THE EAST AFRICAN TRADE UNION CONFEDERATION

Climate Change and Just Transition Training Manual

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ABBREVIATIONS AND ACRONYMS

CBA	Collective Bargaining Agreement
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CH4	Methane
CDM	Clean Development Mechanisms
CFC	Chlorofluorocarbons
CO2	Carbon dioxide
COP	Conference of Parties
EA	East Africa
EAC	East Africa Community
EATUC	East African Trade Union Confederation
DRR	Disaster Risk Reduction
DTDA	Danish Trade Union Development Agency
DWCP	Decent Work Country Programme
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EV	Electrical Vehicles
FAO	Food and Agriculture Organization of the United Nations
FES	Friedrich Ebert Stiftung
GHG	Green House Gases
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ITUC	International Trade Union Confederation
JT	Just Transition
LTS	Long Term (Migitation) Strategies
LULUCF	Land Use, Land Use Change and Forestry
MRV	Measurement, Reporting and Verification
NDC	Nationally Determined Contribution
NAPA	National Adaptation Programme of Action
REDD	Reducing Emissions from Deforestation and Forest Degradation
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Acknowledgement

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1. Introduction

Climate Change has the most adverse impacts on the East Africa's natural resource thus water, land, plants and animals, on which the economic and social development of the region depends. Adverse effects of climate change are threatening to undo decades of development efforts and frustrate poverty eradication programmers in the Partner States. Climate change primarily manifests itself in terms of temperature increase, variability of precipitation patterns, and change in the frequency and intensity of extreme events and sea level rise. Rainfall and temperature are the main driving forces that trigger productivity in agriculture and of ecosystems. Climatic variability and extremes are a great concern for East African countries where the link between climate and livelihood is very strong. Climate change in the region is translated directly to the economic and social performance of the region. Depending heavily on rain-fed agriculture, rural livelihoods are highly vulnerable to climate variability such as shifts in growing season conditions. As rainfall and atmospheric temperatures change, land use potential and productivity will change mainly in response to changes in primary productivity. Several impacts are already observable in the Partner States and there is broad scientific consensus that further climate change impacts will occur. East Africa's climate is changing.

Climate change is contemporarily the most important global environmental, social and economic challenge, predicted to have severe impacts on a planetary scale. The adverse impacts of climate change on environment, human health, food security, human settlements, economic activities, natural resources, and physical infrastructure are already noticeable world-wide. The need to address the problem of climate change and respond to the priority needs of developing countries to achieve sustained economic growth and eradicate poverty is one of the guiding principles that govern the implementation of the UN Framework Convention on Climate Change (UNFCCC). Article 3.4 of the Convention states that Parties have a right to, and should promote sustainable development. It further states that policies and measures to address climate change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change. This link between climate change and sustainable development is further emphasized in the guidelines for the preparation of national communications by Parties not included in Annex I to the Convention (non-Annex I Parties) which request these Parties to include programmes relating to sustainable development in their national communications.

It is now established that rising concentrations of anthropogenically-produced greenhouse gases in the Earths atmosphere are leading to changes in the global climate. Increased concentration of small quantities of certain gases in the atmosphere is the cause of this concern. These gases are carbon-dioxide, methane, nitrous oxide, and several manufactured gases of which the most important are chloroflouro-carbons (CFCs). Ozone in the lower atmosphere, whose concentration is affected by human activities, is also an important trace gas in the global warming equation. Water vapor is intimately involved in the greenhouse question because its concentration is linked with those of other gases through a feedback mechanism. Warming bought about by other greenhouse gases increases evaporation, and allows the atmosphere to hold more water vapour, in turn enhancing warming. Carbon-dioxide is the most important greenhouse gas. Apart from cholorofloure-carbons, these gases also occur naturally in the atmosphere.

The extraordinarily high levels of energy consumption by the industrialized countries are the principal contributor to the build-up of greenhouse gases in the atmosphere. The extraction and combustion of coal, oil and natural gas releases carbon-dioxide and methane in the atmosphere. Carbon-dioxide is the most abundant green-house gas, currently contributing 55% of the total man-made annual additions to the greenhouse effect. Deforestation, which hastens the extinction of species and contributes to soil loss, also contributes to the build-up of heat-trapping gases through carbon-dioxide emissions (burning) and through reduction of its sinks. Expanding agricultural activities world-wide also contribute to the build-up of such gases as methane from paddy cultivation of rice, and nitrous oxide from breakdown of nitrogenous fertilizers. Waste disposal in landfills also emit relatively small but significant quantities of methane. Humankind has dramatically altered the chemical composition of the global atmosphere with substantial implications for the climate on a planetary scale. Global warming is the most stricking indication of the pronounced Climate Change issue. It is the most direct effect of the increased trapping of heat radiation.

A major driving force on the global warming discussion derives from the work of the Inter-governmental Panel on Climate Change (IPCC), a scientific group set up by the United Nations in 1988 to investigate the science of human induced climate change and to advice on how to deal with the problem and its impacts. The Reports of IPCC represent the best consensus to-date on the Climate Change agenda. The Six Assessment Report (AR6) of the IPCC, completed 2022, finds with more than 90% probability that human action is implicated in today's climate change, and presents the already observed and projected impacts it will give rise to.

The IPCC Report presents observational evidence of potential impacts of climate change on sectors and on regions, key vulnerability scenarios and risks, the potential for adaptation and the implications of impacts for sustainability. Substantial new evidence from studies on a wide range of species and communities suggests that the impacts of climate change is strongly related to projected increases in temperature, evaporation, sea level and precipitation variability. Projected changes in the frequency and severity of extreme climate events have significant consequences on agriculture and food security, freshwater availability for humans and ecosystems, human and animal health, biodiversity and ecosystems, as well as social and economic sectors including energy, forestry, wildlife, tourism, industry, human settlements, transport and infrastructure.

The Report highlights several concerns of potential impacts that could occur as a result of climate change in Africa. Africa is characterized by a wide variety of climate systems, ranging from humid equatorial systems, through seasonally-arid tropical, to sub-tropical Mediterranean-type climates. Because of multiple stresses and low adaptive capacity, Africa is the most vulnerable continent to climate change and variability. The key vulnerable sectors of concern relate to agriculture and food security; water resources; ecosystem degradation and depletion of biodiversity; prevalence of human diseases and plant pests; degradation of coastal areas; and the general insecurity occasioned by the incidence of extreme weather events such as floods and droughts.

The effects of climate change such as rising temperature and changes in precipitation are undeniably clear with impacts already affecting ecosystems, biodiversity and people. In both developed and developing countries, climate impacts are reverberating through the economy, from threatening water availability to sea-level rise and extreme weather impacts to coastal regions and tourism. In some countries, climate impacts affect the ecosystem services that communities are largely dependent upon, threatening development and economic stability. Future impacts are projected to worsen as the temperature continues to rise and as precipitation becomes more unpredictable.

One region of the world where the effects of climate change are being felt particularly hard is Africa. Because of the lack of economic, development, and institutional capacity, African countries are likely among the most vulnerable to the impacts of climate change (IPCC, 2001). Climate change impacts have the potential to undermine and even, undo progress made in improving the socio-economic well-being of East Africans.

The negative impacts associated with climate change are also compounded by many factors, including widespread poverty, human diseases, and high population density, which is estimated to double the demand for food, water, and livestock forage within the next 30 years (Davidson et al., 2003).

Trade Unions as Catalysts for Change:
Recognizing the multifaceted nature of the challenges posed by climate change, there is a growing realization that collective and inclusive efforts are required for effective mitigation and adaptation strategies. In this context, trade unions emerge as pivotal actors with the potential to drive positive change. Beyond their traditional role in advocating for workers' rights, trade unions can leverage their influence to shape sustainable policies, foster just transitions, and contribute to the broader discourse on environmental stewardship.

1.1 Purpose of the Manual

The purpose of this manual is to empower trade union leaders and members in East Africa with the knowledge and tools necessary to actively contribute to climate change mitigation and adaptation. Beyond mitigation efforts, the manual emphasizes the importance of a just transition a comprehensive and equitable approach to shift towards a more sustainable and low-carbon economy. Through this training, trade unions can position themselves as key advocates for environmental stewardship while ensuring the well-being and rights of workers are upheld.

Urgency of Action: *The urgency to address climate change cannot be overstated. The decisions and actions taken in the coming years will shape the trajectory of environmental sustainability for generations to come. By equipping trade unions in East Africa with the knowledge and tools to engage with climate change and just transition principles, this training manual seeks to catalyze a proactive response to the challenges at hand. The goal is not only to safeguard the interests of workers but also to contribute to a resilient, sustainable, and equitable future for East Africa.*

1.2 Target Audience

This manual is tailored for trade union leaders, members, and other stakeholders involved in labor and environmental issues within East Africa. By engaging this specific audience, the manual aims to create a cohort of informed and empowered individuals who can drive positive change within their organizations and communities.

Structure of the Training Manual
The climate change training manual is structured into seven modules designed to address specific gaps and realize specific outcomes as shown in table 1.

Table 1: Outline of the training manual

As shown in table 1, the first four modules cover climate change basics, the link between climate change adaptation and mitigation polices to employment and the concept of Just Transition.

	Module Title	Training Gap being Addressed	Expected Learning Outcome
1	Climate Change Basics	Inadequate knowledge on climate change and its impacts on employment	Appreciation of climate change dynamics and sectoral impacts
2	Climate Change Policy in East Africa	Inadequate knowledge on climate change governance, institutions and policies	Improved knowledge on climate change governance, institutions and related polices in East Africa
3	Link between Climate Change and Employment	Inadequate knowledge of the link between Climate Change and Employment	Improved knowledge on climate change dynamics and related mitigation & adaptation issues and their consequences for employment.
4	Negotiating for a Just Transition	Inadequate knowledge on the role of just transition and decent work in national climate strategies.	Improved knowledge on effectively engaging with social partners on the implementation of climate change mitigation and adaptation polices and responses.
5	Promoting Green Jobs and Reskilling	Limited understanding of green jobs and jobs that will require reskilling of workers.	Increased awareness of strategies for effective engagement in collective bargaining on green jobs and reskilling of workers.
6	Trade Union Action on Climate Change	Lack of climate change expertise and exclusion from national climate change governance institutions	Increased awareness of national climate change governance institutions and opportunities f or engagement with social partners.
7	Climate Action – Cross Cutting Issues	Inadequate knowledge of the differential impacts of climate change on female and young workers including informal economy workers	Improved knowledge on the differential impacts of climate change on female and young workers including informal economy workers

The next two modules focus on the green economy and green jobs and reskilling of workers and strategies for trade union action on climate change. The last module highlights the cross-cutting issues of gender, young workers and informal economy workers that trade unions need to address as part of climate change action.

Each module will comprise of Learning Objectives/Section outcomes; an introduction to the section content; Core content; Suggested Activities/Quizzes and Reading Materials

Training Design and Delivery system

The delivery system proposed for this training consists of three stages:

1. Training of EATUC affiliates Leadership

   Training will focus on strengthening EATUC and EATUC affiliate's Leadership capacities to contribute towards climate change policy making and initiatives for green and decent jobs at national and sectoral tripartite and bipartite discussions, collective bargaining and decision-making processes.

2. Training of Trade Union Green Representatives

   A team of core trainers will be constituted to train trade union green representatives in a training of trainer's course. The course will be done using this EATUC Climate Change training manual. The training course will be attended by selected green representatives from each EATUC affiliate. The green representatives will be the facilitators after completing the training course and the same will be done at country level of our affiliates.

3. Training of Trade Union Members

   Each of the trained green representatives will be tasked to train shop stewards, industrial relation officers, trade union leadership within our affiliates structures and members in their respective unions to acquire knowledge and skills in climate change mitigation and adaptation and just transition.

MODULE 1:
CLIMATE CHANGE AND JUST TRANSITION BASICS

Learning Objectives

This module provides basic information on climate change adaptation and mitigation. The module provides the background information for the subsequent modules and focuses on building a level of understanding on the core concepts of climate change. The science behind climate change is briefly covered including some core terminologies used at the international level. While much of the scientific information presented in this section is informative for the trade unions, it is not expected that participants will delve deeply into climate science. It is more critical that they agree or express some perceptions of the major climatic trends in East Africa and how adaptation and mitigation policies impact employment in key sectors of the East African economy.

The module addresses key concepts of climate change and mitigation then introduces key developments in climate policy and negotiations. It lays the foundation for a mutual unde standing of climate change issues and of the policy environment concerning climate change at the Regional level. The capacity to understand climate change issues and the specific language of climate policy, as well as knowledge of developments on the international climate stage are prerequisites for a meaningful participation in policy discussions. Trade unions need to understand the fundamentals of climate change and climate policy to join policy makers from environment ministry and the national climate change council at the decision-making table when designing more equitable measures.

This module defines the Just Transition principle according to the ILO and outlines the role of trade unions in ensuring a just transition for workers impacted by the implementation of climate change mitigation and adaptation policies. Just transition is a concept dealing with the transformation of industries and economic sectors into more sustainable models while focusing on workers' livelihoods and rights. Just transition measures refer to policy interventions that aim to shift the economic structure to a low-carbon, socially and environmentally friendly one.

Unit 1: Climate Change Basics

"Climate" refers to the average weather conditions experienced over a long period of time and includes temperature, wind and rainfall patterns. Throughout the world's history, the Earth's climate has been known to change many times in response to a variety of natural causes. The term "climate change" usually refers to changes that have been observed since the early 1900s. These changes in global climate are likely to be due to a combination of bothnatural and human causes. Natural causes are as a result of interactions between the ocean and the atmosphere, changes in the Earth's orbit, fluctuations in energy received from the sun, and volcanic eruptions. While human causes are as a result of emissions of greenhouse gases *(GHG)* such as carbon dioxide *(CO2)* and methane *(CH4)* into the atmosphere.

Emissions of greenhouse gases leads to global warming. The Earth needs to retain some of its natural heat by trapping energy from the Sun – the process known as the “greenhouse effect”. However, the concentration of greenhouse gases in the atmosphere has increased, particularly through burning fossil fuels, raising the average surface temperature of the Earth and the oceans to a detrimental degree. The evidence shows that this increase in greenhouse gases is almost entirely due to human activity. The global increases in carbon dioxide concentration are due primarily to fossil fuel use and land use change, while those of methane and nitrous oxide are primarily due to agriculture”. *(IPCC, 2013)*

The climate change that is of interest in this trade union training manual is attributed directly or indirectly to human activity as opposed to natural climate variability observed by scientists over comparable time periods. While the earth’s climate has always experienced a natural variation of colder and warmer periods, there is overwhelming scientific consensus that the current increase in the earth’s average temperature is caused by human activity

Evidence of Climate Change.

Climate change is a serious threat to the well-being of everyone and its main cause is human activity. Scientists of the Intergovernmental Panel on Climate Change (IPCC) have warned that the world needs to act urgently to keep global average warming to less than 1.5 C above pre-industrial levels and avoid environmental catastrophe.

According to the IPCC, "Since systematic scientific assessments began in the 1970s, the influence of human activity on the warming of the climate system has evolved from theory to established fact." Scientific information taken from natural sources (such as ice cores, rocks, and tree rings) and from modern equipment (like satellites and instruments) all show the signs of a changing climate. From global temperature rise to melting ice sheets, the evidence of a warming planet abounds. Table 2 that follows highlights the evidence of climate change.

