



FIXING THE FOOD SYSTEM, FARMERS FIRST

A GUIDE TO HOW TRÓCAIRE DOES
FOOD AND AGRICULTURE

trócaire

CONTENTS

**WHY DO WE
WORK ON
FOOD AND
AGRICULTURE?**

page 3

**OUR
AGROECOLOGICAL
APPROACH**

page 4

**WITH WHOM DO
WE WORK?**

page 4

**HOW DO WE SUPPORT
SMALLHOLDERS?**

page 5

**HOW IS
IMPACT
MEASURED?**

page 8

**WHAT DOES IT
LOOK LIKE?**

page 9

**REFERENCES
AND RESOURCES**

page 11

Front cover photo: Community meeting to discuss successes and challenges of women's valley gardens such as distances for transporting produce from the land they were allocated with partner MEWODA, Sierra Leone. The agroecological elements of Efficiency, Human and Social Values and Responsible Governance are at play here.

All photo credits to **Rose Hogan**, except where otherwise stated.

WHY DO WE WORK ON FOOD AND AGRICULTURE?



Women, men and youth discussing use and management of runoff water, Rwanda.

Since 2014 the number of undernourished people in the world has continued to increase¹². If this trend continues the Sustainable Development Goal 2, (Zero Hunger) will not be met and Africa will contain the greatest number of underfed people. Already, over half of Africa's population is food insecure because of environmental degradation, conflicts, climate change and structural drivers of inequality. In 2019, close to 750 million – or nearly one in ten people in the world – were exposed to severe levels of food insecurity. The COVID-19 pandemic added up to 132 million people to the total number of undernourished in the world in 2020 and has exposed the already broken food systems³ (in every region of the world, healthy diets are unaffordable to many people, especially to those who are experiencing poverty). However, the pandemic has also given visibility to community food innovations and opened up opportunities for transformation of food systems⁴.

The majority of the world's poor are women. While rural women play a major role in productive activities, gender inequality in agriculture is stifling productivity. Trócaire is keenly aware of the irony that, although women produce most of the food in the global south, women are the worst fed and poorest people on the planet! Women⁵ and girls represent 60% of all undernourished people

Trócaire is keenly aware of the irony that, although women produce most of the food in the global south, women are the worst fed and poorest people on the planet!

in the world.⁶ Food insecurity, like other stresses and crises, also exacerbates gender-based violence⁷. Trade and agricultural policies incentivise domestic production of staple foods but seldom support the diverse cropping needed for nutritious diets⁸. This is why we work on food and agriculture and why we strive to mainly partner with women and youth (especially young women). Although it is known that investing in women farmers is one of the most effective strategies for reducing extreme poverty and hunger⁹, women are seldom targeted effectively or reached by agricultural investments.

THE MAJORITY of the 1.3 billion people in poverty worldwide are women.



.....investing in women farmers is one of the most effective strategies for reducing extreme poverty and hunger.

We have analysed the dominant models of agriculture and food¹⁰ to find that the current input-intensive, productivity focussed agricultural system is failing on multiple levels. It is promoting social inequalities and forced 'economic' migration, especially youth migration, from rural areas; it is leaving female-headed and child-headed households behind and advancing inefficient and wasteful cash-focussed food chains. Monoculture systems fly in the face of women's farming interests which focus on diverse nutritional, seed exchange, sharing culture and trading opportunities.

Wild natural sources of foods and medicines, the knowledge of which women are custodians, are removed and threatened by extinction due to industrial agriculture. Input-intensive agriculture is undermining the ecological conditions for agriculture, including fertile soils, biodiversity and a stable climate.



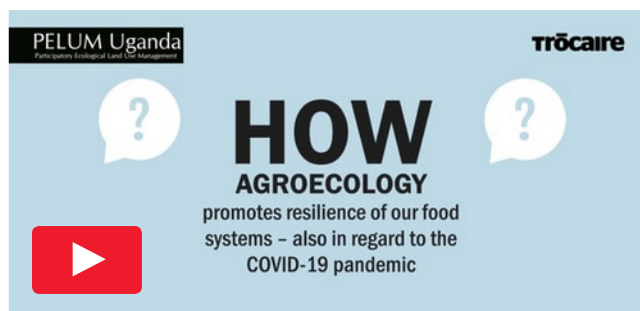
Women in Tharaka Nithi, Kenya show how botanical fertilisers and pesticides are made. Co-Creation of Knowledge, Efficiency and Diversity are also on show!

