

CAPYEI GREEN POLICY

A GREEN SKILLS AND LIVELIHOODS APPROACH TO CLIMATE CHANGE MITIGATION IN KENYA

THE PROBLEM

Kenya's economy is largely dependent on tourism and rain fed agriculture, both susceptible to climate change and extreme weather events. Increasing heat and recurrent droughts contribute to severe crop and livestock losses, leading to famine, displacement, and other threats to human health and wellbeing.

Even though Kenya contributes less than 0.1 percent of global greenhouse gas (GHG) emissions annually, the government has made a commitment to abate greenhouse gases by 32 percent by 2030 in line with its sustainable development agenda and national circumstances.

Kenya's Nationally Determined Contribution (NDC) notes that successive climate change impacts result in socio-economic losses estimated at 3-4 percent of Gross Domestic Product annually and impede development efforts. One of the sectors facing the greatest risks from Climate change is agriculture. In 2021 Kenya imported \$150M worth of food. Even then, over 4 million Kenyans are facing the risk of hunger. The number is expected to rise with reduced rainfall that has been experienced in most parts of the country for the last 3 years.

SOLUTION

CAPYEI has been working to address this challenge from a livelihoods perspective, by engaging young people to see the green sector as an opportunity to secure livelihoods, through entry level employment or small business set up, **while at the same time offering a solution to this major social problem**. We have noticed that youth are increasingly interested in playing their part in addressing the existential global challenge of Climate change. By supporting them to also secure **earning opportunities**, we believe this interest and contribution will be more likely to last and spread.



INVESTMENTS MADE SO FAR

Climate Smart Agriculture: One of the biggest investments we have made in this area has been in Climate smart agriculture. We have created a curriculum and already trained 300 youth, set up two demo farms for practical training and established a green community of practice around one of the farms. Now the organization wishes to expand this approach by engaging the youth in the development of microbusinesses based on climate smart agriculture. These will include: *carbon farming practices, organic farming, production of organic fertilizer, water conservation, solar panel installation and maintenance, organic pesticides production, tree planting, traditional herbs, nutritional products* and many others¹.

¹ For a detailed outline of the proposed approach to livelihoods under Climate smart agriculture, see annex

Green Construction: In the past ten years, we have developed successful training programs in the construction sector with courses like: building construction, plumbing, and carpentry among others. These will now be recast in order to integrate a Green skills and livelihoods approach, so that these courses serve to link youth to employment or entrepreneurship opportunities in green areas like: low cost housing, *use of locally available construction materials and technologies, interlocked stabilized blocks production, waste recycling, water harvesting and conservation* among many others.

Green Energy: We have also developed and delivered training programs related to energy such as electrical wiring, air-conditioning, electrical and electronics maintenance. We plan to build on this experience to expand employability training and support in areas of the Green energy sector such as: *solar panel fabrication and maintenance, building insulation, rooftop solar installation, energy conservation, solar wind and water mini-grids development, solar cooling units* among many others.

Market surveys to identify and validate the best opportunities for livelihoods in each sector and sub sector will be done before any training course program begins.

KEY STRATEGIES

1. **Food production:** adoption of carbon farming principles to improve sustainable food security and engage women and youth in this critical sector. This will involve establishing demonstration training units, based on our demo farm model, paired with skills delivery partner institutions to provide skills, mentorship and support for Vulnerable youth sufficient to gain **reasonable livelihoods** through jobs and small business set up.
2. **Integration in TVET training:** develop a range of multilevel curriculum in the Green economy to be delivered through Government and private sector TVETs. This will include special TOT for TVET trainers as well as the development of digital delivery tools, such as learning management system, for wide reach. Every curriculum will be developed on the basis of prior market assessment to identify greatest value.



3. **Basic Employability Skills Training:** Adapt a tested model for responsive demand led, skills training based on CAPYEI experience, to create a platform for training and engaging youth in Climate change efforts broadly, and specifically **Green energy, Green construction** and **Climate smart** agriculture as technical vocations. This model will also form the framework for scaling up the initiative using government and private sector TVET skills providers to ensure wider reach and sustainability.