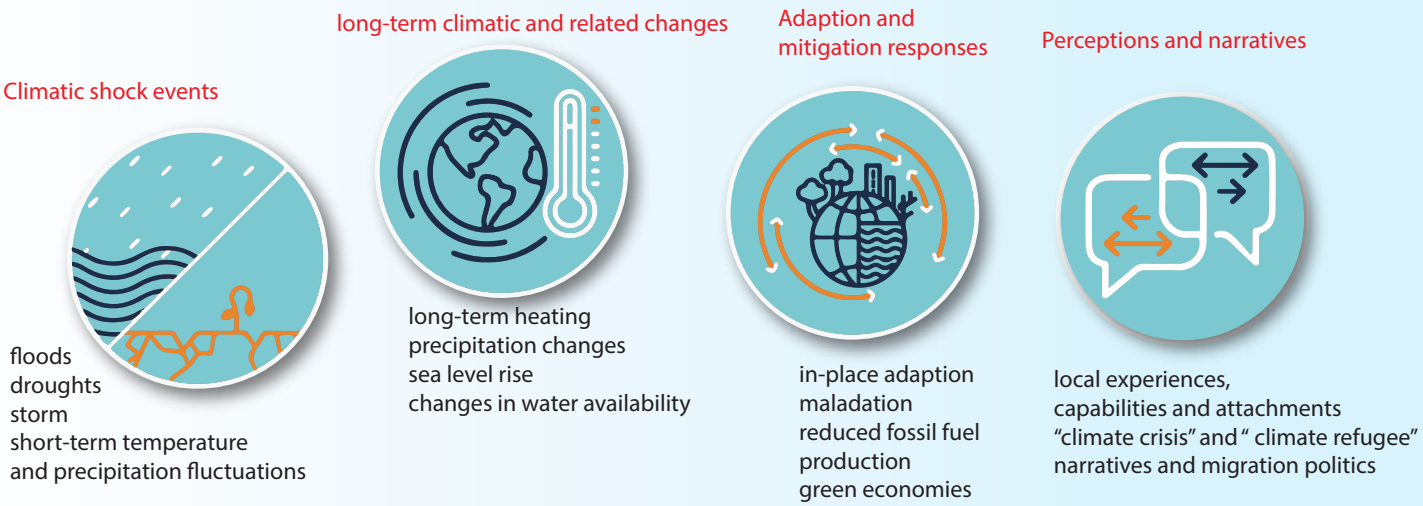


Table 2: Evidence of Climate Change

Increased evaporation and decreased water balance. • Increased severity of droughts • Reduced snow caps and melting. • Reduced ranges and alteration of ecosystems and species diversities. • Increased stress and pressure exerted to natural resources	***Higher maximum temperatures, increased more hot days and more heat waves*** •Increased incidence of crop and livestock loss. • Increased heat stress in livestock and wildlife. • Increased risk of damage to crops. • Increased wild fire danger (frequency and intensity).
Higher minimum temperatures •Decreased risk of damage to crops. Livestock and increased risk prevalence. • Extended range and activity of some pest and disease vectors. • Reduced heating energy demand.	***Decrease in precipitation Decreased average runoff, stream flow.*** • *Decreased water quality.* • *Decreased water resources.* • *Decrease in hydro-power potential.* • *Impacts on rivers and wetland ecosystems*
Increased severity of drought Decreased crop yields and rangel and productivity. • Increased damage to foundations caused by ground shrinkage. • Increased forest fire danger	***More intense rain Increased flood, landslide and mudslide damage.*** • Increased flood runoff. • Increased soil erosion. • Increased pressure on disaster relief systems • Increased risk to human lives and health

Unit 2: Impact of Climate Change

Climate change is a global phenomenon with widespread impacts that are both profound and far-reaching, altering ecosystems, economies, and societies across the world. Its effects are felt in the melting of ice caps, the rising of sea levels, the shifting of weather patterns, and the increasing frequency and severity of natural disasters such as hurricanes, floods, and droughts. These changes pose significant risks to biodiversity, threaten food and water security, exacerbate health problems, and increase economic vulnerabilities, particularly for those living in the world's most susceptible regions.

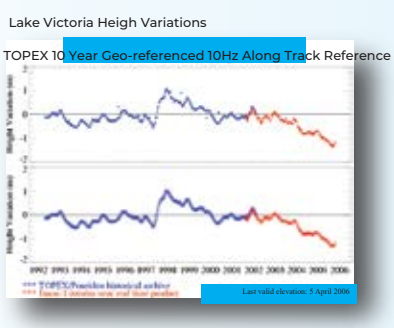
The root cause of climate change is the significant increase in greenhouse gases in the Earth's atmosphere, primarily due to fossil fuel combustion, deforestation, and various industrial processes. This accumulation traps heat, leading to global warming. The implications of a warmer planet are vast and varied. For instance, polar and glacier ice melt contributes to higher sea levels, threatening coastal communities with erosion, increased flooding, and the loss of habitat. Warmer temperatures also disrupt weather patterns, leading to extreme weather events. Agriculture, a critical source of livelihood for billions, faces unpredictable seasons, crop failures, and pest invasions, directly impacting food security worldwide. (IPCCC 2022)

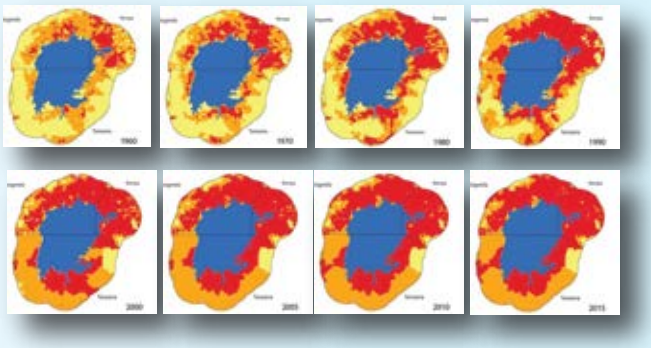
Furthermore, climate change is a catalyst for biodiversity loss. As habitats shift, shrink, or disappear, numerous plant and animal species are at risk of extinction. The alteration of natural ecosystems also affects human populations, leading to displacement, conflict over dwindling resources, and increased exposure to health risks. Diseases like malaria and dengue fever are expected to spread as the mosquitoes that carry them move into new areas, bolstered by rising temperatures.

As we focus on the East Africa region, the impacts of climate change become even more pronounced, given the area's high vulnerability due to its geographical position and socioec nomic factors. East Africa is experiencing a wide array of climate-induced challenges. The region is witnessing more intense and prolonged droughts, significantly affecting water availability and agriculture. These droughts lead to food shortages, loss of livelihoods, and increased competition for scarce resources, exacerbating existing social and economic tensions. (world bank report).

Conversely, East Africa is also prone to extreme rainfall events that cause devastating floods. These floods lead to immediate loss of life and property and have long-term implications for public health, as standing water facilitates the breeding of disease vectors such as mosquitoes. Infrastructure, too, is severely impacted, with roads, bridges, and homes often destroyed, further hindering economic development and disaster response efforts.

A specific example of climate change's impact in East Africa is the variability of Lake Victoria's water levels. This lake, which is vital for the economies of Kenya, Tanzania, and Uganda, has seen significant fluctuations due to changing rainfall patterns. High water levels have caused flooding of nearby communities and farmlands, while low levels affect the lake's hydroelectric power generation capacity, which is crucial for the region.





Another poignant case is the coral bleaching events in the Indian Ocean, affecting the marine ecosystems off the coast of East Africa. These coral systems are not only biodiversity hotspots but also support the livelihoods of millions through fishing and tourism. Warmer sea temperatures have led to mass bleaching events, severely degrading coral health and the marine life dependent on these ecosytems.

In conclusion, climate change in East Africa is one of significant challenge and urgency. The region, already grappling with socio-economic issues, faces amplified threats from the changing climate. Addressing these requires a concerted effort from local, regional, and global actors to implement adaptive strategies, promote sustainable development, and mitigate further environmental degradation. The resilience of East Africa's people and ecosystems depends on our collective response to these unprecedented environmental changes.

Unit 3: Climate change impacts in East Africa by Economic Sector

Agricture

Climate change is significantly impacting agriculture in East Africa, a region heavily dependent on rain-fed farming systems. The effects of climate change, including rising temperatures, shifting precipitation patterns, and increasing extreme weather events, are posing substantial challenges to food security and agricultural productivity across the region.

East Africa's agriculture is particularly vulnerable due to its reliance on rainfall. This vulnerability is exacerbated by climate-related phenomena such as droughts, floods, and the emergence of pests and diseases. For instance, recent years have seen the spread of fall armyworms, an invasive pest that has threatened maize yields, a staple crop in the region. This outbreak has been linked by some scientists to climate change, highlighting the interconnectedness of climate variability and agricultural health.

Moreover, the increasing frequency of extreme weather events, like severe droughts and storms, directly affects crop yields and food availability. In Tanzania, for example, farmers have experienced reduced harvests due to delayed rains and unexpected weather patterns, making their livelihoods increasingly precarious. The unpredictability of weather patterns has become a new norm, forcing farmers to adapt to more variable growing seasons.

The International Food Policy Research Institute's comprehensive analysis on East African agriculture underlines the need for adaptation strategies to mitigate the adverse effects of climate change. These include improving agricultural practices and leveraging technology to enhance food security. Without attention to adaptation, the poor, who are already most vulnerable, will suffer the most from the impacts of climate change.

Addressing these challenges requires concerted efforts from governments, regional agencies, and the private sector to support smallholder farmers through access to climate-resilient agricultural inputs, training, and financial services. Interventions such as crop insurance and the distribution of climate-resilient seeds can help mitigate some of the adverse effects of climate variability. Additionally, promoting sustainable farming methods and increasing investment in agricultural research are crucial for enhancing the resilience of the agricultural sector in East Africa.

In summary, climate change poses significant threats to agriculture in East Africa, affecting the region's food security and economic stability. Adapting to these changes through comprehensive strategies and support for smallholder farmers is essential for ensuring sustainable agricultural development and resilience in the face of a changing climate

o *Water and Sanitation*

Climate change is deeply impacting the water and sanitation sector in East Africa, presenting significant challenges and opportunities for adaptation and investment. The region, already grappling with issues of water scarcity and inadequate sanitation, faces intensified threats due to erratic rainfall patterns, increased frequency of extreme weather events like droughts and floods, and rising temperatures. These changes compromise the availability and quality of water sources, affect the infrastructure for water and sanitation, and ultimately threaten public health and economic stability.

Investments in water, sanitation, and hygiene ***(WASH)*** services are crucial for making these systems more resilient to climate change. Strategies include improving water management and infrastructure to ensure sustainable, safe, and equitable access to water. For instance, ***UNICEF*** emphasizes the importance of making WASH services adaptive, safe, and resilient to climate change impacts. They suggest utilizing renewable energy sources such as solar and wind power to reduce greenhouse gas emissions and using smart design to keep water sources operational during extreme weather events.

The World Resources Institute (WRI) points out that investing in the water sector can yield substantial economic benefits, highlighting the urgency for Africa to act on climate change to unlock these opportunities. They recommend delivering universal, climate-resilient drinking water and sanitation, managing drought risk for farmers by investing in climate-resilient water systems, and investing in both green and gray infrastructure. Such measures not only help in adapting to climate change but also in reducing vulnerability and enhancing economic growth.

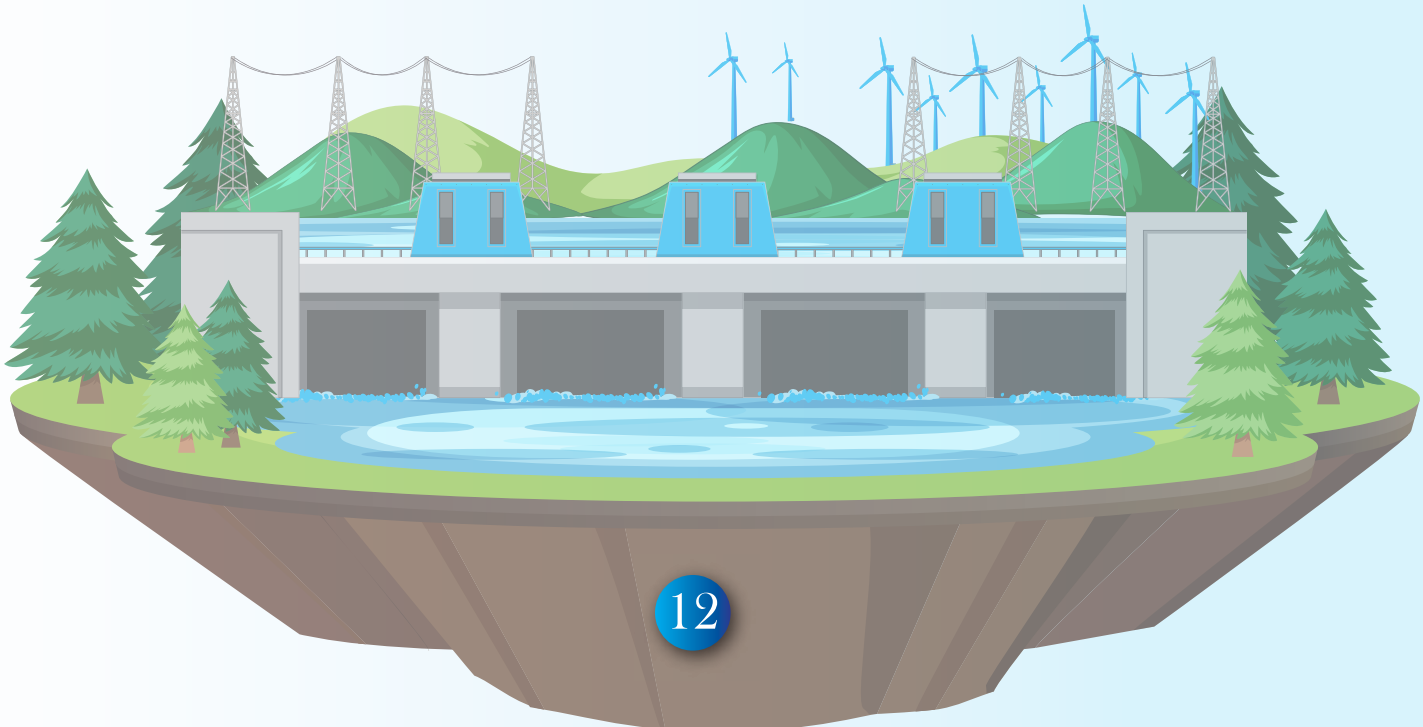
In East Africa, the impacts of climate change on water resources have affected nearly all sectors including, among others, agriculture through unpredictable rainfall patterns, human health through water-borne diseases during flooding, as well as trade through destruction of road and telecommunication infrastructure. Although water is not mentioned in the Paris Agreement, it is a vital component in addressing nearly all climate change adaptation and mitigation strategies.

The impacts of climate change on water and sanitation in East Africa necessitate immediate and strategic actions. By investing in resilient infrastructure and sustainable management practices, the region can mitigate these challenges, protect its populations, and harness the economic benefits of climate action.

o *Energy*

The energy sector in East Africa is undergoing significant transformations, driven by both challenges and opportunities. The region's energy landscape is characterized by a heavy reliance on renewable sources, particularly hydropower, which constitutes the majority of its renewable energy generation. Additionally, the declining costs of solar panels and batteries have spurred growth in the solar energy sector, presenting a promising avenue for diversifying the region's energy mix and enhancing energy security.

Hydropower remains the dominant renewable energy source in East Africa, contributing to around 78% of the total renewable energy generated in the region as of 2021. This dominance is expected to persist, supported by the geographical advantages of countries within the region, such as the presence of the Nile River, mountains, and Great Lakes, which are conducive to hydropower generation. Notably, Kenya is positioned to lead market growth due to several upcoming projects and favourable government policies aimed at increasing renewable energy capacity.



Despite its potential, the energy sector in East Africa faces several challenges. These include water stress, reduced food production, increased frequency of extreme weather events, and lower economic growth—issues that are exacerbated by the adverse effects of climate change. Africa, including East Africa, is experiencing more severe climate change impacts than most other parts of the world, despite contributing minimally to global CO2 emissions. This has led to a disproportionate experience of negative effects such as mass migration and regional instability.

To address these challenges and harness the opportunities within the energy sector, there is a push towards achieving universal access to modern energy services by 2030. This ambition aligns with the Sustainable Africa Scenario (SAS), which envisions a future where Africa leverages the global shift towards clean energy to achieve its energy-related development goals. Achieving these goals requires substantial investments and a concerted effort from African countries to adopt clear strategies and policies, supported by increased levels of international support.

In conclusion, the energy sector in East Africa is at a critical juncture, with the potential to significantly enhance energy access and security through renewable sources. The move towards a more sustainable and resilient energy system is crucial not only for the region's economic development but also for mitigating the impacts of climate change.

o *Tourism*

Climate change significantly impacts tourism in Africa, affecting countries that heavily rely on this sector, such as Zanzibar, Tanzania Mainland and Kenya. Challenges include heat related illnesses and disease outbreaks, which can deter tourism, leading to economic implications for these nations. Investments in climate-resilient infrastructure and policies are necessary to mitigate these effects and sustain tourism as a crucial economic sector in Africa.

o *Health*

Climate change is increasingly recognized as a critical determinant of health outcomes in East Africa, affecting a wide range of health issues including waterborne diseases, vector-borne diseases, malnutrition, and mental health. The World Health Organization (WHO) reports that over half of the public health events in the African region between 2001 and 2021 were climate-related, with a notable increase in climate-linked emergencies in the last decade. These emergencies encompass a broad spectrum of health risks, from increased incidences of diseases like yellow fever and Congo-Crimean hemorrhagic fever to natural disasters such as floods, which were the most frequent event, accounting for 33% of all reported natural disasters in the region.

