

**BOOSTING  
DECENT  
EMPLOYMENT  
FOR AFRICA'S  
YOUTH**

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# GREEN JOBS FOR YOUNG PEOPLE IN AFRICA: WORK IN PROGRESS

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It is in the interests of African nations to ensure that their most productive citizens are employed in useful work that contributes to national economic growth and social development. It is estimated that approximately 122 million young people will join Africa's labour force in the next decade, but this is nearly three times faster than the expected rate at which stable, wage-paying jobs will be created across the continent. Furthermore, the new jobs are often of low quality and in productive sectors that are adversely affected by climate change.

The concept of the 'green economy' is emerging as a hopeful solution to the multiplex challenges of climate change, poverty alleviation and inequality reduction, while also enabling African countries to create decent jobs and to accomplish an inclusive economic transformation. The 'greening' of economies is broadly understood as a process through which resources are reallocated from unsustainable production systems to sustainable and regenerative ones that also reduce vulnerabilities and promote human-wellbeing. This transformation is anticipated to create new 'green jobs', and for this reason it is widely heralded as a solution to the youth employment crisis in Africa. However, it is also clear that not all new jobs being created by this transformation will be necessarily 'decent' and as such, a distinction between decent and green jobs is important.

A job is considered green if it contributes substantially to protecting or restoring ecosystems and biodiversity; reducing resource consumption and inefficiency; de-carbonizing the economy; and minimizing or altogether eliminating all forms of waste and pollution - while also generating and supporting the wellbeing of people.

The challenge for African governments is that a green transformation of the economy will destroy and displace existing jobs, even as it creates new ones. This is bound to be disruptive, even if the eventual outcomes are generally positive. What should African governments, funding partners, researchers and other relevant stakeholders do to support a green transition of their economies, which stimulates job creation that benefits young people? This paper consolidates and reviews evidence on the creation of green jobs for African youth at regional, national and sectoral levels.

## Key Messages

**The evidence base on green employment in Africa is thin.** The quantity and quality of available data often depends on reporting from specific, short-term projects. Empirical evidence to show whether such initiatives have lifted young people from working poverty, addressed social protection, or even contributed to conserving the environment, is scarce. There is little evidence of sustained effects or scaling up from these beginnings; consequently, there is a lack of macro-scale data that could provide an evidence base to inform overarching national or sectoral plans for a green economy transition that could create decent jobs for youth.

**Green jobs interventions typically display clear goals and approaches, however, publicly accessible information on delivery, impacts and outcomes lacks depth.** Information about the design principles that shaped the interventions is often limited to general observations about the economic and environmental situation of the country, region or industrial sector concerned, relating to youth employment, environmental degradation and other sustainable development challenges, such as the prevalence of food insecurity. The appearance is of piecemeal interventions that fail to anchor to key (green) economic development indicators.

**From the available evidence, Africa's track record on green employment is mixed.** Not all purportedly green jobs fulfil all the definitional criteria of 'decent work'. Only a few of the jobs labelled as green jobs are long-term opportunities that offer high-quality, decent employment. At a policy level, governments across Africa have expressed their commitment to create job opportunities for youth through national policies as well as various regional and continental policy agendas. Financial resources have been allocated to green economy programmes that include a focus on green employment. The green economy narrative is already present even in remote and rural areas. However, across Africa, progressive policies and strategies to support green growth and job creation remain largely aspirational rather than practical.

Furthermore, even in some countries where national green jobs assessments are being conducted, there is limited forecasting of how many jobs will be created, lost and/or transformed in each sector.

**It is challenging to determine with the current evidence base whether green jobs programmes have significantly boosted decent youth employment in African countries.** This is due to a variety of factors, ranging from a lack of proven theories of change, limitations of funding, and poor coordination of policies, investments and programmes, to weaknesses in monitoring, evaluation and learning. What is then presented as success of the green economy in generating decent jobs is probably more rhetoric than realistic, given the complexities of youth employment and sustainability.

**There are few ways in which youth are in a unique or special situation, compared to other generations, in relation to the employment market in green jobs.** This is not to deny that young people entering the African job market for the first time are in a challenging predicament, facing a scarcity of quality jobs in contexts of high youth unemployment and underemployment. Pathways into green jobs for youth are enabled and constrained by the prevailing structures and macro-economic dynamics in national and regional economies, not only youth-specific factors. Economic and industrial changes, such as the rise of the gig economy, are shaping the prospects for the creation of decent, green jobs.

**There is scant evidence that the perceptions of young people towards jobs in the green economy differ significantly from their attitudes towards employment in other economic sectors.** In a context where opportunities to find employment, especially decent paid work, are scarce, any income-earning opportunity is preferable to none. Decent jobs must be created in greater numbers throughout the economy before young people could conceivably start expressing a preference for jobs in the green economy. Innovative reforms to social protection systems could allow young people to exercise more choice in favour of decent jobs, including employment in the emerging green economy.

**Some (but not all) kinds of green jobs are knowledge-intensive,** implying a need to support anybody who aspires to do such work with appropriate education and training. However, where training has been offered, tracking mechanisms to determine the career pathways of trainees are often lacking.

**In general, young women have more difficulty finding jobs than young men, especially in rural areas.** Most of the green jobs initiatives considered in this report have incorporated a focus on gender equity, however, the piecemeal and short-term character of green economy projects and programmes means that efforts to address gender inequalities are also fragmented and short-term. Intersectionalities between gender and other axes of diversity must also be considered.

In African countries, **unsustainable activities continue to offer huge employment opportunities.** Concerted political will is needed, not only to stimulate new green sectors and green jobs, but to build realistic pathways for a transition out of environmentally and socially unsustainable activities. A coherent and integrated approach is needed, to achieve a decisive shift. Piecemeal approaches to green job generation are in danger of producing only modest progress, limiting the number of opportunities available for today's youth generation to attain meaningful and sustainable livelihoods in the green economy.

## Summary of Recommendations

- Create and improve mechanisms for systematically collecting, monitoring and publishing data on green jobs and youth employment in green economic sectors.
- Develop theories of change to inform the design, implementation and impact evaluation of green jobs and youth jobs strategies and interventions, at all levels.
- Promote policy coherence to underpin green growth, by integrating youth employment and green jobs priorities into broader national economic development plans, at all levels.
- Integrate gender-responsiveness into youth green jobs interventions at all levels; raise awareness and promote participation of young women and men in decision-making and programming as they relate to the green economy and green jobs opportunities.
- Alongside supply-side interventions that aim to support young women and men into green jobs, demand-side interventions should boost the green economy transition and create more job opportunities that could be taken up by youth.
- Engage and partner with private sector and industry players to create green youth employment opportunities and provide skills training for knowledge-intensive roles in the green economy.
- Conduct national green jobs assessments, including risk analysis and mitigation measures across all sectors.
- Coordinate African regional policies and harmonise frameworks for qualification of standards and certification in the green economy.

## Conclusion

Inclusive green economy approaches should not mean choosing between growth, social progress or environmental sustainability. With strong planning and coordinated policy frameworks, inclusive green economies could be built, which also reduce inequalities and promote social well-being. A green jobs strategy for youth should incorporate three key principles of the decent jobs agenda, comprising: strategies to support green economic growth and decent job creation; supporting youth to build skills that are relevant for the green job market; and improving income security with innovative social protection systems.

# 1. Introduction

This paper analyses evidence on efforts to boost decent employment for young people<sup>1</sup> in Africa through green jobs programmes in various sectors, countries and regions across the continent. The paper reviews a variety of green economy interventions being implemented in Africa and discusses evidence on the impact they are having on youth employment and the 'greening' of African economies. The paper is based on a desk review of existing literature on green jobs for young people. The paper assesses the scope, nature and quality of jobs being created and elucidates the perceptions of young people regarding work and employment in the green economy. Further, it examines what works and what does not work in interventions to promote green jobs for youth, identifies priority knowledge gaps, and makes recommendations.

Africa's youth employment crisis is a complex one. Many of the continent's increasing population of working-age youth are unable to find decent work in Africa's steadily expanding economies afflicted by 'jobless growth' (ILO, 2020d). The minority of young people lucky to find a job are typically underemployed or in poor working conditions with no job security. Meanwhile, African nations, like others around the world, are grappling with the threats and risks associated with environmental degradation and climate change. The economic sectors directly implicated in climate change are also seen to be the ones where current job needs and future employment opportunities exist; sectors such as agriculture, natural resource management, ecotourism, waste management, infrastructure (public works), energy, construction and manufacturing, among others. Against this background, the narrative of 'green jobs for youth' has emerged as a policy response to the youth employment challenge, which also provides a route to inclusive economic growth, a pathway towards achieving Sustainable Development Goals (SDGs), and a driver of a green transformation of African economies.

While green jobs are the ultimate goal, they must also be decent. Some of the notable challenges to finding decent jobs for young people have been the vulnerability of most youth to climate change, lack of sufficient information on green jobs, and unstable employment statuses, among other challenges. The majority of young people hold precarious, gender imbalanced and poorly remunerated jobs, few of which meet their needs and aspirations. Even where decent jobs might be available, evidence indicates that young people lack access to quality education and adequate training in order to match skills demanded in the job market; they also lack access to financial services and social protection. Young people and organisations that represent youth (such as youth-led institutions, cooperatives that are likely to invest in young entrepreneurs, and organisations likely to create work opportunities for youth) are also typically excluded from decision-making (FAO, 2020).

## 1.1 Organisation of the paper

The paper is organized as follows. Section two defines, contextualizes and discusses the key concepts of the green economy, green jobs, and the youth employment crisis. It then offers a synopsis of the scope, nature and quality of 'green jobs'. Section three presents and discusses various case studies of green economy interventions, and assesses evidence on the impacts they have achieved in relation to youth employment. Section four analyses enablers and drivers of green employment that are particular to young people. This is followed, in Section five, by a review of evidence that sheds light on the perceptions and aspirations of young people towards green jobs. Section six reflects on the evidence on the economic and sectoral impacts of emerging shifts towards a green economy. Section seven identifies some key knowledge gaps while Section eight concludes and offers recommendations for policy and practice. Annex 1 describes the research methodology.

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<sup>1</sup> The term 'young people', used interchangeably in this paper with 'youth' is a very broad and loose policy category. It is defined both by age group (15–35-year-olds, according to the African Union Youth Charter), but also as a socially constructed transitional phase of life between childhood and fully fledged adulthood, which relates to with the social and economic status, entitlements and behaviours of individuals. Izzi (2020: 16) offers a detailed analysis of this.

## 2. Definitions, Concepts and Scope

This section discusses the key terms and discourses associated with the concept of the green economy (see **Box 1 & Box A1 in Annex 2**), including green jobs and green skills, and contextualizes policy concern about a 'youth employment crisis' in Africa. The section offers an analysis of the scope, nature and quality of green jobs.

### Box 1: Glossary of some key terms

**Green economy:** an economy that results in improvement of human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP, 2011).

**Green growth:** Green growth is the selection of economic activities that, at best, promote environmental and social development and, at a minimum, do not harm the environment or human welfare. It is achieved through rigorous analysis of economic alternatives and their related environmental and social impacts (Monga, 2019).

**Green jobs:** Any work that contributes substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution (UNEP, 2008).

**Green skills:** The knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource efficient society (OECD, 2014).

**Decent jobs:** Encompasses opportunities for women and men to obtain productive work in conditions of freedom, equity, security and human dignity, and in which women and men have access on equal terms (ILO, 2013).

