



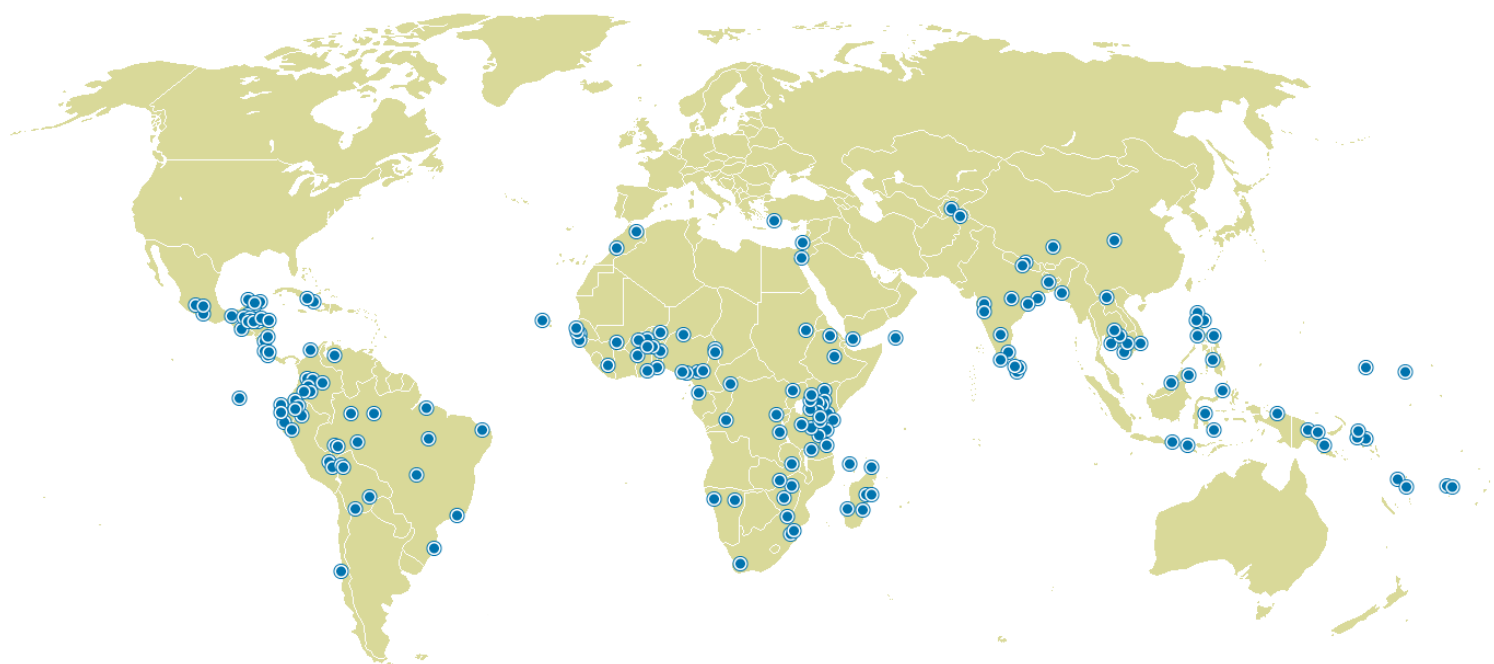
Equator Initiative Case Studies

Local sustainable development solutions for people, nature, and resilient communities

UNDP EQUATOR INITIATIVE CASE STUDY SERIES

Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative. The Equator Initiative aims to fill that gap.

The Equator Prize 2014 was awarded to 35 outstanding local community and indigenous peoples initiatives working to meet climate and development challenges through the conservation and sustainable use of nature. Selected from 1,234 nomination from across 121 countries, the winners were recognized for their achievements at a prize ceremony held in conjunction with the UN Secretary General's Climate Summit and the World Conference on Indigenous Peoples in New York City. Special emphasis was placed on forest and ecosystem restoration, food security and agriculture, and water and ocean management. The following case study is one in a growing series that describes vetted and peer-reviewed best practices intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication. Case studies are best viewed and understood with reference to [The Power of Local Action: Lessons from 10 Years of the Equator Prize](#), a compendium of lessons learned and policy guidance that draws from the case material.



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MAKONI ORGANIC FARMERS ASSOCIATION

Zimbabwe

PROJECT SUMMARY

An organic farming cooperative developed to transition away from tobacco cultivation and chemical-intensive agriculture, Makoni Organic Farmers Association is an initiative of 450 farmers trained in organic farming. The association uses a three-pronged approach that includes capacity building; scaling of good farming practices in apiculture, mushroom cultivation, poultry rearing, and tree nurseries; and organic certification to improve local livelihoods and restore degraded land. With the help of the association, 50 percent of member farmers have become organically certified. The promotion of alternative organic livelihood options – along with the introduction of organic certification standards – have helped local farmers increase incomes and facilitated access to new, more lucrative markets. In areas where tobacco cultivation and pesticide use had rendered much of the agricultural land infertile, organic farming, and the planting of multi-purpose trees have improved nutrition and increased food security, soil fertility, and biodiversity.