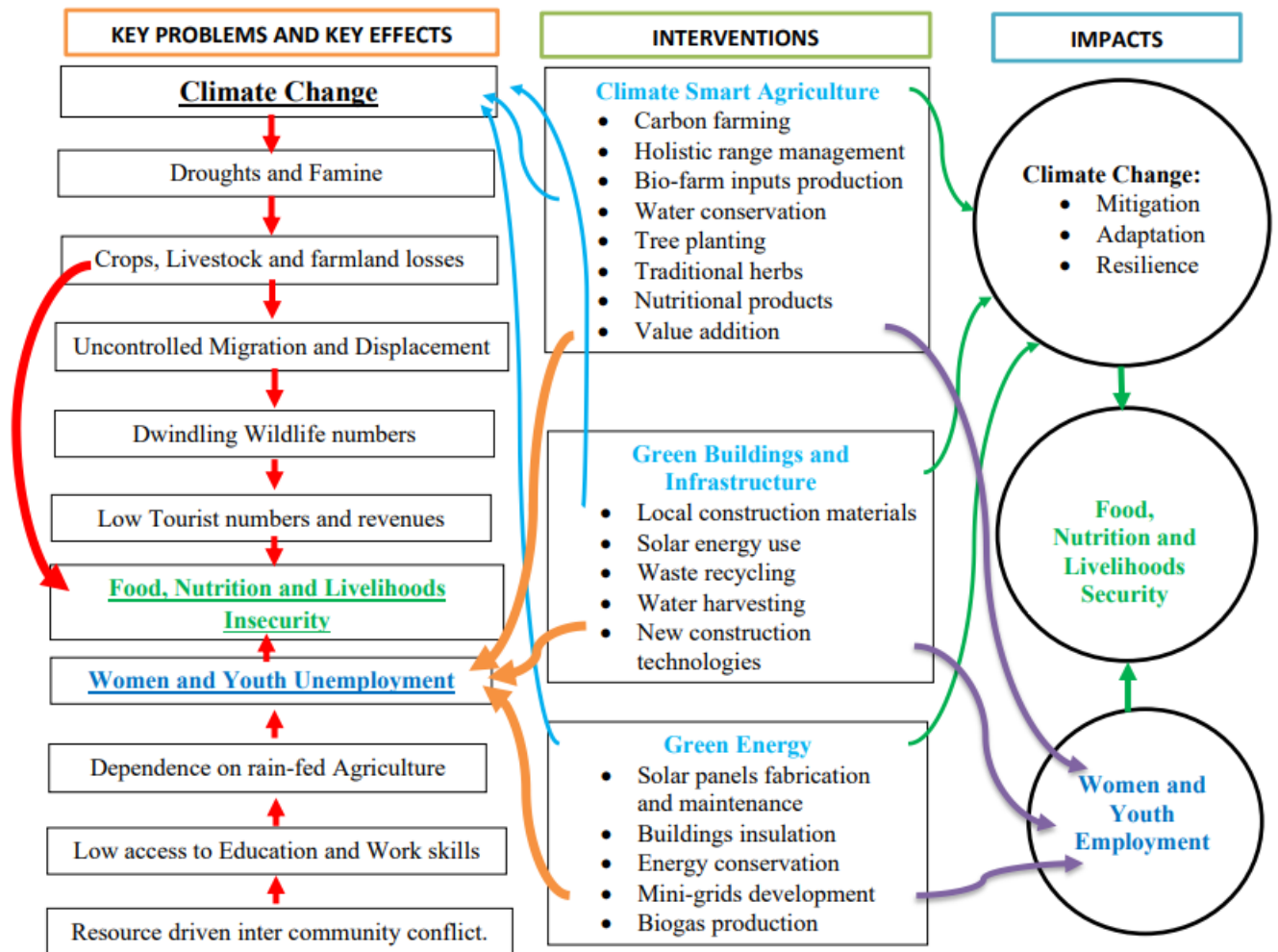
4. **Market led:** Carry out regular scoping exercises to establish the potential for investing in high value, high impact subsectors of the Green sector at scale, with a view to establishing commercial viability and generation of jobs and markets for trained youth. Some of the sector components to be considered for scale will include: solar panel fabrication; organic fertilizer production; organic farming; food processing, preservation and marketing; water conservation, Black soldier fly farming and waste recycling among many others.

5. **Community engagement:** Engage indigenous communities and community groups such as the *Masai, Samburu, Pokot, Turkana* and *Somali*. These communities occupy the most arid and marginal land in

Kenya and are at greatest risk of **humanitarian disaster** caused by climate change. This will involve prioritizing youth and women from these communities for training and support as well as focus on monetizing their traditional economic sectors such as livestock, fishing, bee keeping etc that are now threatened by climate change.

6. **Gender lens:** Prioritize women, with at least 60% of learning and livelihood engagement opportunities allocated to them. This is fair and reasonable as women tend to lose the most from climate change disasters; through collapsing ecosystems, dried up water sources and **vanishing food supplies** for their families. In addition, Women now dominate the population in rural areas, with men mostly moving to urban centers in search of work. A special attention to engaging this cohort will have long term beneficial effects on families and **marginalized rural communities** affected by climate change.