Climate change directly impacts the spread and intensity of infectious diseases in Africa. The region's vulnerability is exacerbated by its dependence on agriculture and natural resources, which are significantly affected by climatic changes. Moreover, the lack of robust health infrastructure in many African countries makes it challenging to cope with the additional burden placed by climate change on health systems. For instance, the WHO emphasizes that between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year from under nutrition, malaria, diarrhea, and heat stress alone, with direct damage costs to health estimated to be between US$ 2–4 billion per year by 2030.

The WHO highlights that no one is immune to the health risks posed by climate change, but, the most vulnerable and disadvantaged populations, including women, children, ethnic minorities, and those living in poverty, are the hardest hit. These groups often live in areas highly susceptible to climate change and have the least capacity to respond to health emergencies and natural disasters. Addressing the health impacts of climate change in East Africa and other vulnerable regions requires a multifaceted approach that includes improving health systems' resilience, enhancing disease surveillance and response, investing in water and sanitation infrastructure, and adopting comprehensive climate adaptation and mitigation strategies.

The situation calls for urgent action from governments, international organizations, Trade Unions and the private sector to implement effective climate action plans that prioritize health and support the most vulnerable workers and communities in building resilience against the adverse effects of climate change

o Forestry

Climate change is profoundly affecting forestry in East Africa, a region that holds significant portions of the continent's forests. These forests are crucial not just for their biodiversity but also for their role in carbon sequestration, which is vital in the fight against global warming. However, the rate of forest loss in Africa is the fastest globally, driven by factors such as deforestation for agricultural expansion, charcoal production, and logging. This rapid deforestation exacerbates climate change impacts and undermines the forests' ability to support local economies, maintain biodiversity,and provide ecosystem services.

The Africa Forest Carbon Catalyst (AFCC) initiative by The Nature Conservancy is an innovative approach to counter these threats by leveraging the concept of accelerators or incubators to fast-track forest conservation and reforestation projects. By providing technical and financial assistance, the AFCC aims to scale up successful forest protection models, making them aviable defense against climate change. This initiative highlights the potential to not only conserve and restore forests but also to improve livelihoods and create jobs, thus underscoring the economic importance of forests in the region. The AFCC projects could collectively avoid or reduce 20 million tons of CO2 emissions annually and restore or conserve 10 million hectares of African forest by 2025, significantly contributing to climate change mitigation efforts.

The broader impacts of climate change on Africa's economies, including the forestry sector, cannot be overstated. The continent, despite contributing minimally to global greenhouse gas emissions, faces disproportionate effects of climate change. These effects include increased temperatures and erratic rainfall patterns, leading to reduced agricultural production and increased food insecurity. In the context of forestry, such climatic changes threaten the health and productivity of forests, affecting their growth rates, regeneration capabilities, and vulnerability to pests and diseases. Therefore, addressing climate change and its impacts on forestry is not only a matter of environmental concern but also a crucial economic issue for East Africa.

Efforts like the AFCC are critical in mobilizing resources and expertise to safeguard East Africa's forests against the adverse effects of climate change. Such initiatives also underline the importance of international cooperation and investment in climate resilience and sustainable development strategies to protect and leverage forestry as a vital economic sector in the region.

o Manufacturing

The manufacturing sector in East Africa, like many others, faces significant challenges due to climate change. Increased costs and disruptions associated with climate impacts are expected, affecting economic growth, food security, health, and human capital across the region. Agriculture, a key livelihood source, urgently requires adaptation and resilience efforts.

However, there's also an opportunity for East African countries to leverage their potential for renewable energy, fostering economic transformation towards low-carbon, climate-resilient development. This shift could simultaneously address the energy deficit, reduce food insecurity, and alleviate poverty, though it faces obstacles like higher capital expenditures for clean energy systems compared to fossil fuels

Unit 4: Defining Adaptation and Mitigation

Adaptation refers to an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploit beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation (IPCC, 2013)

Adaptation is distinguished from mitigation, which involves measures to cut emissions of climate altering “greenhouse gases” in order to slow or halt climate change itself. In some cases, however, mitigating specific impacts of change can be part of an overall adaptation strategy.

The purpose of adaptation is to develop a resilient community. Adaptation requires proactive steps to prepare for the impacts of projected climate change. It results from deliberate decisions by government ministries and community stakeholders to address climate change and its impacts.

Examples of mitigation activities include:

Reforestation: This is the process of replanting trees on marginal crops and pasturelands to absorb carbon from atmospheric CO2 into biomass. It is essential that carbon must not return to the atmosphere from burning or breakdown of dead trees. To this end, the trees must grow in perpetuity or the wood from them must be sequestered (e.g., into biochar, bioenergy with carbon storage, or landfill).

improved agricultural practices:
Soil can act as an effective carbon sink. Examples of improved agriculture include practicing zero till farming, increasing crop yields, reducing overuse of fertilizers, reducing soil disturbances, improving irrigation, and breeding crop strains based on locally beneficial traits. Emissions can also be reduced by restoring degraded land which slows carbon release while returning land to agriculture or other natural uses.

Energy-efficient technology: Investing in renewable energy sources to produce electricity (such as solar, wind, or hydro) and supporting the use of efficient low-carbon technology in the industrial (more efficient cement production), commercial (more efficient heating processes), transport (more efficient cars and public transport systems), and residential (more efficient household appliances) sectors can reduce or prevent emissions in the frame of economic development.

A low carbon future is also often referred to as a decarbonized future. It refers to minimizing emissions through basing the economy on low-carbon power sources. Pathways toward deep de-carbonization include: limiting or eliminating the use of fossil fuels (e.g. through switching fuel sources from coal to renewables); waste reduction (decreased consumption, reducing the emissions of waste products), preserving valuable carbon sinks often found in forests and agricultural land; and conservation, or energy efficiencies (demand-side management that reduces consumption, or that uses energy efficient technologies and materials).

Unit 5: Just Transition – Understanding the Concept

Workers and communities will be affected not only by the direct impacts of climate change but also through mitigation and adaptation measures. For many economic sectors, the transition to a green economy means opportunity. For other sectors, the transition is potentially disruptive. Appropriate and relevant policies are necessary in both instances to ensure that the benefits of the transition to a low-carbon and climate-resilient economy accrue to all, and that any negative impacts on sectors, communities and workers are effectively managed.

The "Just Transition" is a framework that was developed by the trade union movement to encompass a range of social interventions needed to secure workers' jobs and livelihoods when economies are shifting to sustainable production, including avoiding climate change and protecting biodiversity, among other challenges. The concept has been broadened and formalized in the International Labour Organization (ILO) and captured in the "Guidelines for a Just Transition" document.

The Just Transition framework refers to a set of principles, processes and practices aimed at ensuring that no people, workers, places, sectors, countries or regions are left behind in the move from a high-carbon to a low-carbon economy. It includes respect and dignity for vulnerable groups; creation of decent jobs; social protection; employment rights; fairness in energy access and use and social dialogue and democratic consultation with relevant stakeholders.

The concept has evolved, becoming prominent in the United States of America in 1980, related to environmental regulations that resulted in job losses from highly polluting industries. Traced from a purely labour movement, trade union space, the Just Transition framework emphasizes that decent work and environmental protection are not incompatible. During COP 24, with the Just Transition Silesia Declaration, the concept gained in recognition and was signed by 56 heads of states (IPCC, 2022).

For IPCC, a Just Transition entails targeted and proactive measures from governments, agencies, and other non-state authorities to ensure that any negative social, environmental, or economic impacts of economy-wide transitions are minimized, whilst benefits are maximized for those disproportionally affected. These proactive measures include eradication of poverty, regulating prosperity and creating jobs in 'green' sectors. In addition, governments, polluting industries, corporations, and those more able to pay higher associated taxes, can pay for transition costs by providing a welfare safety net and adequate compensation to people, communities, and regions that have been impacted by pollution, or are marginalized, or are negatively impacted by a transition from a high- to low-carbon economy and society. (IPCC, 2022)

IPCC's 11 elements of a just transition

The IPCC defined 11 elements of a just transition in its latest Global Assessment Report:

1. Investments in establishing low-emission and labour-intensive technologies and sectors;
2. Research and early assessment of the social and employment impacts of climate policies;
3. Social dialogue and democratic consultation of social partners and stakeholders;
4. Creation of decent jobs; active labour markets policies; and rights at work;
5. Fairness in energy access and use;
6. Economic diversification based on low carbon investments;
7. Realistic training/retraining programs that lead to decent work;
8. Gender-specific politics that promote equitable outcomes;
9. Fostering of international cooperation and coordinated multilateral actions;
10. Redressing of past harms and perceived injustices; and
11. Consideration of inter-generational justice concerns, such as the impacts of policy decisions on future generations.

According to UNDP there are five ways in which a just transition can help achieve the Paris Agreement:

1. Brings the public along

Applying just transition principles through collective and participatory decision-making processes is critical to securing broad public support and enabling greater climate ambition. According to the results of UNDP's People's Climate Vote, investing in green business and jobs is one of the most supported climate policies globally – highlighting the demand for a multidimensional approach that not only cuts GHG emissions, but also raises Gross Domestic Product (GDP), creates jobs, and ensures a just and equitable future for all.

2. Supports a green jobs revolution

Investing in a circular economy and applying just transition approaches will help ensure jobs are decent with guaranteed living wages, proper workplace safety protections, and health benefits – and that they contribute to poverty eradication and social inclusion.

3. Lays the groundwork for a resilient net-zero economy

Just transition is a necessary condition to attain the political economy of a net-zero future. Without strategies to manage the process and impact of change, socio-political backlash could slow the pace of de-carbonization. Conversely, transparent planning processes with the active participation of a broad range of stakeholders can help minimize fear, opposition, and inter-community and generational conflict. Integrating just transition into implementation of the Paris Agreement also helps highlight the human and social capital required to achieve net zero.

4. Drives contextualized local solutions

There is a need to develop a local vision for just transition. Poorly defined or ill-contextualized transition concepts may lead to false solutions. Definitions that are too broad or general may render the concept un-actionable. To unlock the benefits of a just transition, countries must understand the socio-economic impacts through assessments and broad-based stakeholder consultations.

5. Reinforces the urgency for concerted efforts

To avoid climate catastrophe, the world must pivot at an unprecedented scale to a cleaner, greener, more resilient future. To ensure this transition happens swiftly, but also reduces inequality, poverty, and social exclusion, leaders need to stay focused on whole-of-economy NDCs that incorporate whole-of-society approaches.

Activity/Quizzes

1. Outline measures that your employer has taken to reduce greenhouse gas emissions in the workplace to promote low-carbon and energy saving actions. Examples include:

    - *Undertaking an energy audit of the manufacturing facilities and processes, and implementing energy efficient actions.*
    - *Installing energy-efficient lighting by replacing incandescent lamps with compact fluorescent lamps or light emitting diodes (LEDs).*
    - *Using renewable energy sources to power facilities.*
    - *Regular maintenance of equipment regularly to prevent efficiency losses and reduceheat losses or gains.*

2. *Review your employer's waste generation and management to reduce environmental pollution.*

3. *Review existing adaptation and mitigation policies in your specific sectors and identify workers / employment issues*

Module Reading Materials

What climate change means for Agriculture in Africa (one-acre fund, 2023) https://oneacrefund.org/articles/what-climate-change-means-agriculture-africa

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The Climate and Development Knowledge Network, Climate Change and the Energy and Manufacturing Sector. KEPSA Climate Change and Your Business Briefing Note Series. April 2014. Available from https://cdkn.org/sites/default/files/files/Climate-Change-and-the-Energy-Sector.pdf

MODULE 2:

CLIMATE CHANGE POLICY IN EAST AFRICA

Learning Objectives

This module outlines the international and Regional structures and policies governing climate change adaptation and mitigation. Subsequently, the module discusses how trade unions can use existing decision-making structures to get their voices heard on issues relating to climate change. The fundamental assumption lies in realizing that effective responses to climate change cannot be achieved without active involvement of the affected workers and their unions. This module provides participants with knowledge of the nature of governance structures in East Africa and how these could be utilized to address climate change.

The module will enable participants to gain knowledge and skills on how to make effective use of channels of communication between government, employers and trade unions. The module highlights climate change policy in East Africa and its impact on trade unions in specific sectors of the East Africa. At the end of this module, trade union officials should be able to understand the main environmental, social and economic problems and actions being taken, international climate change instruments and East Africa regional instrument.

Unit 1: East African Community Situation Review

The East African Community (EAC) has been proactive in addressing the impacts of climate change through a variety of programs and policies aimed at adaptation and mitigation. These efforts are particularly vital as the region faces significant challenges, including food insecurity, energy insecurity, land degradation, loss of biodiversity, and more, due to extreme weather phenomena like droughts and floods. The EAC's strategies include the Programme on Climate Change Adaptation and Mitigation in Eastern and Southern Africa, a five-year initiative that started in 2010, focusing on climate-resilient and carbon-efficient agriculture. It also encompasses the Planning for Resilience in East Africa through Policy, Adaptation, Research, and Economic Development (PREPARED) project, aiming at enhancing the region's resilience and sustainability. Additionally, the EAC has embarked on Climate Change Adaptation and Mitigation Actions, supported by the Intra-ACP GCCA+, to increase resilience to climate change impacts and support the implementation of the Paris Agreement.

East Africa has been grappling with record droughts, making it crucial to implement these adaptation strategies. The region, including Somalia, Djibouti, Ethiopia, and Kenya, has experienced some of the driest conditions and hottest temperatures on record, leading to acute food and water shortages for millions. These conditions are attributed to climate change, with Africa, contributing only a small fraction to global emissions, bearing a significant portion of the adverse effects.

Recent studies have highlighted severity of climate impacts in East Africa, noting that climate change has intensified both droughts and heavy rainfall in the region. The heavy rains and flash floods have led to significant loss of life, displacement of communities, and widespread damage to infrastructure and agriculture. This situation underscores the urgent need for effective climate change adaptation and mitigation strategies.

These combined efforts at the EAC level represent a comprehensive approach to tackle the multifaceted challenges posed by climate change. They emphasize the importance of regional cooperation and the integration of climate change adaptation and mitigation into broader development agendas to ensure the sustainability and resilience of East African communities against the backdrop of a changing global climate.

Unit 2: The Paris Agreement and Sustainable Development Goals

The Paris Agreement on Climate Change entered into force on November 4, 2016. It was preceded by the UN Sustainable Development Summit in New York in September 2015, which set 17 sustainable development goals (SDGs) with 169 targets to be achieved by national governments by 2030. Goal 8 relates to Decent Work & Economic Growth and calls for governments to "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all". Goal 13 relates to climate change and calls for governments to "take urgent action on climate change and its impacts." Further Goals 5 calls for the reduction of gender inequality and empowerment of women and girls while Goal 10 call for the reducing of inequalities within and among countries and promoting economic inclusion.

Unit 3: EAC Climate Change Policy

The EAC Climate Change Policy Framework is designed to guide the regional response to climate change impacts. It emphasizes the need for a coordinated approach in adapting to and mitigating climate change effects while exploiting the opportunities it presents for sustainable development. The policy framework focuses on key sectors affected by climate change, including agriculture, water resources, energy, and health, proposing comprehensive strategies for resilience building, emissions reduction, and adaptation.

This policy aims to guide the EAC partner states in integrating climate change adaptation and mitigation measures into national and regional development plans, programs, and strategies. It focuses on building resilience and reducing vulnerability to the impacts of climate change across various sectors.

EAC Climate Change Strategy

Aligned with the policy framework, the EAC Climate Change Strategy outlines specific actions, projects, and programs to be undertaken by member states to address climate change. It includes mechanisms for climate finance, technology transfer, and capacity building to ensure effective implementation. The strategy also prioritizes cross-border environmental conservation efforts and promotes the integration of climate change adaptation into national development planning processes.

Complementing the EAC Climate Change Policy, the strategy outlines specific actions, measures, and interventions to be undertaken by the EAC and its partner states to address climate change challenges. It includes measures for adaptation, mitigation, technology transfer, finance, and capacity building.