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KEY FACTS

EQUATOR PRIZE WINNER: 2014

FOUNDED: 2007

LOCATION: Makoni District, Manicaland Province, Zimbabwe

BENEFICIARIES: 450 farmers across 22 villages in the Makoni District, Tandri Ward, Zimbabwe

AREA OF FOCUS: Organic agriculture, agrobiodiversity, and reforestation



Background and Context



Zimbabwe: Agriculture and environment

Throughout rural Zimbabwe, the household is the key unit of production. In some cases farmers have voluntary associations for contact with public, private, and non-governmental organizations. These associations revolve around pooling labor (known in the local Shona language as 'mushandira-pamwe'), savings clubs ('mukando'), collective purchasing, and collective selling. All farmers in Zimbabwe face a similar set of management decisions on how to allocate limited resources among crop production, livestock production, and off-farm employment. Overall productivity is determined to a large extent by how effectively farmers can manage their land and make use of limited amounts of water.

In 1996, agriculture employed 66 percent of the total labor force in Zimbabwe, industry 10 percent, and services 24 percent. Despite the fact that agriculture employs the majority of the population, a 2004 survey showed that agriculture contributed only 18.1 percent of the gross domestic product (GDP), whereas industry contributed 24.3 percent and services 57.7 percent. Major food crops in the country include cereals (maize, wheat, sorghum and millet) and vegetables; major cash crops are cotton, sugar, tobacco, and horticultural produce such as tomatoes, potatoes, and peppers. At independence in 1980, Zimbabwe inherited a dual agriculture economy, consisting of a highly productive mechanized large-scale commercial farming sector, mainly located in areas with good soil and favorable rainfall patterns, and a relatively low-input, low-output, community agriculture sector located predominantly in dry and infertile regions. Water-demanding maize is the dominant and preferred staple food across the country. The lack of crop diversity and the minor role of more drought-tolerant staples such as sorghum, millet, and cassava increase the vulnerability of food production in the face of climate change.

Approximately 70 percent of the country's soils are derived from granite and are sandy, light-textured, and of inherently limited agricultural potential. The extreme west of the country, in particular,

has large tracts of deep Kalahari sandy soils with low agricultural potential. The vegetation of Zimbabwe is mainly characterized by savanna woodlands interspersed with open grasslands and the dambos, or seasonally water-logged low lying areas, of the central watershed area. Zimbabwe's forest resources include natural moist forests, woodlands, and plantations. These forests cover about 54 percent of the total land area of the country, with a further 13 percent is covered by bushlands. Over a quarter of the woodland area is found on state lands, mostly in national parks, wildlife reserves, and forest reserves.

Zimbabwe's natural woodlands play an essential role underpinning the country's local livelihoods, including the provision of wild foods, traditional medicine, fuelwood, freshwater, fodder, and forage. Rural livelihoods depend on these natural products – wild foods and medicinal plants play key roles supporting local nutrition and health, firewood is the primary source of energy, and fodder and forage maintain the country's livestock and dairy industries. Forests furthermore house diverse wildlife species that form the foundation of the country's tourism industry, which is the third highest foreign currency earner after agriculture and mining. Forest ecosystems likewise provide important ecological services such as the maintenance of soil fertility, protection of watersheds, water regulation, and flood control.

Setting the local context

The Makoni district is located in Manicaland province in northeastern Zimbabwe. The province is bordered by Mashonaland East Province to the north, Mozambique Province to the east, Masvingo Province to the south and southwest, and Midlands Province to the west. Manicaland is subdivided into seven rural districts: Buhera, Chimanimani, Chipinge, Makoni, Mutare, Mutasa, and Nyanga. Makoni's main town, Rusape, has an estimated population of 29,300 and is located 170 kilometers southeast of Harare, the capital of Zimbabwe. The area is defined by its grasslands and a hilly landscape,

with a tropical climate that is mitigated in high altitude areas. The primary source of income in the region is the farming, with tobacco and maize as the main crops.

The tobacco sector in Zimbabwe has historically made a substantial contribution to the country's GDP. In 2012, Zimbabwe received US\$771 million from tobacco exports, at an average price of US\$5.94 per kilogram. Like many industries with deep roots in Zimbabwe, the tobacco sector was once dominated by large-scale, predominantly white, commercial farming interests. Recent decades, however, have seen sizable growth in the number of smallholder farmers joining the tobacco-growing sector. Between 2012 and 2013 alone the number of tobacco farmers increased from 22,000 to nearly 65,000, with more than 80 percent of these new farmers qualifying as smallholders that grow the cash crop on an average of 1.3 hectares of land. In the 2013 growing season, about 77,910 hectares of land were under tobacco production compared to the 56,377 hectares of land the year before – this is a 38 percent increase.

Smallholder tobacco farming as a driver of deforestation

Deforestation has been an endemic problem in Zimbabwe. According to a World Bank study conducted in 2010, 62 percent of the population resides in rural areas, and a large proportion of these rural residents depend on firewood as their primary source of household energy. From 1990 to 2005, Zimbabwe endured a decline of about 21 percent in forest cover, amounting to approximately 312,900 hectares. Many of the native forests in Zimbabwe are old growth, ranging in age between 75 and 150 years, meaning that deforestation creates long-term changes in local ecosystems and available ecosystem services. High demand for firewood has driven the rate and scale of deforestation in the countryside, including in newly resettled areas that were inaccessible prior to the land reforms of 2000. The increase in smallholder tobacco farming in recent years has only served to exacerbate the problem.