### 2.1 The green economy concept

The term green economy was conceptualized in the 1980s (Pearce et al, 1989), but the concept and its surrounding discourse - including related terms, such as green growth, green jobs and green transformation (see **Box 1 & Box A1 in Annex 2**) - gained currency after the 2008 global financial crises, which helped to intensify appreciation, among policy makers and publics, for deepening social and environmental crises (Jacobs, 2012; Fergusson, 2015). The United Nations Environment Programme (UNEP) and the UN's International Labour Organization (ILO) endorsed the green economy as a solution to the multiplex challenges of climate change, poverty, unemployment, and other consequences of the global financial crisis (ILO, 2012; UNEP, 2011). UNEP then defined the green economy as **"an economy that results in improvement of human well-being and social equity, while significantly reducing environmental risks and ecological scarcities"** (UNEP 2011).

The green economy concept was also linked centrally to the achievement of the UN Sustainable Development Goals (SDGs) (Lamphere & Shefner, 2015; Smit & Musango, 2015), which influenced the flow of investments into global and local initiatives, such as renewable energy, waste management, ecosystem restoration, ecotourism, green infrastructure and sustainable agriculture, among other green economy sectors. The green economy discourse re-invigorates debates about sustainable development and how that concept integrates core components of 'greening', such as efficiency in resource consumption, reduction of environmental impacts, tackling vulnerabilities, and promoting inclusive and transparent approaches to economic growth. At the level of principles, policies and strategies, these elements have been incorporated in a variety of green economy-influenced initiatives to promote sustainable development (UNDP, 2015).

Faccer et al (2014) identified three key discourses that have flowed through debates on the green economy. The incrementalism discourse supports the need to minimize the impacts of economic growth and development on the environment. The reformist discourse emphasizes the opportunities of the green economy, to enhance economic growth and promote improvements in environmental and social values. The transformative discourse calls for a fundamental paradigm shift that includes issues of human rights and social equity. **Table 1** presents some distinguishing features of these three discourses, which have

potentially different implications. For example, the transformative discourse implies that approaches to green jobs in ‘developed’ countries would be quite different from those that would be appropriate in ‘developing’ countries. In the former, the emphasis would be on decarbonization and reductions in material consumption, while African nations would have leeway to emphasize job creation and increases in material consumption, however, the measure of success would not be GDP growth but human development, wellbeing, and decent livelihoods.

**Table 1: Distinguishing features of the three discourses on the green economy (Adapted from Facer et al 2014, pp 645)**

Discourse	Distinguishing features				
	Orientation towards growth	Orientation towards principles/ justifications for action	Orientation towards indicators	Orientation towards environmental limits	Orientation towards strategy or action
<b>Incrementalist</b>	Pro-growth, consistent with the prevailing economic paradigm	Environmental cost avoidance (e.g. emission taxes) will provide insurance against slowed growth & crises over the medium-term	Gross domestic product as an unchallenged & appropriate measure of progress	No clear comment on environmental limits (although efficiencies are emphasized)	Job opportunities through manufacturing & technology associated with environmental efficiencies
<b>Reformist</b>	Pro-growth, with improvements to (but still within) the existing economic paradigm	Costs of inaction important for the long term & new sources of wealth (e.g. ecosystem services) available for advanced growth	Additional indicators of value needed in addition to what is in current use (e.g. ‘beyond GDP’)	Recognition of some environmental limits (e.g. imperative of fossil fuel reduction) & supportive of decoupling (mostly relative)	Social returns with an emphasis on green jobs incl. through NRM & lifestyle changes (e.g. green cities & products)
<b>Transformative</b>	Pro-development (broadly defined, beyond simply GDP growth) for developing countries; zero/ de-growth most appropriate for developed countries	Demands more attention to human rights, including voice of minorities in green economy debate	Suggest alternative measures of progress, including a consideration of a broader conception of societal well-being	Emphasis on absolute rather than relative decoupling	Caution against technology as a panacea, highlighting risks of over-consumption & risks to social and ecological communities

## 2.2 The youth employment challenge

Markets for youth labour in Africa are characterized by a scarcity of decent jobs. The youth employment problem in Africa is a crisis first and foremost of the unavailability of productive work, and at the same time a crisis of unsustainable livelihoods (Carreras et al 2020; ILO, 2020d; Sumberg et al, 2020). Against the background of slow economic growth and weak demand for labour overall (Ortiz, 2012), young people in particular face widespread unemployment and underemployment, and low-quality jobs characterised by informality, temporary work, low wages, poor working conditions and inequalities in pay (e.g. between young men and women) (ILO, 2020d). Consequently, young people are over-represented among the working poor, especially in rural areas. This problem disproportionately affects young women, who often work in informal, low-productivity segments of the economy, often as contributing family workers, micro-entrepreneurs, or low-paid and unskilled casual workers (see Box 2).

### Box 2: 2020 Africa youth employment trends (Source: ILO, 2020d)

- 70% of population are youth below 35 years
- 12.4 million youth are unemployed
- 95% of youth are in informal employment
- 53.5 million youth (20.7%) are not in employment, education or training (NEET)
- 9% unemployment rate in sub-Saharan Africa
- 30% unemployment rate in Northern Africa

The prolonged youth employment crisis, particularly the numbers of youth not in employment, education or training (NEET), implies an underutilized productive potential in the economy as well as thwarted aspirations of millions of young people, with the potential of long-term negative impacts. Widespread unemployment also creates imbalances in the economy, expressed in adverse effects such as price volatility, food insecurity, disease risks, poverty and weak social cohesion (Cock, 2014; Furlong, 2016; Loiseau et al., 2016, OECD, 2012).

Policy responses to the youth employment crisis have been diverse, ranging from the AUDA-NEPAD's 2004 strategic framework for youth, which targeted youth employment; the 2006 African Youth Charter, which prioritised poverty eradication, socioeconomic integration of youth, sustainable livelihoods and youth employment (AU, 2006); the declaration by the UN General Assembly in 2009 on the International Year of Youth; the current work of the AU Youth Envoy; national employment policies as well as policy responses emanating from civil society and non-profit organizations. International development organisations have also provided support to national and sectoral programmes on youth employment. Examples from these programmes will be reviewed in this paper.

Consequently, many African countries have formulated national youth policies that are intended to address youth employment challenges. These often involve providing support such as skills development programmes, vocational and technical training, apprenticeships, and micro-loans for youth entrepreneurs. However, it is increasingly recognised that these kinds of measures cannot overcome structural issues that limit the availability of and access to quality jobs. An effective and lasting solution to the youth jobs crisis demands broad-based solutions for the economy as a whole.

## 2.3 Green Jobs

Green jobs are defined as work in agricultural, manufacturing, research and development, administrative and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes **“jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution”** (UNEP, 2008).

Green jobs should also be decent jobs, defined by the ILO as **encompassing opportunities for women and men to obtain productive work in conditions of freedom, equity, security and human dignity, and in which women and men have access on equal terms** (ILO, 2013). The ILO Decent Work Agenda outlines four pillars for decent work - employment creation, social protection, rights at work, and social dialogue - that shaped the inclusion of decent work in the sustainable development goals (ILO, 2015c). Hence, decent work is anchored on SDG Goal 8 (“Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”). Importantly, this goal includes several targets that relate to young people: reducing the proportion of youth NEETs; operationalizing a global strategy for youth employment; supporting the development of job-creation opportunities through entrepreneurship, creativity and innovation; and formalising micro-, small and medium enterprises (MSMEs) in the informal sector, improving their access to financial services. Target 8.2 focuses on labour-intensive sectors and increasing economic productivity through diversification, technological upgrading, innovation and value addition; arguably, green jobs would achieve these objectives while also being environmentally sustainable and protecting the rights of workers (ILO, 2015c).

## 2.3 Green Skills

The Organization for Economic Cooperation and Development (OECD) defines green skills as **“the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource efficient society”** (OECD/CEDEFOP, 2014). They include core skills such as environmental awareness, technical know-how, values and attitudes, as well as specific skills and knowledge pertaining to green technologies and innovations, specific green sectors and green production processes, which are needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community (ILO, 2015a).

Ultimately, personnel skilled in green innovations are expected to be required in all sectors and levels of product value chains across a green economy. The required skills are not necessarily readily available within the current workforce. Training, skill-building and opportunities for lifelong learning are considered essential for a successful transition to a green economy. The UN Economic, Social and Cultural Organisation (UNESCO) advocates the ‘mainstreaming’ of green skills throughout formal education systems, in order to equip learners from an early age to operate in a greener economy (UNESCO, 2016).

The ILO says that green skills should be identified (e.g. through national or sectoral green skills assessments), then measures taken to train current and future workforces, through the inclusion of green skills in formal education (including higher education (HE) and technical, vocational, educational and training (TVET) curriculums), agricultural extension services, continuous training and adult learning schemes, employer-led skills training initiatives, training provided through workers’ organisations, and courses in green skills for specific sectors, such as energy, waste, eco-tourism, agriculture, etc. (ILO, 2018a).

## 2.5 The Scope, Nature and Quality of Green Jobs

In the process of a successful transition to a green economy, new jobs will be created, some jobs will be substituted, some will be eliminated altogether, while others will be transformed (UNEP, 2008). In countries where the degree of industrialization is still low, the green economy transition promises to offer new jobs and economic sectors that could be green from the onset, as part of low carbon, resource efficient, and socially inclusive development pathways.

A framework of qualitative indicators could be used to identify and assess green jobs at industrial, organisational and job levels. **Table 2** presents a framework proposed by Martinez-Fernandez et al. (2010). Following their approach, jobs may be considered green if they belong to a green economic sector or are involved in the provision of green products or services, if they contribute to a green production process or perform a function within a value chain that fulfils certain green criteria, or if they perform roles within an organisation that expresses green values through its operations. At the level of individual job roles, green jobs maybe identified by considering the occupational profile, assessing the kinds of knowledge and skills being exercised, and measuring the proportion of time devoted to green tasks, as well as considering whether the job offers decent working conditions.

**Table 2: Green Jobs Indicators. Adapted from Martinez-Fernandez et al (2010)**

Industry-level	
<b>Sector</b>	The fields of economic activity into which firms can be categorized. The sectors most often referred to as 'green sectors' include renewable energy, building, transportation, recycling, food and agriculture, forestry and tourism. They are usually the focal points of studies on green jobs not only because of the nature of the goods and services they are producing, but also because they tend to be labor-intensive.
<b>Product/ service</b>	The specific output of the businesses in the different industries or sectors. There are specific products and services that can be considered 'green' due to the eco-innovative processes involved in their production. For instance, products and services aimed at reducing or limiting the negative impact of human activity on the environment (e.g. energy-efficient home appliances) or at improving the environment directly (e.g. waste-recycling services). Look for changes in human consumption habits as awareness for green products and services increase.
Organization- level	
<b>Production method</b>	The environmental quality standards used by firms in their production process. Firms can set in place measures to reduce energy consumption and waste production and build environmentally-friendly infrastructure for their production processes. This criterion allows for the classification of jobs in a firm that does not belong to a green sector but uses energy-efficient techniques considered to be green.
<b>Green Awareness</b>	Organizations have different levels of commitment to green and environmental issues. In some cases, the heads of firms are individuals that are deeply committed to the environmental cause and engage in associations, partnerships or community movements to protect the environment. Green awareness is often reflected in the levels of corporate social responsibility of the organization. This is often dependent on the history and structure of the organization.
<b>Position on the value chain</b>	The implication of a job in the green economy might vary along the value chain of the good or service being produced. For example, a job in a company producing energy-efficient automobiles might be considered to be green.

