

Climate Change Education, the key to combating Climate Change!

## Introduction

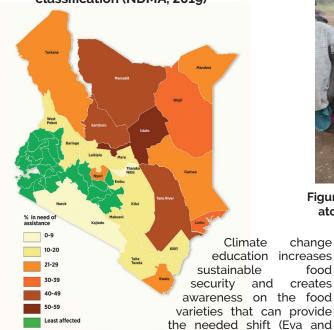
Climate change education is Kenyans' paradox to food security. This has the implication that addressing climate change is a crucial step towards food security. Tackling climate change requires the basics of climate change education and its inclusion in every sector of the economy for sustainability. About 73% of the people in Kenya, lack the climate change education and awareness therefore making it an obstacle to combating climate change. The devastating effect of climate change has far reaching impacts especially on rainfed agriculture the mainstay of millions of inhabitants in the poorest regions of the world (UNDP, 2016). In 2017, more than 2.6 million Kenyans were severely food insecure and this number has been rapidly increasing due to the climate change effects providing a basis for integrating climate change education. In February 2017, the Government declared a national drought emergency, with 23 of 47 counties affected. During the period, the number of food insecure people more than doubled from 1.3 million to 2.7 million (Standard Newspaper, 2018) which indicates the need to migrate from the traditional foods to new climate smart foods through climate change education.

# Sustainable Food Security in Kenya

## **KEY HIGHLIGHTS**

- The climate change has negatively affected agriculture rendering 15million Kenyans on food aid and food insecure, with an increase of 1.6million Kenyans in 2019
- The prevalence of pests and disease outbreaks from invasive species costing about 30 to 40 million shillings lost in 2017alone
- The education and awareness gap in Climate change have about 73% of the Kenyan people requiring knowledge on climate smart food varieties and innovations
- Climate change education has proven to increase food security through multifaceted approaches to mitigation and adaptation
- Climate change education offers sustainability in food security in climate change dynamic world

Figure 1: Current food insecurity phase classification (NDMA, 2019)



M'Ikiungu, 2018). The practical pathway begins with empowerment through climate change education to achieve food security in Kenya.

A change in the system of thinking requires education which serves as the vehicle to combating climate change. The platform for climate change education enhances collaborations with various sectors in society thereby making it sustainable and impactful in ensuring food security. In particular, education can enable society



Figure 2: The face of food insecurity as Climate change takes atoll (Photo courtesy of Standard Newspaper, May, 2019).

to benefit from climate change science by transferring scientific knowledge across societal sectors. Education plays a central role in several processes that can accelerate mitigation and adaptation of climate change in food security (Eva and M'Ikiungu, 2018).

Education is an essential element of the global response to climate change. It helps people understand and address the impact of global warming, increases "climate literacy" among young people, encourages changes in their attitudes and behavior, and helps them adapt to climate change related trends. Education and awareness-raising enable informed decision-making, play an essential role in increasing adaptation and mitigation capacities of communities, and empower women and men to adopt sustainable lifestyles (UNESCO, 2015).



Figure 3: Clamor for Climate change Education (Ezra Baum, 2016)

Fundamentally, building a culture of recognition will not only make the future generations conscious of their actions and the consequences of their actions but spur the spirit of innovation in a bid to deal with the effects of climate change which enhance Climate Smart Agriculture. Looking back at the realities of climate change like, invasion of pests and diseases on crops and livestock, the floods in the past few months in Kenya which led to closure of learning institutions, then the importance of incorporating Climate Change in education and training cannot be ignored.

The suggested strategies that have been proposed over time are to develop policies for climate education, integration of climate change in school curricula, training

and teaching materials for teachers and educators and safe and sustainable school campuses. Incorporation of climate change to the education system is not about just teaching on climate change but an education system overhaul that begins from the change in policy to including this in the curriculum. This is part of efforts to address climate change by aligning it with planning, budgeting and implementation of international legal frameworks. "This can inhibit efforts towards the achievement of Kenya's Vision 2030 the Sustainable Development Goal (SDGs) 13, whose objective is to take urgent action to combat climate change and its impacts," (Environment and Natural Resources Cabinet Secretary; The East African Newspaper, 12th December, 2017).