The priority areas identified for intervention are:

(1) Disaster risk (floods and drought) management;

(2) Food and nutrition security;

(3) Water and the Blue Economy;

(4) Forestry, wildlife and tourism;

(5) Health, sanitation and human settlements;

(6) Manufacturing; and

(7) Energy and transport.

The main objectives of the Plan for each area are to:

i. Reduce risks that result from climate-related disasters, such as droughts and floods, to communities and infrastructure;

ii. Increase food and nutrition security through enhanced productivity and resilience of the agricultural systems, in as low-carbon a manner as possible;

iii. Enhance the resilience of the water sector by ensuring access to, and efficient use of water for agriculture, manufacturing, domestic, wildlife, and other uses;

iv. Increase forest cover of total land area, increase the resilience of the wildlife and tourism sectors, and rehabilitate degraded lands, including range lands;

v. Reduce incidences of malaria and other diseases that are projected to increase because of climate change, encourage climate-resilient solid waste management, and promote climate resilient buildings and settlements; improve energy and resource efficiency in the manufacturing sector; and

vi. Develop a climate-proof energy and transport infrastructure, promote renewable energy development, increase the uptake of clean cooking solutions, and develop sustainable transport systems.

To help eliminate hunger and food insecurity, the Plan focuses on:

i. Implementation of Climate Smart Agriculture to improve crop productivity together with an improved irrigation system, productivity in the livestock sector, and productivity in the fisheries; and

ii. Food and nutritional supplements, such as school feeding programs.

In order to make agriculture and forestry more productive and sustainable, main actions aim to:

i. Increase annual per capita water availability through the development of water infrastructure and harvesting of flood water;

ii. Promote farm forestry;

iii. Increase the use of drought tolerant crops and crop diversification;

iv. Promote such non-rainfed agricultural practices as greenhouse farming;

v. Promote water efficiency (monitor, reduce, re-use, recycle and modeling);

vi. Introduce drought-resistant breeds and adopt new animal husbandry techniques;

vii. Develop fish farming;

viii. Protect fish breeding sites; afforest and reforest degraded and deforested areas;

ix. Reduce deforestation and forest degradation; and

x. Promote sustainable timber production on privately-owned land.

Rural poverty will be mainly faced by promoting energy efficiency and encouraging transition to clean cooking to reduce demand for fuel-wood in rural areas through the use of alternative fuels and up-taking of clean biomass (charcoal and wood) cook-stoves, briquettes, and other clean cooking alternatives.

To enable more inclusive and efficient agricultural and food systems, the plan envisages:

i. Capacity development of Water Resources Users Associations (WRUA) with female and male membership; and
ii. Increased gender responsive affordable water harvesting-based livelihood resilience programs.

To achieve resilience of livelihoods to disasters the government plans to:

i. Improve ability to cope with droughts and floods through early warning systems, and water harvesting and storage;
ii. Increase expertise to customize and manage satellite-generated vegetation condition index used for drought early warning and response;
iii. Implement integrated flood management plans, for example, water storage, drainage networks, reforestation and rehabilitation of riparian areas, construction of dams, and land use restrictions;
iv. Diversify livelihoods to adjust to a changing climate;
v. Improve resilience of coastal communities;
vi. Promote climate proof landfill sites;
vii. Increase generation capacity for captive renewable energy and climate proofed energy infrastructure;
viii. Develop an affordable, safe and efficient public transport;
ix. Encourage low-carbon technologies in the aviation and maritime sectors; and
x. Develop a climate proof transportation infrastructure. (NCCAP, 2018)

EAC Disaster Risk Reduction and Management Strategy

Although broader in scope, this strategy addresses climate change-induced disasters by promoting measures to reduce the risk and impact of such events. It focuses on enhancing preparedness, response, recovery, and resilience at both the national and regional levels.

Development and enactment of the EAC Climate Change Bill

The bill aims to provide a legal framework for implementing the region's climate change policy and strategy. It emphasizes the need for coordinated action among partner states, the mobilization of resources, and the establishment of mechanisms for climate change governance.

Climate Finance for mitigation and adaptation

Climate finance is a crucial element for both mitigation and adaptation strategies in East Africa, aiming to address the impacts of climate change and support the transition towards a low-carbon, climate-resilient development pathway. The continent requires significant financial investments to implement its Nationally Determined Contributions (NDCs) under the Paris Agreement, with an estimated need of USD 2.8 trillion between 2020-2030. However, current annual climate finance flows in Africa stand at only USD 30 billion, highlighting a substantial financing gap that must be addressed to achieve the 2030 climate goals.

The distribution of climate finance in Africa tends to favor mitigation efforts over adaptation, with mitigation accounting for 49% of climate finance flows, followed by 39% towards adaptation. This balance is more favorable compared to global trends where adaptation finance is significantly lower. Despite this, funding for both areas needs to increase substantially to meet the demands posed by climate change.

One of the major challenges in bridging the climate finance gap is the limited contribution from the private sector, which accounts for only 14% of total climate finance in Africa. This is considerably lower than in other regions, indicating a need for enhanced mechanisms and policies to mobilize private sector investment, especially in developing countries. Regulatory frameworks, investment barriers, and financial instruments such as the Green Climate Fund are pivotal areas of focus to leverage private investment towards climate resilience.

To increase adaptation financing, it is essential to view investments not as sunk costs but as opportunities for economic benefit and community resilience. Mainstreaming adaptation in economic sectors and selecting investments that enhance resilience can yield high economic benefit-to-cost ratios. Moreover, focusing on sectors like Agriculture, Forestry, and Other Land Use is critical due to their significance for food security, biodiversity, and water security in Africa.

Efforts to mobilize more effective climate finance in East Africa should consider adapting strategies to current and future realities, funding hard-to-abate sectors and less mature markets, and catalyzing private finance, including domestic capital. Tailoring solutions to local factors like the depth of capital markets and implementation capacity will be key to accelerating investment into Africa's diverse opportunities for sustainable development.

For more detailed insights, the reports from the Climate Policy Initiative, Brookings Institution, and ISS Africa provide a comprehensive overview of the landscape of climate finance in Africa, highlighting the need for increased funding, opportunities for investment, and strategies for mobilizing private sector finance for mitigation and adaptation.

Unit 4: Climate Change Governance in East Africa

Climate change governance in East Africa represents a complex and collaborative effort aimed at addressing and mitigating the impacts of climate change across various countries within the region. This governance structure involves a wide array of stakeholders, including national governments, regional entities like the East African Community (EAC), civil society organizations, and the private sector, all working towards common goals of sustainable development, environmental conservation, and climate resilience.

At the heart of regional efforts is the EAC's Climate Change Policy, which provides a comprehensive strategy for adaptation, mitigation, and sustainability practices among member states. This policy is supported by initiatives such as those by the Lake Victoria Basin Commission, which focuses on sustainable management practices for Lake Victoria's ecosystem, severely affected by climate change.

Nationally, each member state within the EAC has developed its own set of policies and legislation reflecting their commitment to combating climate change. These range from Kenya's Climate Change Act, which establishes a legal framework for climate action, to Rwanda's Green Growth and Climate Resilience Strategy, aiming for sustainable economic growth alongside climate resilience. Uganda and Tanzania also contribute with their respective national climate policies and action plans, focusing on integrating climate change into broader development and conservation efforts.

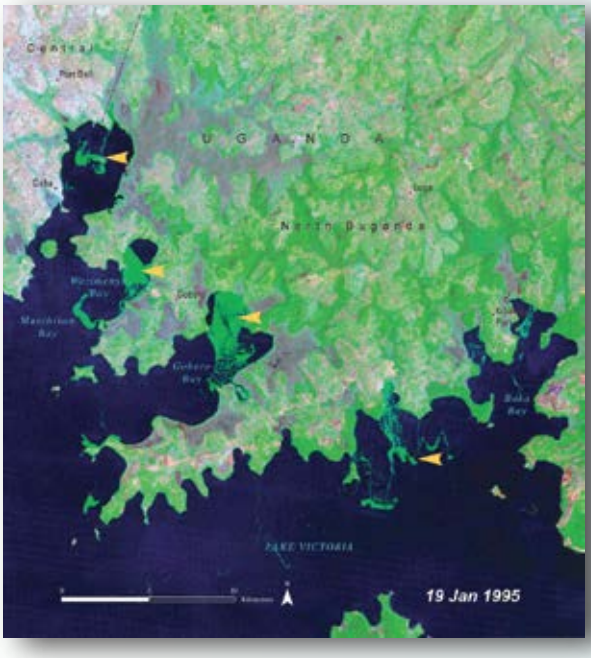
However, the path forward is not without its challenges. Limited financial resources, technical capacities, and the need for more robust regional coordination remain significant hurdles. Yet, there are substantial opportunities for growth and development through initiatives focused on climate-smart agriculture, renewable energy, and ecosystem restoration.

International partnerships play a crucial role in supporting East Africa's climate governance, offering much-needed support in technology transfer, capacity building, and financing. At the grassroots level, non-governmental and community-based organizations are pivotal in driving local action, raising awareness, and implementing sustainable practices.

As East Africa continues to navigate the complexities of climate change governance, the emphasis on policy coherence, data management, and inclusive stakeholder participation will be crucial. Mobilizing finance for climate resilience and low-carbon development will be key to ensuring a sustainable and prosperous future for the region. This integrated approach highlights the region's proactive stance on climate change, underscoring the importance of collaboration, commitment, and community engagement in overcoming one of the most pressing global challenges.

Regional Cooperation and Policy Frameworks

- **East African Community (EAC) Climate Change Policy:** The EAC has developed a comprehensive climate change policy that outlines regional strategies for adaptation and mitigation, promoting sustainable development and environmental conservation within member states.
- **Lake Victoria Basin Commission (LVBC):** This commission focuses on the sustainable management of Lake Victoria's basin, which is critically impacted by climate change. Initiatives include water resource management, biodiversity conservation, and community adaptation projects.



National Strategies and Legislation

Each EAC member state has its own national policies and strategies to combat climate change, reflecting their commitment to both regional and global agreements such as the Paris Agreement. Key areas of focus include renewable energy development, forest conservation, and agricultural adaptation to ensure food security.

Kenya: Kenya's Climate Change Act of 2016 provides a legal framework for climate action, including mechanisms for mitigation, adaptation, and support towards a low carbon development pathway.

Uganda: Uganda's National Climate Change Policy and the Climate Change Bill aim at mainstreaming climate change into national development processes and establishing a Climate Change Fund.

Rwanda: Rwanda's Green Growth and Climate Resilience Strategy outlines the country's approach to achieving sustainable economic growth while addressing climate change impacts.

Tanzania: Tanzania's National Climate Change Strategy and Action Plan guides the country's efforts in climate change adaptation and mitigation, emphasizing community-based approaches.

Challenges and Opportunities

The governance of climate change in East Africa faces several challenges, including limited financial resources, technical capacity, and the need for enhanced regional coordination. Despite these challenges, there are significant opportunities for sustainable development through climate-smart agriculture, renewable energy investments, and ecosystem restoration projects.

International and Local Collaboration

East African countries actively participate in international climate negotiations and seek support from global partners for technology transfer, capacity building, and climate finance. At the local level, non-governmental organizations and community-based initiatives play a crucial role in implementing climate action and raising public awareness.

Unit 5: Sectoral Climate Change initiatives

The East African Community (EAC) is proactive in developing sectoral policies and strategies to address climate change within its member states. These efforts are aimed at mitigating climate change impacts and promoting adaptation across various sectors including agriculture, water, energy, and forestry. Here's an overview of some of the key sectoral climate change relevant policies and strategies within the EAC:

Agriculture

Agriculture is a critical sector for the EAC, given its significance for food security and economic development. The EAC Climate Change Policy emphasizes sustainable agricultural practices and resilience against climate variability. Initiatives focus on improving agricultural productivity in the face of changing climatic conditions, promoting climate-smart agriculture, and enhancing early warning systems for food security.

Water

Water resources management is vital for the EAC region, which faces challenges of water scarcity exacerbated by climate change. Policies aim at improving water conservation, enhancing the efficiency of water use, and protecting water catchment areas. Strategies include integrated water resources management (IWRM) to ensure the sustainable use of water resources and resilience of water infrastructure.

Energy

The EAC promotes the development of renewable energy sources as part of its climate change mitigation strategy. This includes harnessing solar, wind, geothermal, and hydropower to reduce dependency on fossil fuels and decrease greenhouse gas emissions. Policies support investments in renewable energy projects, energy efficiency, and the development of regional power pools to enhance energy security.

Forestry

Forestry policies within the EAC focus on conservation and sustainable management of forest resources. Efforts include reforestation and afforestation projects, promoting sustainable land management practices, and combating deforestation. These strategies are crucial for carbon sequestration, preserving biodiversity, and protecting watersheds.

Cross-sectoral Initiatives

In addition to sector-specific policies, the EAC has developed cross-sectoral initiatives such as the development of green cities to promote urban resilience, investments in climate-resilient infrastructure, and the implementation of disaster risk reduction strategies. These initiatives are supported by regional collaboration and knowledge sharing on best practices for climate change adaptation and mitigation.

Unit 6: Sectoral Climate Change Policy Measures and Trade Union Action

Trade unions are instrumental in:

1. Educating and Mobilizing Workers: They inform members about climate change impacts on jobs and mobilize them towards sustainable practices.
2. Advocacy for Just Transition: Unions advocate for policies ensuring that transitions to greener economies are fair, providing new job opportunities and retraining for workers displaced by environmental policies.
3. Participation in Policy Development: They are involved in the development and implementation of climate policies at both national and international levels to ensure workers' interests are represented.

Strategies for Trade Union Engagement

1. Promotion of Economic Diversification: Trade unions advocate for diversifying economies in areas most affected by the transition to a low-carbon economy, ensuring workers have access to new jobs in emerging sectors.
2. Negotiating Transition Agreements: They negotiate agreements at sectoral and company levels to address future skills needs and the creation of sectoral skills councils.
3. Establishing Social Dialogue: Trade unions engage in dialogue with all relevant stakeholders, including regional authorities, to manage the social impacts of climate policies effectively.
4. Strengthening Social Protection Systems: They promote the establishment of adequate social protection systems to support workers through the transition.
5. Worker Participation: Ensuring that the transition to a greener economy includes active participation from workers and trade unions, facilitating a more democratic and inclusive process.

Activity/Quizzes

1. What kind of emissions is your industry/sector responsible for?
2. Does your sector contribute to air pollution and water pollution?
3. Which climate change related policies in your sector do you see as having an impact on your members?
4. Does your employer run recycling programmes?
5. Is your employer implementing energy efficiency alternatives?
6. Does your employer openly support green initiatives and have workers been included in these initiatives?

Module Reading Materials

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Kenya's Climate Smart Agriculture Strategy-2017-2026 Available at https://www.adaptation-undp.org/sites/default/files/resources/East Africa_climate_smart_agriculture_strategy.pdf

Kenya's Updated Nationally Determined Contributions (NDC) Government of East Africa, 2020 Available at https://unfccc.int/sites/default/files/NDC/2022-06/East Africa%27s%20First%20%20NDC%20%28updated%20version%29.pdf

Climate Policy Initiative: Landscape of Climate Finance in Africa

Brookings Institution: Climate adaptation finance in Africa

ISS Africa: Climate finance: Mobilising private sector finance for mitigation and adaptation

EAC Climate Change Policy Framework: Provides an overview of the regional approach to climate change, emphasizing sustainable agricultural practices, resilience, and adaptation. EAC Website

National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs): Each EAC member state has submitted NAPs and NDCs to the UNFCCC, detailing specific commitments to agriculture and other sectors. UNFCCC Website

MODULE 3:

THE LINK BETWEEN CLIMATE CHANGE AND EMPLOYMENT

Learning Objectives

This module aims at providing information on existing and potential medium/long term effects of climate change on employment in specific sectors as outlined in the East African NDC. It will help participants in analyzing the effects of climate change mitigation and adaptation strategies on employment. At the end of the module, participants will be familiar with the potential impacts of climate change on employment in key economic sectors and the need to integrate employment issues in designing climate change mitigation and adaptation strategies.

Unit 1: Employment by Sector in East Africa

East Africa is the region with the highest economic growth in Africa, increasing by 5.7% in 2018. However, in addition to the opportunities this presents, East Africa is also facing social, economic and environmental challenges, such as high population growth, climatic changes that impede food security, and large income disparities. International crises and the resulting insecurity in supply and value chains, as well as the impact of the Covid-19 pandemic, add to these difficulties.

