The problem: Agriculture is the source of most of the food we consume. 70% of low-income people worldwide work in agriculture and on their small farms, and the overwhelming majority of them are at risk of food and nutrition insecurity and poor health.

The solution: Nutrition-sensitive agriculture is a food-based approach to agricultural development that puts nutritionally rich foods and dietary diversity at the heart of overcoming undernutrition, overnutrition and micronutrient deficiencies. Agriculture plays an important role in providing both nutritious food and sustainable livelihoods and in achieving Sustainable Development Goal 2: Zero Hunger.

An internationally recognised challenge, requiring a localised response

Many agencies recognise that agricultural systems need to provide nutrition as well as income. Large-scale farming is often centred around profits and does not consider the nutritional value of crops, the importance of diversity, the protection of natural resources, or indeed the rights and needs of the local population.

We believe that well-diversified, small family farms, which are built on traditional knowledge and skills complemented by new practices and innovation, are the most successful systems for helping rural families to grow the food they need in challenging environments. The knowledge is held within the family because the family members provide most of the farm labour.

Our three areas of expertise are: gender and social inclusion, sustainable farming and enterprise development.
The Ripple Effect principles

Ripple Effect’s guiding principles for implementing nutrition-sensitive agriculture in rural Africa align with the industry standards, developed by USAID, to improve nutrition through agriculture.

1) Increase the availability of, and access to, diverse, nutritious foods

- Ripple Effect promotes kitchen garden crop production, bringing farmers together to share skills and resources for growing nutrient-dense food at home.
- We focus on the diversification of crops, to bring greater nutrition, biodiversity and resilience to the farm.
- Where appropriate, we encourage the integration of livestock into the farm system. Cattle, poultry, rabbits and goats provide additional animal-based dietary protein, and their manure improves soil fertility.
- We ensure environmental protection and the sustainability of crop and livestock production through our agroecological approach, which focuses on farm regeneration and soil health.
- We promote indigenous vegetables, which are suited to local growing conditions and provide essential vitamins and micro-nutrients, such as black nightshade (calcium, ascorbic acid, β-Carotene) and amaranths (calcium, iron, copper, essential vitamins, magnesium, zinc and manganese), most of which are open pollinated and easy to access.
- We promote post-harvest drying and storing techniques to ensure year-round access to food.

2) Encourage farmers to use their income for better diets, health, and hygiene

- Our enterprise development work supports communities to attain financial resilience and have diversified livelihood sources to continuously cater for their family’s needs.
- Ripple Effect facilitates access to a range of financial services. Our work with savings and lending groups enables families to cater for medical emergencies, as well as providing food and household essentials like soap and utensils. Linkages to formal financing can also help unlock services such as group medical cover.
- We support project participants in adding value to foods such as turning milk into yoghurt, and creating a nutritious porridge from vitamin A-rich potatoes and iron-rich beans.
- We encourage them to participate in market systems as producers, employees, employers and consumers of the products and services created.
- We provide training in WASH (water, sanitation, and hygiene) including the building of simple hand-washing stations called Tip Taps, rainwater harvesting and sanitary disposal at the household level.
3) Recognise the central role of women in agriculture and nutrition

- We ensure that a minimum of 65% of our project participants are women.
- As an organisation, we invest significant time, resource and research capacity into ‘gender and social inclusion’, as one of our three programmatic areas of expertise.
- Culturally, women have carried the burden of responsibility on the farm for providing adequate food and nutrition for the whole family. Ripple Effect engages all family members to contribute to the household workload – often resulting in better farm yields.
- We involve everyone in gender trainings to strengthen collaboration between men and women at the household level. We use Transformative Household Methodology (THM) - an interactive approach developed by us - to strengthen women’s participation in decision making at the household level.
- Our gender and social inclusion expertise means that we look more widely to actively include marginalised groups such as people with disabilities, refugees/internally-displaced peoples, or those with HIV/AIDS. Our inclusion policy ensures that no one gets left behind.

