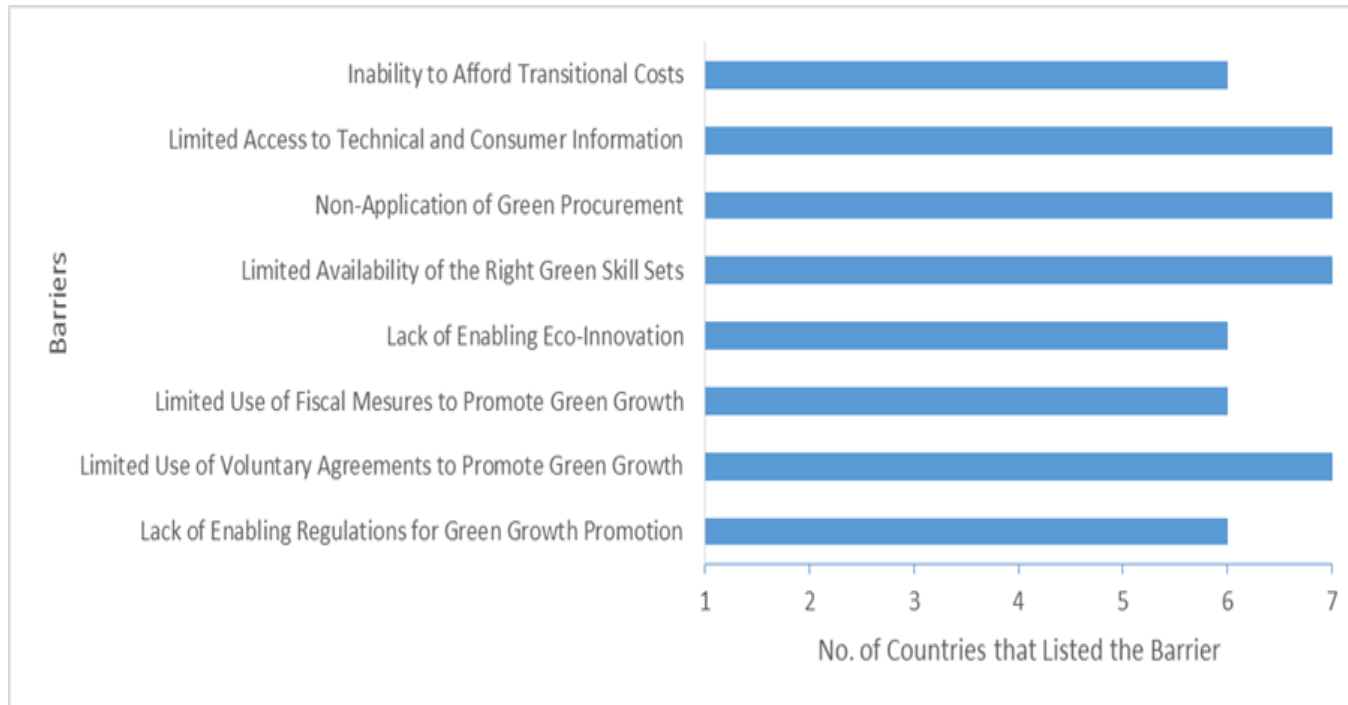
Potential Solutions

- A **better understanding** of the value of products and materials – focus to go beyond waste (giving products and materials multiple lives is better)
- **Better Terminology** - It is necessary to **re-categorize “waste”** as a resource. By calling end-of-life products “waste”, their value is immediately diminished and regulations often require that they be handled as non-valuable. However, when such products are somebody else’s resource, language and laws should be reviewed to reflect this;
- Engaging the **whole value chain**
- Provide **financial support for RD&D**, focus on **eco-innovation, technological development and adaptation** across the entire value chain
- Develop **infrastructure and networks**
- Embrace **Green Procurement or Sustainable Public Procurement**