When tobacco leaves are harvested from the field, they must undergo an energy-intensive drying process, known as curing. This usually takes place in a specialized barn where heated air is circulated to extract moisture from the tobacco leaves. Coal and wood are the most common fuels used in the curing process, which takes roughly one week. Wood is the most accessible fuel, as coal and electricity are beyond the means of most farmers, but it is far less efficient than coal, so a greater abundance is required to complete the curing process. The majority of smallholder tobacco farmers rely solely on

firewood to cure their tobacco, and consequently turn to degrading indigenous forests to meet their fuelwood needs. In 2011 alone, an estimated 46,000 hectares of forest were cleared, and 1.38 million cubic meters of firewood burnt, to cure a portion of the 127 million kilogram tobacco output. According to the International Tobacco Growers Association (ITGA), a smallholder farmer produces up to 1,400 kilograms of tobacco per hectare and needs seven tons of firewood to cure his or her crop. Cumulatively, smallholder tobacco farmers must cut about 5.3 million trees every year to support tobacco production in Zimbabwe.

Negative health impacts and food insecurity

In addition to being a driver of deforestation, tobacco farming is highly input-intensive, requiring large amounts of labor and pesticides. Chemical inputs are essential to tobacco farming and are both expensive and have highly negative impacts on the environment, local water quality, and public health. The use of chemicals leads to substantial soil erosion and high residual rates of persistent organic pollutants (POPs), which pose high risk for humans as they can easily enter the human body through the skin, nose, or ingestion. Once used, they remain in soil, sediment, fish fat, animals, and vegetables. Exposure to chemicals used in tobacco farming and curing such as DDT, methyl dibromide, and tamaron are all linked by a growing body of evidence to reproductive failure, deformities, cancer, and immune system disruption.

Tobacco is furthermore an export crop that does not contribute to food security in a highly food insecure country. Land that might otherwise be used to produce food for local people is being dedicated to a crop that makes cigarettes and other tobacco products. 87 percent of tobacco-growing farmers reported that they devoted less than five acres of land for food crops, indicating a high susceptibility of tobacco farming households to food insecurity. The increase of land for tobacco cultivation also reduces rangelands available for livestock production, and increases land degradation and siltation of rivers.

The birth of an organic farming movement

Like many regions of Zimbabwe, smallholder farmers in the Makoni district have gravitated in recent years towards tobacco farming. The industry, however, has proved to be labor intensive and input-intensive in ways that are neither sustainable nor economically viable. Farmers also noted greater risk of exposure to chemicals and witnessed substantial environmental degradation from changes in land-use.

“As local farmers we have noted vast benefits of engaging in organic farming as a way of managing our natural resources and the opportunities presented by the initiative. Organic farming protects and enhances the environment and natural resources such as soil fertility, thereby increasing yield in a limited area, which is an element of crucial importance to the rural farmer.”

Mrs. Zvavamwe, Chair, Makoni Organic Farmers Association

In 2007, a group of farmers in Makoni came together to receive trainings from the Organic Network Forum on organic farming methods. Farmers were taught ways of integrating farming into standing forests to avoid cutting down trees. Techniques such as soil turning, crop diversification, and livestock rearing were introduced. Importantly, guidance was also given on how to transition away from heavy chemical fertilizer and pesticide dependence. Local farmers were instructed on how to replace chemical inputs with biomass, animal manure, as well as how to integrate compost into soil to improve water retention, reduce erosion, and improve drainage. Natural pest control was furthermore promoted by using locally available materials that would help to prevent crop damage. To this end, farmers were encouraged to maximize agroforestry in their fields and to reintroduce plant diversity, which is considered among the more effective ways to maintain the ecological balance that keeps pest populations in check.

This initial training led to the creation of the Makoni Organic Farmers Association, a community-based organization focused on promoting sustainable livelihoods, community development, and sound environmental management. In its earliest stages, the association focused primarily on mobilizing farmers and sensitizing them to the benefits of organic farming as an alternative to growing tobacco. Initially, local farmers were skeptical about the shift away from tobacco. However, as the benefits of organic farming became

clear, local farmers began to move in a big way away from tobacco and towards an eco-agricultural approach that would provide for enriched livelihoods and greater food security. With the help of the Organic Network Forum, the association began working with farmers to adopt organic farming standards that would allow their products to enter international organic markets.

A turning point came in 2011, when the Makoni Organic Farmers Association received a grant from Global Environment Facility Small Grants Programme (GEF SGP) implemented by UNDP, which was used to scale up activities and establish six new demonstration plots. The group also received additional training on organic farming techniques, a step that proved to be critical in the association receiving organic certification in 2012. Makoni Organic Farmers Association has become a force for positive change in local farming communities, reducing the use of inorganic fertilizers, and increasing use of organic fertilizers. Local farming communities have become aware of the need for environmental conservation, the importance of eliminating persistent organic pollutants, and the benefits that come from organic farming methods, including improved soil fertility, decreased soil erosion, improved nutrition, and greater food security. Most importantly, smallholder farmer are transitioning away from tobacco farming towards food production, which is providing for local self-sufficiency and improved food security.