Small and medium-sized enterprises (SMEs) form the backbone of the East African economy. SMEs account for 90% of traders, contribute to over 60% of employment and generate 29% of the region's GDP. However, entrepreneurial success is often hampered by multiple challenges, such as a lack of skilled labour, low innovation, insufficient competitiveness, non-tariff barriers and poor knowledge of export and product standards.

The high rates of labour informality is of concern for East African trade unions. Informal workers do not have social protection, labour rights, or are not covered by domestic labour legislation. This group is mostly composed of young workers, mainly women and vulnerable groups. The COVID-19 pandemic has worsened the situation for informal workers with many losing their livelihoods. Informality turns just transition into an even greater challenge for developing countries like East Africa. This is particularly true in countries that are heavily dependent on their agricultural sectors and natural resources, such as East Africa, because informal and precarious workers are most likely to lose their jobs.

In East Africa, robust economic growth and SME dynamism face significant challenges, including climatic changes affecting food security, high population growth, and income disparities. These issues, compounded by international crises, Covid-19 impacts, and barriers to SME success such as skill shortages and low innovation, underscore the need for integrated strategies. Addressing these complexities requires enhancing resilience and adaptability in key employment sectors, ensuring sustainable development, and fostering inclusive growth amidst environmental and health challenges.

Unit 2: Climate Change and the Decent Work Agenda in East Africa

Decent Work Country Programmes (DWCPs) have been established as the main vehicle for delivery of ILO support to countries. DWCPs have two basic objectives. They promote decent work as a key component of national development strategies. At the same time they organize ILO knowledge, instruments, advocacy and cooperation at the service of tripartite constituents in a results-based framework to advance the Decent Work Agenda within the fields of comparative advantage of the Organization. Tripartism and social dialogue are central to the planning and implementation of a coherent and integrated ILO programme of assistance to constituents in member States (ILO, 2020)

The ILO Centenary Declaration for the Future of Work adopted in June 2019 reaffirms the centrality of climate change in the pursuit of the mandate of the ILO to advance social justice. The Declaration recognizes climate and environmental changes as key drivers of the transformation of the world of work. It highlights a just transition towards a sustainable future of work in its economic, social and environmental dimensions.

The Guidelines for a just transition towards environmentally sustainable economies and societies for all formulated through a tripartite consensus among representatives of governments, employers' and workers' organizations provide a policy framework and a practical tool to guide the transformation to low-carbon and climate-resilient economies taking into account the social and employment-related dimensions. An important aspect of the ILO's work is to support ILO constituents with developing a full understanding of the nature and scale of changes that could take place in labour markets as a consequence of climate and environmental change, and the policy responses that countries take.

East Africa Decent Work Country Program

The East African Community (EAC) and the International Labor Organization (ILO) have signed a memorandum of understanding (MoU) to improve the work environment in East Africa. The ILO's Decent Work Country Programs (DWCPs) are the main way it supports member countries. DWCPs are medium-term planning frameworks that guide the ILO's work in a country based on priorities agreed upon with employers, trade unions, and governments, such as The DWCP (2021-2024) is based on the Kenya Vision 2030, Third Medium Plan (2018-2022), and the Big. Four Agenda.

The ILO's Decent Work Agenda has four elements: employment, rights, protection, and social dialogue.

The ILO supports its tripartite constituents, such as the Rwandan Government, employers' and workers' organizations, to improve working conditions. For example, Rwanda has a DWCP that focuses on extending social protection to informal workers, with financial support from Luxembourg and Belgium

Unit 3: Effects of Adaptation and Mitigation Measures on Employment

Understanding the impacts of climate change on labor markets and the resulting policy implications requires distinguishing the different mechanisms through which this process will take place. Climate change is expected to affect labour markets in several ways, each of which will have different implications on employers and workers. There are two major channels through which climate change may affect labor markets: first, impacts from regulations, affecting the supply (enterprises) and the demand (consumers) side, and second, direct impacts on natural and built environments.

The key distinction of the different impacts from climate change is the first element to take into account when analyzing the labor market implications of a transition to a low-carbon economy. There are some other transforming/mitigating mechanisms that can propose solutions to the challenges faced by labour markets, chiefly technological innovation.

As a direct consequence, climate change will affect labour markets through the increase in climate change-related natural phenomena resulting from global warming such as floods, heat waves, and falls in precipitation levels. These events will eventually lead to resource and species depletion; and to physical impacts on natural and built environments and human populations.

Such events will have a significant impact on labour market conditions of the affected regions. On the supply side, climate change related phenomena will affect workforce availability due to potential food shortages (especially in agricultural regions) and a decrease in the health conditions of the population (ILO, 2008). On the demand side, the viability of businesses and economic activities will be strongly undermined leading to decreases in the demand for labour. Several economic sectors have been identified as highly vulnerable to the direct effects of climate change due to their dependence on regular climate conditions. These include agriculture, tourism, insurance, forestry, fisheries, infrastructure and energy.

The United Nations Environmental Programme notes that employment will be affected in four ways as climate policies reorient the economy towards greater sustainability – through job creation, job substitution, job elimination and job transformation and redefinition.

Job creation: The expansion of low carbon intensive products, services and infrastructure will translate to higher labour demand across many sectors of the economy. Examples include jobs in: renewable energy; energy efficiency (e.g. manufacturing, transportation, building construction and operations); organic agriculture; adaptation projects intended to protect and restore ecosystems and biodiversity; and infrastructure projects (e.g. flood barriers) intended to adapt to climate change impacts and build resilience.

Renewable energy production is a key source of growth for new jobs. Such jobs can be temporary (e.g. in the construction of a new wind farm) or permanent (e.g. workers employed in operation and maintenance of the plant). Existing studies tend to combine temporary and permanent employment into one aggregate job creation number. In 2016, 8.1 million people were employed in the renewable energy sector worldwide (excluding hydropower). The sectors with the largest employment were solar PV, biofuels and wind (OECD, 2017).

Job substitution: Some existing jobs will be substituted as a result of shifts in the economy from less to more efficient, from high carbon to low carbon, and from more to less polluting technologies, processes and products. Examples include shifts from fossil fuels to renewables, from truck-based transportation to rail, from internal combustion engine manufacturing to electric vehicle production, and from landfilling to recycling and refurbishing.

Job elimination: Certain jobs may be eliminated – either phased out or massively reduced in numbers – without direct replacement. This may happen where polluting and energy and materials-intensive economic activities are reduced or phased out entirely. The continued large-scale mining and burning of coal, in particular, is incompatible with a stable climate.

Job transformation and redefinition: Many, and perhaps most, existing workers (such as plumbers, electricians, metal workers and construction workers) will simply have their jobs transformed and redefined as day-to-day workplace practices, skill sets, work methods and job profiles are greened.

Unit 4: A Just Transition for Workers.

The East African Nationally Determined Contribution (NDC) is the instrument which outlines how East Africa will develop adaptation and mitigation and consequently how that will impact employment and economic sectors. The concept of just transition means focusing on the social and employment dimension of climate action policies and in practical terms it has meant developing plans and considering the impacts on the labour market of policies that aim to remove emissions.

The international labour movement has provided the following definition of Just Transition: “A Just Transition secures the future and livelihoods of workers and their communities in the transition to a low-carbon economy. It is based on social dialogue between workers and their unions, employers, government and communities. A plan for Just Transition provides and guarantees better and decent jobs, social protection, more training opportunities and greater job security for all workers affected by global warming and climate change policies.” (ITUC, 2019)

The importance of decent work in achieving sustainable development is highlighted by Sustainable Development Goal (SDG) 8 to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. In addition, the recognition in the Paris Agreement of “the imperative of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities” urges countries to undertake climate change actions that equally advance job creation and social justice. Efforts to promote climate action and environmental sustainability (SDG 13) can contribute to achieving SDG 8.

Analyzing and Anticipating Impacts of climate change policies

Climate change policies can be divided into two broad categories: mitigation and adaptation. Mitigation policies aim to reduce greenhouse gas (GHG) emissions while adaptation policies seek to enable adaptation to the effects of climate change. Trade unions need to analyze and anticipate the impact of measures from both categories and their impact on the workforce. This requires an assessment of the proposed mitigation and adaptation measure as outlined in various sectoral policies and the East African Nationally Determined Contributions (NDC). There are two aspects to consider regarding the impacts that climate change policies have on employment: quantitative impacts, which in simple terms means number of jobs affected; and qualitative impacts, which looks into the quality of jobs created or transformed. A just transition for all towards an environmentally sustainable economy needs to be well managed and contribute to the goals of decent work for all, social inclusion and the eradication of poverty.

ILO Guidelines for a Just Transition

The International Labour Organization (ILO) Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All were adopted in November 2015. These guidelines offer the ILO and its constituents a framework and practical tool to ensure that national and global efforts to tackle climate change and other environmental challenges also advance employment creation goals, social justice and fair transitions for workers, enterprises and communities on an equal footing.

These guidelines can also help countries at all levels of development manage the transition to a low-carbon economy and help them achieve their Intended Nationally Determined Contributions and the 2030 Agenda goals. Designed to promote decent work on a large scale and ensure that social protection operates where needed, these guidelines also include mechanisms for social dialogue between governments and workers' and employers' organizations throughout policy-making processes.

The ILO Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All include:

1. Employment-centered macroeconomic and growth policies;
2. Environmental regulations in targeted industries and sectors;
3. Creating an enabling environment for sustainable and greener enterprises;
4. Social protection policies to enhance resilience and safeguard workers from the negative impacts of climate change, economic restructuring and resource constraints;
5. Labour market policies that actively pursue job creation, limit jobs loss and ensure that adjustments related to greening policies are well managed;
6. Occupational safety and health policies to protect workers from occupational hazards and risks;
7. Skills development to ensure adequate skills at all levels to promote the greening of the economy;
8. The establishment of mechanisms for social dialogue throughout policy-making processes at all levels; and
9. Policy coherence and institutional arrangements for the mainstreaming of sustainable development and ensuring stakeholder dialogue and coordination between policy fields.

From the perspective of decent work and just transition, the guidelines for a just transition towards environmentally sustainable economies and societies for all (ILO, 2015a) include the following principles:

a. Strong social consensus on the goal of and pathways to sustainability is fundamental. Social dialogue has to be an integral part of the institutional framework for policymaking and implementation at all levels. Adequate, informed and ongoing consultation should take place with all stakeholders;

b. Policies should respect, promote and realize fundamental principles and rights at work;

c. Policies and programmes need to take into account the strong gender dimension of many environmental challenges and opportunities. Specific gender policies should be considered in order to promote equitable outcomes;

d. Coherent policies across the economic, environmental, social, education and training and labour portfolios need to provide an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies. These policies also need to provide a just transition framework for all in order to promote the creation of more decent jobs, including, as appropriate: anticipating impacts on employment; adequate and sustainable social protection for job losses and displacement; skills development; and social dialogue, including the effective exercise of the right to organize and bargain collectively;

e. Policies and programmes need to be designed in line with the specific conditions of countries, including their stage of development, economic sectors, and types and sizes of enterprises.

Unit 5: Climate Change and the Informal Economy Workers

Informality is one of the defining features of urban areas globally. As cities have expanded, formal housing has been unable to keep up with rising shelter demands, the formal economy has not provided meaningful levels of employment for the growing number of city dwellers. Urban expansion on hazard-prone land with inadequate services and shelter has created high levels of risk for a growing number of people in informal settlements, particularly in the face of climate change.

The informal economy provides key functions in cities, but informal workers are vulnerable to several climate change impacts. Most workers in the urban centers in East Africa eke out a living in the informal economy, where work is uncertain and precarious, yet their work makes an important economic contribution. Climate change impacts such as heat stress, downpours, floods, and clean water scarcity — already impose a heavy toll on informal workers' livelihoods and health. These threats interact with other challenges such as use of unclean energy, hazardous living and working conditions, limited social protection, and gender-inequitable burdens. Expanded access to social protection (can strongly enhance these workers' climate resilience.

The informal economy is crucial for making cities function, and it provides the main means of income for a significant proportion of all workers globally. At the same time, informal workers are extremely vulnerable to the effects of climate change, with higher temperatures and more intense weather events causing direct physical harm and contributing to ill-health. The direct impacts of climate change are compounded by other factors, including low-quality living conditions and the absence of provision for Occupational Health and Safety (OHS).

Informal workers in East African cities have adopted a range of responses to reduce risk. However, key interventions such as expanding access to social protection (which has important potential to foster climate resilience) often fail to reach the most vulnerable urban informal workers.

Informal labourers comprise most of the workforce in low- and middle-income nations (LMICs), and they can potentially play a central role in fostering social development and climate resilience. 'Informal employment' encompasses all livelihoods lacking in legal or social protection, whether in informal enterprises, formal enterprises, or households (ILO, 2018). As many as 88% of livelihoods in sub-Saharan Africa and South Asia are informal (WIEGO, 2022).

Although informal workers can be highly vulnerable to climate-related risks, their work can substantially promote environmental sustainability and urban food security (as exemplified by waste-pickers, food vendors, and urban agriculture workers). Addressing the risks facing informal workers will be critical for meeting the Sustainable Development Goals (SDGs) including on climate change (SDG13), sustainable urbanization (SDG11), and decent work (SDG8).

Climate change, Informal workers, and Occupational Health

A wide range of climate change impacts are projected to affect cities in the coming decades, often with significant implications for health and informal livelihoods. In the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), scientists concluded that urban areas will be affected by more frequent occurrence of extreme climate events, such as heat waves, with more hot days and warm nights as well as sea level rise and increases in tropical cyclone storm surge and rainfall intensity that will increase the probability of coastal city flooding.

According to the IPCC, urbanization has exacerbated the effects of the Urban Heat Island and in some cases has also worsened the effects of air pollution. The health effects of climate change in urban areas are increasingly well understood, such as higher levels of mortality from heat waves, worsened respiratory illnesses through the combination of higher temperatures and air pollution, and the spread of infectious diseases associated with flooding. These impacts may disproportionately affect the health of low-income urban residents.

Many residents of low-income and informal settlements work in the informal economy, where the unregulated nature of their neighborhoods and work can combine to create several health risks. Informal settlements and informal employment are linked but not identical: many (but not all) residents of informal settlements work in the informal economy. Where they do overlap, precarious living conditions and precarious working conditions can compound the risks faced by individuals and households.

Informal workers face heightened environmental and health challenges, exacerbated by unplanned urbanization and climate change. Climate change makes garbage a bigger health problem. Most informal settlements lack regular waste collection. Informal settlements and slums offer poor living environments with few public services. Climate change and extreme weather events amplify these vulnerabilities (IPCC 2014), placing climate related challenges amongst the biggest risks to informal settlements and workers.

Excessive workplace heat may result in reduced productivity, decreased social and psychological well-being, as well as exhaustion, cardiovascular stress, kidney damage, or even death. Climate change will likely increase air pollution, ultraviolet radiation, vector-borne diseases, and other biological hazards that may substantially affect workers' health. Climate change is also expected to heighten occupational health concerns linked to floods and water scarcity, while curtailing access to critical infrastructure and healthcare.

Typically, informal workers have lower incomes and less training than formal workers, in addition to poorer access to protective equipment. Informal workplaces vary widely, but usually lack key services and infrastructure; many informal workers are regularly exposed to hazardous substances, are at elevated risk of injuries, and may be exploited by employers.

Women are more likely to work in poorly paid, more precarious informal sectors such as domestic or home-based work and there is a need to jointly analyze gender, race, migration status, and other overlapping sources of disadvantage. Strategies to support informal workers' well-being became more important during COVID-19 as the pandemic disproportionately affected precarious informal workers, who earn on a daily basis and typically cannot afford to stop working in the face of shocks (ILO, 2021; WIEGO, 2020). The number of days that informal workers were able to work, as well as the amount of income earned, markedly declined at the start of the COVID-19 pandemic.

Activities/Quizzes

Review the East African NDC and the proposed sectoral mitigation and adaptation actions and analyze possible impacts on workers in your sector.