OUR AGROECOLOGICAL APPROACH

A profound change of the global food and agriculture system is needed if the 690 million people who are hungry today are to nourish themselves and the additional 2 billion people the world will have by 2050¹². This change needs to happen in the countries where the people are hungry and malnourished¹³, and needs to happen at all points in food systems.

Trócaire promotes agroecology¹⁴ because it can avoid, reverse and challenge the damaging impacts of industrial agriculture without sacrificing productivity or profitability¹⁵. Our experience¹⁶, annual programme results and research¹⁷ show that farmers are increasing household dietary diversity and improving resilience to shocks and stresses by adopting agroecology.

A profound change of the global food and agriculture system is needed if the 690 million people who are hungry today are to nourish themselves.



African Ministers have, in 2020, stated that African food systems are far too dependent on imports, such as this flour from Uruguay in the market in Makeni, Sierra Leone.



Localised red climbing bean makes use of vertical growing spaces in very small farm plots to efficiently provide a protein source. Rwanda.

Reduced forced out-migration, to urban areas or abroad, is also a feature where rural households have achieved self-sufficiency and broadened their economic opportunities. The de-urbanisation that COVID 19 has caused can be a new opportunity for tapping the energy and education of young people as they re-integrate into farming households.

Trócaire promotes agroecology because it can avoid, reverse and challenge the damaging impacts of industrial agriculture without sacrificing productivity or profitability.

Trócaire sees that replenishment of depleted soils is a priority investment for sustainably nourishing people¹⁸. This needs to be done in affordable, sustainable ways as part of the food and economic livelihood system.

WITH WHOM DO WE WORK?



We work with crop farmers, agro-pastoralists, pastoralists, fishers, wildlife harvesters, wetland users, refugee settlement residents, urban growers, beekeepers, bio-entrepreneurs, food processors, assemblers and traders and several other professions fully or partially dependent on natural resources. For brevity, they are referred to as **'smallholders'** for the remainder of this document. We especially engage with women and girls and we integrate women's empowerment into our institutional relationships, approaches and activities.

We work with smallholders, especially young and adult women, in the poorest parts of some of the worst-nourished countries of Africa, Central America and Asia. We support these primary producers to maintain a viable lifestyle on marginal lands with naturally low rainfall, harsh climatic conditions and poor soils. We engage with smallholders to downface the risks caused by changes to seasonal patterns due to the occurrence of more and more intense weather events. We also support smallholders to engage with policy processes and to challenge agricultural policies or strategies that worsen/threaten their nutrition and/or livelihoods security.

HOW DO WE SUPPORT SMALLHOLDERS?

We see smallholders as part of the ecosystem with triple roles - stewards¹ of the natural resources, producers of food, fibre and other products, and socio-economic actors. As such, we support a smallholder to act both on her own farm and in her wider biophysical² and socio-economic environments. The CIDSE Principles of Agroecology¹⁹, the FAO Ten Elements of Agroecology²⁰ and the advice of the top agroecology experts²¹⁻³ in the world guide our efforts.

TRIPLE ROLES OF A FARMER



Ms. Maya Margarita Flores in Nicaragua, grows food, cares for her land and works in her community's seed bank

We start with a participatory resource analysis process in which the smallholder and her community take a fresh look at all the resources and opportunities available to them and work out the most effective mix of activities for a better, more sustainable life. The farm or village landscape is analysed under the aforementioned ten elements of agroecology;- Diversity, Efficiency, Synergies, Resilience, Recycling, Co-creation and Sharing of Knowledge, Human and social values (including gender equity), Culture and Food traditions, Responsible Governance and Circular and Solidarity Economy.

