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Creating Green Jobs in Developing Countries

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Question

What interventions have been used to create green jobs in developing countries? How successful are they?

Contents

1. Overview

Even though environmental and social challenges appear to be insurmountable in developing countries, addressing them together (i.e., through green jobs) can yield positive results and powerful development synergies.[1] Investments in rural water management infrastructure and social protection, for example, will not only create jobs and restore soil and water catchment areas; they will also increase incomes, increase agricultural productivity, and improve climate change resilience. Unresolved social issues, such as unemployment (especially among the youth), as well as education, health, sanitation, and infrastructure, complicate the resolution of environmental issues (ILC, 2013).

The 'green jobs' concept does not have a singular and universally accepted definition. Many development organisations have come up with their own definitions (see Section 2). Nevertheless, some of these definitions may have flaws because they are either too broad or too narrowly focused on specific industries and occupations. What is obvious, however, is the fact that **all definitions share both an "environmental" and "decent jobs" component** (Stoevska and Hunter, 2012; Renner et al., 2008; ILO, 2021b).

Environmental goals and social development are no longer treated as distinct pillars of sustainable development, since the two are interconnected. Through increased (and better/decent) jobs creation, social inclusion, and poverty reduction, an integrated approach to environmental sustainability becomes a significant avenue for development (ILC, 2013; ILO, 2021a).

Green job growth has been mostly documented in developed countries and some rapidly growing middle-income countries. However, it is becoming clearer that a green economy can create more and better jobs in all parts of the world (including the poorer developing countries) – and that these jobs can be 'decent'. There are, however, some difficulties. Some new (green) jobs created in the food, agriculture, and recycling sectors (particularly in developing countries) can hardly be considered 'decent' – i.e., due to their poor labour standards. In some cases, climate change is also having a negative impact on jobs (Renner et al., 2008).

Jobs are likely to be lost in industries that consume a lot of energy and natural resources. Climate change is already causing severe problems in the lives of millions of people in developing countries, the majority of whom are poor. For those affected, just/decent transitions to new 'green' and 'stable' jobs are required (Renner et al., 2008).

Donors have a crucial role to play in supporting and financing green jobs initiatives and 'green employment' across developing countries – given the inadequate investment in the sector, growing unemployment issues and their unique vulnerability to climate change (Pahle et al., 2016; Muller et al., 2020; ILO, 2021a). Nevertheless, the 'green jobs' sector – thus far – has only been able to receive limited financial assistance from donors. Lack of focus and funding by donors and development agencies not only stymies the creation of green jobs in developing countries, but it can also result in the loss of many existing jobs and livelihoods, particularly in agriculture, because of climate change. Furthermore, the funding for most green jobs programmes by donors usually tends to be project-based, which fails to be part of a larger

[1] see Section 2 of this report for definition of 'green jobs' and Section 4 for some exemplar donor programmes.

strategy to promote sustainable development – thus, limiting its impact (Muller et al., 2020; Renner et al., 2008).

Brief summaries of some exemplary donor funded 'green jobs' programmes and projects (discussed in section 4) are provided below:

- In Zambia, the 'Green Jobs Programme' helped to create 2,660 full-time green jobs. The programme also improved the quality of 2,018 Micro, Small, and Medium Enterprises (MSMEs) jobs (i.e., enhancing them to 'decent jobs') through the extension of 'social protection' services. MSMEs in Zambia (particularly those in building/construction industry) have also gained from value-chain development services – including green business development services, skills development, and development of technical and vocational skills. The programme showed that 'strategic partnerships' are needed to ensure the sustainability, local ownership and institutionalisation of green (and decent) jobs creation in developing countries.
- In Egypt, the 'Decent Jobs for Egypt's Young People' Programme helped to create more than 3,000 employment opportunities for the youth in three governorates of Egypt. The project has helped to raise public awareness on the benefits of green jobs by demonstrating their effectiveness through pilot projects in different sectors. The project, for instance, helped in setting a strategy and action plan for a solid waste management system in the Port Said governorate. In addition, it has helped to set up biogas units that provide clean renewable energy. The project also carried out interventions on sustainable agricultural development.
- In Rwanda, the 'Fund for Climate Change and Environment' has helped to create over 145 thousand green jobs. The programme/fund has particularly benefitted women, since more than 60% of the green jobs employed them. However, nearly all jobs (roughly 99%) were of short-term nature – i.e., shorter than 6 months of employment. The considerable experience garnered from the programme (one of the largest of its kind in Africa), would potentially help Rwanda (and donors) to mainstream environmental and climate issues into national labour policies and strategies.
- In Kenya, the 'Youth Employment for Sustainable Development' project has provided training on two 'green' technologies (i.e., 'cobblestone' and 'Do-nou') to help Kenyan SMEs generate green jobs for the youth. The project generated about 67,150 person-day of employment. The project partly suffered from delays in project start up and provision of training – especially considering its short implementation timeline. Overall, however, the project performed well, even surpassing some targets.
- In Senegal, The Partnership for Action on Green Economy (PAGE) promoted green jobs as pathways of local development. The programme has led to the creation of Senegal's national strategy on green jobs and has facilitated the integration of 'inclusive green economy' into its national policies. Various sectoral green jobs mapping studies (e.g., on agriculture, energy, and climate change adaptation mechanisms) have also been supported by the programme. This programme has been very successful in promoting green jobs in Senegal – so much so that it received the 'Future Policy Vision Award' from the World Future Council.[2]