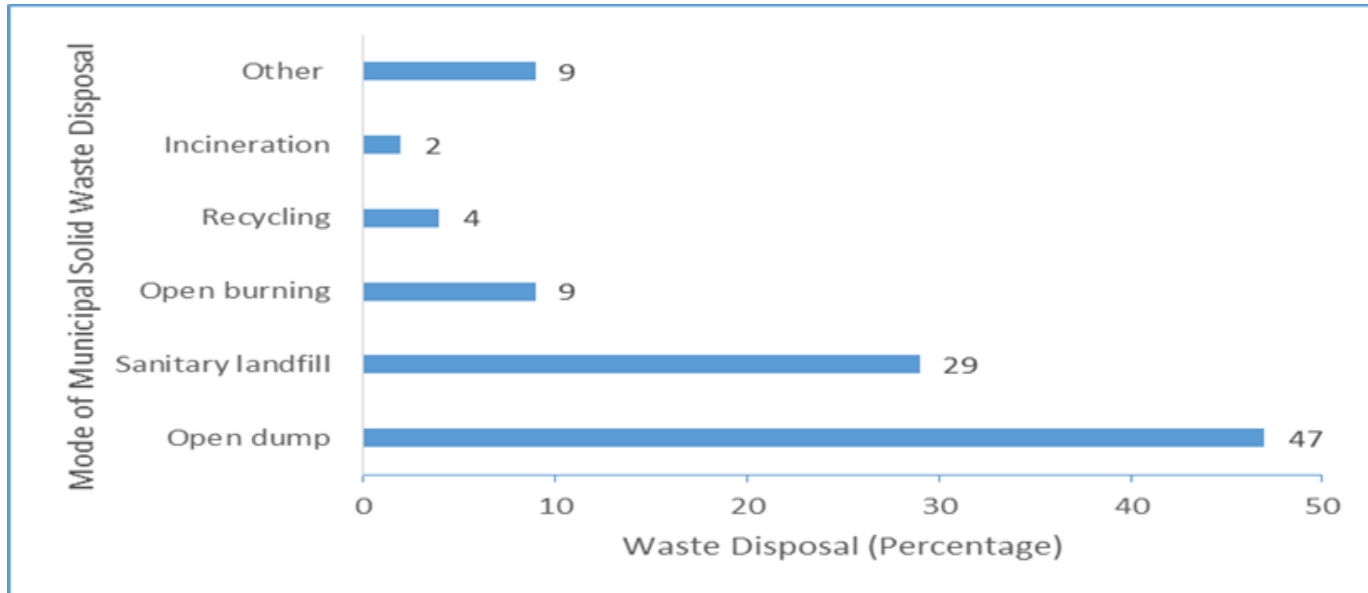
Actors/ Drivers of the Green Economy



Barriers to Green Growth



Mode of Municipal Solid Waste Disposal in Africa





Background and Challenges of African Forests

- 20% of Africa's land is covered with forests (675 million ha of forests and 350 million ha of wooded land)
- Forests contribute 1.8% of GDP and 1.9% of exports in Sub-Saharan Africa with significant variation across Countries
- The formal wood harvesting and processing industry currently generates around US\$17 billion per year and contributes just **less than 1 per cent of Africa's GDP** (FAO, 2014) employing about 650 thousand people constituting just 0.2 per cent of the labor force
- The informal sector is a key player in wood harvesting and processing (providing more jobs than the formal forestry sector – up to twice)
- **Wood is primarily used as an energy source in Africa** with over 600 million people in Africa lacking access to modern and clean energy. High importation of value added food products. Africa is a significant global producer of wood energy, responsible for 60 per cent of global charcoal production and 34 per cent of global wood fuel production in 2012 (FAO, 2012)
- Inefficient wood use for energy generates **toxic emissions that kills 600,000** people in Africa Annually
- Non-wood forest products valued at US \$ 5.3 billion (0.3% of Region's GDP) in 2011 are important for livelihoods as well as commercial trade
- There is little regional level information on employment in NWFPs. People with data in this area can help us strengthen the report
- African forests are threatened by deforestation at the rate of 0.5% per year – varies across countries
- Overharvesting and unsustainable forest management (logging) hence justifying the need for the adoption of sustainable forest management (SFM) practices
- NWFPs threatened by forest deforestation, degradation, and over harvesting