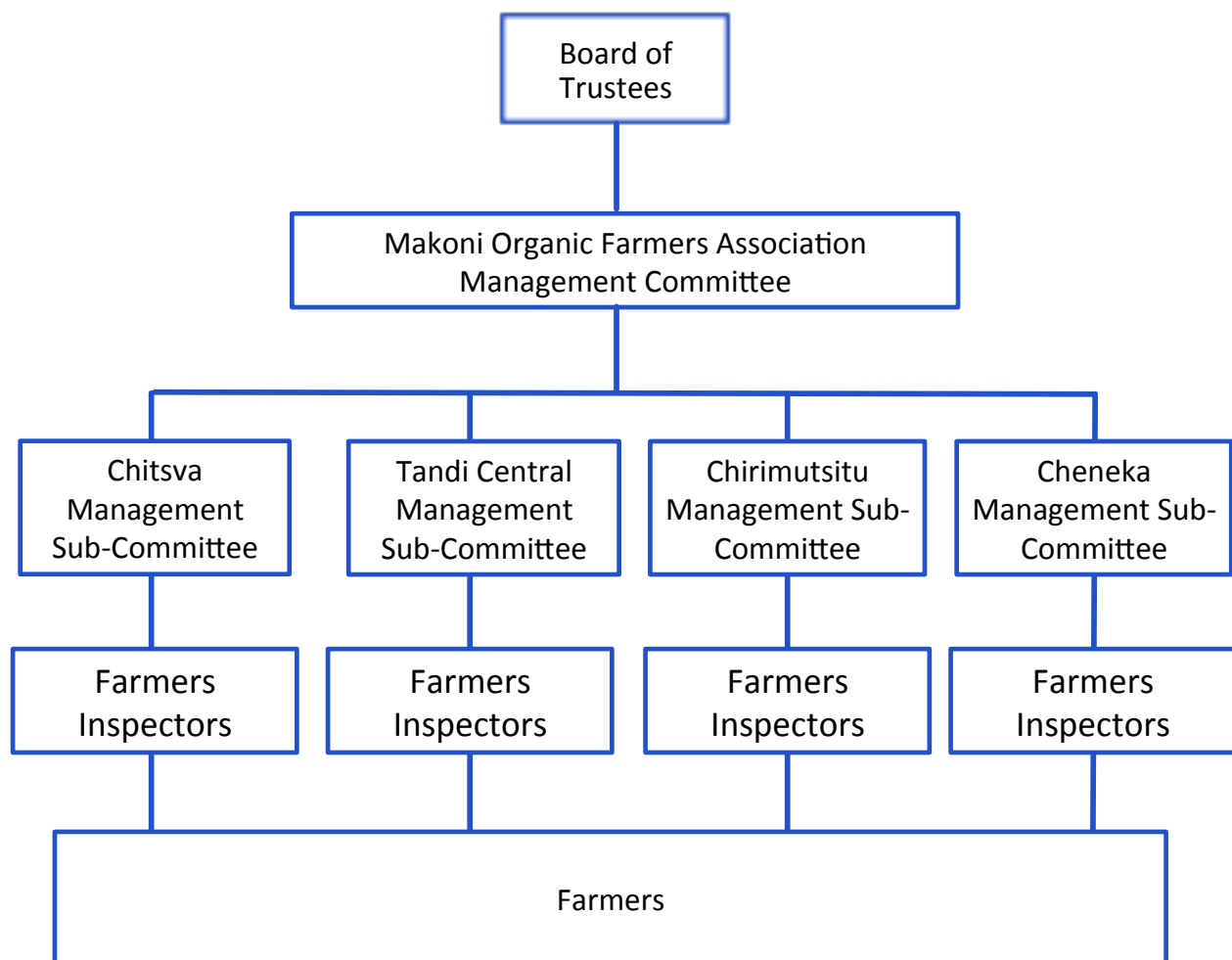


The association has taken form through two phases. The first phase focused on implementing a program to eliminate persistent organic pollutants by promoting organic farming practices, while the second phase focused on building organic farming skills and creating livelihood and income-generating opportunities for local farmers that respected environmental health and ecosystem integrity. Makoni Organic Farmers Association has made it their goal to use organic agricultural techniques to restore environmental health and reduce external inputs by controlling pests naturally. By combining modern and traditional resource management techniques, the group has been able to increase agricultural yields, bolster the resistance of local crops to diseases, and improve livelihoods by phasing out dependence on these chemical inputs. Local farmers have become aware of the health hazards associated with persistent organic pollutants and are using low-intensity farming as a way of reducing and entirely phasing out their dependence. Organic farming

integrates biodiversity, agrobiodiversity, and soil conservation and takes low-intensity farming one step further by eliminating the use of chemical fertilizers, persistent organic pesticides, and genetically modified organisms. This approach not only improves human health and agrobiodiversity, but also off-farm environmental health.

Governance and institutional arrangements

The project is owned and driven by the community. Farmers are involved in all phases of the project, including formulating proposals, drawing up action plans, making decisions on the use of funds, implementing project activities, and monitoring of project activities. Makoni Organic Farmers Association has its own bank account and funds received, such as those from the GEF SGP, go directly into the account, which is managed collectively.