Module Reading Materials

ITUC-TUDCN (2019) The contribution of social dialogue to the 2030 Agenda - Promoting a Just Transition towards sustainable economies and societies for all, Brussels. https://www.ituc-csi.org/socialdialogue-for-sdgs-promoting-just-transition

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International Organization of Employers (IOE).2022 Guidance Paper on employment, just transition and climate governance. Available from https://www.ioe-emp.org/index.php?eID=dumpFile&t=f&f=156527&token=4c1bb27519dc5ad48a493496cca87ef922f63baa

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Greibe Andersen, J., Kallestrup, P., Karekezi, C. et al. Climate change and health risks in Mukuru informal settlement in Nairobi, East Africa – knowledge, attitudes and practices among residents. BMC Public Health 23, 393 (2023). https://doi.org/10.1186/s12889-023-15281-y

WIEGO. 2022. COVID-19 and Informal Work in 11 Cities: Recovery Pathways Amidst Continued Crisis. WIEGO Working Paper No. 43. Manchester, UK: WIEGO. Available at: https://www.wiego.org/sites/default/files/publications/file/WIEGO_Working%20Paper%20No%2043.pdf

MODULE 4:

TRADE UNIONS AND JUST TRANSITION

Learning Objectives

Reducing CO2 emissions in line with the Paris Agreement requires ambitious policies with significant effects on labour markets in terms of employment. Just transition should deal with the outcomes and the management of this process for the communities affected and strive for optimal results in terms of social welfare and market performance; it should not impede the transformation of economic activity, put people's livelihoods at risk and hinder the sustainability of enterprises. In this sense, the transition will only deliver for people if companies and entrepreneurs have the conditions to create good jobs and the modalities of any mechanism must be carefully designed through consultation to optimize its impact.

Unit 1: Trade Unions and Just Transition

Trade unions have adopted a broader approach for the Just Transition to a low carbon, climate resilient economy and society that also includes defending and protecting the rights of workers and the most vulnerable, including women and informal sector workers.

Trade unions participating in the COP process have noted that those who are most vulnerable to climate change are the poor, particularly in Africa and other developing countries. In East Africa, we are challenged by inequality, poverty and unemployment. These national challenges have contributed to making especially the poor, highly vulnerable to climate change. Low adaptive capacities of those most vulnerable to climate change are characterized by inadequate access to three key resources: productive land-use, water and energy.

Just Transition includes both measures to reduce the impact of job and livelihood losses and industry phase out on workers and communities, and measures to produce new, low emissions and decent jobs and livelihoods as well as healthy communities. It also requires adequate, informed and ongoing consultation with stakeholders in addition to social dialogue (ILO, 2015)

Just Transition is based on social dialogue between workers and employers and as such, enables a pathway to social justice in a sustainable economy transition. It builds hope and trust in a future that prioritizes people and nature. Unions want to ensure that workers' lives, wages, security of employment, health, safety and social protection are guaranteed in economic transition processes. Strong national workers' organizations negotiate at eye level with governments and employers for better working conditions and environmental standards. The role of trade unions is to ensure that the trade-offs between labor, environmental and social issues are discussed and solid proposals are developed to manage change. Traditionally, an important union focus that is also applied to Just Transition is the principle of social dialogue (FES, 2021)

Unit 2: Negotiating for a Just Transition

A strong and meaningful social dialogue is a bipartite or tripartite process that includes all types of negotiation, consultation and any exchange of information between governments, trade unions and employers' organizations that relate to economic and social policy and are of common interest.

Unions collectively negotiate (through collective bargaining) the working conditions of their members (wage, benefits, pensions, social protection, working conditions, safety and so forth). Social dialogue may be informal or institutionalized and takes place on the different levels (company, sector, nationally, cross-border and internationally). It may involve the social partners in different economic sectors, within a single sector or in a single company or group of companies. It differs from other participation processes in that it is not open to all stakeholders and has specific forms.

At the heart of the ILO's notion of a just transition is the idea of decent work, which depends on respect for the organization's core conventions – no child labour, no forced labour, respect for the rights to organize and to establish collective bargaining. In other words, it is assumed that workers are able to speak up, individually and collectively, convey their views to their employer and receive a reasoned response. The same is true for the public policy architecture and for employers' sectoral or corporate strategies; in all cases it is envisaged that the trade unions have a seat at the table so that the voice of organised labour cannot be ignored (ILO, 2015).

Unit 3: Just Transition Elements

a. Macroeconomic and Growth Policies

National Governments need to ensure that macroeconomic and growth policies align with the Paris Agreement and ensure a just transition while promoting sustainable production and consumption patterns, and placing full and productive employment and decent work for all, particularly the most marginalized and vulnerable, at the centre of economic and social policies. With the right policy and institutional frameworks in place, economic growth can be a major driver for the creation of green jobs, which are by definition decent jobs (ILO, 2018).

Targeted fiscal policy measures, market-based instruments, public procurement, and investment policies can create frameworks for enterprises and investors to adopt or promote more innovative economic practices, which are grounded in the sustainable use of resources and lead to better access to economic opportunities and more inclusive labour markets.

East Africa's Vision 2030 identified climate change as a risk that could slow the country's development. Climate change actions have been incorporated into the Medium-Term Plans (MTP), starting from the second MTP (2013-2017). In the Third Medium-Term Plan (2018-2022), climate change was mainstreamed across sector plans. The East Africa Vision 2030, the long-term national development blueprint encapsulates flagship programmes and projects with aspects of adaptation and mitigation.

b. Industrial and Sectoral Policies

Sector-specific policies are needed to ensure relevant skills development for green and sustainable production and growth, social protection to support workers in transition, enterprise development support for growing green sectors, and respect for international labour standards. A sectoral approach to just transition can ensure that policies and practices respond to the needs of specific sectoral employers and workers (ILO, 2022)

The key stakeholders of a sectoral approach to a just transition include labour ministries and most representative employers' and workers' organizations. For East Africa the key stakeholders are Ministries responsible for labour, Employers Organizations, East African Trade Union Confederation(EATUC) and its Affiliates. According to the ILO Just Transition Guidelines, other sectoral stakeholders include relevant line ministries such as those dealing with energy, public services, extractives, tourism, transport, finance, education, health, water, agriculture, maritime affairs, to sector specific employers' and workers' organizations (ILO, 2022).

c. Enterprise Policies

Enterprises are the main source of economic growth and employment, and have a central role in guiding and sustaining the transition to a low-carbon and resource-efficient economy considering their contributions to innovation, adoption of new technologies, financing, and know-how to address environmental challenges (ILO, 2018).

Regulatory frameworks and institutions should be coupled with economic policies and incentives to support enterprises in adopting clean technologies, low-carbon production processes, and encourage investment in up-skilling and re-skilling of their workforce.

d. Skills Development

Just transition policies on skills development are essential to supporting workers and businesses in the transition to a green economy and should involve engagement from governments, workers', and employers' organizations in their formulation and implementation. Access to training can assist workers and enterprises in transitioning to new green jobs, or work with new materials, processes, and technologies that support greening existing jobs.

Enhanced policy coordination, social dialogue and partnership at planning, design and implementation stages and well-developed and sound national and sectoral policies that increase relevance of skills development to green jobs can help to propel a just transition. This will also require reviewing and (re)formulating skills development policies, including means for validation and recognition of skills and all forms of prior learning jointly by governments, social partners and training institutions at all levels (ILO, 2022).

Systems for identifying and anticipating skills needs for green jobs can benefit from improved labour market information and institutionalized social dialogue. This will lead to provide comprehensive data and information on supply and demand related to skills for green jobs and better match skills needs.

A good mix of foundational, technical (hard) and core (soft) skills, including science technology, engineering and mathematics (STEM) skills, is vital to an inclusive just transition to a greener future, allowing everyone reap the benefits of newly created jobs and enabling the transition and job creation. Mainstreaming the green transition through the technical and vocational education and training (TVET) and lifelong learning systems will increase the chance of advancing a just transition (ILO, 2022c)

The ILO's "Greening TVET and skills development: A practical guidance tool" is a useful guide for TVET stakeholders to mainstream skills for the green transition in TVET and skills development in a systemic and holistic manner. The tool provides guidance on designing competency-based education and training (CBET) standards and curricula for greener jobs, adapting training delivery and assessments to support greener learning, adapting practices to maintain a greener campus, capacitating teachers and trainers, and sensitizing enterprises (ILO, 2022c).

There is a need for a plan that ensures that young workers have the chance to acquire skills that will help them to obtain employment, to keep a job, and to manage employment transitions. EATUC has adopted a rights-based approach through social dialogue and collective bargaining and effectively advocating for quality training and lifelong learning opportunities and the right of every worker to participate in decent work.

Training and skills development as an adaptation measure

Skills development is key to resilience-building and adaptation processes that also ensure decent work. In particular, skills development:

- Helps displaced workers to move on to sectors where there is employment growth, thus protecting them against income losses and other adverse effects of climate change;
- Promotes innovation, investment and competitiveness, which in turn feed back into social development, thus creating a virtuous cycle of sustained and robust resilience; and
- Is required for the adequate implementation of adaptation strategies (e.g., the development of climate-smart infrastructure)

Anticipating and monitoring skills needs related to climate change adaptation are crucial first steps in skills development. National governments need to establish suitable platforms to anticipate skills needs and to provide training in general, but that not all of those platforms were used to discuss the skills implications of the green transition. The active participation of the social partners is useful in identifying skills gaps, implementing training provisions, emphasizing that a higher skill level translates into higher pay, and formally recognizing skills that are acquired on the job.

Skills identification exercises regularly indicate that skills in the STEM (science, technology, engineering and mathematics) fields are the ones most relevant to climate change adaptation (see table 3).

e. Occupational Safety and Health

Extreme heat and cold temperature waves have been linked to an augmented risk of occupational injuries and fluctuations in labour productivity. Several economic activities for environmental sustainability present health and safety risks related to minerals, chemicals, and pesticides, among others. Local air, water and soil pollution and other forms of environmental degradation negatively affect workers' health, income, food, and fuel security.

ILO standards, such as the Occupational Safety and Health Convention, 1981 (No. 155)192, provide a solid basis to develop just transition legal and policy measures. Such just transition measures ensure that new jobs in the green and blue economy are decent, safe, and healthy. Switching from fossil fuels to renewables, for instance, entails changes in the occupational safety and health risks. Occupational safety and health standards and training are an essential component of all skills training for women and men. Regulations and guidance should be provided by national government occupational safety and health authorities, in alignment with international labour standards, with practical prevention measures adopted at the sectoral and enterprise level based on risk assessment and the principles of elimination and control of hazards.

f. Social Protection

The IPCC noted that "integrating climate adaptation into social protection programmes, including cash transfers and public works programmes is highly feasible and increases resilience to climate change, especially when supported by basic services and infrastructure", having "strong co-benefits with development goals such as education, poverty alleviation, gender inclusion and food security".

Sound, comprehensive and sustainable social protection schemes are an integral part of the strategy for just transition towards sustainable development, built on principles of decent work, social justice, and social inclusion. Firstly, social protection can support adaptation efforts when it is used to protect populations who are at heightened risk of climate-related hardship. Secondly, it is a key tool to support individuals and households that are negatively affected by the unintended impacts of green policies.

Universal social protection facilitates the global shift towards a carbon-free world by ensuring the provision of essential guarantees against social risks affecting income and health in the context of climate change, thus favoring social acceptability of green policies.

Social protection policies should provide workers displaced by technological change or those affected by natural disasters with income support as well as access to health care and basic services (e.g. energy, transportation, and housing) during the transition, and thereby reduce inequality while supporting gender equity. Targeted assistance to groups, regions and occupations affected by the transition is essential. The Social Security (Minimum Standards) Convention, 1952 (No. 102) and the Social Protection Floors Recommendation, 2012 (No. 202) provide essential frameworks to develop such policies.

g. Active Labor Market Policies

The transition to a green economy poses challenges similar to those of earlier transitions caused by technological revolutions and globalization. Just transition-linked active labour market policies can help enterprises and workers, as well as unemployed persons, face these challenges. The anticipation of changing labour market demands towards a greener economy, through sound labour market information and data collection systems, as well as social dialogue, is essential to helping governments, employers, workers, and education and training systems identify the skills in demand and take appropriate measures to provide timely training. Employment services can help facilitate the match between labour demand and supply in the workforce transition to green occupations.

h. Rights

Along with human rights treaties, such as the as the Universal Declaration of Human Rights and the Convention on the Elimination of All Forms of Discrimination against Women, international labour standards offer robust tools within the Just Transition framework for addressing the challenges in the world of work connected with achieving a greener and more gender-equal economy. These standards provide clear rules for the just transition framework to ensure that a transition towards a greener and more gender-equal economy would go hand in hand with social justice, prosperity and peace for all.

International labour standards are legal instruments drawn up by the ILO's constituents (governments, employers and workers) setting out basic principles and rights at work. Standards are adopted by a two-thirds majority vote of ILO constituents and are therefore an expression of universally acknowledged principles. In most cases, international labour standards have universal value and apply to all workers and all enterprises. Due to the fact that many standards cover specific industries or groups of workers, they offer a social pillar for the green economy and are key in ensuring that emerging sectors offer decent working conditions.

i. Social Dialogue and Tripartism

One of the guiding principles of the ILO Guidelines is the need for strong social consensus on the goal and pathways to sustainability. Social dialogue has to be an integral part of the institutional framework for policymaking and implementation at all levels. Social dialogue is defined by the ILO to include all forms of "negotiation, consultation or simply exchange of information between, or among representatives of governments, employers and workers, on issues of common interest". It can exist both as a tripartite process with the government as an official party to the dialogue, or as bipartite relations only between trade unions and employers' organizations, with or without indirect government involvement. A social dialogue process may be "informal or institutionalized and is often a combination of the two. It can take place at the national, regional or at enterprise level. It can be sectoral, inter-professional or a combination of these".

The main purpose of social dialogue is "to promote consensus building and democratic involvement among the main stakeholders in the world of work". The ILO Guidelines include specific roles and responsibilities of governments, workers' and employers' organizations at different levels. They also call on consultation with other stakeholders where necessary,

including women's organizations. Social dialogue is "an indispensable building block of sustainable development and must be at the centre of policies for strong, sustainable and inclusive growth and development.

Strong tripartite actors with a sound grasp of climate-related issues and its consequences are essential for effective social dialogue on a Just Transition. Social dialogue facilitating a Just Transition goes beyond energy policy and should cover all relevant policy domains when setting the agenda (ILO, 2022).

Why a just transition is central to East Africa's future economic strategy

In 2015, the twenty-first Conference of the Parties (COP21) to the United Nations Framework Commission on Climate Change (UNFCCC), held in Paris, France, agreed to a set of principles to address the climate change crisis. Due to the successful interventions by trade unionists, the Paris Agreement demands a Just Transition. The basis of the Paris Agreement is that nations must develop their own commitments to greenhouse gas reductions, but then monitor their progress and produce verifiable reports. The UNFCCC will periodically take stock of the aggregate progress and, based on scientific advice, advise member states to raise the ambition level of their commitments.

The important phrase, which appears in the preamble of the Paris Agreement, is that the Nationally Determined Contributions must "take into account the imperative of the just transition of the workforce, and the creation of decent work and quality jobs. This was greatly reinforced at 2018's COP24, in Katowice, Poland where a declaration on Just Transition was adopted. Sustainability – especially the social dimension of it – is fundamentally a union struggle. Trade unions have the mandate and the capacity to speak on behalf of workers, workers' families, and the communities that depend on them (IndustriALL, 2018)

Including Just Transition Clauses in CBAs

According to the International Labour Organization (ILO) Convention No. 154 collective bargaining is a process referring to all the negotiations which take place between employers' organization on the one hand and workers' organizations on the other. The aim of the collective bargaining is to determine the working conditions and terms of employment as well as the relations between the employers and trade unions. The collective agreements are the main instruments where the result of the collective bargaining is reflected. Green collective bargaining is part of the response to climate change, since it links environmental solutions to social commitment so as to positively transform the economic efficiency of innovative organizations.

To support change at work place, trade unions can provide information to shop stewards and branch official on how environmental and climate change can be addressed at workplace level and collective bargaining. Trade unions in specific sectors impacted by climate change should actively integrate green provisions into their collective bargaining.

Social dialogue is the core instrument to deal with the 'justice' aspect of the transition that is needed. This calls for trade unions to prepare adequately for negotiations with employers and governments about climate policy measures. A Just Transition framework to facilitate these negotiations should be supported by the following pillars:

- Early assessment of the social and economic consequences of climate change and responses to it.
- Promotion of substantial public investment in low-carbon sectors and technologies.
- Implementation of active policies for the restructuring and diversification of the economy.