[2] https://www.futurepolicy.org/award/

- In Bangladesh, Indonesia, Nepal, Philippines and Sri Lanka, the 'Green Jobs in Asia' project has been able to introduce 'Decent Work Country Programmes' in all participating countries. The projects targeted different sectors – including, renewable energy in Bangladesh; sustainable tourism in Indonesia; environmentally sustainable construction in Philippines; and solid waste management in Sri Lanka. The project partnered with non-traditional stakeholders, including ministries and various professional organisations, in order to be effective at bring local experts together. It also helped in broadening the awareness about 'decent work'; facilitated the discussion about green jobs (e.g., by hosting conferences); and promoted the formation of 'new partnerships' among various stakeholders working on green jobs.

However, it is worth noting that there is relatively limited donor programming on 'green jobs' – i.e., most donor funded jobs creation programmes are not explicitly 'green'. Another poignant observation is the general lack of proper programme evaluation, especially independent evaluation, on donor interventions around 'green jobs' (which are usually small projects). As such, there is a lack of good evidence base. Consequently, the green jobs programmes and interventions described in Section 4 are not systematically selected. Rather, the selection follows reviews of 'jobs' programmes by major development agencies active on the 'green economy' scene (e.g., ILO, FCDO, etc.), and also following literature/programme leads explicitly on 'green jobs'. It is also important to mention that most programming on 'green jobs' (and 'decent jobs') in developing countries is mostly about sectors such as sustainable agriculture; waste recycling; renewable energy; green tourism; and green construction. While some donor interventions work directly on green jobs creation, other interventions work on awareness raising around 'green' and 'decent' jobs and/or mainstreaming the 'green'/'decent' jobs initiatives in national labour laws and policies.

The rest of the report is structured as follows. Section 2 briefly looks at key definitions of 'green jobs' – by particularly touching on both the 'environmental' as well as 'social' (i.e., 'decent jobs') aspects of green jobs. Section 3 discusses the link between green ('decent') jobs and sustainable development. Section 4 provides brief case studies on donor funded 'green jobs' programmes and projects in different developing countries. For each programme or project, the section provides brief programme details, objectives, and outcomes.

2. What are Green Jobs?

The current working definition of green jobs adopted by International Labour Organisation (ILO)'s 'Resource guide on green jobs' implies that **"jobs are green** when they help reduce negative environmental impact ultimately leading to **environmentally, economically and socially sustainable** enterprises and economies. More precisely green jobs are **decent jobs** that (ILO, 2021a):

- reduce consumption of energy and raw materials;
- limit greenhouse gas emissions;
- minimise waste and pollution;
- protect and restore ecosystems.

Overall, the green job concept has environmental as well as social aspects. Thus, green jobs comply with the pillars of decent work (as defined by the ILO above) and are provided by economic activities that contribute to reduced environmental impact. Green jobs are thus environmentally sound and yet also "decent" in social terms (Jarvis et al., 2011).

2.1 The environmental (traditional) aspect of Green Jobs

'Green', 'environmental', and 'sustainable' are some of the terms that are frequently used interchangeably to describe businesses, people, or technologies that do things that are 'greenish' (ILO, 2021b). All of the approaches (linked to green jobs) point to a new economic model based on environmentally sustainable resource use and economic efficiency. Green economy is a tool for achieving sustainable development, not a replacement for it (ILO, 2021b).

Numerous attempts have also been made to define green jobs, either by **concentrating on the environment and sectors of the economy** like forestry and renewable energy, or by analysing different occupations and **how they add value to the "greening" of the economy** (Stoevska and Hunter, 2012)

An often-cited **definition of Green jobs from a 2008 ILO/UNEP report** describes green jobs as "...work in agricultural, manufacturing, research and development (R&D), 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-carbonise the economy, and minimise or altogether avoid generation of all forms of waste and pollution" (Renner et al., 2008: p.3).