¹. A **steward** supervises or takes care of resources. Christian teaching charges humans to guard and wisely use the earth. This is called **stewardship**. See Pope Francis' encyclical Laudato Si.

². Her **biophysical environment** is her **living** (micro to macro organisms mainly animals and plants e.g. bacteria to elephants and algae to baobab trees) and **non-living** (e.g. rocks, the mineral part of soil, air, gases, light, water, acidity/alkalinity, humidity) **surroundings**.

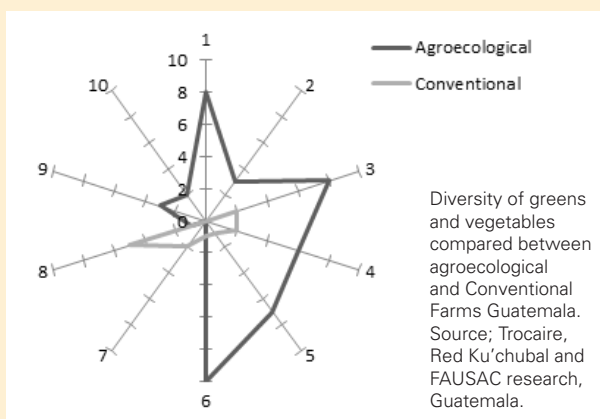
³. <https://www.tandfonline.com/doi/full/10.1080/26395916.2020.1808705>



FAO Ten Elements of Agroecology <http://www.fao.org/agroecology/knowledge/10-elements/en/>



The village community of El Porvenir, Tacana, Western Guatemala map and discuss the biodiversity, opportunities, and challenges in their natural landscape.





Farm design before (left) and after (right) proposed by participants in a Trocaire Africa Regional Agroecology Exchange and Training workshop.

The farm and/or landscape is re-designed to nurture the improvement of the ten elements and lead to re-booting of the ecological functions thus making its system work more productively and effectively. Normally a farmer or a community will select specific elements for prioritisation and will phase-in⁴ this transition. Transitions are seen as a continuum rather than smooth linear processes. Experimentation and learning are facilitated. Stresses and shocks commonly interrupt transition processes. Individuals, households and/or communities may choose to begin at any Phase. For example, some begin with policy and advocacy actions, that is, Phase Five. Usually farmers and partners are working on two or three phases at once, for example Phases 1, 2 and 5.

PHASE 1 **Phase One** is exemplified by the adoption of new practices such as vegetating contours for improved water infiltration or the retention of leguminous trees for enhancement of soil fertility.

PHASE 2 **Phase Two** often involves the dropping of negative practices e.g. the use of poisonous chemicals for pest control, because such practices are no longer needed.

PHASE 3

Phase Three involves the re-design of the farm or landscape. Opportunities are identified. Problems are recognized, and thereby prevented, by internal site and time-specific design and management approaches.