Conceptual Framework



ANNEX

CLIMATE CHANGE MITIGATION THROUGH CLIMATE SMART AGRICULTURE

A FRAMEWORK FOR YOUTH ENGAGEMENT THROUGH: "SKILLS-TO-LIVELIHOODS-TO-SCALE"

Introduction: CAP Youth Empowerment Institute (CAPYEI) is an NGO that targets vulnerable young people with skills and support to earn a living. As part of its effort to engage youth through livelihoods development, in Climate change mitigation, the organization has recently developed a threefold strategy (see annex). This strategy identifies three sectors: Climate smart agriculture, Green Construction and Green energy as holding the highest potential for youth to engage in productively benefit society. This paper describes the strategy for developing the Climate Smart agriculture, *skills to livelihoods to scale up* program.

Principles: For much of Africa to play an effective role in Global climate change mitigation, much of the 'heavy lifting' will have to be done by the Agriculture sector by:

- (i) Changing how farmers do farming – so as to reduce emissions and mitigate harm
- (ii) Engaging more youth (who are now the demographic majority) in agriculture to replace the aging farmers, who now average 59 years of age, and at the same adopt the new methods.
- (iii) Adopting modern 'green farming' methods and behaviors, mechanization, water and energy conservation and the conversion from *agriculture* to *agribusiness* in order to create livelihoods for the youth and improve food security.
- (iv) Developing 'green skills' training curricula and teaching tools that can be easily delivered through Kenya's TVET sector, to reach large numbers of youth with the skills and motivation to do their part for themselves, the nation and the planet.

Carbon Farming as the Supporting Framework: Also known as conservation agriculture, 'regenerative agriculture' etc, this is holistic farming "...approach to optimizing carbon capture by implementing practices that improve the rate at which CO₂ is removed from the atmosphere

and stored in plant material” while at the same time improving farm yields and reducing use of chemical inputs².

Some of the methods of Carbon farming include the following, among many others³:

- 1. Reduced inorganic fertilizer application:** Chemical inputs reduce the capacity of soils to sequester carbon and can be wasteful when applied in excess.
- 2. Reduced tillage:** Frequent and heavy tilling increases the rate of carbon dioxide released from the soil. It also breaks up soil structure which can lead to erosion. Regenerative tillage, or no-tillage at all, **preserves soil quality** and increases crop yield.
- 3. Improved range management:** Poor use of grazing lands causes soil and vegetation to become degraded, negatively affecting animal health and survival. Holistic grazing land management utilizing a revolving paddock system, enables range land to regenerate and reduces soil erosion and other harmful effects of uncontrolled grazing⁴.
- 4. Cover cropping and dual cropping:** **Cover** crops are grown precisely to protect the soil, which is different from the primary crop usually cultivated on the farm. Cover crops reduce soil disturbance and help capture nutrients, building soil fertility. Dual planting increases plant diversity by growing 2 or more crops close together to benefit not just the crops but also the soil. Dual cropping can also be to use to help with organic pest control.
- 5. Reforestation and agroforestry:** Planting trees and hedges to increase green cover, biodiversity and positively influence microclimates. Integrating crop farming with trees to improve productivity and increase farmer income.

Key Strategies:

1. We shall convert the major principles of Carbon Farming and Climate Change mitigation into easily deliverable, multilevel, training programs target youth as well as practicing farmers.
2. Collaborate with Private sector, National and County Governments to introduce these programs for delivery by TVET institutions at all levels

² <https://www.carboncycle.org/what-is-carbon-farming/>

³ Adapted from: <https://eagronom.com/en/blog/10-best-carbon-farming-practices/>

⁴ For more information see: Holistic Management: <https://savory.global/what-is-holistic-management/>

3. Lobby for select TVET institutions to be equipped as centers of excellence in Climate smart agriculture training, demonstration and business incubation.
4. Work with existing farmers and youth community groups to adopt the new principles and practices widely
5. Adopt tools and approaches that enable us to reach, engage and benefit the entire 'food producing' Community in Kenya. Eg; carbon farming for crop farmers, holistic management for animal keepers and sustainable fisheries⁵ for the Blue Economy.
6. Engage experts to develop and adapt simple tools for carbon capture measurement in order to propose some of these initiatives as Carbon credit participants, which will provide an added income stream to practitioners, further increasing their motivation to practice these new methods.
7. Develop a behavior change communications program aimed at sensitizing Kenyans on the Climate Change impact of their choices and behaviors and encouraging them to support these initiatives in different ways.

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⁵ www.fao.org