Stoevska and Hunter (2012) argue that, whilst the 2008 ILO/UNEP definition is reasonably comprehensive, it seems to ignore, perhaps not intentionally, the likelihood that green jobs might also be present in activities like mining, quarrying, construction, and energy supply.

Stoevska and Hunter (2012) further note that, for products and services, most definitions include:

- Environmentally friendly products and services;
- Renewable energy products and services;
- Clean transportation and fuels; and
- Green buildings.

Some definitions also include the processes by which these products and services are produced. These include (Stoevska and Hunter, 2012):

- Energy efficient manufacturing, distribution, and construction;
- Decrease in energy, materials, and water consumption via high efficiency strategies; and
- Shifting from carbon to non-carbon components.

Aside from the fact that each organisation's definition of 'green' differs, there are much more similarities than differences in what constitutes a 'green economy'. The preservation or restoration of the environment is a common theme. The majority of the studies also seek to

identify products and services that meet one or more of the green economy's criteria (Stoevska and Hunter, 2012).

2.2 The social ('decent jobs') aspect of Green Jobs

The **'green economy'** concept was initially defined and understood in terms of climate change, CO2 emission reduction, and short-term solutions to the prevailing global environmental crises. However, the **concept of 'green economy' (and implied 'green jobs') evolved over the years to refer to the greening of the whole economy, long-term development goals, and the promotion of social justice and 'decent' work**. It now encompasses a broader range of issues such as energy and resource efficiency, poverty alleviation, social equity, and human well-being. As a result, a 'green' economy encourages not only environmental sustainability but also economic growth and, most notably, social inclusion (ILO, 2021b).

Green jobs, therefore, must also be 'decent jobs' (Stoevska and Hunter, 2012). This is reflected in the broader definition currently used by the ILO Green Jobs Programme: "Jobs are green when they help reduce negative environmental impact ultimately leading to environmentally, economically and socially sustainable enterprises and economies. More precisely green jobs are decent jobs that:

i) reduce consumption of energy and raw materials;
ii) limit greenhouse gas emissions;
iii) minimise waste and pollution; and
iv) protect and restore ecosystems" (Stoevska and Hunter, 2012).

This definition is fairly comprehensive, and it reflects the most important policy goals and issues linked to green jobs. **A key aspect, therefore, is the need to capture both the 'decent work' and the 'environmental' dimensions of green jobs** (Stoevska and Hunter, 2012).

3. Green ('decent') Jobs and Sustainable Development

The 'Decent Work' agenda, which is a comprehensive policy framework in and of itself, is conspicuously visible across the UN's Sustainable Development Goals (SDGs) and 'Agenda 2030'.[3] To address development challenges, the 2030 Agenda calls for integrated and transformative policies. A central element of many of the SDGs is the promotion of more and better jobs (ILO, 2015).[4]

Greening the economy will necessitate vast investments in new technologies, equipment, buildings, and infrastructure, with major implications for the workplace. There will be

[3] https://www.ilo.org/global/topics/sdg-2030/lang--en/index.htm

[4] Green Jobs could fit in to various specific SDG targets – such as SDGs 1,4,7,8 and 12 and possibly even other related indicators (ILO, 2015)

significant opportunities for job creation and skill development, and also enhancements in job quality and incomes, and advancements in equity and social inclusion (ILO, 2015).

However, the advancements linked to green economy and green jobs are not automatic – but rather dependent on the implementation of the appropriate policies by developing countries and other stakeholders (including donors). The interaction between environmental sustainability, decent work, and gender equality (among others) must be recognised in these policies. Transitioning to low carbon, environmentally (and socially) sustainable economies can be a huge force for job creation/upgrading, social justice, and eradicating poverty if handled properly and introduced by consensus (ILO, 2015).

It is important to identify gaps in skills in relation to green jobs and offer opportunities for workers (and businesses in green sectors) to upgrade their technical and entrepreneurial skills. This can be done through provision of training and other technical assistance schemes to achieve sustainable development and climate goals (ILO, 2015).

Green job creation is a strong way to integrate social and environmental development. Social and environmental goals can be met by creating decent jobs and guaranteeing that such jobs have a lower environmental impact and a greater ability to deal with the demands of climate change and limited resources (ILO, 2015).

To realise both the environmental and social objectives, green jobs programmes (e.g., by donors and partner governments) may follow different strategies. First, they commonly support the employment and social aspects of environmental policies so as to provide decent work for current and future generations. Secondly, however, they could also work to integrate environmental issues into the workplace so as to alter patterns of consumption and production (ILO, 2015).