<b>JOB-level</b>	
<b>occupational profile</b>	This refers to the nature or purpose of the job, irrespective of the sector it is performed in. Almost any occupation can be considered green as long as it contributes to reducing harmful impacts of human activity on the environment, either directly or indirectly.
<b>Required skills and abilities</b>	Certain jobs require workers to possess certain specialized green skills and abilities. Determining whether a job can be considered as being green can in some cases be done based on the necessary skills and competences required to perform it.
<b>Job decency</b>	UNEP and the ILO emphasize the condition that 'green jobs' need to be decent jobs, i.e. good jobs that offer adequate wages, safe working conditions, job security, reasonable career prospects, and worker rights.
<b>Green workload</b>	Some workers may do some of their work in green areas and some of their work in traditional areas. In this case, it is important to adequately measure the part of the workload that is officially dedicated to green tasks in order to determine if the job can be considered as green.

Van der Ree (2019) has proposed another approach to identifying green jobs, in any of three ways. First, jobs can be labelled green if the final product or service has significant green attributes, regardless of whether the production process was resource-efficient. Examples of green products might include green buildings, clean transport services and renewable energy technologies. Secondly, green jobs can be identified by their production processes, such as resource-efficient manufacturing, green agricultural practices, or eco-tourism. Third, green jobs could be identified by looking at the domain of activities, for example, work that contributes to natural resource conservation, such as reforestation, agroforestry, biodiversity preservation, soil and water conservation, etc.

Achieving jobs that are fully decent and green is the ultimate goal. However, the extent to which a green job benefits the environment and upholds decent work conditions can vary considerably. The UN Environment Programme (UNEP) proposed that green jobs should then be classified using a 'shades of green' framework (UNEP, 2008), under which jobs in various shades of green span a wide array of skills, educational backgrounds and occupational models, and can be found at different points of value chains across a broad spectrum of economic sectors (see **Table A1 in Annex 2**). This concept was later elaborated by ILO to depict the decency and environmental friendliness of a green job along a spectrum (ILO, 2016a). For example, jobs in highly efficient industries or production processes often require higher technical skills and more sophisticated training for workers, whereas jobs in less efficient sectors, such as informal waste recycling, require simpler skills; the former would be designated as a greener shade than the latter.

The shades-of-green approach recognizes that there are different degrees to which technologies, products, and business practices can be labelled as green, ranging from reactive and remedial measures on one hand to much more proactive and progressive measures on the other. The organisations argue that technological advances mean that the threshold between practices that are considered efficient and inefficient must rise over time. Equally, additional social benefit entitlements provided to workers above the minimum national labour standards place jobs closer to the greener end of the spectrum (ILO, 2016a; UNEP, 2008). Jobs which happen to be engaged in environmental sectors or resource-efficient production systems, which nonetheless exploit cheap labour or provide dangerous working conditions, cannot be fully green and UNEP designates these as 'brown' jobs. (UNEP, 2008).

The shades-of-green concept is helpful in thinking about where individual young people are positioned in the jobs market relative to green jobs that are becoming available across sectors. Many of the jobs available to youth, especially those without educational qualifications or skills, are liable to be found in the browner range of the spectrum. The aspiration then, is to accelerate the transition of these sectors and elevate these to more decent and greener jobs.

## 2.6 Green Jobs for Youth Discourse and its Implicit Theory of Change

A prevailing narrative within policy circles and some academic literature holds that there is a ‘youth employment crisis’ in Africa. However, as deconstructed by Sumberg and colleagues (2020), this discourse risks portraying young people as the source of the problem, whereas better evidence supports the alternative view that the essence of the crisis is a scarcity of decent jobs that could occupy both youth and non-youth. The root of the problem lies in structural constraints within African economies, which inhibit job creation and economic growth.

With this insight in mind, it is useful to reflect on the discourse of ‘green jobs for youth’ in Africa and the theory of change which it implies. To fulfil the rhetorical promise of green jobs for youth, action is needed on both the supply and demand sides of the youth employment relationship: not only do young people need to be ready and prepared to do green jobs, but there need to be green job vacancies ready to absorb youth (and others). As with the economy in general, so with the emerging green sectors of the economy: It is important to avoid the error of focusing only on supply-side problems, by intervening to improve the readiness of youth to undertake work in (green) jobs. The supply-side interventions need to be matched with interventions to stimulate demand for workers, including job-seeking youths. Therefore, one of the questions we have asked in this study is whether the policies, programmes and schemes to generate green employment for youth have prioritized the supply or demand sides of the equation, or attended to both.

In this section, we have discussed key concepts and terms, and considered criteria for classifying jobs as green jobs. We have also looked at the discourse of green jobs and considered its implicit theory of change. In the next section, we present and discuss selected case studies of green economy interventions in Africa, with a particular focus on whether and how they have affected African youths’ chances of securing decent employment in a transformed green economy.

## 3. Africa's Transition to a Green Economy: Analysis of Selected Case Studies

In this section, we present and discuss selected case studies<sup>2</sup> of green economy interventions adopted across Africa, which involved a focus on youth employment and the creation of green jobs. The cases are organized into four sets: **policy- and strategy-driven; donor-driven; sectoral; and youth-driven** interventions. These four categories overlap; the intention of grouping them in this way is to support our analysis of possible similarities and differences among cases that have some features in common.

The analysis that follows is based on a desk review of available evidence. In each case, we have tried to identify the **main goals, approaches, key activities, outcomes and impacts** of the intervention and to assess these from the perspective of our research questions (**Annex 1**). A general observation about the evidence available for all the following case studies is that the goals and approaches are mostly clearly outlined, however, they typically lack in-depth details on delivery, impacts and outcomes. Information about the design principles that shaped the interventions is often limited to general observations about the economic and environmental situation of the country, region or industrial sector concerned, relating to youth employment, environmental degradation and other sustainable development challenges, such as the prevalence of food insecurity.

### 3.1 Policy-driven interventions

In this category are interventions that aim to implement, or are incentivized by, green economy policies, which have been adopted by a number of African states. Interventions in this category typically aim to promote economic growth, employment and incomes, along with climate adaptation and mitigation, often while addressing one or more social inequities, such as gender inequality and youth inclusion in the job market. The kinds of policy measures used might include strategy frameworks as well as financial investments (e.g. in youth job skills and entrepreneurship training schemes) and regulatory measures (e.g. eco-labelling and certification schemes) (Bianco, 2016; Brooks et al., 2020; Chapple, 2012; UNEP, 2008). Policy-driven interventions might also involve setting priorities for research, development and innovation, such as developing instruments to diagnose youth labour-market dynamics (Jarvis et al., 2011). Typically, green economy and youth jobs interventions that are driven by policy are locally contextual, and linked to broader global, national or sectoral development policies and strategies (Jarvis et al., 2011; ILO, 2016a). In the cases below, we focus on how the youth green jobs agenda is incorporated and implemented.

#### Case study 1: AfDB Ten-Year Strategy, 2013-2022

The African Development Bank's Ten-Year Strategy (TYS) 2013-2022 has two overarching objectives: the achievement of inclusive growth and the transition to green growth through infrastructure development, regional economic integration, private sector development, governance and accountability, and skills and technology (AfDB, 2013). Under this strategy, inclusive and green growth is expected to create jobs which the African continent needs today and will need in even greater numbers in the future, as millions more young people enter the job market. A gradual transition tailored to national circumstances and supporting national development strategies is expected to create decent jobs, while also easing pressure on natural assets by managing environmental and socio-economic risks and sustaining natural capital (AfDB, 2013). Africa's 'demographic dividend' is viewed as a key driver of inclusive and green growth, hence young people are viewed as central to the TYS. The AfDB's 2016–2025 Jobs for Youth in Africa Strategy builds on the TYS. It targets the creation of 25 million jobs and aims to equip 50 million youth with skills. The strategy is explicitly linked to SDG 8 (decent work and inclusive economic growth), SDG 4 (equitable education and skills development), and SDG 1 (ending poverty) (AfDB, 2016b). Equally it also links to Agenda 2063, particularly the priorities in incomes, jobs and decent work; sustainable and inclusive economic growth; and youth empowerment, among others (African Union, 2015).

*Key Observations:* The AfDB's use of terms such as 'decent jobs' and 'inclusive green growth', rather than 'green economy' or 'green jobs' highlights the heterogeneity of green economy narratives across the continent. The TYS and the associated youth jobs strategy are evidently guided by clear goals, but we could not locate any publicly shared implementation plans or evaluation reports indicating progress in achieving these institutional commitments.

<sup>2</sup> See Annex 1 for research methodology

## Case study 2: Skills for Green Jobs in South Africa

Since 2010, South Africa has aimed to transition to a green economy, which entails transitioning away from the country's fossil fuel industry while tackling high rates of inequality and poverty.

A green skills assessment has been undertaken in South Africa, carried out by Sector Education and Training Authorities (SETAs) under the Ministry of Labour. This assessment involved a survey of skills shortages and identification of skills-development priorities across industries. The government publishes a National Scarce Skills List. Shortages in green skills were indicated in areas such as environmental management, urban and regional planning, civil engineering and construction technology, quantity surveying, environmental science, and occupational and environmental health, among others (ILO, 2018b).

Between 2009 and 2013, the National Cleaner Production Centre of South Africa (NCPC-SA) offered a six-month internship programme, which aimed to enhance the employability of newly qualified graduate engineers. The NCPC-SA analysed key green skills relevant to resource-efficient and cleaner production (RECP), then offered training in those areas to new job entrants. By increasing access to knowledge, skills, technology and best practices, the programme, which involved a combination of training, mentoring and workplace experience, was intended to support companies to realise environmental benefits and economic savings, while creating new jobs for youth. Internships were offered in various sectors with green production practices, including clothing and textiles, chemicals and pharmaceuticals, automotive, and agro-processing. The programme was reported to have achieved an employment rate of 83 percent among beneficiaries, between 2010 and 2013 (Van der Merwe, n.d.).

Key Observations: The green skills assessment carried out by SETAs did not capture all the skills gaps faced by enterprises and workers in the informal sector. Equally, traditional learning approaches employed within schemes like the NCPC-SA green skills internships programme were more suitable for enterprises and youth in the formal sector than for those in the informal sector. Consequently, these skills training initiatives have tended to benefit a minority of young people, and not the most disadvantaged. Moreover, sustained livelihoods are not certain to have endured once an internship was completed.

## Case study 3: Kenya Green Economy Strategy and Implementation Plan (2016-2030)

The Kenya Green Economy Strategy and Implementation Plan (GESIP 2016-2030) is an outcome of multiple national and sectoral efforts since 2010 to transition to a green economy. It follows past green economy assessments, conducted by UNEP, which have informed the strategic direction for the country and helped to mobilize investments. The strategy supports priorities for rapid economic growth, wider access to quality education and healthcare, infrastructure development, climate adaptation and mitigation, diversification and commercialization of agriculture, food security, youth employment, and provision of better housing and improved water sources and sanitation. The creation of employment for young people and women has been prioritized in sectors such as nature-based enterprises, ecotourism, and agribusiness. Importantly, the strategy emphasizes the participation of young people, among other actors, in sharing the benefits of the green economy. Youth and women are included in the proposed GESIP implementation organogram, and are identified as beneficiaries in the list of key performance indicators for assessing social inclusion and sustainable livelihoods (Government of Kenya, 2016).

Key Observations: The development of the strategy was informed by an assessment of the green economy landscape, which has been used to raise funds for investments towards the implementation plan. Coordination across sectors and ministries, and the inclusion of women and youth are equally notable in emerging 'green economy' projects in government ministries and non-governmental organizations in Kenya. However, there are no regular reports at a national level on progress towards the implementation of the strategy against the indicators.

