

POLICY BRIEF

Chakula cha afya

INTRODUCTION

There has been a growing recognition among policymakers that improving the position of small-scale farmers is especially crucial in order to combat poverty and improve food security. There is, however, far less consensus about what type of investments are best able to strengthen the position of these producers¹. To date, development interventions in the agriculture sector in Africa have been heavily weighted towards the intensification of farming systems through the use of agricultural technologies such as hybrid seeds and synthetic fertilisers and pesticides. Yet there is mounting evidence to suggest that these methods are often unsuitable to small-scale farmers, and risk undermining long-term sustainability and climate resilience by reducing seed diversity, burdening low-income rural families with dependency on expensive and often harmful chemical inputs, and damaging soil structure and fertility.

Although there is a growing appreciation among governments and development cooperation partners for the potential of ecological farming systems to meet multiple food security, livelihood, poverty reduction and environmental sustainability objectives, many donors struggle to identify mechanisms via which to channel assistance to such interventions in Africa²

The battle for healthy food in Machakos through farming system resilience

It is important to note that agriculture is the backbone of the Kenyan economy. This sector is grappling with the effects of climate change; rising temperatures, unpredictable rainfall patterns, and significant environmental degradation. Further still, Land use in Kenya is underexploited in arid and semi-arid lands (ASALs) and small scale farmers only use 60% of their land for farming. These are two of the existing reasons

informing Kenya's Agricultural sector Development Strategy (2010- 2020); which pushes for improved inputs such as hybrid seed, fertilizers, safe use of pesticides and machinery by small scale farmers.³ These inputs are expensive for local farmers, have damaging effects on the land and hinder biodiversity and food sovereignty – instead promoting mono-culture and dependency on industrial corporations.

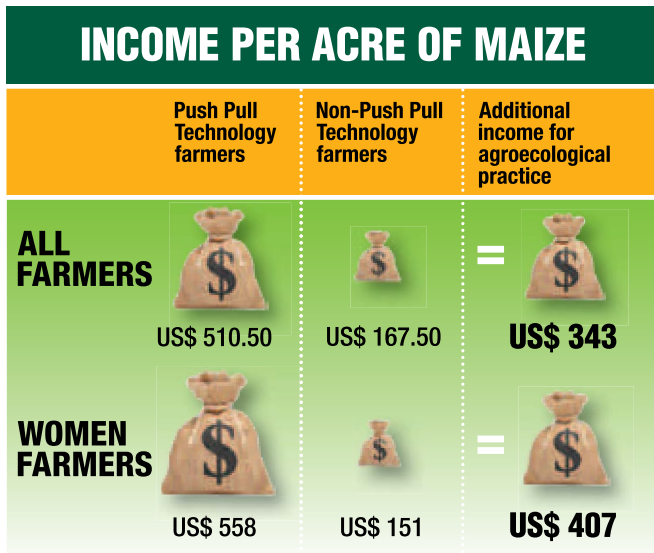
A sustainable and affordable solution is required. The best option for Kenya and Machakos specifically is **ecological farming** - allowing for climate resilient food production⁴



- <https://www.greenpeace.org/africa/Global/africa/publications/Financing%20Ecological%20Farming%20in%20Africa%20FOR%20WEB.pdf>
- See, for example, K.Mondelaers et al, A meta-analysis of the differences in environmental impacts between organic and conventional farming. *British Food Journal* 111 (10), 2009, <https://biblio.ugent.be/input/download?func=downloadFile&recordId=682772&fileId=901101>; P. Tittonell, 'Livelihood strategies, resilience and transformability in African agroecosystems', *Agricultural Systems*, in press, 2014; P.Tittonell & K. Giller, 'When yield gaps are poverty traps: The paradigm of ecological intensification in African smallholder agriculture', *Field Crops Research*, 143: 76-90, 2013; UNEP/UNCTAD, *Organic Agriculture and Food Security in Africa*, 2008, http://www.unctad.org/en/docs/ditcted200715_en.pdf.
- Agriculture Sector Development Strategy 2010 - 2020
- Consultative Group on International Agricultural Research (CGIAR) – Increasing food security and farming systems resilience in East Africa through wide-scale adoption of climate smart agricultural practices

Kenya

Compared farmers using push-pull technology against corn borer with farmers using chemical pesticides or neither.



Average annual income in Kenya is **US\$ 256**, and much lower in rural areas.



Small-scale farmers practising agroforestry and push-pull technology were better off financially than their neighbours using agrochemicals, even when agrochemicals were subsidised.

RECOMMENDATIONS

The best way to build climate resilient agricultural systems in Kenya is through sustainable agricultural practises⁵ compatible with ecological farming. Women have been flagged as strong contributors to this sector as seed trade actors (preserving ancestral seeds and biodiversity). As it stands, approximately 50% of Sub-Saharan African farmers are women. Over the last 30 years, female farmers became increasingly important for Africa's food supply. Therefore, as a stakeholder group they need to be supported more effectively by government.

As it stands the Kenya government is of the opinion that subsidising farm inputs such as fertilizers through the National Cereals and Produce Board (NCPD) will address food insecurity. On the contrary Greenpeace

Africa, the Machakos Farmers Network and local organisations in Machakos are pushing national and County governments to actively support ecological farming; a sustainable way of agriculture - through specific policy and related budget allocation.