Existing and Potential green Businesses within African Forests

- Tapping the opportunities presented by REDD+ (Reducing Emissions from Deforestation and Forest Degradation”
- Embracing Resource efficiency interventions along the entire value chain and in wood processing technology
- Enhancing improved productivity of planted forests and agroforestry
- Adopting Improved charcoal kilns (wasteful traditional charcoal production methods with efficiencies of 10-15 per cent which means that it takes about 6-10 tons of sun-dried wood to produce 1 ton of charcoal)
- Adoption of improved stoves
- Addressing Indoor air pollution and associated health impacts of inefficient wood energy use
- Certification of Non Wood Forest Products (NWFP) e.g. **bamboo** in providing a strong, lightweight, and alternative to metal in the **manufacture of bicycles**. Ghana’s bamboo bikes aims to provide opportunities for women and young people. So far it has created 30 jobs for 20 bike assemblers and 10 bamboo farmers. More information on this is welcome!



Impact of COVID 19 on the Forest Sector

- As a consequence of the **halting of tourism**, many park guides and rangers have lost their jobs, resulting in decreased patrols and conservation and leaving forests more open to unlawful activities, such as poaching and illegal logging. Moreover, people who have lost their livelihoods in the economic slowdown are increasingly using forests as a resource of the last resort
- While wild **natural medicinal** plants with scientifically-proven effects may be useful in the wider medical response to the pandemic, their increased use, combined with additional pressure on charcoal production and changes in land use, may lead to accelerated forest resource losses and increased carbon emissions
- Response: full protection of the **forest-dependent communities** and build momentum to halt deforestation, further overuse of forest resources and degradation



Recommended Key Action Areas in Forestry

- Accelerating the adoption of **sustainable forest management (SFM) practices** with a view to advancing the sector's contribution to the green economy with a focus on wood harvesting and processing; use of wood as an energy source; sustainable harvesting of non-wood forest products (NWFPs); as well as general provision of ecosystem services;
- Promoting **resource use efficiency along the entire forestry value chain** with a focus on improving productivity; wood processing technologies; and adoption of improved stoves and charcoal making kilns;
- Promoting the adoption of **sustainable consumption and production (SCP) practices** along the forestry value chain with a focus on certification of forestry products, prohibition of the importation and export of illegal timber; organic and fair trade labelling of natural food and health products, and adoption of appropriate technologies;
- Promoting the sustainable **alternatives to wood products** such as bamboo growing and its subsequent value addition (e.g. making of bamboo bicycles in Ghana); and
- Learning from the United Nations Economic Commission for Europe (UNECE) to develop an African Action Plan for the Forestry Sector in a Green Economy perspective similar to Europe's Rovaniemi Action Plan.



Background and Challenges of Energy

Africa is home to **about 30 percent of the world's mineral reserves, 10 percent of the world's oil and 8 percent of the world's natural gas;**

- Yet, **Africa has the world's lowest per capita energy consumption:** with 16 per cent of the world's population (1.18 billion out of 7.35 billion population), it consumes about 3.3 per cent of global primary energy (UNEP, 2017);
- Africa's renewable energy resources are diverse, unevenly distributed and enormous in quantity - almost unlimited solar potential (10 TW), abundant hydro (350 GW), wind (110 GW) and geothermal energy (15 GW);
- Energy from biomass accounts for more than 30 per cent of the energy consumed in Africa and more than 80 per cent in many sub-Saharan African countries;
- Africa uses **more renewable energy than any other of the world's regions**, deriving as much as 70 per cent of its energy consumption from renewable sources
- It is estimated that 4 out of 5 rely on solid biomass, mainly fuelwood and charcoal for cooking (UNEP, 2017)
- **Africa's enormous renewable energy potential remains untapped.**
- **Around 93 per cent of economically feasible hydropower potential remains unused**
- Regional integration presents an opportunity to tackle energy deficiency through "**power pools**" and regional interconnections. Regional power pools could create savings of USD 41 billion per year by 2040 (OECD Development Center, 2020). The African Continental Free Trade Area (AfCFTA) will make it easy for the power pooling efforts to take shape.