Overall, greening developing economies, therefore, offers numerous opportunities for achieving social goals. It has the capability to be a new engine of growth (and a net contributor of decent green jobs) that can greatly help on poverty reduction and social inclusion. Greening will improve the ability of developing economies to manage their natural resources sustainably, increase their energy efficiency, and lower waste while also reducing problems of inequality and increasing their overall resilience. Greening jobs in traditional and emerging industries will help developing countries to create a competitive and environmentally sustainable economy as well as contribute to the global fight against climate change (ILO, 2015; ILC, 2013; Pahle et al., 2016; Muller et al., 2020).

4. Green Jobs Programmes

4.1 Zambia: Green Jobs Programme (GJP)

Brief Details:

Budget: USD 12 million

Donor: Government of Finland[5]

Period: 1 September 2013 - 30 April 2018

Overall Objectives:

The Zambia Green Jobs Programme aimed at generating sustainable and green jobs among MSMEs, particularly in the building/construction industry (GJP Project Page, 2016; ILO, 2021c). The programme's core objective was to increase the competitiveness and sustainability of businesses – and thereby generate at least 5,000 "decent green jobs" especially for young people and enhance the quality of at least 2,000 jobs in MSMEs. The green jobs, it was aimed, will in turn boost the incomes and livelihoods of at least 8,000 Zambian households who particularly depend on the construction sector of the country (ILO, 2021c).

Programme Outcomes (Successes):[6]

An intermediate programme review at the end of 2015 showed that the programme documented some notable results.[7] About 2,660 full-time green jobs created, in connection with the programme. Further, the quality of 2,018 MSME jobs were improved because of the extension of 'social protection' and 'occupational safety and health' services provided to workers in the building sector (ILO, 2021c).

The programme worked to facilitate a conducive business environment and encourage inclusive green growth and job creation. The programme had a strong focus on the strengthening of local capacity and increasing household income. It used a value-chain development approach that incorporated private sector promotion and sustainable housing (ILO, 2021c).

The programme made use of a multidimensional intervention approach so as to encourage a sustainable market transformation in the Zambian construction industry (ILO, 2021c). The synchronised interventions by the programme have been carried out at three different system levels, targeting the following core objectives:

- **The shaping of attitudes and mind-sets:** one of the programme intervention clusters was devoted to generating awareness about the gains from green construction to boost market demand for green building services, technologies, and materials – as well as their capacity to propel inclusive green growth in Zambian economy. By raising awareness activities, the programme encouraged changes in mind-set and attitudes among key stakeholders – not only those in the construction sector, but also the public (ILO, 2021c).
- **The 'greening' of policy framework:** the programme fostered an enhanced industry-specific regulatory framework in order to build up demand for environmentally friendly building materials, products and methods among private and public housing developers. This included the promotion of policy analysis and social dialogue on the design and

[5] http://www.zambiagreenjobs.org/index.php/about-us/zambia-green-jobs-programme-at-a-glance

[6] https://www.ilo.org/global/topics/green-jobs/projects/africa/WCMS_209922/lang--en/index.htm

[7] No final programme review was publicly available (discovered) while preparing this report.

review of the appropriate legal and regulatory framework between policy makers and implementers (ILO, 2021c).

- **Building capacity for MSMEs:** the programme built the capacity of local MSMEs so that they could effectively participate in 'green' building/construction activities in Zambia (ILO, 2021c).

The 'greening' of the building sector in Zambia has opened the way for (decent) job creation through green business development services, skills development, as well as the creation of a more conducive and growth-oriented environment for MSMEs (ILO, 2021c).

Zambian MSMEs have benefited from a market-driven mix of financial, non-financial and value chain development services. These services include: productivity and working conditions enhancement, as well as reinforcement of social protection; entrepreneurship training; business linkage support; small business management and value chain development; the development of technical and vocational skills for green jobs; and support targeted at financial literacy and access to "green finance" (ILO, 2021c).

In order to guarantee sustainability, local ownership and institutionalisation of practices, the programme was carried out through strategic partnerships. In this regard, the programme worked together with government ministries and agencies, financial institutions, business development service providers, and other private sector players in Zambia's building construction industry (ILO, 2021c). Technical assistance and capacity building was supplied by a group of five UN agencies (FAO, UNEP, UNCTAD, ITC and led by the ILO), where each one was chosen for its respective expertise (ILO, 2021c; GJP Project Page, 2016).