## 3.2 Donor-driven interventions

### Case study 4: Partnership for Action on Green Economy (PAGE)

The ILO has played a central role in promoting green jobs. The organisation has formed partnerships with more than 20 countries to implement more than 50 projects that are deemed to offer green jobs opportunities, most of which aim to benefit young people (ILO, 2020b). The Partnership for Action on Green Economy (PAGE) brings together several UN agencies (UNEP, ILO, UNDP, UNIDO, UNITAR), bilateral agencies, government bodies, and specialized non-governmental organizations and donors with the aim of 'putting sustainability at the heart of national economic policy and practice' (PAGE, 2020).

PAGE supports six African countries - Burkina Faso, Ghana, Mauritius, Morocco, Senegal and South Africa - to meet their SDGs related to economic growth, job creation, environmental conservation and industrial development, as well as their national commitments to tackling climate change. Specific activities under PAGE have included conducting national green jobs assessments to inform national green jobs programmes; designing and delivering green skills training; embedding the green economy into the curriculums of universities and vocational colleges; and supporting countries to integrate plans for green jobs initiatives. More than 6,000 individuals have been trained through global, national and sub-national trainings. The PAGE initiative is also focused on deepening partnerships with government, civil society organizations and the private sector, in order to achieve global targets (such as the SDGs 2030 Agenda, the Paris Agreement<sup>3</sup> and the post-2020 biodiversity framework<sup>4</sup>) while also spurring national economic growth and decent employment for all (PAGE, 2020).

**Key Observations:** A key focus of PAGE is on providing governments with tools and services ranging from policy and planning, priority-setting, measuring impact, financing and inspiring global action (PAGE, 2020). A key feature of the PAGE programme is the focus on green skills assessments, followed by training to address skills gaps. The training is sectorally focused. However, it is unclear whether the trainees are eventually matched with a green job, or have the means of launching their own business in order to employ others. Similarly to the AfDB youth strategy, it is not clear if or how young people have been included in co-designing the interventions offered through the programme.

### Case study 5: Opportunities for Youth Employment

The Netherlands Development Organisation (SNV) has in the last ten years promoted the 'Opportunities for Youth Employment' (OYE) approach, which aims to enable gainful employment for young people in several African countries. This market-based approach seeks to improve the livelihoods of youth in rural areas, and of out-of-school unemployed and underemployed youth, by supporting them to acquire skills in ways that fuel their aspirations for and access to gainful employment in the energy, agriculture, and water and sanitation (WASH) sectors. The initiative focuses on matching skilled youth with job opportunities and helping to establish new, youth-led enterprises.

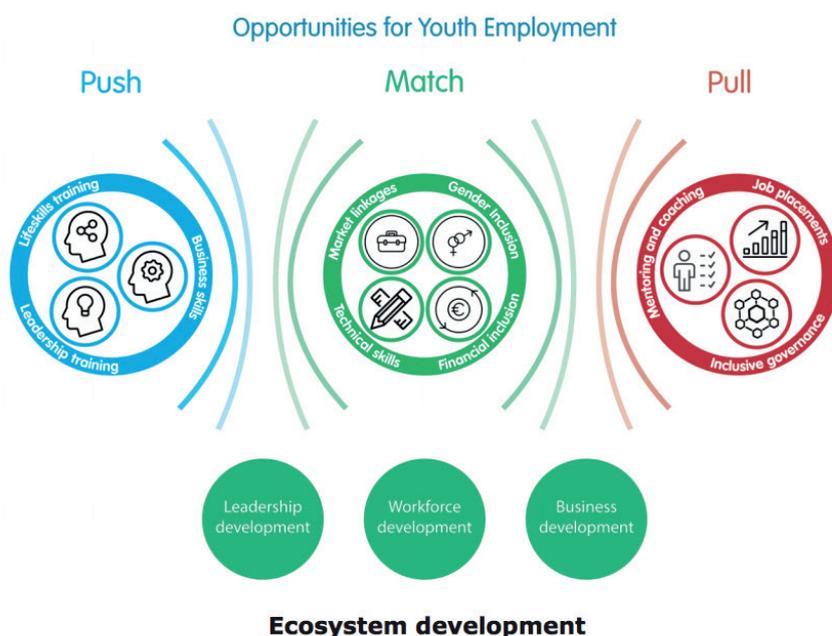
SNV has developed a framework through which it hopes to sustain an 'ecosystem' for creating 'meaningful employment' (Figure 1). Following this framework, some of the projects under OYE have been in solar-powered irrigation, agro-ecological farming, aquaponics farming techniques, waste-recycling, and renewable energy businesses. Countries currently involved in the programme include Tanzania, Zimbabwe, Rwanda, Mali and Mozambique (SNV, 2017).

**Key Observations:** OYE's framework did not start off with a 'green jobs' narrative, however, the recent framing of this programme as an initiative for decent and green jobs reflects how SNV believes that enhancing youth employment also provides opportunities for green skills development and green jobs creation. Nonetheless, in their reporting, the organisation does not distinguish between opportunities that are green and those that are not green.

3 Adopted in 2015 under the UN Framework Convention on Climate Change (UNFCCC) <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

4 See ongoing preparations of the UN Convention on Biological Diversity (CBD) for the post-2020 biodiversity framework : <https://www.cbd.int/conferences/post2020>

**Figure 1: Creating Opportunities for Youth framework. Adapted from SNV 2017**



### Case study 6: Green Jobs for young people in rural areas - Morocco

In Morocco, the German agency for international development cooperation, GIZ, is providing financial support to the Ministry of Agriculture, Marine Fisheries, Rural Development, Waters and Forests to 'improve the employment situation of young people in the rural areas' and create up to 2,000 jobs between 2018 and 2022. The initiative, 'Green Jobs for young people in rural areas', specifically targets rural youth, who have fewer career prospects and are faced with social and financial problems. The programme offers training courses for ecologically sustainable careers, provides technical advisory services, and finances micro- and small enterprises and young entrepreneurs in businesses such as fishing and the processing of wood and other natural products. The programme also supports the creation of a network for green employment, which aims to allow youth in rural areas to obtain professional advice on implementing their business ideas. Finally, the programme is supporting an additional 1,000 youth business start-ups to increase their incomes, through a collaboration with the national education and training centre (GIZ, 2020). Of the 2,000 jobs which the programme expects to create, one third will be targeted to women.

**Key Observations:** Similar to the initiatives by ILO and SNV, this intervention targets perceived barriers to youth employment (skills, financing, networks), and specifically to green employment, by offering skills training and networking opportunities for young people. It has further provided opportunities for rural youth and women in particular, and has involved government ministries in the implementation. While there is a target for the number of jobs to be created, it is not clear what kinds of jobs these will be, or how the business environment will be supported to ensure that such opportunities are created and made accessible to trained youth. No data was available on the progress and impact of the programme to date.

### Case study 7: Decent Jobs for Egypt's Young People (DJEP) Project in Egypt

Funded by the Government of Canada and implemented by the ILO alongside the government of Egypt, the Decent Jobs for Egypt's Young People (DJEP) Project has facilitated youth employment opportunities, with a particular emphasis on green jobs, both at the national level and in several governorates of Egypt. Interventions have helped to create awareness and dialogue on the potential benefits of green jobs across several sectors in Egypt. The investment include CAN \$15million over nine years across all project activities funded by the Canadian government, an in-kind contribution of \$5 million from the government of Egypt, and a further \$2 million as grants from the private sector. These investments have gone towards skills-development toolkits, trainings, conferences and knowledge-sharing events, decent jobs assessment studies, and national and regional level initiatives addressing demand and supply challenges in youth labour markets. The DJEP has also worked with numerous partners in the development, implementation and institutionalization of demonstration initiatives. As a result, between 2011 and 2020, the programme

supported 216,000 young people, of whom 40 percent were women. The DJEP also focused on creating green jobs in renewable energy, environmental conservation, waste management and recycling, organic farming, agro-processing, and eco-tourism. They conducted assessment studies, green jobs academies and in 2015, three biogas plants were constructed offering alternative clean energy while also ensuring safe cattle manure waste management. The demonstration has encouraged over 60 households in the region to construct biogas plants in their homes in Port Said. Since 2018, a further 160 biogas plants have been supported for construction in Minya with funding from private partners (ILO, 2020a).

**Key Observations:** This programme, which covers multiple sectors (renewable energy, environmental conservation, waste management and recycling, organic farming, agro-processing, and eco-tourism), includes a central focus on green awareness raising as well as training on green skills and green entrepreneurship. The programme includes some attention to stimulating demand for youth workers. However, while figures are provided of number of young people reached, there is no evidence that these youth are now in sustainable employment and if the sectors have shifted towards green economic practices. The programme has now reached the end of its term and there are no reports indicating continued funding for the programme or other efforts to ensure its sustainability beyond the end of the project.

### **3.3 Sectoral interventions**

While multisectoral green economy policies exist at the national level, there is a vast number of green economy and green jobs interventions that target specific sectors, such as agriculture, energy, infrastructure, ecotourism, ecosystem management and waste management, among others. Most of these are based on exploitation of natural resources, which are heavily affected by climate change, environmental degradation and urbanization, among other factors. The main challenge with sectoral interventions is ensuring that benefits are equally distributed to reach all sections of a community. With each new opportunity created, especially with a scarce natural resource base, there are potential trade-offs, such as lost livelihoods and incomes, land-use changes, loss of wages, etc. For instance, how can initiatives ensure that ecotourism benefits trickle down to local communities; or that the process of greening cities does not leave people working in informal sectors with additional challenges to their livelihoods? Depending on the skills available in a local or national context, there is a risk that skilled migrant labour brought into the area, in order to support a green economic shift, could lead to financial resources flowing out of the local economy.

#### **Case study 8: Ecosystem management (Working for Water Programme in South Africa)**

The Working for Water (WfW) programme is part of South Africa's employment-generation programme, which offers unemployed workers short-term public-works contracts to remove water-intensive alien tree and plant species that have invaded South Africa's water catchment areas since 1995. WfW also aims to alleviate poverty and specifically targets vulnerable groups; the programme seeks to employ 60 per cent women, 20 per cent youth, and 5 percent persons with disabilities. The programme has resulted in the clearance of over one million hectares of invasive alien plants since 1995 and the release of an additional 50 million cubic tonnes of water per year. By doing so, the programme is estimated to have reduced water insecurity, biodiversity loss and soil erosion, thereby boosting economic development (ILO, 2018b). WfW has spawned additional 'working for' programmes, which address a range of environmental issues, such as deteriorating wetlands, wildfire risks and waste management. All of them address components of a green economy, creating environmental benefits while also offering employment to unemployed poor people in South Africa (UNDP, 2015).

**Key Observations:** Public works programmes such as WfW are said to deliver a double dividend, by tackling poverty and unemployment at the same time as they contribute to climate-resilient economies and societies (ILO, 2018a). They use public spending to create demand for workers directly, but do not necessarily stimulate ongoing economic activity that stimulates demand for employees. They have been described as a type of employment-based safety net, which gives households access to a buffer mechanism that can help them to reduce temporary deficits. Ideally, they integrate development objectives guided by principles of justice and equity, and they promote women and youth empowerment, for example by facilitating access to credit (FAO, 2012). However, the temporary employment offered by WfW only reduces the vulnerability of its employees for short periods of time; the workers may remain insecure.

## Case study 9: Green agriculture

In principle, the economic and technological development of the agriculture sector has the potential to stimulate job creation through agro-industrialization and commercial production. However, commercialising on a sustainable basis often proves to be a big challenge, and the quality of agricultural jobs available often appears unattractive to young women and men, especially educated youth, who often prefer to seek non-farm-based occupations (Benson, 2014; Fox et al, 2016; White, 2019). The sector has attracted increased attention and investment, which often takes the form of programmes which aim to entice young people to engage in agriculture as entrepreneurs. Alongside the promotion of climate-smart agriculture, there are efforts to stimulate new green jobs in non-farm value-adding work, such as agro-processing.