Key Activities and Innovation



The vision of the Makoni Organic Farmers Association is to restore the confidence of Makoni farmers in their ability to manage their lands in a way that provides for local livelihoods and protects the environment. The association's projects seek to improve the quality of life of their members by offering income generation opportunities in organic farming, apiculture, aquaculture, ecosystem restoration, and organic mushroom production. The association's main objectives are to: (i) strengthen local capacity in organic farming, the elimination of persistent organic pollutants, and biodiversity conservation; (ii) enhance the capacity of local communities to access organic markets domestically and internationally; and (iii) operate a farmer resource center that is responsive to local needs in the areas of health, conservation, and income generation.

To achieve its objectives, the association undertakes a diverse range of activities. Workshops and demonstrations raise local awareness of organic farming and support farmers to build capacity in systems of conservation farming, agroforestry, and apiculture. Farming methods promoted by the association minimize the use of external inputs and optimize use of local resources, including composting to improve soil fertility and integrated pest management to more naturally manage pests and diseases. Further programs focus on eradicating invasive species, and supporting improvement of local leadership and management capacity. Extending beyond their work to support sustainable land management, the Makoni Organic Farmers Association also builds institutional capacity for farmers to come together as an incorporated association in order to facilitate better market access and increased negotiating power. In a parallel program to add value to the products of local farmers, the association assists farmers to meet the organic certification standards developed by the International Federation of Organic Agriculture Movements (IFOAM), a worldwide umbrella organic agriculture movement, as well as to meet the fair-trade standards developed by ISO65, an international system based on independence, transparency, quality and equality. The association facilitates access to organic seeds through seed fairs and seed certification programs, offers farmers

preliminary organic certification, and networks with the IFOAM-accredited certifying board to conduct final organic certification.

Capacity building

The association employs a three-pronged approach to its activities. The first is a focus on capacity building in order to create a strong foundation for the successful implementation of project activities and ensure the long-term viability of the association. Farmers receive intensive training on organic farming standards and techniques, integrated pest control and management, sustainable livestock rearing, beekeeping, and organic mushroom and vegetable production. Trainings aim to equip member farmers with the knowledge and skills they need to effectively and profitably conduct organic farming. Key topics are covered, such as persistent organic pollutants, biodiversity issues, and climate change. Examples of different ways to plant without using or minimizing chemical or synthetic fertilizers are presented for various environmental contexts. The association has also constructed 96 liquid manure plants to improve soil fertility management, which are now being used by farmers in the Makoni district. After participating in these trainings, farmers are well acquainted with eco-friendly methods available to them, ranging from the use of traditional knowledge to the use of organic inputs. After the trainings, mostly led by the association's partner Zimbabwe Organic Producers and Promoters Association (ZOPPA), farmers are positioned to exchange knowledge with other farmers in the network and, importantly, mentor farmers who are new to the association.

Expanding organic farm production and diversifying livelihoods

The second dimension of the Makoni Organic Farmers Association's approach is scaling up organic farming activities. The association works in multiple areas to increase income and support its objective to make organic farming productive for association members. The

association has established seven one-hectare organic farming gardens for demonstration activities, training, and harvesting where 120 farmers are engaged in integrate cultivated of garlic, onions, leafy vegetables, beans, sweet potatoes, and grafted mangoes and oranges. The association has also undertaken a range of other activities, as outlined below.

- **Aquaculture:** Organic aquaculture activities are being carried out on 14 different sites. Farmers are maintaining their own fish ponds for local production. Organic matter from organic farming activities (such as fifer, banana stems, and maize crashes) are used to feed the fish.
- **Apiculture:** Beekeeping is undertaken on 17 different sites. At the moment the association has 120 beehives out of its target of 590 beehives. Each beehive has the capacity to produce two to three tons of honey annually, which will be sold to domestic markets.
- **Mushroom farming:** As an income diversification project, mushroom farming is being carried out in 41 households. The average annual production has been 20 kilograms of mushrooms per household, which has strengthened food security and provided an additional source of household income.
- **Chicken rearing:** Currently 16 groups, each containing between four and eight households and together representing approximately 155 farmers, are engaged in organic chicken rearing. The groups follow organic standards to raise native

breeds of chicken that are adapted to the local environment and climate.

- **Tree nursery management:** More than 25 farmer groups are now undertaking tree nursery management as an income diversification strategy and an environmental restoration exercise. Taken together, the tree nurseries produce over 10,000 trees annually, which are sold and planted in the region.

Organic certification

The final dimension of the association's work is organic certification. Member farmers are supported to bring their practices and land management techniques up to international organic certification standards, so that their products can be marketed domestically and internationally at a premium. Farmers receive training on inspection methods and techniques. Each farmer is given an organic inspection form to ensure that they are in compliance with the 'participatory guarantee system', which helps to carry out individual inspection and peer-to-peer inspection, respectively.

A total of 224 farmers have been organically certified, which has enabled the association to secure a contract with one of the leading organic export companies in the region, VegFlora. As one example, to date the association has managed to export 1,134 kilograms of organic peas to foreign markets, bringing in US\$1,360. Plans are underway for the construction of an organic produce collection centre, which would become a central collection and distribution point for all organic produce in the region.