4.2 Egypt: Decent Jobs for Egypt's Young People (DJEP)

Brief Details:

Budget: 15 million CAD[8]

Donor: Department of Foreign Affairs, Trade and Development Canada (DFATD)

Period: 1 January 2011 - 31 December 2016, Phase I

Overall Objectives:

The DJEP project had the objective of creating job opportunities for youth in environmentally sustainable activities and, thus, promoted green jobs at both national and local/regional levels in Egypt (Goc, 2021; ILO, 2021d; 2021e).

[8] This reflects budget figure for two phases of DJEP (I: 2011-16; II: 2016-20), while the discussion in this section is on phase I of DJEP alone, because of lack of information on second phase.

Programme Outcomes (Successes):

The project facilitated the creation of over 3,000 employment opportunities for youth, with a special focus on green jobs creation at both the national and local level in three Egyptian governorates, namely - Minya, Port Said and the Red Sea. Project interventions had helped to generate awareness and dialogue on the possible benefits of green jobs across several sectors in the country (ILO, 2021d; 2021e).

- **Work on increasing national awareness around green jobs:** the project launched a workshop on "Skills for Green Jobs in Egypt: The Case of Composting and Renewable Energy" which was organised in collaboration with GTZ in November 2012. The workshop addressed different stakeholders and initiated a national process for the development of a vision, strategy and action plan for composting and renewable energy, especially, skills policies and programmes to support sector growth.[9] Further, a study on "Skills for Green Jobs, Egypt" was carried out and published. The study identified the key environmental challenges which Egypt faced and the policy responses that were required to gain from the employment opportunities emerging from a transition into green economy (ILO, 2021d).
- **Work on recycling of waste and renewable energy:** so as to bolster local capacity on waste recycling, a training toolkit ("Start Your Waste Recycling Business" (SYWRB)) was adapted to the Egyptian context, was translated into Arabic, and was rolled-out, together with an operational training manual. In March 2015, the project had carried out training on SYWRB for participants from 17 newly created solid waste management businesses and some civil society organisations. Furthermore, the project assisted in setting a strategy and action plan for a solid waste system management in the Port Said governorate, Port Fouad City. Workshops were conducted for Port Said University students in April 2013 in order to increase their environmental awareness regarding solid waste management. The project had also helped to set up two biogas units, that have been fully operational since December 2014. Thus, the project has created green jobs opportunities for the youth in Port Said, providing clean renewable energy (ILO, 2021d).
- **Work on agriculture:** The project has organised several programme interventions that back sustainable agricultural development for Egyptian youth. The project has put in place innovative tools and practices (e.g., the solar drying of agriculture products) that helped to enhance Egyptian agriculture. Between 2013 and 2014, for instance, the project implemented "Improvement of Post-Harvest processing" through solar drying. The project created the first solar drying post-harvesting unit in Fayoum. Afterwards, solar drying post-harvesting has been scaled-up and was replicated in other governorates of Egypt (ILO, 2021d).
- **Work on green tourism:** in cooperation with the Egyptian Ministry of Tourism, the project also launched a national conference "Create Green Jobs through Green Tourism – The Green Start Hotel Certification Programme for Hotels in the Red Sea" in June 2015**. It was targeted at generating green jobs in tourism in the Red Sea**

[9] https://sites.google.com/site/icecairowiki/events/skills-for-green-jobs-workshop-in-egypt---the-case-of-composting-and-renewable-energy

governorate of Egypt. The conference brought together several national stakeholders and high-level executives from hotels and resorts (ILO, 2021d).

4.3 Rwanda: Fund for Climate Change and Environment (FONERWA)

Brief Details:

Budget: Overall budget was USD188 million (i.e., about GBP 145 million), of which FCDO contributed GBP 24.56 million, making it the largest contributor to the Fund.

Donor: FCDO/DFID, KfW, SIDA and others. [10]

Period: April 2013 – September 2020

Overall Objectives: [11]

FONERWA was established to mobilise international and domestic climate finance, as well as secure long-term financing for public and private investment, in order to contribute to environmental sustainability, green growth (i.e., green jobs), and economic development in Rwanda (FONERWA Project Completion Review, 2020; FONERWA Business Case, 2013).

The programme/fund was particularly set up to help realise the climate change objectives of the Government of Rwanda. FONERWA's Business Case (2013) noted that the objectives set out in the Rwandan Green Growth Strategy also contributed directly to DFID's 'Business Plan' to 'Combat Climate Change', and in particular aligns with its objective of supporting developing countries to have better adaption to climate change and 'low carbon growth' (FONERWA Project Completion Review, 2020; FONERWA Business Case, 2013).