The UN Food and Agriculture Organization (FAO) estimates that green jobs in agriculture will yield an increase of between 52 percent to 59 percent in primary sector employment and a 20 percent increase in GDP by 2050 (FAO, 2019). Decade-long efforts have been invested in 'youth in agriculture' initiatives, which have evolved further into 'green jobs' initiatives (Mwaura, 2015). An example is the FAO's five-year and US\$10 million 'Green Jobs for Youth' programme, which aims to provide green jobs across agri-food and other rural economic sectors. The programme seeks to identify the most promising value chains for green development, and to involve local communities as well as public and private actors in programme design and implementation, in order to ensure sustainability and ownership. The programme will offer capacity strengthening to local actors, support youth entrepreneurship, work with impact investors to scale successful agribusinesses, and offer training to young people in business development. Further, the programme intends to encourage the mainstreaming of green jobs policy in national development plans. The programme will work in the UN Partnership for Action on Green Economy (PAGE) partner countries and countries with green jobs as a national development priority. In Africa, these include Burkina Faso, Ghana, Mauritius, Rwanda, Senegal and South Africa (FAO, 2019). In Sierra Leone, Zimbabwe and Timor-Leste, rural and urban youth will have the opportunity to develop skills and work in green agriculture, energy and waste management sectors as well as in transferable soft skills such as teamwork, communication, business development, information technology and financial literacy. Trained youth will then identify local challenges upon which they can develop a proposal for public employment programme or business start-up which will receive seed funding for two years. Financial and technical support will be in partnership with local government and private sector.

**Key Observations:** The Green Jobs for Youth programme works on both the supply and demand sides of the youth employment equation. Efforts to entice young people into agriculture have found a niche in promoting agricultural occupations as green jobs that should be attractive even to educated, unemployed youth. However, there is limited analysis of what agricultural jobs are really green. In particular, agricultural jobs often fall on the lower end of the shades-of-green scale. Climate-smart agriculture, also an initiative of FAO, could be a useful approach if employed in this intervention.

## Case Study 10: Decentralized Renewable Energy in Kenya and Nigeria

Energy access is believed to be a major opportunity for economic development and employment creation for millions of people in sub-Saharan Africa, especially with the increased transition from fossil fuels to solar, wind, and electricity storage as well as rural electrification, which form part of the decentralised applications of renewable energy (DRE) (Shirley et al, 2019). Recent studies in Kenya and Nigeria suggest that DRE offers big opportunities for employment generation and economic growth, by supplying energy to 573 million people in sub-Saharan Africa whose access to electricity in 2017 stood at 44 percent overall, and only 22 percent in rural areas (Shirley et al., 2019; World Bank, 2017). To date, DRE has created 10,000 and 4,000 decent and skilled jobs in Kenya and Nigeria respectively. Of these, women make up less than 30% of the workforce while the young people make up more than 40% of the workforce (also see IRENA, 2020).

As the global efforts towards low-carbon development pathways continue, and as countries with low energy access continue to commit to DRE targets, Shirley et al. (2019) have made projections for employment opportunities in the sector based on employment factors and market estimates from literature. They estimate a doubling of DRE jobs between 2019 and 2023, with Kenya and Nigeria providing 17,000 and 52,000 direct formal jobs and further 30,000 and 24,000 informal jobs respectively. Examples of these jobs include field technicians, sales agents, engineers and managers.

The intersection of the jobs in the energy sector with other sectors is a critical consideration. This, IRENA suggests, has the potential to create up to five times more jobs in the local communities than direct formal employment in DRE. This is because the application of DRE solutions is largely in productive uses such as agriculture (e.g. solar powered irrigation, agro-processing), commerce, communications and education, among others. This offers a diverse opportunity space for women and young people. According to the 2020 IRENA report, the percentage of women in direct, formal DRE employment between 2017 and 2018 was estimated at 23% for Kenya and 27% for Nigeria while that of youth was at 41% and 28% respectively. This indicates that more jobs would be available to young people and women but in specific sectors and supported by skills training and strong collaborations between industry and educational institutions, including TVET organisations. According to the same report, direct formal DRE jobs in Kenya utilized skills in sales & distribution (41%), management and business administration (22%) and after-sales service (15%). In Nigeria, after-sales service offered 26% of these jobs, followed by management and business administration at 25% and project development and installation at 22% (IRENA, 2020).

**Key Observations:** Shifts to clean and renewable energy promise multiple benefits, including energy security, job creation, health improvements, gender equity, better education, and environmental resilience at both grassroots and national level. Stimulating growth in the DRE sector could be expected to increase demand for workers. However, while the sector promises green jobs, and indeed has created some, it is unclear whether there is commitment to address other principles of decent jobs such as social protection, better wages and working conditions, because most of the jobs created are informal. Advanced and gender-responsive skills development are also needed in the renewable energy sector.

### **3.4 Youth-Driven Interventions**

The case studies presented in this section refer to initiatives driven by actors other than youth, mainly funding partners and governments. We must also consider green jobs interventions emanating from young people themselves as well as efforts to meaningfully engage young people in the design of donor-driven youth employment programmes. A recent report by Plan International has highlighted the importance of youth engagement in employment programmes noting that youth participation can enable intergenerational partnerships which may empower young people to contribute to long-lasting labour market outcomes (Plan International, 2021). While this report focuses mainly on engaging youth in the context of donor-driven interventions, youth-driven interventions may also benefit from the proposed framework that incorporates diversity, enabling environment, intergenerational partnerships, participation and empowerment. A diversity of these youth-led interventions exist, mainly as short-term initiatives relating to awareness-creation through conferences, digital platforms and advocacy activities, often within educational institutions and contexts. A few such initiatives have advanced to focus on skills training and entrepreneurship. Here we present two examples.

#### **Case Study 11: Climate-Smart Agriculture Youth Network (CSAYN)**

The aim of the Climate-Smart Agriculture Youth Network (CSAYN) is to create awareness and build the capacity of young people (including people living with disabilities (PLWD) on CSA concepts for adaptation, mitigation and increasing food productivity in a sustainable manner (CSAYN, 2021). The network comprises volunteers from across Africa, Asia, the USA and Europe, and engages in a broad range of projects including climate-smart agriculture, energy-efficient farming systems and sustainable development training, among others. The network maintains a website and blog, a platform used to share information on climate-smart agriculture and related opportunities and knowledge products. While the network lists working with key organizations that are involved in green jobs initiatives, it is unclear what initiatives such networks have had in creating job opportunities, or preparing young people for green jobs. From their website, they claim to be an authorized affiliate agency of UNEP with the mandate to train and develop young farmers to promote climate-smart agriculture and its potential to address climate change and world hunger. However, there is little information available on the impact in creation of green jobs or employment for youth.

**Key observation:** The network's focus has mainly been awareness creation, some trainings, and youth involvement in policy-making events. From the information available, it is difficult to determine how many young people are reached and/or directly benefitting from green jobs as a result of CSAYN

## Case study 12: Youth and Green Jobs for a Green Economy (JEVEV-ORG), Benin

The 'Jeunesse et Emplois Verts pour une Economie Verte' (Youth and Green Jobs for a Green Economy, JEVEV-ORG) programme, through 'green tours', creates awareness of green jobs and best practices among students, teachers, and informal workers. As a result, the organisation claims that many young people are interested in green entrepreneurship in Benin. JEVEV-ORG has so far reached 10,500 people and an African Green Economy Promotion Centre supports 56 young green entrepreneurs. Ten green innovations are at the start-up stage, with three involving women cooperatives and seven involving associations of people with disabilities. These opportunities are being created in the waste-management sector, with schools making their own compost and ecological gardens while the other groups are involved in making biodegradable bags and other products. The organization also collects information on green innovations, in order to make this available and support, where necessary, capacity for scaling solutions to the community (GBIF, 2019). JEVEV-ORG aligns its initiatives with Benin's Law 2017-39, which bans the use of plastic bags. The financing and technical support for this initiative has used participatory approaches, led from the Ministry of Living Conditions and Sustainable Development (Climate Chance, 2021).

Key observation: While some entrepreneurial activities are mentioned, the numbers are small in comparison to the population of the country. There is also more focus on awareness creation but limited information on which youth directly become employed in green jobs as a result of these initiatives.

### 3.5 Insights from selected case studies

A point that stands out from the case studies discussed in this section is that the evidence base on green jobs for youth is quite thin. It would be useful to have evidence to demonstrate the extent to which green jobs interventions align with principles of green and decent employment, as well as the size of their contribution to national, regional and global targets on employment, green transitions and sustainable and inclusive economic growth. Indicators to show how economic sectors are transforming as a result of these interventions would also be valuable. Few of the cases discussed above appear to have (yet) been evaluated or had their reports shared publicly, which would allow an assessment of the extent of progress and impact. Donor-funded projects and programmes often are evaluated, openly or privately, but abstract policy initiatives are unlikely to be subjected to rigorous impact assessment, which in any case would be methodologically challenging. At any rate, there are few published reports that shed light on progress in implementing such policies, let alone their effectiveness. This makes it difficult to identify lessons to be learned, or to incorporate insights and lessons from experience into new models, approaches and methodologies for achieving a just transition to a green economy.

From the evidence that is available, the impression created is that policy instruments by themselves are not enough. Among the cases highlighted in this section, most are still under implementation, while some have come to an end or changed focus. In various cases, this seems to be due to a lack of funding, scarcity of alternative funding sources, and/or overlaps in governance structures. Programmes that rely on donor funding are limited in scale, and some successful projects have come to an end without a clear indication of how any jobs created would be sustained. Other problems could be attributed to a lack of political will and the scarcity of successful precedents to guide policy makers and practitioners (Brockington 2012). Nonetheless, there is evidence that global efforts to stimulate national initiatives towards a green economic transformation have provided an impetus that has influenced policy makers in Africa.

Another insight is that the contribution of green jobs to clean economic growth and poverty reduction depends heavily on the quality of employment created. At present, many of the new jobs are informal roles in small and medium enterprises, which often involve precarious work of poor quality (examples include work in waste recycling, tree planting and distribution of solar products). Nevertheless, analysts still believe that green jobs in a green economy constitute a development pathway which, with the right policy coherence, investments and political will, offers a chance for countries in sub-Saharan Africa to create decent jobs that also spur inclusive and sustainable economic growth (Ehresman & Okereke, 2014). Overall, the concept of the green economy remains a useful one, in spite of its diverse interpretations, because it helps to re-invigorate existing debates and challenge existing pathways to the achievement of sustainable development.

Green entrepreneurship is a running theme and a common approach across many of the interventions shared here. Self-employment and employment are two different things, but the hope is that young people, who are equipped with green skills and coached in entrepreneurship, will create new green businesses and green jobs, for example in agriculture, waste recycling or renewable energy. The success of this implicit theory of change appears to hinge on whether the business environment is conducive for young entrepreneurs, however, the programmes reviewed above focus more on skills training for youth than on lowering barriers to entry. Some programmes do aim to provide or facilitate access to credit.

There are few initiatives of young people attempting to find work opportunities in the green economy. Some of these focus on entrepreneurship training, for instance in the waste management and agriculture sectors, while others are geared towards awareness creation and advocacy at higher levels of decision making. A key observation from these case studies is their attempt to connect with the national and global narrative of green jobs, but it is also evident that they remain limited by the resources, skills and opportunities available to them.

All of the interventions discussed here are characterized by high aspirations, but often lack a detailed strategy to translate these bold objectives into effective action at grassroots level, where jobs are created and young people participate in the economy. Few, if any, of the programmes offer a significant voice to young people themselves; funding bodies are typically in the driving seat. Finally, there is a lack of coherence and coordination of green economy and green jobs initiatives across sectors, countries and regions.