Figure 4: Food Insecurity Effects with endless queues for food rations (Photo courtesy of Standard Newspaper, 2017)



Figure 5: Climate change Education empowers a community to be Climate Change resilient (Photo courtesy of Standard Newspaper, 2017)

Climate change education is an intervention that will simultaneously enhance gains in agricultural productivity, build resilience to climatic and weather shocks as well as reduce emissions intensity from agriculture and food systems by adapting to efficient practices (KCSAIF, 2018). Through climate change education, it becomes easy to implement and also to spur climate smart innovation that tackle food insecurity in Kenya. The Climate Change Act 2016 Section 15 provides for public entities to coordinate mainstreaming of climate change issues into sectoral strategies, plans, programmes

"The analysis indicates that drought and food security situation has worsened across most parts of the country especially in view of the poor performance of the previous season NDMA, 2019."

and projects. Further the Act requires that each state department and National government public entity to establish a Climate change Unit (CCU). Through these units at county level, Climate education can be implemented and enhanced which has been advocated in all sectors, projects and programmes (KCSAIF, 2018). Climate change education can be spurred by use of mobile technologies which provide timely alerts on climate change effects and offer solutions that mitigate the climate change effects in agriculture.

## Why Climate Change Education

Kenya would benefit more to include climate change education as an avenue to the implementation of climate smart agriculture through sustained agricultural productivity gains which require investments that build resilience to climate shocks and climate change. Climate Change Education (CCE) can be defined as learning geared toward helping people address and develop effective responses to climate change (UNESCO, 2015). More specifically, climate change education is multi-disciplinary curriculum which provides a networking platform of various disciplines indicating the interdependence which is required in combating climate change.

Thus, the benefits that are accrued from climate change education include build adaptive capacity, Reduce vulnerability, enhancing preparedness to climate change thus building resilience, Strengthen capabilities for disaster risk reduction, cleaner and greener environment and ultimately, change of attitude and behaviour. Therefore, the necessity to realign incentive policies currently in place can improve the climate smartness of the food system and a renewed urgency needed to sustain climate-smart agricultural research to deliver needed science-based solutions through climate change education research.

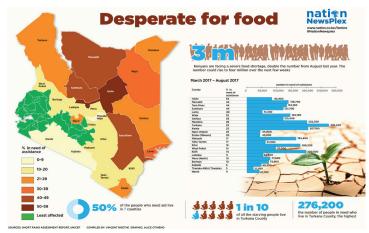


Figure 6: Kenya's food demand and the desperation without climate change education (UNICEF, 2017)



Figure 7: The future of food security in Kenya without Climate Change Education (World Bank Group, 2017).

#### **CLIMATE CHANGE EDUCATION**

The role of climate change education helps build resilience and reduce vulnerability in the face of climate change impacts. Moving forward, strategies to mitigate natural and other forms of disaster must include climate change education as a way to improving people's knowledge of the risks, the need to adapt and of measures that could reduce its impact on livelihoods.

Climate change education forms a basis for paradigm

shifts to mitigation and adaptation of climate change and food security through introducing new food varieties and the enhanced nutritional foods from the traditional ones as indicated by World Bank group. Through climate change education, there shall be a shift from traditional foods and cereals to better improved nutrition and overall health of the population thus increased food security by 2050 through demand for non-cereal crops.



Figure 8: The harsh reality of Food insecurity in Kenya (Photo courtesy of Daily Nation, 2017)

The gap that exists between science and society's understanding of climate change, the threats it poses, and the energy transition it demands which formulate a solid ground for Climate Change education. It is recognized that education for action requires more than



Figure 9: Bumper harvest to Food security through Climate Change Education (KSCAIF, 2018).

scientific knowledge; but must integrate concepts and dynamics across disciplines and in ways that address affective, social, and cultural forces a challenge that can be met through integration climate change education and its adoption in every sector.

## Key policy recommendation

If climate change education is not mainstreamed in key economy sectors crop failure and livestock losses will be obvious and this likely to costs Kenyan economy more than KSH 16 Billion per annum which could support 27% of the national agriculture rural and urban development budget.

#### **Key Message**

- Mainstream climate change education in county development plans and programs
- Integrate climate change education in all levels of formal education
- Disseminate climate change education and climate change information services through various social plat forms such as Facebook, Whatsup and Twitter.

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#### Dr. Bessy Kathambi

Wangari Maathai Institute for Peace and Environmental Studies, University of Nairobi Email: k22bessy@gmail.com P. O. Box 30197 - 00100, Nairobi, Kenya