Existing and Potential Green Businesses in the Energy Sector

- The distribution of sunlight across Africa is fairly uniform, with more than 80 per cent of Africa's landscape receiving almost 2,000 kWh/m²/yr - twice as much as in Germany
- This gives solar power the potential to bring energy to most locations in Africa without the need for expensive large-scale grid infrastructure
- Solar energy is currently gaining traction due to its decreasing prices, with an increase in installed PV capacity from 40 MW in 2010 to 280 MW in 2013
- In 2016, Germany's share of the global solar energy installed capacity was 13.7 per cent, yet it has an annual average of irradiance of 125 W/m² compared to Africa's 0.8 per cent share of installed capacity, which boasts an annual average of irradiance of between 220-300 W/m² (UNDP, 2018)
- Africa's hydropower potential is estimated at 283 GW, with only 20 GW being currently exploited (a paltry 7%)
- The resources for geothermal energy - estimated between 10 GW and 15 GW - are concentrated in the East African Rift Valley
- There are already 700 MW capacity installed in Kenya with a target of 5,000 MW by 2030. Additional countries in the region are carrying out geothermal explorations, including Ethiopia, Rwanda, Zambia, Tanzania and Uganda (IEA, 2014)
- In 2011, Germany determined to close its nuclear plants by 2022 and to become the first industrial country to shift completely to clean energy by increasing investments and research and development for renewable energy and energy efficiency. To fill the gap in its energy supply after it abandons nuclear, **Germany** has proposed vigorous development of wind, solar, and biomass, and new standards for the thermal efficiency of buildings. The country is also urging European and North African countries to create a continent-wide super smart grid which would allow the and wind power from the North Sea (World Bank, 2013) **import of power from sun-rich North Africa**



Existing and Potential Green Businesses..

- Africa has a substantial wind energy potential with on-shore and off-shore wind energy that is less uniformly distributed
- Africa's global share of the installed **wind turbine capacity is very low**, at 0.8 per cent compared to 40.4 per cent in Asia and the Pacific, 34.2 per cent in Europe and Eurasia, and 20.9 per cent in North America (UNDP, 2018). In spite of the high potential, the continent of Africa's installed wind energy capacity is less than 5.0 per cent of China's, 6.0 per cent of the United States, 12 per cent of Germany's and 40 per cent of Brazil's installed capacities (UNDP, 2018)
- The total hydropower potential for Africa is equivalent to the total electricity consumed in France, Germany, United Kingdom and Italy put together
- Africa's exploitable hydropower potential is estimated at 1,584,670 GWh per year (12 per cent of the world's total potential); currently, about 92 per cent of this potential remains unexploited (IRENA, 2015)
- The Inga site on the **Congo River** has an estimated potential of between 44,000 megawatts (MW) (UNIDO, 2009) or more **than twice** the power equivalent of the Three Gorges dam in China, which is currently the world's largest dam



Impact of COVID 19 on the Energy Sector

- Led to a reduction of energy demand, financial stress, and disruptions to the power supply chain (IFC, 2020)
- The slowdown in energy demand has led to cleaner air with estimated global carbon emissions dropping by 17 percent
- Increasing unemployment due to the pandemic may prevent many people from paying their electricity bills