Impacts



ENVIRONMENTAL IMPACTS

Prior to the inception of the association, the farmers of Makoni Organic Farmers Association predominantly practiced tobacco farming, which is associated with deforestation in order to provide wood for tobacco curing and the heavy application of agrochemicals, which led to high residues of persistent organic pollutants in local soil and water systems. The arsenal of chemicals used by farmers to increase the quality and quantity of their crops included DDT, methyl bromide, rogor, and tamaron. In response to the environmental and health issues associated with tobacco farming, the Makoni Organic Farmers Association started the process of eliminating chemicals from the local repertoire by promoting organic methods in farming and the use of natural remedies for pest and disease control through integrated pest management. By offering inexpensive, locally available alternatives to agro-chemicals – and by shifting the local farming economy towards organic farming methods and techniques – the Makoni Organic Farmers Association is helping to protect biodiversity and maintain healthy, functioning ecosystems.

Reducing agrochemicals

Contaminants such as inorganic fertilizers, herbicides, and insecticides that are widely used in conventional agriculture, and deemed to be requisite for tobacco farming, have serious negative health implications for people and for the environment. Agrochemicals used in tobacco and vegetable farming have severe negative impacts on aquatic life and the environment. Chemical runoff from agricultural areas is a primary contributor to eutrophication – the suffocation of aquatic plants and animals due to rapid growth of algae, a phenomenon that is also referred to as ‘algae blooms’. This rapid algal growth is caused by increases in the amounts of nitrogen and phosphorus in bodies of water due to agricultural runoff, and leads to diminished biodiversity in lakes, rivers, and other bodies of water around the world. The presence of these chemicals in water and riverine systems furthermore exposes

both humans and livestock to health hazards through contact with and ingestion of contaminated water.

Agrochemicals also have detrimental impacts on terrestrial systems, where herbicides and insecticides produce impacts far beyond the weeds and insects they are designed to target. When introduced into an eco-agricultural landscape, chemicals make their way up the food chain as targeted insects and plants are consumed by other animals, accumulating at dangerously high levels in top predators, including humans, with negative implications for health.

Makoni Organic Farmers Association works with farmers to encourage the use of natural fertilizers and compost. Notably, the association has reduced the use of dangerous chemicals including DDT, methyl bromide, rogor, and tamaron by substituting them with local organic pesticide plant remedies such as marigold (*Tagetes* spp.) and hoary pea (*Tephrosia* spp.). These species are recognized for their ability to replace chemical fertilizers at a lower cost. The association has also constructed over 96 liquid manure plants to improve soil fertility management in the Makoni district, providing an alternative to chemical inputs. Some farmers have constructed their own manure plants after learning the technique from demonstrations. Unlike chemical fertilizers, which are expensive, natural fertilizers enable even the resource-poor farmers to manage their land sustainably. Organic farming has helped to reduce human and livestock exposure to chemicals by eliminating the use of persistent organic pollutants in local farming practices. This reduction in agrochemicals has also contributed to the restoration of aquatic and river ecosystems.

Reduced deforestation and tree planting

Most tobacco curing and processing in Zimbabwe is done using wood energy. This has been true in Makoni as well, and is a major contributor to deforestation and forest degradation in the region. One hectare of trees is required to cure one hectare of tobacco. Over the past three years, it is estimated that more than 330,000 hectares of indigenous forests – that is 1.7 percent of the native forest cover

in the country – were destroyed annually, the majority of which occurred at the hands of smallholder tobacco farmers.

Organic farming has enabled farmers to move away from tobacco farming, creating a viable economic alternative that reduces pressure on local forests. The association promotes use of local agrobiodiversity in organic agricultural systems, and has created a living gene bank through the establishment of 10 hectares of farmland for open-pollinated varieties of maize and wide varieties of legumes. To further conserve and promote genetic diversity, Makoni shares varieties that have proven to be the most bountiful and resilient with farmers across the region at seed fairs. These locally adapted varieties can serve as a powerful resource for farmers seeking to shift away from environmentally-destructive tobacco farming.

In addition to the shift away from forest-depleting tobacco farming, Makoni Organic Farmers Association has worked with its members to establish and operate tree nurseries and undertake reforestation efforts. With an annual output of more than 10,000 trees, the tree nurseries bringing attention to the association as an agent of positive environmental change in the region. Reforestation has been undertaken using multi-purpose trees – using some that have positive impacts on pest control, others that have medicinal value to local communities. In particular, five types of multiple purpose tree species have been planted on land where tickberry (*Lantana camara*), a noxious invasive alien species, was cleared. These include gliricidia (*Gliricidia sepium*), kei apple (*Dovyalis caffra*), sesban (*Sesbania sesban*), moringa (*Moringa oleifera*), fish-poison bean (*Tephrosia vogelii*), and acacia (*Acacia angustissima*). Alternative income generation projects in beekeeping have also helped to create livelihood options within standing forests.

The protection of forests has important implications for wildlife protection in the country and protection of some globally endangered species, including, as just one example of many, the black rhino (*Diceros bicornis*). The worldwide population of black rhino is just over 4,000. Zimbabwe holds the fourth greatest concentration of this species and has seen populations slowly rise since the late 1990s. The 2008 population of 490 was up from 320 when the country's State of the Environment Report was conducted in 1998.