## 4. Drivers and Barriers to Green Employment for Youth

This section discusses evidence and arguments from various sources, which identifies factors that enable and inhibit the employability of young people in the green economy.

### 4.1 Regulatory and policy factors

A major policy driver for green employment has been the evolution of regulatory frameworks, policies and political will (including subsidies, carbon markets, tax reforms, budgeting, eco-labelling, international aid, targets and mandates, among others). At a high level, debates on the SDGs enabled international dialogue on strengthening the social dimensions of sustainable development (Jacobs, 2012) and with it came the specific focus on inclusion, with the adoption of specific SDG targets relating to decent employment of young people. The global focus on decent employment and the specific gaze on Africa's demographic dividend has heightened policy interest in youth employment, decent work and green jobs (for instance, youth inclusion in national green economy policies). The youth employment crisis in Africa has further inspired the development of policy frameworks and incentives to promote investment in sectors that are most likely to create more opportunities for decent work such as in agriculture, renewable energy, ecosystem management, ecotourism, service delivery among others (such as youth employment opportunities linked to public private partnerships).

Commitments to decent youth employment, by governments, investors, development partners and other leaders at local, national and global levels, are essential if the SDGs are to be achieved. The Decent Jobs for Youth initiative by ILO and international partners reflects a high-level commitment to decent youth employment, which has trickled down to regional and national levels. For example, the 2019 declaration at the fourteenth African Regional Meeting of the ILO, in December 2019, emphasized the need to make decent work a reality for Africa's youth, developing their skills and productivity as well as opening up technological pathways and transforming rural and informal economies (ILO, 2019a; ILO, 2019b).

### 4.2 Green financing

Finance for the transition to green growth is central to most green economy strategies and action plans. Financial vehicles such as the Global Environment Fund, Climate Investment Fund, Green Climate Fund, Green Bonds and national green funds, as well as private sector funding, aim to provide capital to large as well as small and medium-size green economy projects and provide an impetus for green employment creation (AfDB, 2013). Some national-scale funding programmes have targeted youth, women and other marginalized and disadvantaged groups. However, funding is limited and only a few green economy projects are adequately financed, in order to produce the kinds of results that will steer achievement of SDGs. Accessing green finance can be a challenge for young people, who typically struggle to access credit for any kind of enterprise. Access to finance is only one part of the challenge, however. Young people seeking to start green businesses or access green employment will also need access to other resources, such as equipment, technology and social capital (Bianco, 2016; Angelov & Johansson, 2011), and the barriers to accessing these are still a barrier not just to young people but to most businesses on the African continent.

### 4.3 Skills development

The shift to a green economy and green jobs creation poses challenges to the whole labour sector, as the education and skills of majority of the people in the workforce do not always align with the demands of the transitioning sectors, processes, practices and systems. Access to green jobs requiring technical know-how or new green skills is especially difficult for young people with no education, low levels of education, or who have been out of employment for extended periods (Baah-Boateng, 2016; Decent Jobs for Youth, 2017). Lessons could be learnt from countries with well-established labour market policies and practices and that particularly support youth employment (e.g. Germany); and programmes and policies that facilitate skills development for the workforce through apprenticeships, vocational training and work-based learning initiatives. While a few examples exist such as ILO's PAGE and SNV's OYE initiatives, this remains a challenge in Africa, where labour-market policies are weak and green skills development often depends on short-term donor funding that focuses narrowly on a particular sector or policy (as has been the case of SNV and ILO initiatives).

Development of soft skills is equally an important driver and barrier for any employment among young people. Alongside training in technical and entrepreneurship skills, development of leadership, management values, communication, and attitudes for sustainability help shape the perceptions of young people towards the changing world of work, thereby shaping their actions in the green economy sector (BERF, 2017).

#### **4.4 Market-based and strategic factors**

The transition to a green economy will involve technological change across whole industries, sectors, regions and entire national economies. In common with many people in older and younger generations, today's youth will be challenged to adapt nimbly to the opportunities and risks which technological change presents (Aceleanu et al., 2015). As was evident in the case studies presented in Section 3, there has been a lot of focus on green skills training, so that young people can participate successfully in the shift to a green economy, either as entrepreneurs or as employees. However, the accessibility of educational and skills training opportunities in technical and engineering fields is unevenly distributed across sub-Saharan Africa (AfDB et al, 2012; ILO, 2020d). Relatively well-endowed countries, such as South Africa, possess a strong infrastructure for technical education and skills development (Musyoki, 2012), but similar opportunities are more limited in other African countries. For example, Kenya has had to seek skilled migrant labour to develop the national wind energy sector, and relies on importing clean technology products, such as solar panels (Achiba, 2019; Kazimierczuk, 2020; Newell & Phillips, 2016).

#### **4.5 Youth-specific factors**

Although green innovations offer significant job opportunities and income generating avenues, imbalances between demand and supply for labour skills can slow down the process of greening the economy and lead to labour shortages in green sectors. Measures are needed to empower the youth who constitute the workforce with the requisite skills and abilities to adapt to the novel requirements of new green enterprises and the associated job opportunities. Other supportive measures are also needed, such as social security safety nets (e.g. insurance) that prevents vulnerable groups from falling into poverty; improvements in access to education and training in green skills; efforts to achieve gender equality; higher minimum wages; inclusion of youth in decision-making and policy processes; and the removal of barriers to entry that face young entrepreneurs in markets for environmentally sustainable products and services (Aceleanu et al., 2015; Balcha Gebremariam, 2017).

The trend towards green jobs needs to be viewed in the context of the broad challenges facing the journey towards sustainable and inclusive economies. African societies have not witnessed a significant increase in employment opportunities of all kinds, leave alone in decent or green jobs. Annually, the ILO reports an increasing number of youth NEETs, unemployed, and underemployed young people, whose working conditions do not seem to be improving overall (ILO, 2020d). The conundrum here is that young people are hit the hardest by weak labour markets. While green jobs have a strong foothold in developed countries (Aceleanu et al, 2015), it is in the developing countries that these jobs are keenly needed, if employment is to be found for the expanding numbers of young working-age Africans, and African nations are to be enabled to follow low-carbon pathways of industrialisation and economic expansion (AfDB, 2016a; AfDB, 2016b). Informality in emerging sectors and the rise of a gig economy create additional challenges to achieving decent jobs in developing countries (Hunt et al, 2019). Meanwhile, unsustainable business practices are still prevalent, providing essential products and services. An example of the tenacity and resilience of these unsustainable sectors is the reported 'excitement' around the discovery of oil in Northern Kenya, which is leading to new investments and creation of jobs in this sector (Newell et al, 2014). While entrenched businesses continue to offer employment and for as long as unsustainable enterprises continue to make money for their owners, the proportion of green jobs available will struggle to grow in a competitive business environment. Without political will, these obstacles will not be easily overcome until alternative, green practices offer higher returns on investments, both in the short and long term (UNEP, 2008).

The intersection of youth-specific and sector-specific factors is also worth considering. For instance, according to the FAO, green jobs for youth can be realised through agriculture. Employing youth in agriculture is seen as key to transforming old agricultural practices, because young people are perceived to have a comparative advantage in their affinity for new technologies and innovations. The FAO argues that engaging youth in agriculture has additional co-benefits for rural sustainability, by reducing youth migration to urban areas and facilitating a smooth generational change in farming, which should also introduce higher potential skills, leading to the adoption of new technologies and more sustainable practices, and stimulating innovative entrepreneurship in rural areas. The FAO sees this as key to advancing new agricultural opportunities, while increasing rural adaptation capacities and resilience (FAO, 2020). The provision of social amenities such as roads, railways and telecommunications that link rural areas to urban areas make it easier for young people to remain in rural areas and become more productive there while benefitting from the markers of urban life (Mwaura, 2017).

The green economy is a conceptual tool that can be used to stimulate action towards sustainable youth livelihoods and transformative change. The expected benefits can only be realized when both hard and soft infrastructure, legal and regulatory frameworks of governments coupled with private sector investments are aligned (UNEP, 2014a). The expectation here is that government should provide an enabling environment of policies to support green innovations, skills development, financing and markets, in which young people themselves can become champions of the green economy and influence their peers to pursue green jobs (Brooks et al., 2020). Such expectations rely on young people benefitting from green transitions in the near term and being able to project pathways towards decent livelihoods in the long term.

## 5. Perceptions and Aspirations of African Youth towards Green Jobs

Just as inadequate skills among youth are perceived as an obstacle to an expansion of employment in a green economy, the attitudes and values of young people towards green jobs are also targeted as a problem that needs correcting. The perception that young people need to be encouraged to seek green jobs and engage with the green transformation of the economy does not seem to be based on firm evidence. While some studies have been published concerning youth perceptions towards work in some sectors (e.g. Giuliani et al., 2017; Sumberg & Okali, 2013), we found no specific literature that sheds light on how young men and women perceive the green economy and green jobs.

Today's African youth are more educated than previous generations, yet they still risk long-term unemployment and underemployment (Fox et al., 2016). The thwarting of young people's aspirations presents a risk of demotivation and demoralization, social exclusion, and a waste of human potential. Even when they are in employment, youth often face poor working conditions, have limited access to social protection, and find few opportunities for career progression. Arguably, there is a mismatch between the kinds of jobs young people aspire to do and those currently available in African economies (Carreras, et al., 2020). Unfortunately, the nature of many jobs in the emerging green economy is little better, leaving young people in the same precarious position, often working on short-term jobs without protective regulations, and faced with few alternatives that could lead to stable occupational identities or social security (Standing, 2011).

African youth show by their behavior that they are aware of the dynamism and precarity of the times they are living in. To young people, gainful employment is what distinguishes them from children and is key to attaining social markers of adulthood (Honwana, 2013). Holding a steady job carries multiple meanings to a young man or woman: it provides an occupational identity and status; a source of income that enables them to attain material goods that have symbolic meaning, such as marriage, house ownership and raising a family; and agency in social life and economic transactions, for instance through entrepreneurship, advocacy, innovation, leadership, and so on. When jobs are non-existent, precarious, and/or provide low incomes and poor working conditions, they place young people in a state suspended between youth and adulthood, filled with uncertainty; this has been termed 'waithood' by some scholars (Balcha Gebremariam, 2017; Honwana, 2013). In practice, economic precarity means that young men and women sometimes move back and forth between statuses, sometimes being able to exercise greater agency and express a more independent identity as an adult, at other times being pushed back by unemployment or underemployment, into a more youth-like position of dependency and insecurity. In precarity, young people may be inclined to accept any job on any terms, yet it has also been reported that young people sometimes leave employment due to low wages, inflexibility, and poor working conditions, even when there is no alternative work (Honwana, 2013).

Studies on youth perceptions of work have been concentrated in the agriculture sector. In spite of the prevalence of informal work in agricultural occupations, the sector has the potential to transform, through new technology, to offer more formal, decent and green jobs (Mwaura, 2015; Sumberg & Okali, 2013). In the last decade, there have been significant efforts to entice young people to become farmers or to remain in rural occupations, in order to create jobs in on- and off-farm enterprises, as well as boosting agricultural production in Africa in the face of climate change. However, the agriculture sector, alongside some others, such as construction and waste management, is considered less attractive by many young people, because it is perceived to offer only labor-intensive and low-status jobs, often confined to informal terms of employment without social protection (Filmer and Fox, 2014). Nonetheless, the average age of farmers in Africa is holding steady or falling, which is consistent with the entry of young people into farming; there is also evidence that a relatively higher number of women are working in the agriculture sector (Yeboah & Jayne, 2018). This evidence, which indicates that agriculture in countries with rapid population growth is employing young people now and will continue to do so in the future, amplifies the importance of ensuring that the sector can provide decent green jobs, increase productivity, and mitigate and adapt to climate change. The need is not restricted to rural areas: urban agriculture is an emerging concept for the greening of cities and food systems.