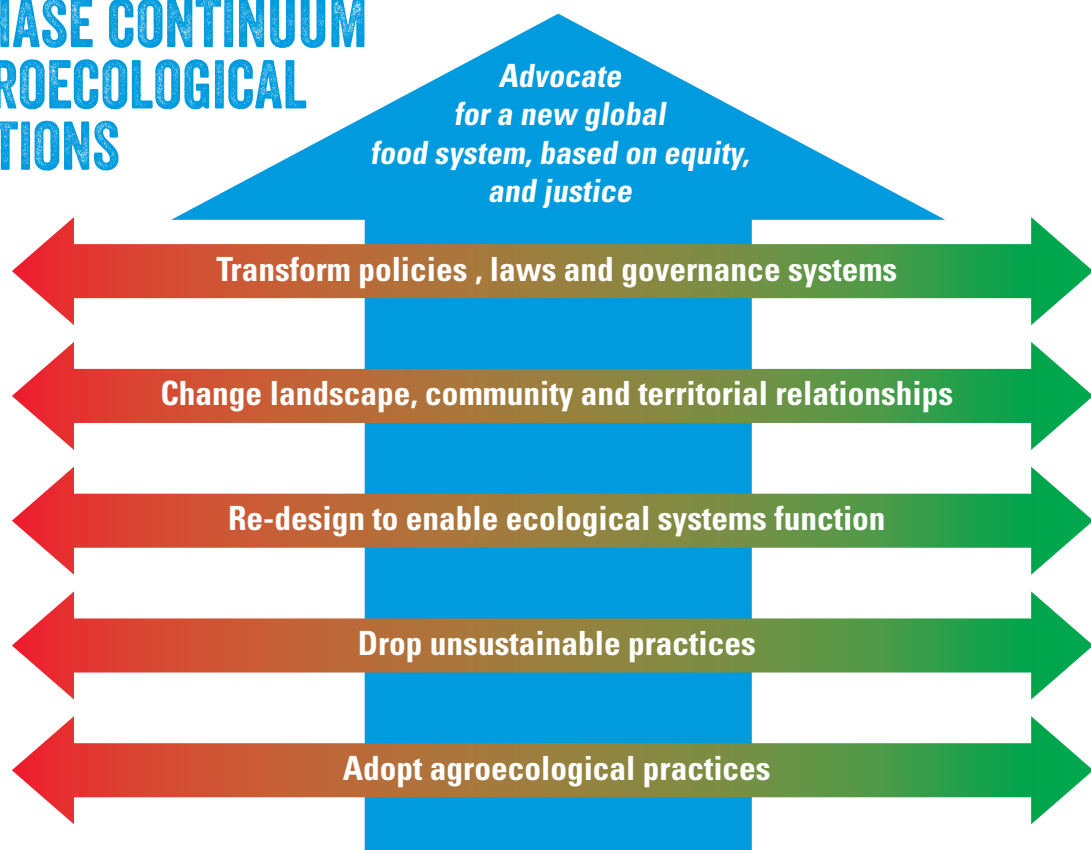
PHASE 4

Phase Four involves changing the relationship between the farm or landscape and the wider food system. Here, farmers analyze their positions in the market taking efficiency and equity factors into consideration. Structures and infrastructure, such as regular marketing times and locations and seed exchange systems, are designed and transformed. We put the consumer and the producer closer together in a more respectful relationship where learning how to boost the local economy and to demand nutritional quality are entwined.

PHASE 5

Phase Five is where producers and consumers are supported to work on national and international policies and laws - for example seed rights, cropping choice, payment for ecosystems services, subsidies for agroecological innovations and interventions - , which promote sustainable smallholder agriculture, pastoralism and natural resource management.

FIVE-PHASE CONTINUUM FOR AGROECOLOGICAL TRANSITIONS



HOW IS IMPACT MEASURED?



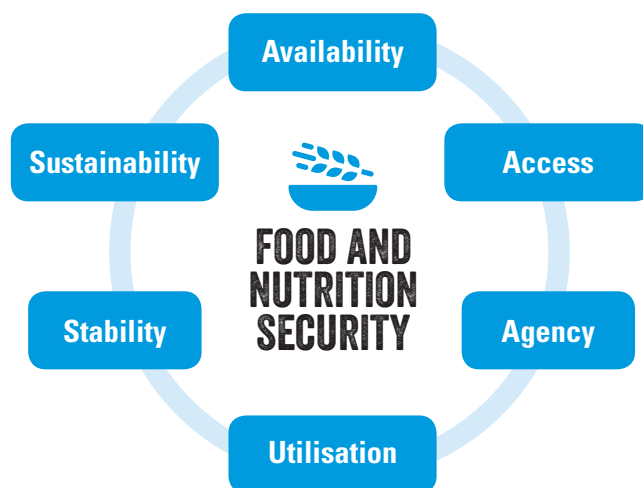
Wild wetland fibres are important for household use and cash sales, therefore careful community management/Responsible Governance of wetlands (Inland Valley Swamps) is promoted. S. Leone.

In our agriculture and livelihoods work, Trócaire's primary focus is food and nutrition security, which has six dimensions: Availability, Access Agency, Utilisation, Stability and Sustainability²². We measure food and nutrition security across all food and agriculture programmes using two complementary indicators, which are globally recognised. Firstly the Household Dietary Diversity Score²³ (HDDS) and secondly the Livelihoods based Coping Strategy Index (LbCSI).