According to FONERWA's Business Case (2013), Rwanda was chosen by the UK's International Climate Fund (ICF) because of having "very high vulnerability with capacity to deliver" and "high potential for demonstrating low carbon development, based on strong political will".

Programme Outcomes (Successes):

FONERWA project completion review (2020) reported that the programme contributed to the creation of 145,256 green jobs by June 2020 – exceeding the target by over 450 jobs. Interestingly, women had benefited the most from the green jobs programme, with about 88,000 of the green jobs going to them (i.e., over 60% of the total green jobs creation linked to the programme). Women

[10] Besides from FCDO, FONERWA was able to mobilise funding from other development partners. Other funders included KfW (the German development bank) and SIDA (Swedish International Development Cooperation Agency); funding for capacity building and support from UN Development Programme (UNDP), Green Climate Fund (GCF) and the Global Green Growth Institute (GGGI). FONERWA was also partly funded by domestic budget. As of October 2020, the Fund had mustered a total of USD188 million. This large funding made FONERWA one of the "largest government-run, demand-based climate funds in Africa" (FONERWA Project Completion Review, 2020). https://iati.fcdo.gov.uk/iati_documents/59213232.odt

[11] https://iati.fcdo.gov.uk/iati_documents/3955656.odthttps://iati.fcdo.gov.uk/iati_documents/3955656.odt

seem to have disproportionately benefitted from the green jobs creation because the jobs were mainly in the agricultural sector and women are more involved in agriculture activities than men in Rwanda. Further, from all green jobs created within agriculture, 'terracing activities' have contributed by far the most (around 90%) of the green jobs created (FONERWA Project Completion Review, 2020). Although agricultural sector/activities constitute by far the largest portion of green jobs created, a 2016 project report notes that 'green jobs' activities as per the programme also included ecotourism, mining, natural resource enterprises, green energy, low carbon development activities, etc (CIDT, 2016).

Despite the sizeable number of green jobs created, well below 1% of them were long-term, i.e., more than 6 months of employment. FONERWA project completion review (2020), therefore, noted that future green jobs initiatives (FONERWA or others) should consider ways to stimulate programmes and projects that can create long-term employment. That is, efforts should be made at creating and expanding stable (or 'decent') green jobs that are productive and sufficiently remunerative, in line with the Government of Rwanda labour policies – and overall 'decent jobs' objectives. It was noted that the experience from the FONERWA project could offer the opportunity to mainstream environmental and climate issues into existing labour policies and strategies of the country (FONERWA Project Completion Review, 2020).

Apart from creating a large number of green jobs and (especially) benefiting women, FONERWA also achieved the following key environmental (i.e., green economy) results (FONERWA Project Completion Review, 2020):

- It led to a cumulative mobilisation of $188m for climate programming in Rwanda, making it one of the largest (government-run and demand-based) climate funds in Africa;
- It supported 111,323 people to cope with effects of adverse climate change;
- It supported Rwanda's Green Growth and Climate Resilience Strategy therough several programmes of action;
- It helped to secure 21,914 ha of land against erosion;
- It helped to cover 43,154 ha with forest and agro-forest;
- It helped to protect 27,984 ha of watershed;
- It provided 73,251 households with access to clean energy; and
- It helped to avoid about 93,604 tonnes of CO2 emissions.

4.4 Kenya: Youth Employment for Sustainable Development (YESD)

Brief Details:

Budget: USD 1.6 million

Donor: Government of Japan

Period: 1st January 2012 to 31st December 2012

Overall Objectives:

The overall objective of YESD was to strengthen the capacity of Kenyan SMEs to adopt green jobs approaches – and particularly to generate youth employment opportunities as well as enhance their employability in the road construction and maintenance sector of Kenya (YESD Project Briefing Note, 2021; ILO, 2021f; 2021g).

Specific objectives of the project included (YESD Project Briefing Note, 2021):

- Introducing Green Jobs as a means of addressing the impact of climate change and facilitating dialogue and capacity building on the topic among relevant government agencies;
- Knowledge transfers (e.g., around labour intensive technologies) and skills upgrading in implementing agencies;
- The creation of employment opportunities for unemployed youth in the urban and rural areas; and
- The provision of business development support to emerging youth owned SMEs.

Programme Outcomes (Successes):

As a result of the project, Kenyan youth (750 in total) from SMEs (70 in total) have obtained training on two technologies utilising green jobs – i.e., training on cobblestone paving works (employing 250 youth) and road maintenance using the "Do-nou" technology (employing 500 youth). During implementation, the project had surpassed its target by 27% in terms of number of SMEs trained on cobblestone and "Do-nou" road construction (target was 55 SMEs trained). The project also surpassed its target by 50% in terms of number of individual youths trained (target was 500 youth trained) (Karuga, 2012).

