

Agroecology: A Nature-based Food System NBS Proposal from the AgroEcology Fund

i. Title/Heading

Agroecology: A Nature-based Food System

ii. Context and rationale

Farming the land as if nature doesn't matter has been the model for much of the Western world's food production system for at least the past 75 years. The results have been disturbing: depleted soil, chemically fouled waters, family farms vanishing, a worsening of public health and more. But an approach that combines innovation and tradition has emerged, one that places ecological science, food security, nutrition, human rights, climate resilience, and sustainable development at the center of agriculture. It's called agroecology, and it places nature at the center of agriculture.

Agroecology measures its success not only by bushels and calories but by how well food nourishes people while regenerating soil and water and helping more farmers secure land title and make a dignified living. More and more countries — encouraged by networks of small and medium-size farmers organized in networks like La Via Campesina — are actively shifting to policies and investments that support nature-based, agroecological food systems.

iii. An overview of the contribution

In India, the state of Andhra Pradesh is investing \$200 million to convert its farmers to the agroecological practice known as zero budget natural farming, which uses from-the-farm nutrients to grow crops without using costly chemical fertilizers or pesticides, which can push farmers into debt. More than 100,000 farmers there are already using this method, and an estimated 500,000 farmers in 3,000 villages will have moved to this method by the end of 2019.

In Africa, the African Centre for Biodiversity, a research and advocacy organization, urges the Tanzanian government to phase out subsidies for chemical fertilizers and speed a transition to agroecology through support to locally manufactured inputs.

In the Americas, the Agroecology Collective in Ecuador strengthens municipal farmers' markets sourcing from local agroecological producers to achieve a national goal of food sovereignty. The new Mexican president is making agroecological principles a guiding force behind Mexican agriculture.

Within the FAO, there is growing support for agroecology, as evident by recent symposia and inter-governmental support for the Scaling Up Agroecology Initiative.

iv. How the contribution leverages living natural systems as a solution to avert climate change?

In Ghana, for example, the Centre for Indigenous Knowledge and Organizational Development, works with local chiefs to promote sustainable forestry that restores soil moisture to slow the encroaching Sahel desert. Leaves decompose and become fertilizer; roots fix nitrogen and build up soil structure and microbiology.

v. How might the contribution support both climate, mitigation and adaptation as well as other important co-benefits and social, economic and environmental outcomes in coming years?

CONSERVING BIODIVERSITY

Since the 1900s, 75 percent of the world's plant genetic diversity has been lost and replaced with a handful of genetically uniform crop varieties; additionally, some 30 percent of livestock breeds are at risk of extinction. Worldwide, agroecological farming and agroforestry demonstrate that it is possible to provide abundant food and fiber and sustain livelihoods while conserving—and even enhancing—biodiversity.

CREATING CLIMATE RESILIENCE

Our food and agriculture system is responsible for roughly one third of all atmospheric warming. Agroecology is key to solving this crisis and making communities more resilient. In addition to sequestering carbon, soil rich in organic matter is better able to retain moisture, withstand drought, erosion, and flooding; and increase crop yields. This is especially important for the smallholder farmers and rural communities that are most vulnerable to climate-related fluctuations and disasters.

ENHANCING FOOD SECURITY

33 percent of the world's land is degraded from erosion, compaction, salinization, or chemical pollution. Agroecological practices can restore and improve soil health and fertility and thus boost food production. In Burkina Faso, the combination of crop rotation, mixed cropping, and a local water collection technique led to 130 percent yield increases compared with conventional agriculture.

IMPROVING HEALTH & NUTRITION

Unhealthy diets, according to the recent EAT-Lancet commission report, now pose a greater risk to morbidity and mortality than unsafe sex, alcohol, drugs, and tobacco use combined. Researchers have demonstrated that adopting agroecological diversified farming improves local consumption of key nutrients while helping to make sure nutritious foods are available throughout the year.

REACHING THE SUSTAINABLE DEVELOPMENT GOALS

Agroecology helps achieve the SDGs due to its comprehensive approach to creating local food and agriculture systems. The UN Food and Agriculture Organization (FAO) affirms that "people-centered, knowledge-intensive, and rooted to sustainability, agroecology matches the transformative approach called for by the 2030 Agenda."

vi. Which countries and organisations are involved in the contribution?

The AgroEcology Fund works on five continents across the globe. Thus far, it has provided funding to 36 collaboratives, encompassing 200 grassroots organizations.

vii. How have stakeholders been consulted in developing the contribution?

The AgroEcology Fund works with democratic, grassroots organizations – some indigenous-led and some women-led. The grantees themselves are increasingly part of the Fund's governance and help decide strategy and grant allocation.

viii. Is this initiative contributing to other Climate Action Summit workstream?

There are strong connections in agroecology to: 1) energy transition – industrial agriculture is fossil-fuel dependent while agroecology is not; 2) cities – agroecology promotes urban agriculture and re-

localizing urban markets; 3) agroecology is a social movement involving youth and citizen mobilization.

ix. Examples of experiences to date: how does this contribution build upon this experience?

Agroecology is a modern science that has been developed over past decades but is based on ancestral practices. It is a process of intensive experimentation, seeking to find nature-based solutions appropriate to each farm, economy and culture.

x. Mechanisms for funding

Agroecology could be rapidly expanded with adequate public and private financing. The AgroEcology Fund works to educate leaders in the development and philanthropic sectors to increase investments. Some financing will come from shifting subsidies from for example, imported chemical fertilizers to locally manufactured bio-fertilizer.

xi. Means of stewardship, metrics for monitoring

Proponents of agroecology seek to measure impact through such indicators as soil health, yield, nutritional improvements, income, carbon sequestration, etc.

xii. Communication strategy

A dominant narrative suggests that only industrial agriculture can feed the world. Agroecology proponents, grantees of the AgroEcology Fund, communicate an alternative narrative, without the multi-billion dollar advertising budget of the agricultural inputs industry. Creative communications strategies to influence farmers, consumers and policy makers include: professional research offering scientific evidence, articles and opinion pieces in local and elite media, community radio, short-form story-telling for electronic media, You Tube videos, and more.

xiii. Contact details of proponents:

AgroEcology Fund – www.agroecologyfund.org. Contact: Daniel Moss, Executive Director, Daniel@agroecologyfund.org. On our website are dozens of partner organizations and coalitions from scores of countries that endorse and participate in the work described here.