Recommended Key Actions in the Energy Sector

- Promoting energy efficiency across the manufacturing and service sector enterprises of the economy;
- Tapping the continent's impressive solar irradiance of 260 W/m² to improve on Africa's insignificant global share of solar installed capacity of 0.8% to a significant percentage and also appropriately use the abundantly available solar energy to promote and accelerate its use by solar irrigation systems, solar lamps, solar kits, solar pumping, solar street lighting, and installation of off-grid solar centers;
- Tapping the continent's strong wind speeds of 6.47 m/s that surpasses the minimum 6 m/s for constructing utility scale wind power plants and raise Africa's global share of the installed wind turbine capacity from the current 0.8% to a reasonable wind powered renewable energy mix;
- Working to fully exploit the continent's large scale/ mini-hydro and geothermal power plant electrical energy generation potential;
- Promote the uptake of decentralized renewable energy (DRE) technologies in form of pico-solar appliances (>10W), solar home systems (SHS) (10 W+), standalone and grid-tied commercial and industrial systems (100 W+), mini-grids (>1Kw), and productive use systems such as solar water pumps;
- Working to efficiently and fully exploit the continent's biomass potential through the use appropriate technologies such as efficient charcoal kilns, briquette/ pellet making; biomass gasification, biogas, creation of bio-energy wood lots, bio-fuels, waste, community based forest management; and
- Investing in skills, training and qualification of locals around green energy technology and infrastructure, including installation, repairs and maintenance.



Background and Challenges of the African Agricultural Sector

- 43.6% of Africa's land is dedicated to Agriculture and 80% of all farms in Sub-Saharan Africa are small-holder farms
- Agriculture contributes nearly 14.3% of GDP, with Agriculture exports valued at more than US \$ 20 billion per year (FAO, 2014)
- Although agriculture is very prominent in most African economies, employing more than 60% of the population and contributing 25-34% of the GDP, its productivity is low and food insecurity is generally high on the continent
- In many African countries, productivity of major crops is significantly below potential due to reduced soil fertility and soil erosion driven by unsustainable and changing land use practices – notably clearing forests for small scale agricultural expansion (FAO, 2016)
- One in every four Africans remain malnourished. Currently, about 48% of Africa's population equivalent to approximately 450 million people live in extreme poverty, on less than US\$1.25 per day, with 63% of the continent's poor living in rural areas depending on agriculture for their livelihoods (World Bank, 2015)
- Droughts and/or prolonged dry spells often worsen the situation by resulting in severe crop damage or complete crop failures
- Achieving food security remains central to many national Governments in Africa as many regional countries remain net importers of food
- There is dwindling availability of arable land and water resources on the continent
- Only 6 per cent (or 13 million ha) of Africa's land is irrigated, compared to 37 per cent in Asia and 14 per cent in Latin America, making it the world's region with the lowest proportion of land under irrigation (UNEP, 2017)



Existing and Potential Green Businesses in the Agriculture Sector

- New science and generic technologies with green potential (**Biotechnology; ICT applications**)
- Farming system innovations (**Integrated Pest Management (IPM); Organic Agriculture; Conservation Agriculture/ Zero Tillage; Efficient Water Management Systems; Urban and Peri-Urban Agriculture**)
- Adoption of Integrated green regimes (**Use of Renewable Energies in Agriculture; Biofuels; Agri-tourism**)



Science technologies with green potential

- Newer technologies can reduce the load of known toxins in agricultural production, protect ground or surface waters, conserve natural habitats, reduce nutrient loads in soils, lower gaseous nitrogen loss and reduce the amount of non-renewable energy used in the cropping cycle
- **Biotechnology** - has a high potential for green agriculture but its use has proved highly controversial. It can support sustainable development by improving the environmental efficiency of primary production and industrial processing and by helping to **repair degraded soils and water** (using micro-organisms to reduce, eliminate, contain or transform to benign products contaminants present in soil, sediments, water or air; create improved crop varieties that require less tillage (reducing soil erosion) or fewer pesticides and fertilizers (reducing water pollution); genetic fingerprinting to manage wild fish stocks and prevent their collapse; and industrial biotechnology applications to reduce greenhouse gas emissions from chemical production
- Development of food, feed, fibre crops that have genetic traits such as: **herbicide tolerance, pest resistance, agronomic traits that improve yields and provide resistance to stresses, product quality traits that improve flavour and colour and technical traits such as chemical markers essential for breeding** (I request for African case studies in this space)
- For biotechnology to be perceived as a win-win solution for sustainable agriculture, policy will have to play a significant role - investing in research, in establishing regulatory frameworks necessary to ensure that biotech applications meet acceptable bio-safety and environmental standards, in ensuring that the technologies are not monopolized by commercial interests to the detriment of the poor, and in increasing awareness among the public of potential benefits;