Cobblestone technology: at the launch of the project, cobblestone paving technology was new to Kenya and was touted to have vast potential in improving urban and rural infrastructure in the country. The experiences in neighbouring countries had shown that the technology is a cheaper option to conventional paving techniques. It is also relatively simple to put in place and is welcomed by the private sector and the general public. Some benefits ('green' aspects) of the cobblestone technology include that it (YESD Project Briefing Note, 2021):

- lowers environmental damages such as soil erosion;
- enhances access to poorer areas in urban zones;
- it is labour-intensive, which generates job opportunities;

"Do-nou" technology: "Do-nou" Technology involves use of gunny bags filled appropriately with either sand, farm soil, gravel and the opening properly secured. "Do-nou" is Japanese word that means wrapping soil in a gunny bag. Do-nuo is commonly used for (YESD Project Briefing Note, 2021; ILO, 2021g):

- Lifting embankments to prevent floods and reinforcing buildings' foundations;
- Construction of temporary structures following disasters; and
- Carrying out emergency and/or routine maintenance of rural and urban roads and drainage structures.

Employment (green jobs) generation from two labour-intensive (cobblestone and "Do-nou") technologies: the project generated about 67,150 person-day (PD) of employment consisting of about 27,150 PDs for 'cobblestone' and 40,000 for 'Donou'. However, the project under-performed its employment targets by approximately 52%. This underperformance was primarily due to two main reasons. Firstly, delays in project start up and provision of training slowed MSE engagement in productive works employment generation opportunities. Secondly, the failure by Kenyan Road Authorities to identify and prepare the most appropriate roads for cobblestone paving trial projects forced the project implementation staff to re-work and form the roads from the sub-base, before paving could begin (Karuga, 2012).

Knowledge sharing: some of the key accomplishments by the project on knowledge sharing included (Karuga, 2012):

- enhanced awareness and participation of local implementation partners in the advancement of green jobs through a wide range of publicity materials;
- organising of high-level campaigns and debriefing meetings (including with the President of Kenya) and other meetings including senior staff in government ministries, road agencies and other prospective clients for the road rehabilitation;
- preparation of a report on global best practices and distribution to stakeholders; and
- formulation of project communication strategy on green jobs.

Overall, according to final project evaluation, the project performed well and it even surpassed some of its targets by "significant margins". This is despite limitations in terms of the short implementation timeline (effectively 6 months), limited budget and staffing (Karuga, 2012).

4.5 Senegal: The National Strategy for the Promotion of Green Jobs; Partnership for Action on Green Economy (PAGE)

Budget: Information Not Available (N/A)

Donor: UN, ILO

Period: 2015-2020

Overall Objectives:

Programme interventions under the framework of Partnership for Action on Green Economy (PAGE) have aimed to support the implementation of a National Strategy for the Promotion of Green Jobs in Senegal (PAGE annual report, 2019).

Programme Outcomes (Successes):

The work of PAGE has resulted in numerous achievements. This included assisting the integration of Inclusive Green Economy (IGE) into Senegal's national policies; influencing sectoral and thematic reforms across green jobs, green industry and the sustainable use of revenues from oil and gas sectors; waste management, sustainable construction, and the promotion of entrepreneurship to support green growth (PAGE Annual Report, 2019).

At the regional level, the programme has backed several sectoral green jobs mapping studies on agriculture, energy, and climate change adaptation mechanisms in the context of Senegal's three local regions. Furthermore, a project on migration and environmental sustainability was launched to deal with environmental degradation as one of the sources of migration in the Sahel, in West Africa. The project concentrated on establishing economic opportunities through green jobs, as trajectories of local development, in order to better guide policies to encourage employment and productive investment for migrants. For instance, over 2,000 youth participated in social and professional orientation workshops in 2012. Hundreds of migrants as well as their families have had access to training on investment opportunities, boosting good use of remittances, and managing family finances (ILO, 2021h).

At the national level, the programme promoted green jobs so that they become recognised as one of Senegal's priorities. As a result, the creation of green jobs become incorporated in Senegal's national development strategy, known as "Plan Senegal Emergent" (PSE). To support the implementation of the PSE (and particularly its green jobs component), the programme partnered with Senegal in three key areas. These included, i) analytical support, including a green job evaluation process to recognise and measure existing and future opportunities for green employment creation; ii) supporting the implementation of a multi-year national programme on green jobs and the creation of a national strategy on green jobs; iii) capacity support and institutional development in principal research and policy institutions in Senegal that are involved in green economy and green job promotion. These programme activities took place under the framework of the Partnership for Action on Green Economy (PAGE), which is a joint initiative on green economy by UNEP, ILO, UNIDO, UNITAR and UNDP (ILO, 2021h).