Dialogues with young people may help to provide evidence of their perceptions towards green and decent jobs. However, there are few of these, for example, a dialogue conducted by IFAD in 2020 provided some anecdotal evidence into the aspirations of young people for green jobs. They also highlighted a set of challenges when it comes to promoting rewarding green jobs in rural areas. However, these dialogues drew a consensus that climate-smart solutions, public–private–producer partnership opportunities, peer-to-peer learning and digital platforms provide key opportunities (IFAD, 2020).

In conclusion, interventions to stimulate green employment should consider how young people weigh the costs and benefits of the alternative job opportunities and career paths available to them, as well as the conditions that enable or constrain individuals to participate in different kinds of economic activity. Youth perceptions regarding socio-economic changes should be an ongoing research agenda to inform policies and interventions designed for young people. This may also benefit from studies on how perceptions of diversified livelihoods influence young people's view of green jobs. Crucially this must also offer a disaggregated analysis of perceptions of young men, young women and those from rural and urban areas.

## 6. Reflections on the Impact of Green Economy

As mentioned in the previous section, there are no specific studies to understand the perceptions of young people towards the green economy, nor tease out any specific impacts of the green economy agenda on youth employment. This section will therefore aim to deduce probable impacts from existing evidence and propose further research on this subject.

The circulation of narratives about the green economy and sustainability may be expected to promote awareness among youth about these concepts and the opportunities they might offer. To the extent that these opportunities are perceived as attractive, they may be expected to deepen young men's and women's interests in work and career opportunities in the green economy. Social dimensions of the green economy narrative also have the potential to raise awareness among young people about principles of human wellbeing and decent work, in order to inform their decision making when considering alternative job opportunities. More broadly, the circulation of these narratives in society may inform youth as citizens, encouraging them to participate in social dialogue and advocacy towards the realisation of a socially just green transition.

The 'greening' process poses multiple challenges for increasing decent youth employment. First, is the ability of policy frameworks and economic structures to enable the creation of new jobs, and substitution and transformation of existing jobs, and scaling of the same, so that more opportunities become available in the labour market. Second is ensuring that the ratio of (decent) jobs lost is small in comparison to the decent jobs being created, and needed by the unemployed workforce (ILO, 2019a). Third, is ensuring that education and skills training builds human resources for development and growth (Baah-Boateng, 2016), to underpin environmental policy objectives and environmentally beneficial production systems (Bowen & Kuralbayeva, 2015). Green economic growth is argued to be a net generator of decent jobs, taking into account social dimensions including satisfactory wages, stability and security at work, long-term career opportunities, and protection of workers' rights (Bowen & Kuralbayeva, 2015; UNEP, 2011).

Coherence is lacking in green policy planning and implementation across African countries (Bianco, 2016; Hughes, 2011; ILO, 2016a; Jarvis et al., 2011). While most African countries may have developed green economy policies, or included green economy principles in their national and sectoral development plans, little is documented about the implementation of these strategies. Attention is needed at the highest level of policy making in Africa. Importantly, such should be about addressing the aspect of attempting to 'green' social policy which requires fundamental sequential changes in the design, implementation and evaluation (Angelov & Johansson, 2011). As documented in this report, most actions have focused on short-term employment opportunities for young people, but data on youth wellbeing in the long-term is critical for good policy making. Governments and researchers typically focus on formal wage employment, where data is more widely available, yet the informal sector is where most African youth work and will continue to work for the foreseeable future, even as the green economy emerges (Bertrand & Crepon, 2013; World Bank, 2006; Fox et al., 2016). Policy makers should focus on how the greening process can enable a transition to green and inclusive growth and decent jobs, for youth and other generations.

The evident urgency to create youth jobs in Africa has left little or no room for public participation and deliberation about green economy approaches and policy coherence. Quick-fix thinking is a challenge not just to the resolution of the youth employment problem, but equally to the green economy and sustainability discourses (Angelov & Johansson, 2011). It is important that green transformation policies progress beyond 'sloganeering', or worse, 'greenwashing', where only an announcement of ambitious goals has been made without transforming existing policies and strategies (Brockington, 2012; Brockington & Ponte, 2015). Short-term programmes exist, as evidenced by the case studies presented here, but we lack evidence to show that long-term national budgets are supporting green economy visions. It is also undesirable to use crude, single indicators to assume that an intervention is indeed stimulating green job opportunities and changing the economy. Faulty and simplistic measures of impact should be replaced with regular assessments and evaluations that are based on well-articulated theories of change.

There are several reasons to critique the optimism that the green economy is positively impacting the youth employment challenge and achieving economic transformation and climate resilience in Africa. First, young people already face substantial obstacles when they try to gain access to any economic sector and/or employment opportunity (Betcherman & Khan, 2015). Weaknesses exist in labor markets, which have not yet addressed these bottlenecks (BERF, 2017). Against this background, an emergent narrative of green jobs, without addressing the structural challenges in the economy and society, will not necessarily resolve the employment crisis.

Second, some studies on youth livelihoods already show that young people face obstacles in building livelihoods based on natural resources, which are often seen as a foundation for 'greening livelihoods' (Mwaura, 2019). Ismail (2016) argues that the youth employment challenge should be addressed along two parallel tracks: a socioeconomic structures pathway, based on the exploitation of Africa's natural resources, and a youth social agency pathway, based on the ingenuity of young people (Ismail, 2016). Interventions in the green economy that focus on only one of these aspects are likely to result in significant gaps in the search for solutions.

Third, the type and magnitude of investments required to open up employment opportunities in the green economy shapes the ownership structure of such interventions, which may further marginalize young people and limit the extent of decent and sustainable job-creation. For instance, green entrepreneurship requires financial investments and an enabling policy environment, and the necessary capitals are often inaccessible to young people, owing to their position in society. Factors such as this mean that low-end jobs in green economy sectors, such as smallholder agriculture, waste recycling, and casual work in construction, retail and ecotourism, are often the most readily accessible to young people.

While some potential and actual impacts have been synthesised in this report, it is important to reflect on the question of what kinds of impact are being or could be achieved, and for whom. Quantitative impact studies sometimes leave little room to investigate different, including indirect, impact pathways through which interventions have affected someone's life. For example, an impact survey might ask whether an enterprise, job or increase in earnings has been sustained; if the answer is no, the intervention is deemed unsuccessful. However, it is typical for African youth to juggle portfolios of livelihood activities, and it is common that they engage in some activities for a short time, intentionally, in order to secure resources for another purpose, such as funding the start up of a different activity, going back to school, or paying for the education of a sibling (Mwaura, 2017). Such outcomes may be valuable to the individual or other members of their family or household, but are difficult to measure and quantify with evaluations that are carried out at the level of individual programmes.

Effective and well-targeted impact evaluation of policies and programmes is necessary in order to learn what works and how it works. In this study, we have found that documentation and analysis of the impacts of green jobs and green economy programmes for youth is scarce. Alongside clear theories of change that could be used to assess impacts and impact pathways, adequate funding is needed to conduct impact evaluations, as well as coordination of policies, funding and programmes. In the absence of these resources, what is then presented as a success of the green economy is probably more rhetorical than realistic, given the evident complexity of the connections between decent youth employment, sustainability and a green economic transformation. It is challenging to determine with the current evidence base whether green jobs programmes have significantly boosted decent youth employment in African countries.

In light of these reflections, the subsequent sections identify a set of knowledge gaps and key recommendations for consideration by researchers and policy makers.

## 7. Priority Knowledge Gaps

This section summarizes the key knowledge gaps identified in this report.

- 1. Reliable and detailed evidence on green jobs and youth employment in the green economy is lacking.** Where data is available, it is scattered and incoherent. Data gathering is not informed by a plausible theory of change or a robust or standardised analytical methodology. To address this gap, focused and multi-disciplinary empirical studies are required, as well as systematic mechanisms to routinely collect, monitor and publish data so that it can be used as evidence to inform policy and decision-making. Efforts should be made to collect more tightly focused and granular data, capable of shedding light on sub-national economic sectors, regions or sections of society.
- 2. Clear and relevant concepts and indicators are needed to inform policy analysis and decision making on youth employment in the green economy.** There is fuzzy thinking around the separate discourses on the green economy, green growth and green jobs for youth, and how they relate to one another. Conceptual clarity is needed, to sharpen these narratives and to underpin coherent theories of change through which impact can be measured.
- 3. The voice of young people themselves is largely absent from policy discussions and programming relating to the green economy and green jobs.** There is a widespread assumption that young people are familiar with green economy concepts. However, most of the evidence presented in this paper is generated not by young people but by others purporting to act on the behalf or in the interests of young people. There is limited evidence on how young people perceive the green economy and its relevance to their search for decent jobs and meaningful livelihoods. Channels and mechanisms for involving young people in policy, and social science studies with young people, should help to improve the design of green jobs programmes.
- 4. Evidence is needed on what economic sectors produce more green jobs, how and where.** Even with the increased efforts to create decent and green jobs, evidence about the economic sectors that might offer the largest numbers of such jobs exists largely in the forms of rhetorical claims and anecdotes. In Africa, for example, it is asserted that agriculture and energy are two sectors that may offer abundant green job opportunities, but detailed evidence is lacking on how new jobs will emerge and what is needed to support green and decent job creation in these sectors. We also lack well founded projections of how many jobs could be created or who is most likely to benefit from such opportunities. Any such analysis should also model jobs that might be lost in different sectors during the transition to a green economy. Disaggregated evidence is needed, to indicate the different opportunities for youth, women and vulnerable groups across different economic sectors.

## 8. Conclusion

The strongest insight from this synthesis is the desirability of close scrutiny of the 'green jobs for youth' discourse, including the assumptions on which it is built. A critical reflection on the green economy and green jobs narratives is that they have often emerged from the international community, particularly from multilateral organisations and bilateral funding agencies. At the grassroots, the narratives promise livelihood options, social wellbeing and environmental sustainability. Not only are there millions of underemployed people in Africa, majority of livelihood options are rural-based, low-paying, informal, and intimately connected to natural resources. Equally, urbanization is on the rise, which is exerting pressure on urban systems, drawing in migrants from the rural areas in search of work, but also increasing pressure on rural systems such as agriculture, water, biomass energy, etc. Hence the objective to achieve meaningful livelihoods for a growing population while ensuring a healthy planet becomes critical to achieving a green economy.

Importantly, as Africa's demographic profile is getting younger, this challenge is even more critical for the continent's growing youthful population, who will live for longer with the implications. The green economy is conceived as a pathway to sustainability because, through its economic, environmental and social dimensions, there is an intentional promotion of a 'new engine of growth,' which also offers stronger market linkages and promotes entrepreneurship, innovation and investment, to generate new green jobs (AfDB, 2016a; UNEP, 2011).

It is imperative that, as governments and stakeholders assess green jobs for young people, they do so alongside consideration of the extent to which they are achieving their SDG objectives and targets overall, as well as key milestones in the implementation of their national and sectoral green economy policies. The green jobs programmes analysed in this report depict piecemeal initiatives that have short-term goals, largely driven by donor funding, and focused on selective aspects of the green economy. While some green jobs are being created, governments and other stakeholders seem not to be compiling accurate records that shed light on the gaps that these jobs are filling, and especially the rate at which the transition to a green economy is happening.