The HDDS consists of a relatively simple count of food groups that a household has consumed over the preceding 24 hours. Dietary diversity is a qualitative measure of food consumption that reflects household access to a variety of foods and is also a proxy for nutrient adequacy of the diet of individuals²⁴.

The Livelihood based Coping Strategy Index (LbCSI) uses 'coping strategies' as an indicator for stress regarding access to food. The index helps us to understand how the targeted population's normal livelihoods have been impacted and what they are doing to cope. The LbCSI Index is made up of 10 contextually - relevant coping strategies. Each strategy is associated with one of four categories of stress. Household representatives are surveyed on whether any of the strategies were used by the household in the past 30 days. Based on this information each household is classified into 1 of 4 categories;- Food Secure, Stress, Crisis and Emergency.

A variety of other measurements of progress, such as measurable change in locally defined resilience, are made throughout the project cycle. These are country and context dependent and include such indicators



as adoption of various sustainable agricultural and land stewardship practices; dropping of unsustainable practices; income from agriculture and related activities; number of actions to preserve wild and indigenous crops and bee species; number of women, youth and men successfully engaged in savings and credit organisations; area of community land under collective regeneration; number of water catchments being managed; number of seedbanks established by community structures; level of successful engagements of duty bearers on food and agriculture, land use, water and natural resources and economic development policy and budgets.

We are adopting the new FAO Tool²⁵ for measuring transition to agroecology because it has global recognition and is a relatively simple set of indices, framed by the Ten Elements of Agroecology, for comprehensively characterizing complex biological, social, economic, political and cultural change.

Participant householders and communities are engaged in assessing their progress to their own targets and learning is used to inform further project activity and higher-level policy and strategy.



Patties of cattle manure ready for the fire, Ethiopia. Energy for cooking is an important aspect of Food and Nutrition Security. Burning animal manure is an indicator of energy poverty.

WHAT DOES IT LOOK LIKE?

Here we provide some examples from our work towards making agricultural landscapes look and act like their surrounding ecosystems! Agroecology tries to mimic the efficiency of natural ecosystems.



Community Shop creating a local market for local products, demonstrating the agroecological element of Circular and Solidarity Economy (El Salvador).



Abuko Harriet and her husband Edielu Daniel from Otuboi sub-county, Uganda display their family Vision Road Journey for three years. They are working on their relationships to share domestic, farming and community activities for more equitable, harmonious, and efficient lives and livelihoods. They are applying The Human and Social Values element of agroecology.²⁶
Photo Credit: PELUM Uganda



Traditional beehive in Tharaka Nithi, Kenya. Honey is central to Culture and Food Traditions across many ethnicities in Africa, Central America and Asia.



Many species and varieties of perennials and annuals are grown together, supporting (unseen) poultry and bee keeping, in this multistorey long rotation farming system in Guatemala. An example of the application of the agroecological elements of Diversity, Synergies and Efficiency.



Efficient cooking technology saves labour and improves environmental Resilience and retains Diversity. Photo Credit: Trocaire Team Malawi.



Sorghum -groundnut intercrop with retention of natural trees. Diversity of annual and perennial crops, Efficiency of soil fertility mechanisms, and Synergy between plant species. Photo credit: Puro Cham, Elizabeth Amer, Caritas and Willam Deng, HARD, S. Sudan.



Village Savings and Credit Scheme, Yirol, S. Sudan - Financial Resilience and Circular and Solidarity economy building. Elements 5 and 9 of FAOs Ten Elements of Agroecology in Action.²⁷ Photo Credit: Trócaire-CAFOD South Sudan Team.



Mercy Chirambo, from partner CADECOM Malawi, practicing participatory farm design techniques to reduce expenditure of labour and other energy and enable re-booting of ecosystem flows. This exemplifies the practical application of the element of Efficiency.