ICT Applications/ Global Positioning Systems/ Precision Agriculture

- **Precision agriculture**, a technique that uses technology to collect and analyze data for the assessment of variations in soil or climate conditions, in order to guide the application of the right agricultural practices, in the right place, in the right way, at the right time. This has the potential to increase agriculture productivity and raise farm incomes (through more efficient/ low input use), while at the same time decreasing costs for producing and accessing goods and services.
- Use of ICT platforms to promote communication, information exchange and networking among very large numbers of individuals, organizations and businesses.
- Use of ICT in green agriculture in the monitoring of land use patterns, effective environmental databases can be used to track the status of various environmental indicators and impacts for sustainable environmental management and protection (**I need African examples and success stories**)



Farming System Innovations

- IPM - uses a combination of techniques such as biological control, habitat manipulation, modification of agronomic practices, and use of resistant varieties. Helps to reduce the need for chemical pesticides
 - Organic Agriculture
 - Conservation Agriculture/ Zero Tillage/ Crop Rotation
 - Efficient Water Management Systems
 - Urban and Peri-Urban Agriculture
 - Biofuels
 - Agri-tourism/ Farm Tourism
- (We need African case studies and examples here as well)**



Impact of COVID 19 on Agriculture

- Sector exempted from the Lock down
- During the pandemic period, there was increased demand for fruits, vegetables, and herbs that are known to boost human body immunity
- long freight horticultural flower industry value chains were significantly disrupted by the non-operational aviation industry
- At the farm level, the disruptions were realized in input supplies, labor availability as well as the provision of extension services



Recommended Key Action Areas for Agriculture

- Promoting the adoption of Integrated Pest Management (IPM) as a long term solution to pest control through a combination of techniques such as biological control, habitat manipulation, modification of agronomic practices, and use of resistant varieties;
- Promoting the adoption of agricultural energy efficiency as well as the adoption of renewable energy solutions in form of wind mills, solar pumps, solar dryers, and direct use of geothermal energy in Agriculture;
- Promoting and accelerating the production of organically certified agricultural products;
- Promoting the adoption of urban and peri-urban Agriculture as a way of advancing urban food security;
- Promoting the adoption of integrated farming systems in form of agroforestry, crop-livestock-tree systems, and integrated food-energy systems;
- Promoting the adoption of Agricultural water use conservation/efficiency through innovative water harvesting, sustainable ground water extraction; adoption of smart irrigation practices, and accurate weather forecasting capabilities;
- Enhancing soil nutrient management through conservation tillage, erosion control, restoration of degraded soils, and use of mulch, compost and green manure;
- Working to strengthen the continent's weak land policy and governance systems; and
- Promoting the uptake of **Green Innovation Centers (GICs)** by farmers for increased farm productivity and job creation. GICs seek to promote the introduction and spreading of green innovations throughout the various agricultural value chains.



Background and Challenges of the African Manufacturing Sector

- Promoting industrialization ranks high on African governments' policy agenda with aim to create new labor-intensive industries
- African countries have tried to industrialize in the past but with little success
- New Industrialization strategies are therefore for the Region
- The continent should take stock of past mistakes while addressing new opportunities and challenges brought about by the Fourth Industrial Revolution (4IR)
- every year between 2015 and 2030, 29 million new entrants will join Africa's labor force; Industrialization is essential to help realize the goal of the African Union (AU)'s Agenda 2063;
- Africa accounted for 2.6% of global trade in 2018, up from 2.4% in 2017
- There is need for improved resource use efficiency with a focus on energy, water, and other materials
- The percentage contribution of manufacturing value added to Africa's GDP has been declining since 1981 with recorded marginal improvements in FDIs
- Africa lags far behind the rest of the world in manufacturing value added (MVA)