The biggest challenge here is that if these policies are not integrated into national development plans, then piecemeal milestones could be achieved in the short-term without enduring impact to drive transitions into the future. Without downplaying the urgency of boosting decent youth employment, a green jobs approach must consider not only the number but the quality of jobs, bearing in mind the breadth of qualities that meet the definition of 'green jobs'. The green jobs for youth agenda ought to promote the achievement of the SDGs, such as target 8.6 concerning NEETs, rather than aiming to be a quick fix for youth unemployment. The right mix of policies, in respect of the specific conditions of each country, should result in the anticipated outcomes for decent youth jobs, most importantly sustainable and inclusive green employment. The intersection of informality and green jobs is crucial to consider, because the informal sector is the part of the economy that currently employs most young people and where most new jobs are still being created. The emergence of the gig economy in conjunction with economic and technological change further complicates the green-jobs-for-youth challenge during the aspired transition to a green economy that has new technologies at its heart.

Finally, in order to achieve green jobs for young people, this synthesis has alluded to the need to focus on broad-based growth, not just on youth, to create an economic environment in which the green economic approach can thrive and generate jobs for all peoples, including young people. However, this must be coupled with investments in youth skills training in relevant economic sectors, such as transport, energy, agriculture, and manufacturing, to create inclusive opportunities. In addition, there is a need to create more vibrant rural (and urban) economies and to support policies and initiatives which aim to enhance youth's long-term economic prospects. In turn, this should cultivate trust and confidence in government among young people.

## 9. Recommendations

In this section, we highlight key recommendations emerging from this synthesis.

- 1. Develop and sustain systems for collecting and analyzing empirical data on green jobs for youth.** Governments, with support from the research community, should create and improve mechanisms for systematically collecting, monitoring and publishing data on green jobs and youth employment in green economic sectors.
- 2. All actors (governments, funders, development partners) should develop and use explicit theories of change to inform the design, implementation and impact evaluation of green jobs and youth jobs strategies and interventions.** This step should be used to inform policy deliberations and decision-making on national, sectoral, regional and local strategies, plans, programmes and projects for youth employment and green jobs.
- 3. Integrate green economy principles into the heart of national, regional, local and sectoral development plans and strategies for job creation and youth employment.** Different strategies for green economic growth and green jobs could be developed, e.g. for urban and rural areas, and in regional development plans. Policy coherence is needed to give focus to policies, strategies, principles, tools and programmes intended to stimulate a transition to the green economy and the creation of green jobs, at all levels.
- 4. Promote inclusivity in green employment by considering the heterogeneity of young people and their differential agency in national and sectoral efforts to create green and decent jobs.** Such efforts should integrate gender-responsive and intersectional approaches, to ensure that no-one is left behind. All stakeholders should raise youth awareness and promote participation in decision making on the green economy and the job opportunities emerging from it.
- 5. Policy makers should focus not only on supply-side interventions that aim to support young women and men into green jobs but also on demand-side interventions to boost the green economy transition and create more job opportunities that could be taken up by youth.** Examples of demand-side interventions might include incentivising consumption of green products and services, incentivising green investments by the private sector, regulating and taxing unsustainable production systems, products and services, investing in basic green infrastructure and incentivising employers to hire and train new workers, including youth.
- 6. Strengthen the involvement of and funding from the private sector towards green jobs programmes for young people,** with a specific focus to priority investment areas such as in green innovations, skills training, workplace learning opportunities among other opportunities.
- 7. Conduct national green jobs assessments including risk analysis and mitigation across all sectors** on jobs that might be created or lost due to transition into the green economy and then preparing the workforce for this.
- 8. Coordinate African regional policies and harmonise regional frameworks** for standards and certifications, to assist in achieving economies of scale in green innovation, investments, skills building for green jobs, and market expansion for green goods and services.



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# Annex 1: Research Methodology

## Introduction

This was a desk-based evidence synthesis study responding to research questions presented by INCLUDE. Based on the research questions, a research protocol was developed to guide the review of information sources from peer-reviewed publications, online platforms, reports, global, regional and national policy instruments, conference proceedings, theses and dissertations among others. Varied case studies were identified during this review and some have been selected for inclusion in the synthesis.

## Research questions

1. What are the policies and initiatives that support the transition to a green economy in Africa (including innovations in the sector)
  - a. To what extent are youth (male and female) addressed and involved in the process?
2. What are the actual and potential impacts of a green economy on the various sub-groups of the population, including women and youth in urban and rural areas?
  - a. Is there a trade-off between sustainability and decent jobs, or do green jobs promise a win-win solution - decent work, sustainability and job creation - for young people?
3. What are the key drivers of green employment for young men and women?
  - a. What skills are really needed to thrive in the green economy?
4. What is the scope, nature and quality of work in the green economy?
  - a. Do green sectors create the decent jobs for youth that are needed?
  - b. When can jobs in the green economy be considered 'decent'?
  - c. What barriers and constraints do youth face in gaining decent green jobs?
5. What are the perceptions of youth regarding working in the green economy? What are their aspirations?
  - a. How do these perceptions differ between male and female, rural and urban youth?
6. 'What works' and 'what doesn't work' in interventions targeting green jobs?

## Gathering the Evidence (Information Sources)

The search strategy included all terms relevant to 'green jobs for young people' and in the broader concept of youth employment and the green economy in Africa. Comprehensive searches were conducted on key relevant databases and grey literature sources.

- Databases - Web of Science, Scopus, were searched for any works published in the past 10 years relating to the above questions. Reference lists of relevant systematic reviews and all included studies were checked to identify additional articles.
- Grey literature sources - reports, conference proceedings, websites, media platforms. Some of these included but not limited to UN websites, CGIAR centres websites, the World Bank e-library etc.
- Case studies - Case studies were sought from organisations websites, reports, and other forms of grey publication where such might be listed. The ILO website was a major source of these case studies due to their green jobs database.

## Eligibility Criteria

Each information source was assessed on the basis of the following:

- Does it respond to any of the above questions?
- Does it contain at least two of the concepts listed below in its keywords/body?

The following information sources was excluded:

- Information sources that focus on the development of the green economy without paying attention to the opportunities for employment

## The Search Strategy

A comprehensive search strategy was informed by key concepts drawn out from the main research questions. The table below also provides a provisional list of key concepts and their synonyms.

Key concepts	Synonyms/phrases
Green jobs	Green employment, sustainable jobs, greening livelihoods, clean jobs, environmental jobs, green skills,
Green economy	Green growth, greening economies, sustainable economies, sustainable development,
Young people	Youth, young men, young women
Africa	African, panAfrican,
Decent work	Decent employment, smart jobs,
Labour markets	Green labour,
Gender	Gender, young women and young men, gender equality,

Based on the settings of each database, the searches were formatted and performed using Boolean Operators such as:

- Combine key concepts with AND
- Combine synonyms with OR
- Put quotations around phrases with two or more words
- When applicable, add \* to the root of a word to find all forms of that word, plural and singular e.g. ("green job\*" OR "green employment\*") AND (decent work) AND ("green economy\*" OR greening economy\*)

All search results were imported to RefWorks, each including (where possible) a citation and abstract. A scan was conducted to remove/merge any duplicates. Any studies that did not meet the eligibility criteria was discarded. The rest were organised alongside the key concepts and research questions.

## Case Study Selection

Varied case studies were identified during this review and some have been selected for inclusion in the synthesis. The selected case studies are deemed to provide sufficiently distinct approaches to green jobs that facilitate comparison in relation to the goal to boost decent youth employment in Africa. A criterion for further analyzing these case studies addressed the following questions:

- To what extent has that sector been developed in the country/region/continent?
- What youth employment initiatives, or potential for creating such opportunities, exist or are promised in that sector?
- How much documented information exists on that sector enabling the authors to conduct an in-depth analysis of the opportunities and challenges.
- Any emerging/anticipated opportunities in this sector that might accelerate green economy/green jobs initiatives for youth
- Any global, continental, regional or national investments towards this sector e.g. policy instruments, funded programmes, mainstreaming into national plans etc.
- The selection shall also attempt to offer a balance in regions, countries and contexts to provide a diverse range of perspectives and experiences on green jobs for young people.

After this, data extraction was conducted and a literature review written up which is the basis of this synthesis paper.

### Box A1. Multiple Definitions of Green Economy, adapted from UNDP, 2015

One that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low-carbon, resource-efficient and socially inclusive.

In a green economy, 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 (UNEP, 2012).

A system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks or ecological scarcities (UNEP, 2009).

An economy that results in improved human well-being and reduced inequalities, while not exposing future generations to significant environmental risks and ecological scarcities. It seeks to bring long-term societal benefits to short-term activities aimed at mitigating environmental risks. A green economy is an enabling component of the overarching goal of sustainable development (UNCTAD, 2011).

Green economy is “a resilient economy that provides a better quality of life for all within the ecological limits of the planet” (Green Economy Coalition, 2011).

‘Green economy’ is described as an economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development (International Chamber of Commerce, 2011).

The green economy is not a state, but a process of transformation and a constant dynamic progression. The green economy does away with the systemic distortions and disfunctionalities of the current mainstream economy and results in human well-being and equitable access to opportunity for all people while safeguarding environmental and economic integrity in order to remain within the planet’s finite carrying capacity. The economy cannot be green without being equitable (Danish 92 Group, 2012).

The green economy involves largely new economic activities and must provide an important entry point for broad black economic empowerment, addressing the needs of women and youth entrepreneurs and offering opportunities for enterprises in the social economy (Government of South Africa, 2011).

Green economy can be seen as a lens for focusing on and seizing opportunities to advance economic and environmental goals simultaneously (Rio+20 Objectives and Themes of the Conference - UNCSD, 2011).

**Table A1: Shades of Green: examples of pro-environmental measures in major segments of the economy (Adapted from UNEP, 2008: 41)**

<b>Economic Sector</b>	<b>Shades of Green Employment</b>
<b>Energy Supply</b>	Integrated gasification/ carbon sequestration
	Co-generation (combined heat and power)
	Renewables (wind, solar, biofuels, geothermal, small-scale hydro); fuel cells
<b>Transport</b>	More fuel-efficient vehicles
	Hybrid-electric, electric, and fuel-cell vehicles
	Car sharing
	Public transit
	Non-motorized transport (biking, walking), and changes in land-use policies and settlement patterns (reducing distance and dependence on motorized transport)
<b>Manufacturing</b>	Pollution control (scrubbers and other tailpipe technologies)
	Energy and materials efficiency
	Clean production techniques (toxics avoidance)
	Cradle-to-cradle (closed-loop systems)
<b>Buildings</b>	Lighting, energy-efficient appliances and office equipment
	Solar heating/cooling, solar panels
	Retrofitting
	Green buildings (energy-efficient windows, insulation, building materials, HVAC)
	Passive-solar houses, zero-emissions buildings
<b>Materials Management</b>	Recycling
	Extended producer responsibility/ product take-back and remanufacturing
	De-materialization
	Durability and repairability of products
<b>Retail</b>	Promotion of efficient products/ eco-labels
	Store locations closer to residential areas
	Minimization of shipping distances (from origin of products to store location)
	New service economy (selling services, not products)
<b>Agriculture</b>	Soil conservation
	Water efficiency
	Organic growing methods
	Reducing farm-to-market distance
<b>Forestry</b>	Reforestation and afforestation projects
	Agroforestry
	Sustainable forestry management and certification schemes
	Halting deforestation

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### About INCLUDE

INCLUDE was conceived in 2012 by the Dutch Ministry of Foreign Affairs to promote evidence-based policymaking for inclusive development in Africa through research, knowledge sharing and policy dialogue. INCLUDE brings together researchers from African countries and the Netherlands who work with the private sector, non-governmental organizations and governments to exchange knowledge and ideas on how to achieve better research-policy linkages for inclusive development in Africa. Since its establishment, INCLUDE has supported more than 20 international research groups to conduct research on inclusive development and facilitated policy dialogues in Africa and the Netherlands.