- Promotion of professional training and retraining for the development of skills.
- Strengthening of social protection systems and public investment in health, education, etc.
- Promotion of social dialogue, collective bargaining and social participation.

Social protection is critical when managing all transitions, whether related to climate change or not and employers must ensure that workers are paid a living wage and have access to social protection. A just transition ensures that jobs and sectors are resilient to climate change, along with a shift towards low emission production. Key components of a just transition such as social protection, economic diversification, and decent jobs will be more important than ever. Just transition could help ensure the involvement of workers and their representatives in social dialogue in order to define the need for investment, skills and reskilling, decent wages, and a social protection programme.

Unit 4: Just Transition Experiences and Lessons from other Countries

Trade unions in other countries that are grappling with the challenge of ensuring a just transition for workers impacted by climate change policies note that in order to effectively negotiate for a just transition trade unions need to listen to affected workers and engage them from a place of respect and empathy

To implement a Just Transition plan in their individual countries it is critical that trade unions stay together and have a clear plan of what to do to enable them to effectively deal with other actors. Based on experiences from trade unions working on Just Transition in other countries the following recommendations are offered:

- The Trade unions' role is to be a kind of moderator between the positions of employers and the NGOs. While climate change is a big challenge to deal with, on the other hand trade unions also have to deal with the concerns of the workers.
- Building the capacity of the unions' member leaders on climate change policy making and stakeholder engagement is a priority.
- Trade unions should empower the workers, delegates, and shop stewards to drive the debate about Just Transition. If workers have the capacity to drive that debate, it not only gives a voice to working people but also develops a leadership cadre of workers who can support their colleagues through the transition.
- Trade unions should have a clear position on how Just Transition should be implemented in their societies and for workers.
- It is also important for trade unions to understand where their strengths lie. In addition, trade unions need to understand where they have weaknesses and to identify opportunities for capacity building.

Trade unions have shown that Just Transition works. Where workers and communities are consulted in the implementation of Just Transition plans, climate action has gained popular support.

Below are some of the initiatives implemented in select countries. These examples outline the processes and achievements in different countries and presents practical advice for EAUTC and affiliate trade unions to learn from.

South Africa: A Supportive Policy Environment for Just Transition

South Africa's support of a just transition is not new. The concept was bought to the fore by the Congress of South African Trade Unions (COSATU) 2011 policy brief calling for the participation and leadership of organized labour in demanding a just transition and requesting government support for climate-related jobs and renewable energy. This policy brief was instrumental in kickstarting the discussion around a just transition in South Africa. More than a decade later, labour unions continue to advocate for a just transition, particularly in coal-intensive regions, ensuring the concept is part of national thinking while laying a foundation for the whole-of-society to engage.

Starting with South Africa's National Development Plan (2012), the concept of a just transition to a low-carbon economy is firmly rooted in South Africa's policy environment. Illustrating the influence of COSATU's 2011 policy brief, the National Development Plan dedicated a chapter to just transition titled, 'Ensuring Environmental Sustainability and an Equitable Transition to a Low-Carbon, Climate Resilient Economy and Society'. In addition to South Africa's first NDC (INDC) and enhanced NDC supporting just transition, the country's LTS sets net zero goals by 2050. A set of policies and incentives are in place to facilitate the shift away from coal power generation to renewable electricity. The recently approved Framework for the Just Transition Process in South Africa provides concrete guidance to support the transition.

In 2017, to elaborate on the just transition guiding framework set out in the National Development Plan, the National Planning Commission launched the 'Social Partner Dialogues on Pathways for a Just Transition'. These dialogues led to the establishment of the Presidential Climate Commission in 2018, mandated to oversee and coordinate socially-inclusive pathways to net zero. This Commission led the development of the Framework for a Just Transition in South Africa.

The impact of a low-carbon transition will have serious implications on national GDP, the livelihoods of those employed in the coal industry, and the local economies that have grown to support them. The substantive changes that the energy transition will bring, not only in the coal industry, require common agreement on the social compact needed to move towards a green, low-carbon economy.

With the newly approved Framework for the Just Transition Process in South Africa providing guidance on this social compact, it will be vital to bring civil society, academia, trade unions, and private sector stakeholders together to support this common vision. The conversation in South Africa surrounding a just transition is advanced thanks to a conducive policy environment and high stakeholder engagement. From 2017 to 2019, the National Planning Commission, with the support of UNDP and the Wits School of Governance, hosted multi-stakeholder roundtable dialogues with the goal of strengthening the social compact for just transition pathways to a low-carbon, climate-resilient economy and society.

Zimbabwe: Youth leadership for a just transition in Zimbabwe

In Zimbabwe, youth have been actively involved in the NDC enhancement process and are playing a leadership role in the push for a just transition. To facilitate youth involvement in the NDC enhancement process, the UNDP's Climate Promise supported gender-responsive consultations with more than 200 urban and rural youth representatives from youth, women, and persons with disabilities organizations from all ten provinces of Zimbabwe. The objectives of the consultations were to raise awareness and a sense of ownership among youth in relation to the NDC process, to discuss and make recommendations around youth priorities for climate action, and to strengthen cooperation between youth, youth-led organizations, and government.

A major outcome of the consultations was the development of a policy brief that outlined youth recommendations for each sector covered by the NDC. The policy brief attracted the attention of the Minister of Environment and prompted the creation of a Youth Desk within the Ministry. The Youth Desk is tasked with ensuring that youth concerns and needs are fully integrated into implementation of the NDC as well as other environmental issues under the Ministry's remit. By elevating youth voices, the policy brief successfully advocated for increased capacity within the Ministry to respond to youth needs and specific challenges.

Under the Climate Promise, a Green Jobs Assessment was conducted, with support from ILO, to identify climate policy scenarios that can contribute to green jobs creation for youth as per the National Development Strategy 1 (2021-2025). The waste sector was identified as a sector in which green jobs could be generated, specifically in waste transfer centers. In turn, UNDP is supporting the rollout of one waste transfer center in Bulawayo and will target youth for skills development and business sustainability training, better positioning them to apply for jobs at the center.

Ghana: Pilot application of the ILO's Just Transition Guidelines

Just transition is important in the Ghanaian context as it will ensure an inclusive transformation to a zero-carbon economy, addressing both the climate crisis and inequality. However, there is no explicit mention of just transition strategies in Ghana's current NDC. The key departments of the government dealing with climate change policies are agriculture, energy, forestry, waste and health.

In its NDC to the UNFCCC the Ghanaian government proposed 20 mitigation and 11 adaptation programmes to be implemented between 2020-2030. Recent research has revealed limited knowledge of and stakeholder engagement on just transition strategies. While the Ghana Trades Union Congress made some efforts for developing Just Transition strategies, the high share of the informal economy makes labor planning difficult, and just transition an even larger challenge.

The Environmental Protection Agency (EPA) notes that the Government of Ghana recognizes the threats that unemployment and under employment pose to national stability, economic growth and development, and has shown commitments to its obligation to promote decent work for all its citizens as is indicated in the development agenda and in the Medium-Term Development framework. However, the mitigation and adaption actions proposed in the NDC present a host of negative impacts, particularly on work.

Ghana was identified as one of three countries globally for a pilot application of the ILO's Just Transition Guidelines which started in 2018. A National Dialogue on 'decent work and just transition to an environmentally sustainable economy" was organized in 2018 by EPA and Ministry of Employment and Labour Relations (MELR) with the participation of Ghana Trade Union Congress, Ghana Employers Association, ISSER and other stakeholders and with financial support from ILO and EPA.

Two priority areas on Just transition for Ghana were identified and two areas of support proposed. First was an evaluation of the impacts of environment related policies, particularly the NDCs on jobs and the labour market with a view to inform the updating of the country's NDCs by 2020; and second support towards strategy development for green jobs promotion.

Kenya: Kipevu power plant shut down

Kenya's Kipevu 1 Diesel Plant was be decommissioned at the end of 2023 when its Power Purchase Agreement (PPA) expires. The plant was part of the government's plan to shut down two diesel plants in Mombasa to make way for cheaper geothermal power from Olkaria. The closure of Kipevu 1 will allow the country to use more renewable energy sources, such as hydro, geothermal, and wind.

Shutting down of the Kipevu 1 power plan translated to the layoff of workers form the station, who were members of the Kenya Electrical Trade Allied Workers Union who are an affiliate of the Central Organization of Trade Unions Kenya, negotiated with the employers in response to the shutdown of the Kipevu 1 power plant. This negotiation facilitated the redeployment of workers, who faced potential layoffs, to alternative power stations. Consequently, an agreement was secured, guaranteeing that no worker was left unemployed, epitomizing the essence of a just transition.

The Central Organization of Trade Unions (COTU) in Kenya actively combats climate change by educating its affiliates on the environmental impacts of their sectors, advocating for green jobs and sustainable development, and engaging in partnerships for climate resilience. Through workshops, advocacy for policy change, and community mobilization for environmental projects, COTU-Kenya integrates climate action with workers' rights. Their approach demonstrates a comprehensive commitment to ensuring both environmental sustainability and the welfare of workers, showcasing the vital role of unions in addressing climate challenges.

Nigeria: Partnership between labor organizations and social movements

The Nigerian Labor Congress is working to develop concepts and frameworks for Just Transition in the petroleum and agricultural sectors in Nigeria. One of their main objectives is also to strengthen the partnership between labor organizations and social movements. NLC and the social movement organization Environment Rights Action (ERA) are the two implementing partners in a new Just Transition project in Nigeria. The project is supported by the Just Transition Centre, the Dutch union FNV's solidarity fund, and Friends of the Earth Netherlands. The project gives NLC opportunity to understand the knowledge base of workers, the community, and policy makers on the issue of Just Transition.

Across Africa and especially in Nigeria, land-grabbing, destruction of livelihoods, and the introduction of GMOs by transnational corporations are displacing tens of thousands of small-scale farmers with implications for farm workers and impacted communities. In particular, deforestation, livelihood destruction, and impacts on communities from the extractive activities of transnational oil and gas corporations contribute to environmental degradation and human rights violations.

Hence, defending communities' rights and climate justice struggles have some resonance with labor struggles for rights of workers to a decent job and decent conditions of work. The collaboration between civil society and labor aims to ultimately lead to both a just outcome for workers and communities in the transition away from fossil fuels, and for the transition to happen more quickly. ERA has been involved with the local communities in the Niger Delta for a number of years, working on agricultural plantations and palm oil plantations while NLC work with their local union representatives on the ground to identify key issues affecting workers in the Niger Delta.

Working with Just Transition in a developing country differs from the process in industrialized countries. The concept and the goal that we want to achieve remains the same. But one thing that is essentially different is the pace at which the different countries move. In addition, the resources and capacity required for a successful transition are not the same. we're far apart in terms of the capacity and the resources that are available to get us towards a low carbon economy through Just Transition.

Both ERA and LLC appreciate that Nigerians are not yet fully aware of the various opportunities that are available even in the course of transition towards a low carbon economy noting that social dialogue is fundamental to Just Transition. While NLC reports that they have not reached the required level of social dialogue between the trade unions, the communities and the policy makers, they are however optimistic when discussing the opportunities for good and decent jobs in a greener future. As a first of its kind project, it is hoped the project will provide a concrete example to inspire, inform and mobilize other unions and environmental organizations in developing countries on undertaking a Just Transition process in similar circumstances. The Nigerian government has asked NLC to develop a national roadmap for Nigeria outlining action plans for domesticating the International Silesia Declaration on Just Transition to chart a new low carbon economy and build workers' perspective on the implementation of the Nigerian NDC and related domestic policy instruments.

India: Promotion of low-carbon technologies

The Indian government's pledge to be net zero by 2070 has elevated national discussion around net-zero pathways and a just transition. The government, led by the Ministry of Environment, Forest, and Climate Change, is in the process of developing a LTS which is expected to outline India's net zero target. In light of India's revised NDC, all states are currently revising their State Climate Action Plans. Both processes provide excellent entry points to further advocate for just transition principles and approaches.

UNDP's Climate Promise supports two areas of work that aim at increasing the evidence-base and policy prescriptions for a just transition through reskilling, the creation of green jobs, and working with the private sector.

The first area of work will support the promotion of low-carbon technologies, develop nationally accredited solar certification training programs, train youth and vulnerable groups in solar certification programs, and support decarbonization efforts of micro, small, and medium enterprises (MSME). UNDP is supporting the promotion of solar energy through the expansion of electric vehicle (EV) charging stations, installation of solar panels in government health centers, and through solar cold storage promotion in agriculture value chains, specifically targeting farmer groups at the farm gate.

Importantly, a component of these initiatives is to look at existing skills and skills gaps in relation to the deployment, operation, and maintenance of renewable energy infrastructure. For example, despite there being an active network of publicly accessible charging stations, there are only 970 public EV charging stations in India against the required number of 400,000 to meet commitments made for 2026.

Therefore, India requires widespread charging infrastructure to meet the growing adoption of EVs and, alongside this, the human capacity to install and maintain the stations. To address the skills deficit, UNDP is working with the government agency, National Skill Council for Green Jobs, to develop four qualification training programs in solar-powered cold storage and EV charging infrastructure that will result in certification. One thousand people will be certified and linked to actors in the cold storage and EV-charging value chains.

Activity/Quizzes

- Review of existing CBA for clauses that relate to occupational health and safety and social protection and these clauses can serve as an entry point for inclusion of Just Transition clauses.

In order to find solutions to the negative social consequences that climate change policies might have on people and their incomes, several questions need to be addressed and included in policy debates and decisions:

- What will happen to workers and workplaces in weather sensitive sectors in the different regions of the world?
- What alternative jobs are there for laid-off workers?
- What are the working conditions (wages, health and safety, working time, etc.) in the new jobs created? Will they offer “decent work”?
- What kind of unemployment benefits for workers laid off and workers in transition between jobs are in place?
- What kind of education and training initiatives are provided for workers who want to change?
- What will happen to workers who have to migrate because jobs or even land do not exist anymore?
- Who will finance the social costs of environmental change and how will it be done?

The challenges and answers to these questions are important to address as they might provide tools for a socially “just transition”. The term “just transition” used in relation to the process of economic restructuring towards a more environmental and social sustainable economy has been mainly used by environmental organizations and trade unions

Module Reading Materials

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MODULE 5:

PROMOTING GREEN JOBS

Learning Objectives

This module defines green jobs as both a mechanism to achieve sustainable development and an outcome of policies to pursue sustainability. It outlines how green jobs provide the double dividend of more employment and a better environment. It explains how green jobs are decent jobs in economic sectors and activities which help reduce negative environmental impacts by: reducing energy and greenhouse gas emissions by using renewable energy; minimizing energy, waste and pollution to protect and restore ecosystems; and supporting activities that assist resilience and adaptation to climate change.

Unit 1: Defining Green Jobs

Below is an overview of the most common definitions of green jobs:

Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency: International Labour Organisation (ILO)

Green jobs are positions in agriculture, manufacturing, construction, installation, and maintenance, as well as scientific and technical, administrative, and service-related activities, that contribute substantially to preserving or restoring environmental quality: United Nations Environment Programme (UNEP)

Activities which produce goods and services to measure, prevent, limit, minimize and correct environmental damage to water, air and soil, as well as problems related to waste, noise and ecosystems. This includes technologies, products and services that reduce environmental risk and minimize pollution and resources: Organisation for Economic Co-operation and Development (OECD)

A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP, 2011). The green economy encompasses multiple goals including economic, social, environmental and structural transformation. The latter goal is critical for developing economies where economic transformation is considered a key aspect of the development process and advocates for a sustainable structural transformation (SST) (UNCTAD, 2012).

Green jobs and just transition for climate action in East Africa

Green jobs are defined 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-carbonize the economy; and minimize or altogether avoid generation of all forms of waste and pollution *(UNEP, ILO, ITUC, IOE, 2008)*

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.