Rights to save, exchange and access a diverse range of farmers' seeds and breeds are advocated for at local, national and international levels. Responsible Governance of wild and agricultural biodiversity is also supported through community wild food recovery activities. Acholi, Uganda. Photo Credit: Martina O Donoghue.



Villagers in Sierra leone teaching Trocaire and partner staff about the native species and their uses. Co-creating and Sharing Knowledge.



Local chicken breeds are hardy, need little care or inputs, and help with pest control and soil fertility thus supporting the agroecological elements of Diversity, Synergies, Efficiency and Culture & Food Tradition.



A farm's own banana leaves used as grow pots - avoids use of plastic pots which need to be purchased from afar. Recycling and Efficiency, Gakenke, Rwanda.

REFERENCES AND RESOURCES

Endnotes

1. <https://www.wfp.org/publications/state-food-security-and-nutrition-world-sofi-report-2020>
2. https://docs.wfp.org/api/documents/WFP-0000114546/download/?_ga=2.248773700.299959098.1597677805-115237373.1585754773
3. http://www.ipes-food.org/_img/upload/files/COVID-19_CommuniqueEN%283%29.pdf
4. <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/133819/filename/134053.pdf>
5. <https://www.e-ir.info/2020/04/08/eating-last-and-the-least-analysing-gender-in-global-hunger/>
6. [https://www.worldhunger.org/women-and-hunger-facts/#:~:text=There%20is%20a%20strong%20and,malnutrition%20\(FAO%2C%202012\).](https://www.worldhunger.org/women-and-hunger-facts/#:~:text=There%20is%20a%20strong%20and,malnutrition%20(FAO%2C%202012).)
7. <http://www.fao.org/3/a-i7768e.pdf>
8. <https://foodtank.com/news/2020/07/africas-farmers-key-to-solving-malnutrition/>
9. <https://www.adb.org/publications/gender-equality-and-food-security-womens-empowerment-tool-against-hunger>
10. <https://www.trocaire.org/resources/policyandadvocacy/food-democracy-feeding-world-sustainably-0>
11. <https://www.adb.org/publications/gender-equality-and-food-security-womens-empowerment-tool-against-hunger>
12. <https://www.un.org/sustainabledevelopment/hunger/>
13. Prof. Pablo Tittone, personal communication.
14. https://drive.google.com/file/d/1K1dh2fd1u_7609QYyL_i-ttucLMpVbwZ/view Video from PELUM and Trócaire Uganda.
15. <https://www.ucsusa.org/resources/counting-agroecology>
16. <https://www.trocaire.org/resources/policyandadvocacy/trocaire-resilience-lessons>
17. <https://www.trocaire.org/documents/agroecology-in-western-guatemala/>
18. <http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/Food%20Security%20paper%20-%20final%20-%20Converting%20trade-offs%20to%20trade-ons.pdf>
19. <https://www.cidse.org/2018/04/03/the-principles-of-agroecology/>
20. <http://www.fao.org/3/i9037en/i9037en.pdf>
21. Including Eric Holt-Gimenez, Pablo Tittone, Miguel Altieri, Clara Nicholls, Hans Herren, IPES Food
22. <http://www.fao.org/3/ca9731en/ca9731en.pdf> Page 10.
23. http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/FAO-guidelines-dietary-diversity2011.pdf
24. http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/FAO-guidelines-dietary-diversity2011.pdf
25. <http://www.fao.org/3/ca7407en/ca7407en.pdf>
26. https://www.cidse.org/wp-content/uploads/2020/10/40_42_FM0120_Uganda.pdf
27. <https://www.trocaire.org/news/5-ways-we-can-use-eco-friendly-farming-to-tackle-drought-in-zimbabwe/>

Trócaire, Maynooth
Co. Kildare, Ireland
T: +353 (0) 1 629 3333
F: +353 (0) 1 629 0661
E: info@trocaire.org
www.trocaire.org

Trócaire, 50 King Street, Belfast
BT1 6AD, Northern Ireland
T: +44 (0) 2890 808 030
F: +44 (0) 2890 808 031
E: infoni@trocaire.org
www.trocaire.org