4) Generate a demand for diverse, nutritious foods

- We ensure that communities across the region have information and knowledge to make informed choices on selecting proper nutritious food, thus creating a market demand.
- Ripple Effect hosts public field days at the village and regional levels to showcase farmers’ agroecological practices and facilitate the sharing of knowledge.
- We organise exchange visits so farming groups can swap knowledge on safe, nutritious food production and consumption.
- We design training programmes specifically on nutrition at a household level.
- Our projects are designed to encourage the sharing of knowledge and skills between community members. For every family we reach directly with our agroecological farming practices, at least three more families benefit thanks to our ‘peer farmer approach’.
- We use the media (radio and TV) to sensitise the public on the need to produce their own nutritious food using sustainable, regenerative practices.
5) Support a broad view of nutrition in our policies and programmes

- We work closely with national and local governments to showcase how our approach to sustainable agriculture works. Many of our activities have now been adopted by governments as a result.
- We work through government officers such as Community Health Volunteers or cluster associations, whose role is to promote hygiene and sanitation at the community level.
- Our ‘peer farmer approach’ focuses on building influencing individuals at the community level. We form community institutions such as cooperatives and peer farmer associations, building their capacity so they can engage better with government.
- We work in partnership with, and through, associations that advocate for policy change in agriculture - from conventional agriculture to agroecological nutrition-sensitive agriculture.

Ripple Effect’s work also aligns with UNICEF’s conceptual model on nutrition security (below). We focus on interventions to increase food security and health, as well as addressing the wider causes of inequality, including the quantity and quality of available resources, and the social and political context.
Ripple Effect’s systems approach ensures:

1) **Resilience.** Working across multiple outcomes creates protection in case of shocks. For example, if a change in climate causes crop failure, a family will still be able to buy the food they need for a diverse diet, thanks to alternative sources of income.

2) **Inclusivity.** By working at a household level, the interventions are adapted towards differing family needs including gender dynamics and access for those with disabilities.
Our farm systems approach to achieve nutrition-sensitive agriculture

A farm is a system that comprises integrated and complementary sets of activities which farmers perform using their available resources, to maximize productivity and net farm income on a sustainable basis.

Sustainable agriculture considers how multiple natural resources such as soil, water, livestock, labour, energy, capital, and others are managed as a system. The farming family is at the centre of managing these resources.

Well-diversified small farms, which are based on traditional knowledge and skills, and where different elements complement each other, are the most successful for helping rural families to grow the food they need in challenging environments - thus adapting effectively to the climate crisis and restoring the ecosystem for current and future generations. Therefore, when designing and implementing projects with communities, we consider the systems approach.

An integrated farming model

This diagram shows how various elements and enterprises are intertwined within a farm, to form a complex and sustainable system. Crops thrive better because the soil fertility is improved as a by-product from the use of the biogas plant, dairy unit, compost and fishpond. On the other hand, the dairy unit gets fodder from the crop unit and power from the biogas plant. Effective management of this interaction leads to a sustainable self-running farm where the outputs from one unit become the input for the other unit.
Nutrition-sensitive agriculture in action: Burundi

In rural Burundi, Ripple Effect works with community health workers and Mamans Lumières (Light Mothers) to identify children with acute malnutrition.

Fully trained Mamans Lumières support other mothers to fight hunger and malnutrition in children under 5 years old. They share vital knowledge on how to create thriving kitchen gardens that provide vegetables all year round, even in the face of the climate crisis. They also advise mothers how to prepare nutritious meals for their families, shine a light on family planning and promote good sanitation and hygiene.

To screen children for malnutrition, we use the well-recognised Mid-Upper Arm Circumference (MUAC) tape tool. We can then identify those who have severe malnutrition and need to be referred to a specialised health care centre, and those who are suffering from moderate malnutrition who we can support through Ripple Effect training programmes.

Our programmes address this malnutrition through:
- seed distribution, with an emphasis on bio-fortified seeds in many cases.
- cooking demonstrations, where mothers - especially those who are pregnant and lactating - come together to learn about good cooking practices.
- the organisation of centres for learning and nutritional rehabilitation, where mothers and children attend for 12 days to receive full meals and training support.

“I most enjoy training and teaching other mothers like me how to eat nutritious food by adding vegetables to their meals. If they can’t afford vegetables, we train them how to plant kitchen gardens around their homes. This helps them to get vegetables easily without going too far.”

Claudine, Light Mother, Ripple Effect Burundi

Please talk to us further about our work on nutrition-sensitive agriculture:

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