Recommended Key Action Areas in Manufacturing

Policies to help incentivize the adoption of green business models

- Voluntary or binding mechanisms to help mainstream circularity in business models through the promotion of design and material re-use standards, certification schemes, labeling requirements, and extended producer responsibility
- Institutional support to circular business models through development of indicators and targets for resource efficiency, harmonizing waste and material use regulations, skill development, enabling partnerships between key resource users, and research and development
- Making use of behavioral insights to facilitate greater demand from consumers for resource efficient products and eco-labelled products (**culture of green consumerism**)
- Promoting the practical aspects of green industry such as the adoption of **resource efficient cleaner production (RECP)**, adoption of green and circular economy manufacturing practices; adoption of waste and by-product exchange through industrial symbiosis; Pollution prevention; eco-efficiency; as well as the 4R philosophy of reducing, reusing, recovering and recycling wastes **using existing African NCPs (13 in Number)**;
- Establishing the green technology data banks that will accelerate clean technology transfer to the region's manufacturing sector
- Working towards **the conversion of traditional and wasteful industrial parks into green, circular, and resource efficient eco-industrial parks (EIPs)**



Impact of COVID 19 on Manufacturing

- COVID 19 presented both challenges and opportunities to the Manufacturing Sector
- Those companies that manufacture sanitizers, personal protective equipments (PPEs), ventilators, medical oxygen, food agro-processing, and soaps benefitted while the rest were impacted negatively.
- The pandemic ushered in an era of innovative solutions along the value chains that benefitted from the pandemic.
- Global value chains were disrupted presenting an opportunity for Africa to rethink its manufacturing capabilities
- This has accelerated the need for digitization of manufacturing in the region (increased demand for Industrial applications of internet of things (IoT), augmented reality, 3D printing, E-commerce, Big data analytics, cloud computing and digitalized supply chains).



Background and Challenges of Waste Management

- The world's waste market at US \$ 410 billion that comprises of US\$ 160 billion recycling market, US\$ 125 billion Municipal Solid Waste (MSW) market, and US \$ 147 billion nonhazardous industrial waste market.
- The Millennium Institute estimates that the World needs an average yearly investment of between US \$ 83 to US \$ 141 billion to green the waste sector. Doing so will lead to 2 – 2.84 million additional jobs by 2050 in the informal sector.
- The consequence of this will be that waste to landfill will reduce from the current 22% to 5% by 2050.
- The global e-waste market was expected to reach US \$ 21 billion in 2020 while the waste to energy (WTE) market was to realize a global revenue of US \$ 136 billion in 2016.
- According to UNEP, African urban waste generation rates for 2020, 2030, and 2040 are projected to be 165,100,000 tons/year; 258, 100, 000 tons/year; and 367,700,000 tons/year respectively. With improved solid waste management infrastructure, creation of an enabling policy environment and strengthening of green skill sets in the continent, recovery of valuable materials from these waste streams will create significant green jobs.
- Africa was estimated to generate approximately 125 million tons of waste a year as of 2012. The average per capita waste generation in 2012 was between 0.78 kg and 0.8 kg of solid waste per capita/day compared to the global average of 1.39 kg/capita/day (UNEP, 2018).
- Waste should be treated as a resource for wealth and employment creation



Jobs per 10,000 metric tons/year of Waste

Type of Operation	Jobs
Product Reuse	
Computer Reuse	296
Textile Reclamation	85
Miscellaneous Durable Reuse	62
Wooden Pallet Repair	28
Recycling-Based Manufacturers –Average	25
Paper Mills	18
Glass Product Manufacturers	26
Plastic Product Manufacturers	93
Conventional Materials Recovery Facilities	10
Composting	4
Landfill and Incineration	1