SOCIOECONOMIC IMPACTS

The majority of farmers in Zimbabwe, including those in Makoni, depend on agriculture for their livelihoods and wellbeing. By focusing on organic farming, self-sufficiency, food production, and reducing dependence on a cash crop requiring intensive chemical and financial inputs, Makoni Organic Farmers Association has significantly improved the quality of life of a traditionally marginalized and resource-constrained population of rural farmers. Participating farmers now engage in diversified agricultural production that includes organic dry land farming, vegetable production, tree nursery management, mushroom production, aquaculture, beekeeping, agroforestry, and chicken rearing.

More than 450 farmers have been trained in organic farming, and many have shifted away from tobacco farming to grow organic vegetables, including garlic, onions, tomatoes, mushrooms, and

beans. In addition to the substantial increase in food security for local families, the sale of organic produce has created an average revenue stream per farmer of US\$250 to 300 per growing season. Chemical-free products fetch higher prices in domestic and international markets. Notably, the association has obtained international organic certification for 224 of its farmers, allowing them to access international organic markets. In September of 2013, the association entered into an agreement with VegFlora to export 1,134 kilograms of organic peas to foreign markets, bringing in US\$1,360.

The association is composed entirely of smallholder farmers whose mainstay is agricultural production. Organic farming practices and certification have enabled farmers to rise from mere production for subsistence and household consumption to production for commercial markets. This shift has empowered farmers to be entrepreneurs in the organic marketplace and has improved their income security. The diversified livelihood options provided by organic produce and meat production have likewise built the capacity of local communities to address food security improve nutrition levels in a holistic manner.

Reduced use of chemical pesticides and fertilizers has had positive economic and health implications for the local population. Prior to the initiative, farmers commonly used agrochemicals as a way of increasing the productivity of their farms. With the advent of organic farming, the association is eliminating chemicals by promoting natural remedies for pest and disease control through integrated pest management. Resource-poor farmers no longer need to spend what amounted to substantial sums of money on chemical inputs, and can rely on organic farming techniques to improve the productivity and profitability of their farms. This shift in farm management has improved soil fertility, reduced soil erosion, and improved local health.

The new organic farming economy also provides benefits in terms of resilience to climate change and other social, economic, and environmental shocks. Zimbabwe has experienced climate change and weather variability most acutely in its rainfall patterns, with rain coming later than usual in the season, and often not coming at all, leading to prolonged droughts. Many of the organic farming techniques which the association is advancing – including mulching, producing organic manure pits, and water harvesting methods – are enabling farmers to be resilient in the face of climate variability. At the same time, a diversified income base that now includes horticulture, beekeeping, aquaculture, mushroom production and more is reducing farmer dependence on a single industry or market, as was the case with tobacco farming.

GENDER IMPACTS

Women have played an important role in the evolution of the association and continue to be the backbone of the various initiatives. Organic farming was a new concept in the region, and farmers were initially skeptical. In terms of behavior change at the community level, women have been instrumental in championing organic farming. In most of the participating villages, more women are engaged in association projects than men. Out of a total membership of 450 farmers, 248 are women. Of those farmers that

have received international organic certification, 66 percent are women. Women have also been actively involved in leadership of the association and have assumed key decision-making positions. The association is currently chaired by a woman and there is equal male-female representation on the various project committees.

POLICY IMPACTS

On the local and national level, Makoni Organic Farmers Association has been active in promoting policies that will benefit its members, the environment, and lead to a policy environment that is conducive to innovation and growth in the local organic farming sector. In addition to advocating for the eradication of persistent organic pollutants, the association has been active in lobbying for the legal and policy space to adopt organic farming standards across Zimbabwe.

When the association first started, farmers interested in pursuing certification relied on Ecocert, an organic certification organization founded in France in the early 1990s, and the International Federation of Organic Agriculture Movements. Among several barriers facing farmers in Zimbabwe was that working through these groups was often cost-prohibitive and that some of their standards did not apply in the national context. As such, the association worked through the Organic Network Forum and the Zimbabwe Organic Promoters Association to lobby for the formulation of organic standards specific to Zimbabwe. After four years of deliberations and studies, with the help of the ZOPPA, the country now has national organic standards that have been approved by both the Standards Association of Zimbabwe (SAZ) at national level in 2012, and IFOAM on the international level in 2014.

Members of the Makoni Organic Farmers Association were among the first to use the Zimbabwe Organic Standards label to sell their products and have been among the first farmers in the country to receive international organic certification. As a complement to this certification, the association has come up with its own by-laws to govern the implementation of organic farming and agricultural production methods. In addition, they have set up their own local by-laws to safeguard against tree cutting and deforestation.

The past few years have been characterized by a growing interest in the development of organic agriculture throughout the entire African continent. In 2011, the African Union officially recognized the important role that organic production has to play in the strengthening food security, reducing poverty, and adapting to climate change. It has put in place policies such as the 2011 African Ecological Organic Agriculture Initiative at the IFOAM-African Union Conference in Nairobi, to which Zimbabwe is a signatory. In addition, the African Organic Conference held in Lusaka, in May 2012, provided an important platform for discussion and sharing of experiences.