A lot more needs to happen at the policy and private sector level, to ensure long term sustainable change is adopted. Greenpeace Africa and the Machakos Farmers Network demand that private companies, governments, donors and philanthropies shift their investments in agriculture and their policy support away from industrial agriculture and towards ecological farming. This means, for example, that governments stop allowing and subsidising the widespread use of potentially harmful chemicals on our farms.

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THE MACHAKOS COUNTY GOVERNMENT NEEDS TO:

1. Ensure that Smallholder farmers in Machakos

- Decrease the use of agrochemicals
- Adopt ecological agriculture as a solution
- Understand the impacts of agrochemicals

2. Adopt and promote Ecological farming as the viable solution to food security

- Establishment of policies supporting up-scale of ecological agriculture
- Policy change in support of ecological agriculture through fund allocation and the reduced uptake of harmful industrial agriculture inputs (agrochemicals and genetically modified seeds)

3. Improve the climate resilient nature of Kenyan agriculture and the lives of thousands of farmers through the

- i) Creation of seed banks as an initial step along with training farmers on seed selection, diversification and seed banking
- ii) Provision of affective ecological farming based extension services to farmers
- iii) Trainings on climate change impacts and mitigation along with sensitization on long term

implications of agrochemical usage

- iv) Support for institutional research on ecological farming practices aimed at improving the farm eco-system and specifically climate change mitigation
- v) Provision of storage facilities to farmers for their farm produce and seeds
- vi) Revamp of the food procurement system cutting out middlemen and empowering farmers with the establishment of strong community based organizations along with producer companies for marketing
- vii) Assisting farmers with the value addition of farm produce including technical knowledge, infrastructural support and machinery
- viii) Engaging with governments at the various levels to empower farmers in the policy making process
- ix) Ensuring access to institutional credit to farmers
- x) Investment and support for new technologies and start ups
- xi) Support for initiatives aimed at stopping deforestation and soil erosion



What is the problem?

Industrial farming presents one of the most urgent threats to the environment and food security facing the world today:

- It relies on inputs of fossil-fuel intensive synthetic fertilisers, pesticides and genetically engineered (GE) seeds.
- These expensive inputs result in debt and economic insecurity for farmers, especially smallholders.
- It is a big contributor to global climate change, destroying biodiversity, degrades soils, pollutes land, freshwater and coastlines, creating health risks from field to fork, and consolidates control over the food system amongst a handful of corporate giants.

Major concerns regarding the current approach of governments and donors towards climate mitigation in agriculture and these include:

- i) The promotion of expensive certified seeds and agrochemicals by government agencies and donors. These inputs are not only expensive but are harmful to the soil health, water and biodiversity
- ii) The lack of technical support on soil and water conservation measures to the majority of the smallholder farmers supporting ecological agriculture.
- iii) The limited creation of awareness amongst farmers on climate change impacts and mitigation measures that are useful for effective ecological farming practices.
- iv) The lack of research on ecological farming initiatives which could considerably mitigate climate change impacts
- v) The promotion of flawed practices like conservation agriculture which allow use of GMOs and are reliant on heavy herbicide usage

Other concerns regarding the general state of agriculture which when addressed would contribute to improving the lives of farmers and make them more resilient:

- i) General lack of support and encouragement for ecological farming practices
- ii) Lack of access to extension services at the local level- the presence of which could improve farmer knowledge on soil improvement, seed saving etc.
- iii) Lack of access to markets including the presence of middlemen in the procurement process



- iv) Lack of proper storage facilities for seeds and produce
- v) Lack of support for value addition of farm produce
- vi) Lack of access to institutional credit
- vii) Growing deforestation which is impacting farms and increasing erosion

Conclusion

Scientific evidence demonstrates that Ecological Farming protects the soil, water, and climate, and plays a fundamental role in promoting biodiversity. In this time and age, agro-ecological methods outperform the use of chemical fertilizers in boosting food production especially in unfavourable environments. Ecological Farming thus remains fundamental in reversing the trend. The practice of ecological agriculture involves building the strengths of natural ecosystems into agroecosystems, purposely to produce food. The overall strategies include using practices that (a) grow healthy plants with good defense capabilities, (b) stress pests, and (c) enhancing populations of beneficial organisms. This is of absolute use to all⁶.

Greenpeace's campaign on "*Chakula cha afya*" advocates for counties to allocate budgetary resources to small-scale farmers who embrace ecological farming practices. The farming fraternity can ideally enhance ecological and diversified and farm business models which are envisaged to be economically more resilient, healthy and rewarding for farmers. The campaign therefore aims at upscaling the support to Ecological Farming in Africa. County Governments do play a fundamental role in fostering new networks, linkages and partnerships to support Ecological Farming.

County governments should actively support ecological farming; a sustainable way of agriculture - through specific policy and related budget allocation.

5. Ecological Farming – The Seven Principles of a Food Systems that has people at its heart

6. <https://www.greenpeace.org/africa/Global/africa/publications/Financing%20Ecological%20Farming%20in%20Africa%20FOR%20WEB.pdf>