Role of trade unions in the sustainable and inclusive growth in workplaces

The greening of jobs and the promotion of green jobs, both in traditional and emerging sectors, will foster a competitive, low-carbon, environmentally sustainable economy and patterns of sustainable consumption and production, and contribute to the fight against climate change. Managed well, transitions to environmentally and socially sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication. Greening all enterprises and jobs by introducing more energy and resource efficient practices, avoiding pollution and managing natural resources sustainably leads to innovation, enhances resilience and generates savings which drive new investment and employment. (ILO, 2015)

In this regard, governments, in consultation with social partners, should:

(a) Support the transitioning to more environmentally sustainable economies by reviewing skills development policies to ensure they support responsive training, capacity building and curricula;

b) Coordinate skills development policies and technical and vocational education and training systems with environmental policies and the greening of the economy; and consider concluding bipartite or tripartite agreements on skills' development;

(c) Match supply and demand for skills through skills needs assessments, labour market information and core skills development, in collaboration with industry and training institutions; *(ILO, 2015)*

The East Africa Green Economy Assessment Report (UNEP 2014) reveals that the transition to a green economy can deliver important benefits in East Africa, such as long-term economic growth, a cleaner environment and high productivity.

Social dialogue at national, sectoral and workplace level

Trade unions must demand a seat at the table in multi-stakeholder Just Transition task forces and commissions. Trade unions should demand that these discussions take place at company, local, national, regional, and global levels. Social dialogue should establish basic structures and ground rules for implementing sustainable industrial and sectoral policies and Just Transition programmes to manage the transformation of industries and sectors to the benefit of all. The recognition of fundamental labour rights should a core principle of any discussions around Just Transition *(IndustriALL, 2018)*

Activity/Quizzes

- As trade union organizing in a specific sector, identify green jobs in your respective sectors and the required set of skills.

Module Reading Materials

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MODULE 6:

TRADE UNION ACTION ON CLIMATE CHANGE

Learning Objectives

The module aims at raising awareness on the need for a fair transition to a climate-friendly economy and providing tools to achieve it. The module presents possible trade union interventions on climate change and provides information on existing trade union action, from the international to the workplace level, including climate change education for workers.

The module unpacks how the link between employment and labour markets to Nationally Determined Contributions and commitments to international agreements and action to address climate change and de- carbonize economies provide a significant driver for green job creation. The module also highlights the importance of ensuring that commitments to international agreements, including Nationally Determined Contributions (NDCs) to the Paris Agreement are made with reference to workers. The implications these commitments will have on labour markets, and the related skills and training needs and institutions are also presented.

At the end of the module, participants will be familiar with the basic rights and mechanisms that will lead to a Just transition and practical ways for trade unions to promote climate change mitigation and adaptation strategies, in a variety of sectors and at different levels.

Unit 1: National, County and Sectoral Level Actions

Trade unions need to understand how the mitigation and adaptation measures proposed in the East African NDC will impact workers in the sectors they organize in. The unions need to identify the different actors with whom they can establish partnerships for addressing climate change. These include relevant government ministries and departments, employers, trade union federations e.g., Trade Unions for Energy Democracy (TUED), private sector and national and international civil society groups.

Trade unions need to identify the opportunities that exist for them to engage on climate change issues at the policy/national, county, sectoral, workplace levels and community level with a focus on the energy, water, and health sectors. The unions need to define the specific action in addressing climate change issues at the workplace and community level. These include engagement in reforestation efforts, energy conservation and creating awareness among union members about climate change through education and training.

Defining priorities for the sector trade unions

Just Transition priorities for trade unions in East Africa will differ from those of trade unions in the developed world. Due to poverty, East Africa has more pressing needs such as economic growth and employment creation. It is within this context that a just transition becomes justifiable.

If approached right, a just transition should address environmental concerns and economic and social challenges facing East Africa. Trade unions seeking a just transition path need convincing arguments for themselves and other stakeholders. The process starts with adopting a transformative definition for a just transition.

Unit 2: Trade Union Engagement in Climate Change Policy Development

Nationally Determined Contributions form an integral part of the Paris Agreement and are instrumental to achieving its goals of enhancing climate action and sustainable, green, climate-resilient development. The UNFCCC process has highlighted the need for multi-stakeholder driven climate action, at all levels of activities related to all levels of the NDC and national adaptation plan processes.

The engagement of trade unions can be crucial to advocate for higher ambitions and amplify the voices of workers, the most vulnerable, poor, or marginalized populations. However, there are a number of gaps, needs, and challenges concerning trade union engagement in the NDC process. These include gaps and needs related to technical capacity, legal and policy frameworks, national processes, lack of coordination and communication mechanisms, lack of access and participation, lack of monitoring and evaluation mechanisms, and internal challenges within CSOs. (UNFCCC)

Climate Change Education for Members

Trade union can play a crucial role in evaluating and anticipating needs linked to the transition towards a low-carbon economy. In the workplace, they can participate in the identification of needs and play an awareness- raising role among workers, promoting changes in behaviour and awareness in particular of the importance of a lifelong learning process. Through different levels of formal or informal dialogue, trade unions can anticipate the forthcoming changes and foster regular information flows into education and training systems and participate in the definition of political objectives on training and employment.

Activities/Quizzes

- Trade unions to review the East African NDC and identify opportunities for them to participate in addressing climate change mitigation and adaptation at the national and county government levels.

Module Reading Materials

ITUC (2022) Just Transition in action: Union experiences and lessons from Canada, Germany, New Zealand, Norway, Nigeria and Spain. Just Transition Center. Available at https://www.ituc-csi.org/IMG/pdf/191120_-_just_transition_case_studies.pdf

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MODULE 7:

CLIMATE ACTION – CROSS CUTTING ISSUES

Learning Objectives

The module discusses cross-cutting issues as they relate to the differential climate change impacts. The focus is on the impacts of climate change on women and young workers. Participants will have the opportunity to discuss in detail the observed impacts of climate change in different sectors in question and subsequently relate these to different gender categories in their workplaces.

The module also highlights the importance of research and labor market information in supporting effective trade union participation in the climate related policy formulation, monitoring, evaluation process. It also touches on how trade unions can link labor research to education, organizing, advocacy, leadership development, affiliate support in traditional issues such as collective bargaining and OSH.

Unit 1: Gender and Climate Change

Climate change has fundamental gender effects and on relations between men and women. Access to resources and divisions of labour are all affected by climate change. By starting with national level analysis, the project hopes to contribute to realistic and positive changes that unions can lobby for when addressing climate change from a gender perspective.

Anticipated changes in labour markets due to climate change have a clear gender dimension, with serious policy implications. If measures are not adopted to increase women's participation in emerging green occupations, current gender stereotypes are likely to persist and women will only have access to a fraction of the jobs created. According to ILO, "gender-transformative" reskilling measures will be necessary for low, mid and high skilled occupations to ensure women's access to new jobs (ILO, 2022).

Climate change has a greater impact on those sections of the population, in all countries, that are most reliant on natural resources for their livelihoods and/or who have the least capacity to respond to natural hazards, such as droughts, landslides, floods and hurricanes. Women commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty, and the majority of the world's poor are women. Women's unequal participation in decision-making processes and labour markets compound inequalities and often prevent women from fully contributing to climate-related planning, policy-making and implementation.

Yet, women can (and do) play a critical role in response to climate change due to their local knowledge of and leadership in e.g. sustainable resource management and/or leading sustainable practices at the household and community level. Women's participation at the political level has resulted in greater responsiveness to citizen's needs, often increasing cooperation across party and ethnic lines and delivering more sustainable peace. At the local level, women's inclusion at the leadership level has led to improved outcomes of climate related projects and policies. On the contrary, if policies or projects are implemented without women's meaningful participation it can increase existing inequalities and decrease effectiveness (UNFCC).

Parties to the UNFCCC have recognized the importance of involving women and men equally in UNFCCC processes and in the development and implementation of national climate policies that are gender-responsive by establishing a dedicated agenda item under the Convention addressing issues of gender and climate change and by including overarching text in the Paris Agreement.

The EAC NDCs under the Gender, Vulnerable Groups and Youth Medium Term Plan (MTP) sector has identified the priority adaptation action as strengthening the adaptive capacity of the most vulnerable groups and communities through social safety nets and insurance schemes. The East African NDC also requires that in addressing climate change issues, public entities should undertake public awareness and consultations, and ensure gender mainstreaming, in line with the Constitution and the Climate Change Act (2016). The Act shall be applied in all sectors of the economy by the national and county governments to mainstream intergenerational and gender equity in all aspects of climate change responses.

Effective adaptation considers the differing needs of women and men, as well as marginalized groups, to ensure that investments are targeted where they are needed most. The reality in many countries is that women are under-represented in decision-making in areas relevant to climate change adaptation.

The world of work is critical to both minimizing risks and ensuring that the transition to a low-carbon economy empowers women and is supported by their contributions. Recognizing the strong gender dimension of environmental challenges and the need for specific gender policies to promote equitable outcomes for all in the transition to a low-carbon and sustainable economy, the International Labour Organization's (ILO) Guidelines for a just transition towards environmentally sustainable economies and societies for all provide an essential pathway for ensuring gender equality and inclusiveness in a world of work disrupted by climate change impacts and by climate mitigation actions that do not incorporate pathways for decent work outcomes (ILO, 2022).

Unit 2: Engaging Young Workers in Climate Action

Climate change is one of the most significant intergenerational equity challenges of our time. Young people – who currently represent over 50% of the global population – are the generation who will not only be most impacted by climate change, but who will also inherit the responsibility for addressing it. This key constituency, however, is often neglected in policy processes and the design of climate change response measures and initiatives. The question of youth agency is particularly acute in East Africa, which has a growing youth population.

Youth are critical stakeholders in climate action and have the right to participate in public affairs that impact their future. However, as highlighted at the United Nations Economic and Social Council's Youth Forum in April 2022, meaningful youth involvement in governance and policymaking continues to be hampered by a range of factors including lack of technical, political and financial support; discrimination related to age, gender, and capabilities; unequal access to information and education; and shrinking civic space.

Youth constitute a sizable portion of East Africa's national population with many young people struggling to access education and employment. The situation is made even more precarious with sectors that traditionally employ youth, such as agriculture, forestry, and fisheries, under threat from overexploitation and the impacts of climate change.

Green growth presents an opportunity to foster youth employment while simultaneously preserving the environment and increasing climate resilience. Listening to young peoples' voices and working on youth-inclusive data collection, analysis, and research are critical first steps to tap into young people's potential, creativity, and entrepreneurship (UNDP, 2022).

Some key recommendations from UNDP's recent publication, "Aiming Higher: Elevating Meaningful Youth Engagement for Climate Action", include:

- Meaningfully engaging with youth, enabling young people to influence norms, behaviour, institutional structures, formal and informal political processes and accountability mechanisms;
- Supporting and encouraging youth initiatives that introduce alternatives for large-scale systemic transformations; and
- Initiating and strengthening research in support of policy recommendations on the role of youth in just transition and sectoral decarbonization pathways, including energy, transport, higher education, and green jobs.

A green economy, and the transition towards it, will create many employment opportunities for young people. Climate mitigation and adaptation requires many sectors of the economy to transition into more green practices, fostering a climate economy that embraces the pillars of sustainable development. As countries and industries transition, green skills will be required in this new job market. While the private sector plays an important role in job creation, governments also play a central role in incentivizing, structuring and promoting the green transition.

Transitioning to a low-carbon economy will affect youth in particular because their future and livelihoods are at stake and because they are the workforce of the future and will experience unique struggles and opportunities. Addressing the issues faced by youth in a just transition includes equipping young people with the capacity to be involved in decision-making, keeping processes youth-centered and powered by youth, and guaranteeing their right to participation in international and national processes.

Just transition will affect key sectors of East Africa economy and have far-reaching consequences. Sectors such as construction, industry, waste management, transportation, tourism – majorly dominated by the youth - will have to undergo a large-scale transformation to become climate-friendly, sustainable, and equitable, while other areas such as urban settlements will need to reduce emissions and become more resilient at the same time.

In East Africa, most of these sectors have high percentages of family labor as well as informal workers. For a just transition, it is imperative to include the youth's needs, create safety nets and alternative livelihoods, and listen to the youth's voices directly.

Skills development should form part of an effective response to changing conditions. Identifying skills requirements for adaptation to climate change and mitigation measures via reduction of green-house gas emissions has an important role to play in policy development. Meeting skills needs is a critical factor for productivity, employment growth and development (UNEP, ILO, IOE, ITUC, 2008).

Green skills are essential to the transition towards a green economy, with the ILO estimating 24 million jobs worldwide could be created by the green economy by 2030. Green jobs are both a mechanism to achieve sustainable development and an outcome of policies to pursue sustainability. They provide the double dividend of more employment and a better environment. Green jobs are decent jobs in economic sectors and activities which help reduce negative environmental impacts by: reducing energy and greenhouse gas emissions by using renewable energy; minimizing energy, waste and pollution to protect and restore ecosystems; and supporting activities that assist resilience and adaptation to climate change.

The transition to low-carbon climate resilient economies and societies can generate job opportunities, including for young people. Having the right skills for green jobs are the prerequisite to make the transition to a greener economy happen. In addition to high unemployment rates in East Africa, skills gaps are already recognized as a major challenge in a number of sectors, such as renewable energy, energy and resource efficiency, renovation of buildings, construction, environmental services, and manufacturing.

Unit 3: Research and Documentation

The transition towards a low-carbon economy is expected to have very strong implications in terms of competences and skills. Potentially, it may affect a great number of workers, raising the need for new skill profiles, lowering the demand for others. Ensuring a just transition will require an adaptation of vocational and educational systems but also active labour market policies targeting employment creation, training and lifelong learning.

Trade unions need to identify and prioritize the climate change and just transition issues to explore and gather information on. This will support deeper analysis of issues that affects members and provide facts for policy briefs. Trade unions need to have staff who can apply qualitative and quantitative methodologies to research projects for the union on economic, social, political and industrial issues. Trade union research is required to provide statistical data and other information to support negotiations, bargaining and effective representation of members. Trade unions also need to familiarize themselves with relevant sectoral policies and legislation and assess their impact on union activities and interests.

Activities/Quizzes

- In implementing climate change activities, how do you ensure gender equality in terms of participation and representation of officials and members?
- As a trade union, have you considered which workers, industries, and regions will be disproportionately affected by climate change mitigation and adaptation policies and how the government intends to address those challenges.

Module Reading Materials

International Labour Organization. (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice. UNFCCC Submission in Response to Mandate Table 4, D.5, Annex to 3/CP.25. Available at https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202204141910---ILO%20submission%20-%20Just%20transition%20-%20An%20essential%20pathway%20to%20achieving%20gender%20equality%20and%20social%20justice.pdf

ILO and UN Environment. 2022. Green Jobs for Youth: Boosting Decent Jobs for Young People, Greening the Economy. Available at

UNDP (2022). Aiming Higher: Elevating Meaningful Youth Engagement for Climate Action. Available at https://www.undp.org/sites/g/files/zskgke326/files/2022-05/UNDP-Elevating-Meaningful-Youth-Engagement-for-Climate-Action-2.pdf

UN Women Watch. Women, Gender Equality and Climate Change, Fact Sheet Available at https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf

ANNEXES

Handout 1: Just Transition Brief

ITUC Call for Dialogue: Climate action requires just transition

We are in a race against time to stabilise the climate. Renewable energy, sustainable forestry and agriculture, emission-free manufacturing, construction, transport and services are needed to keep the temperature rise to less than 2 degrees Celsius. A significant shift in the capacity to recycle and reuse is vital to create a circular economy that ensures our way of life stays within planetary boundaries. Making the transition to zero carbon in our economies and societies is imperative, but can only succeed if the transition is just. Success needs governments to show leadership when setting ambitious climate change goals but it also requires all of us – businesses, workers and their unions, civil society and communities to support change.

The transition requires dialogue and understanding of different needs at all levels. It requires an integrated approach to both climate action and the UN Sustainable Development Goals for inclusive development, with investment consistent with these objectives.

A just transition will:

- invest in jobs, that is, decent work opportunities in sectors which reduce emissions and help communities adapt to climate change;
- respect the contribution that workers in fossil-fuel industries have made to today's prosperity and provide them with income support, retraining and redeployment opportunities, as well as secure pensions for older workers;
- guarantee social protection and human rights;
- invest in community renewal to gain the hope and trust of regions and townships at the forefront of the energy transition, industrial transformation or climate impacts;
- support innovation and technology sharing to enable a rapid transformation of energy and manufacturing companies along with all other economic sectors And the involvement of workers and communities in the sectoral plans for transforming megacities;
- formalise jobs associated with rescue, restoring communities' and building resilience to climate disasters;
- be based on social dialogue with all relevant parties, collective bargaining with workers and their unions for workplace change, resource productivity and skills development with the monitoring of agreements which are public and legally enforceable.

(Source: ITUC CSI IGB)