“As local farmers we have noted vast benefits of engaging in organic farming as a way of managing our natural resources and the opportunities presented by the initiative. Organic farming protects and enhances the environment and natural resources such as soil fertility, thereby increasing yield in a limited area, which is an element of crucial importance to the rural farmer.”

*Mrs. Zvavamwe,
Chair, Makoni Organic Farmers
Association*

Sustainability and Replication



SUSTAINABILITY

A strong sustainability plan has been put in place for the association. One critical component has been ensuring that the association is able to self-sustainably evaluate and inspect member farmers to ensure that they are complying with organic standards. Farmers throughout the association have been trained in results-based quality management systems as well as internal control systems, so that the association is able to independently run and manage the organic certification program. Members of the Makoni Organic Farmers Association are able to regulate each other and new members on compliance issues.

The association is also growing in terms of financial sustainability, as international organic certification means that contributing farmers can penetrate new markets and increase revenue streams. The greater the economic incentives to stay engaged in organic farming, the more likely the association is to sustain its programming and to expand into other regions and grow its membership.

REPLICATION

Makoni Organic Farmers Association uses a number of different strategies to share its best practices and transfer lessons learned. Favored platforms have included agricultural shows, seed fairs, and garden shows. At these events, the association shares DVDs, articles, fact sheets, and posters that detail project activities and results. The association has also branched out into less conventional, but highly effective, mechanisms such as the performing arts and community choirs, who use music and performance as a platform to share information about the association and its achievements. Makoni's active outreach and promotional programs have enabled the scaling of the association's programs across the region. Initially started in six villages, and the association has expanded its projects across the entire Tandi ward and is now working with 22 villages.

Because of its demonstration plots and learning farms, the association is likewise well-positioned to facilitate peer-to-peer exchange and to host site visits from other communities looking to learn about organic farming techniques. Farmer cooperatives, community-based organizations, and GEF Small Grants Programme recipients from all regions of Zimbabwe periodically visit project sites to learn first-hand about the association's work and programming. Notably, among those who have visited Makoni's demonstration plots, several farmer cooperatives have gone on to replicate the association's model, including those from the towns of Svosve in the Marondera District and Juru in the Goromonzi District.

PARTNERS

Partnerships have been an important determinant of success for the association. NGOs such as the Organic Network Forum and Fambidzanai played a key role in offering training and technical support on organic farming. The Zimbabwe Organic Producers and Promoters Association has trained farmers on organic standards and certification, assessed the level of compliance of Makoni farmers to organic farming standards, and has assisted them in the marketing of organic produce. The Aquaculture Zimbabwe Trust has trained farmers on fish farming, an alternative income generation activity. Makoni Organic Farmers Association has furthermore built partnerships with government departments that include Agritex, Veterinary Service, Environmental Health Technicians, and the Forestry Commission, all of whom have provided technical advice and extension services focusing on organic farming and ethno-veterinary techniques. Partnerships have likewise been forged with local government authorities, including the Makoni Rural District Council, which provided an enabling environment for the association to work as well as with land for gardens, fishponds, and for constructing a marketing centre.

Full partner list

- **Global Environment Facility Small Grants Programme (GEF SGP):** Makoni Organic Farmers Association was awarded a grant of US\$50,000 to implement a range of activities that included training in organic farming, training internal standards inspectors, establishing seven organic demonstration gardens, distribution of seed starter packs, the construction of a farmers' resource centre, and training in beekeeping, aquaculture, mushroom production, and tree nursery operation. Makoni complemented SGP funding through co-financing, mainly in-kind by providing locally materials and labour. Total co-financing from the association was US\$37,060.
- **Organic Network Forum:** This forum offered capacity building support through training, technical expertise on organic farming, and monitoring and evaluation.
- **Zimbabwe Organic Producers and Promoters Association (ZOPPA):** A member of the International Federation for Organic Agriculture Movement, this association helped train farmers on organic standards and certification. ZOPPA was also involved in assessing the level of compliance of Makoni farmers to organic farming standards and assisted in the marketing of organic produce.
- **Fambidzanai:** This NGO provided training in beekeeping.
- **Aquaculture Zimbabwe Trust:** The Aquaculture Zimbabwe Trust trained farmers on fish farming techniques.
- **Government of Zimbabwe:** The association partners with a number of Government of Zimbabwe agencies, including those responsible for agricultural extension, veterinary services, environmental health, and forestry. The government agencies have provided technical advice and extension services focusing on organic farming and animal husbandry.
- **Makoni Rural District Council:** This local government body provided an enabling policy environment and facilitated access to land for construction of the marketing centre.
- **University of Zimbabwe - Faculty of Agriculture:** The University worked with the association to conduct research on the evaluation of pesticidal plants that help to fight vegetable pests and the natural remedies that can be used for controlling pests. The University also worked to document farmers' ethnoecological knowledge, practices, and attitudes on pesticidal plant use.





“Community participation in any project will be a key to project success. For the community to participate they need empowerment. Hence policy makers should empower communities to restore equity, respect, justice, and stewardship of their shared environment both among people and in their relations and to contribute to food sovereignty and reduction of poverty for organic farmers.”

Edwin Mazhawidza, Organic Network Forum

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