Impact of COVID 19 on Waste Management Sector

- Based on research to date, the waste management value chain does not appear to spread COVID-19
- The livelihoods of informal workers who depend on the SWM sector have been heavily affected by the lockdown
- Waste production has shifted from industry and commercial centers to residential areas
- The volume of medical waste has increased by up to 40 percent; industrial and commercial waste production has fallen drastically due to the slowdown in manufacturing activity; hazardous waste production has grown with higher production from the pharmaceutical and medical sectors, existing hazardous waste treatment capacity in developing countries is likely to be overwhelmed, leading to stockpiling and potentially inadequate disposal; and municipal waste has increased in volume, effectively overwhelming existing waste collection and disposal systems – a reduction in recycling activities has further compounded challenges in the collection and disposal of municipal waste.
- Disposal at landfills has increased, in part because more recyclable material, such as plastics, are being sent to municipal waste channels. Most collected waste is transported to landfills or accumulates at temporary dumps. The use of single-use plastics (SUP) waste fraction is increasing. The previously declining dependence on SUP has seen a resurgence, largely driven by increased use of plastic-based personal protective equipment (PPE), such as gloves, masks, and disinfectant bottles, as well as packaging material



Key Action Areas for Waste Management

- Strengthening the region's waste management infrastructure to include Integrated Solid Waste Management (ISWM) approaches for purposes of facilitating waste reduction, reuse, recovery and recycling for the much needed wealth and employment creation while also substantially reducing the amount of wastes that require disposal;
- Exploring the development of a legislative framework that will prevent the landfilling of recyclable materials (plastic, paper, metal, food, greens, construction and demolition waste, e-waste) and organic waste by setting up biogas/ composting eco-start up pilots that are designed to demonstrate the commercial viability of waste recycling and recovery; waste to energy innovations; biomethanation; and adoption of innovative development of refuse derived fuels (RDFs);
- Reviewing and harmonizing waste management laws, policies, strategies, rules, and regulations with a view to having a balanced mix of instruments that advances the ideals of green growth promotion in the waste management sector;
- Working to exploit opportunities for greening waste management through upcycling and methane capture from landfills; and
- Developing and launching circular economy hub online platforms and marketplaces to highlight sustainability education and resources, match buyers and sellers of recovered resources; launch a recyclability app to support community/ private sector participation in waste management with a view to helping to reduce potential contamination of the separated municipal solid waste fractions to aid recycling.



Cross-cutting Recommendations

- Securing political goodwill and commitment for the green economy transformation at the highest level of Governments;
- Reviewing agriculture, energy, forestry, manufacturing, and waste management policies to ensure consistency, synchrony, and alignment to the promotion of the ideals of the green economy
- Promotion of green economy awareness, education and training through:
 - The development of public/ citizen's awareness programs on initiatives and policies necessary for green economy promotion involving innovative children to drive the green economy agenda and serve as catalysts for behavioral change through environmental clubs and youth groups;
 - Adopting green economy programs in schools to ensure a universal basic understanding of what the green economy is, waste management based on the 3Rs (reduce, reuse, recycle), waste minimization at source, and incorporation of indigenous knowledge and practices;
 - Developing and implementing new green economy training programs at University and tertiary levels to help meet the new green skill sets and maximize employment opportunities offered by the green economy;
 - Introduction of professional courses to facilitate re-training and capacity building of officials employed by institutions responsible for green policy implementation;
 - Employing non-formal education techniques to promote awareness of green economy issues at all levels, to change attitudes and behaviors; and develop community programs using traditional methods to educate both men and women;



Cross-cutting Recommendations ...

- Working to provide financial and technical support, while also offering
 - Incentives to the private sector by facilitating access to low interest loans for green investments/initiatives;
 - Zero-rated concessions for importation of equipment for green initiatives, and tax breaks for companies switching to alternative, greener sources of energy (e.g. incentivize circular business models through policy instruments that improve access to finance, the provision of tax incentives and subsidies, integrating resource efficiency criteria in procurement practices, and enabling industrial symbiosis);
 - Making small loans available for persons with an interest in business ventures that promote a green economy;
- Strengthening the **green economy governance** by drafting legislation that promotes a green economy; strengthening the enforcement capacity of institutions with mandates for environmental protection and natural resource management; and strengthening existing institutional frameworks;
- Advocating that **international finance should incentivize green** investments and greater financial and technical support through bilateral and multi-lateral agreements to help finance green initiatives;

The Report Presents several green and circular economy business model examples that demonstrates how the green economy approach creates wealth and employment. More examples are welcome!!