The World Future Council acknowledged the National Strategy for the Promotion of Green Jobs in Senegal as one of the "most inspiring and impactful" green jobs policies targeted at empowering the youth to develop a fair and sustainable future. Accordingly, the Government of Senegalese received the 'Future Policy Vision Award' in October 2019 (PAGE Annual Report, 2019).

4.6 Bangladesh, Indonesia, Nepal, Philippines and Sri Lanka: Green Jobs in Asia (GJA) Project

Budget: N/A

Donor: Government of Australia

Period: 2011 - 2015

Overall Objectives:

The project aimed to support five Asian countries (i.e., Bangladesh, Indonesia, Nepal, Philippines, and Sri Lanka) in order to shift to a green climate resilient economy and accelerate (green) jobs creation, lower social gaps, and help to realise development goals and green and decent work (GJA ILO Project Page; 2021a).

The key objectives of the project included (GJA ILO Project Page; 2021a):

- Mainstreaming of green jobs policies in national labour and social policies of partner countries;
- Launching green jobs demonstration programmes that respond to the diverse requirements of women and men implemented in key sectors, which are selected on the basis of research and consultations in the project countries; and
- Engaging partners in dialogue on green jobs through increased access to reliable sources of data and information on green jobs and training, including on the employment impacts of environment-related policies and good practices on green jobs in all participating countries.

Programme Outcomes (Successes):

The project helped to deepen the understanding and commitments for the promotion of gender sensitive ('decent') green jobs opportunities in the five countries. The project offered capacity building on green jobs, championed the mainstreaming of green jobs in labour and social policies of the partner countries, and achieved concrete sectoral green jobs interventions – particularly in four of the partner countries (GJA ILO Project Page; 2021b). That is:

- Renewable energy in Bangladesh;[12]
- Sustainable tourism in Indonesia;[13]
- Environmentally sustainable construction in Philippines;[14]
- Solid waste management project in Sri Lanka.[15]

The Green Jobs in Asia Regional Conference which was held in August 2012 in Indonesia summoned representatives from both project implementation countries as well as others with green jobs experiences.[16] The conference presented the chance to share experiences and knowledge acquired through the implementation of the project. The different country representatives at the conference called for the replication, scale-up and adaption of successful projects and communicated their priorities while promoting green jobs in the South Asia region (GJA ILO Project Page; 2021b).

According to a 2012 project evaluation (Kim, 2012), the project was conceived as a foundation step in the promotion of green jobs, with the major green jobs activities planned to be designed and expanded upon in a future phase. The project concept and approach have proved to be extremely relevant and timely - as per the evaluation, though the goals were noted as ambitious, given the timeframe and resources available. The project participants and target audiences have shown a positive commitment to promoting green jobs, as exemplified by their active participation in project activities. The degree of community dialogue and improved awareness about green jobs among the constituents has become a significant

[12] https://www.ilo.org/asia/areas/green-jobs/WCMS_183806/lang--en/index.htm
[13] https://www.ilo.org/asia/areas/green-jobs/WCMS_183814/lang--en/index.htm
[14] https://www.ilo.org/asia/areas/green-jobs/WCMS_183815/lang--en/index.htm
[15] https://www.ilo.org/asia/areas/green-jobs/WCMS_183816/lang--en/index.htm
[16] https://www.ilo.org/asia/events/WCMS_180972/lang--en/index.htm

achievement. The national and regional conferences were major gatherings that brought key stakeholders together (Kim, 2012).

Green jobs are included in all participating countries' 'Decent Work Country Programmes,' reflecting the goal of mainstreaming, with labour organisations (and workers) developing their own green jobs policies or incorporating green jobs into their organisational frameworks. The green jobs activities demonstrated by the project sparked a lot of interest, as did the possibilities for replication and expansion. The creation of specific guidelines, standards, and tools for demonstrations in specific sectors were also significant accomplishments of the project (Kim, 2012).

In general, the project's strategy of partnering with non-traditional stakeholders, such as ministries and professional organisations that work on environmental issues and specific sectors, was an effective way to bring together local experts to help build a broader consensus and dedication to green jobs. It aided in expanding the conversation about green jobs, facilitating the creation of new partnerships, and broadening the audience for "decent work awareness" in partner countries (Kim, 2012).

It was noted that delays in project personnel recruitment was a major challenge which obstructed implementation, thus, impeding the timing of key project activities (Kim, 2012).

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