

MIJARC



**FOOD FOR LIFE: ECOLOGICAL PRODUCTION MODELS
TO FEED THE PEOPLE AND TO RESTORE THE ENVIRONMENT**

**EL ALIMENTO PARA LA VIDA: MODELOS DE PRODUCCION ECOLÓGICOS
PARA ALIMENTAR LAS PERSONAS Y PARA RESTAURAR EL AMBIENTE**

**LA NOURRITURE POUR LA VIE: MODÈLES DE PRODUCTION
ÉCOLOGIQUES POUR NOURRIR LA POPULATION ET RESTAURER L'ENVIRONNEMENT**



JOURNÉE MONDIALE DE L'ALIMENTATION 2012

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FOOD FOR LIFE: ECOLOGICAL PRODUCTION MODELS TO FEED THE PEOPLE AND TO RESTORE THE ENVIRONMENT

In 2012, MIJARC would like to focus much more deeply on the issue of models of Production in order to have a different approach in terms of production systems and to promote more sustainable agricultural practices. Through this campaign we would like to make the people to be aware of producing organically and ecologically sustainable ways and to promote an integrate approach in farming to lessen the environmental impacts.

Food for Life: a model of food provision that feeds people, improves equity and restores the environment

The productivity gains of the industrial model of agricultural, livestock and fisheries production and harvesting of commodities have fallen far short of meeting the food needs of everyone – hunger is rising inexorably – and have been accompanied by a number of serious environmental problems that undermine the long term viability of food production itself. It has increased yields under certain conditions, driven by the profit motive, not people's food needs and sustainability. Furthermore, increasing corporate agribusiness involvement has diverted the goal from that of providing food for people as a basic human right to that of producing commodities for profit. It has been clear for some decades that the benefits of increased productivity have been unevenly spread, so that despite there being enough food produced globally to meet the needs of all, more than 1 billion poor people are hungry or malnourished

A Dysfunctional Food System

Of the 1.02 billion people who are hungry, 60 per cent are women, 25 per cent children and 75 percent are in rural areas. About half of the hungry people in developing countries are from marginalized farming families, around 20 per cent belong to landless families dependent on farming and related activities, and 10 per cent live in communities whose livelihoods depend on herding, fishing or forest resources. 25,000 people die every day from hunger and related causes, half of whom are children under five, while another billion people lack sufficient nutritious food for a healthy life. In contrast, more than one billion consume too much and suffer varying degrees of obesity; diet related Type II diabetes is becoming the world's fastest growing pandemic. And up to half of the food produced are not eaten. They are lost or wasted in production, or through post harvest losses, processing wastage and food discarded by consumers, retailers and food outlets

Production Models: impacts on food sovereignty, people, livelihoods and environment

Industrial agribusinesses, fisheries and aquaculture produce food ingredients in monocultures for global markets controlled by few TNCs. They are supported by public and private research institutions and promoted for 'food security' yet, they harm small-scale farmers, pastoralists, artisanal fisher folk and indigenous peoples. And they damage the environment – soils, water, agro ecosystems and our planet's biodiversity and life support systems. They are a major contributor to the current global water crisis and Global Warming through intensive use of fossil fuels for fertilizers, agrochemicals, production, transport, processing, refrigeration and retailing: each unit of food energy produced requires many times more fossil fuel energy inputs. Corporate controlled industrial production is capital intensive, is protected by patents and trade rules. This enable corporations to capture and control markets for inputs (GE) seeds, livestock breeds,

water, fertilizers) and products (food, animal feed, bio-fuels, fiber and industrial commodities), to capture ecosystems and overexploit and degrade natural resources resulting in soil erosion, loss of biodiversity, deforestation, desertification, water depletion and contamination and polluted seas, the costs of which are never included in the price paid. This approach seeks to control and transform nature rather than work within its parameters. It facilitates corporate control over the food system.

Ecological production, pastoralism and artisanal fisheries are diverse and multifunctional producing many goods (food, clothing, housing materials, as well as those for exchange and sale) and providing ecosystem functions (clean water, healthy soils) needed by local communities. They are highly productive in terms of area, inputs and energy. These methods of production and harvesting are people-centered with both women and men having decisive roles. They are knowledge-intensive and maintain livelihoods. They depend on and provide locally-developed plant varieties and livestock breeds that are adapted to local climatic conditions – such as drought resistant seed varieties, crops that grow in wetlands and flood plains, disease-resistant livestock etc. They are not dependent on agrochemicals. They sustain agro ecosystems – they work with and not against the environment and, as a result, productivity is higher. These approaches do not seek to transform nature, but instead, they develop synergies with nature creating space for local experimentation and building the store of knowledge that can be shared, without high costs. They are resilient in the face of climate change and other threats and they are not 'carbon hungry', not dependent on fossil fuels: for every unit of energy input, up to 10 times as much food energy is produced. Small-scale agro ecological production methods and artisanal fishing practices cannot be appropriated or 'owned' by an individual. They enable localized control over food systems i.e. food sovereignty.

Production System respecting small farms

Small-scale and family farmers, who produce the food for more than 70% of the world's peoples, are also responsible for the lion's share of investments in agriculture. Small farms can feed the world and they can deliver enhanced sustainable smallholder food production for local consumption and local and regional markets, in the framework of food sovereignty, if they are able to practice their resilient food production systems, have priority access to the resources they require, and if their markets are protected from alienation, exclusion and expropriation and from agricultural products dumped on their markets at artificially low prices below the real costs of production. A benefit of local markets (or "proximity" markets), which can be built up to national and regional markets, is that they primarily serve local demand which is social as well as material. It is important to analyze what kinds of policies can help them develop, with particular attention to economic aspects and the impacts these markets have on social and environmental dimensions of family farming. These local food webs are more important for realizing food sovereignty than 'value chains' which can enslave producers to distant corporations.

Opting for the sustainable low risk approach to food and agriculture is the only way forward, especially given the context of the food and energy crises and climate change. This 'model of production' serving local consumers and local markets are embodied in the food sovereignty framework, developed by the organizations of small-scale food producers themselves. This 'model of production' provides food for the extended family, local community and (especially local) markets. It includes the recognition of the multifunctional nature of agriculture and consideration of the range of issues affecting small-scale food producers, as well as meeting consumer demand for healthy, local food produced in socially and ecologically sustainable ways. It supports and promotes the development of sound and inclusively formulated national and regional agricultural policies. It promotes access to land and other productive resources, such as biodiversity and resilient seeds and livestock breeds; in the face of land grabs and the appropriation and commodification of common resources. It requires appropriate farmer-led research and extension supported by public bodies; in the face of increased efforts of research institutions to serve capital rather than food producers. It focuses on delivering a food system that can be controlled locally, that supports family farming and realizes food sovereignty; in the face of a neoliberal project to draw producers into a globalised food system over which they have no control.

In defending such a food system, it is necessary to challenge the agribusiness-dominated 'model of production' and its marketing 'value chains' and its call for 'Sustainable Intensification' that is a threat to truly sustainable local production. In the agribusiness model, agriculture is seen as a business like any other, in which enhanced growth, profitability and reduced labour requirements are sought through the application of 'modern' technology, including GM seeds and livestock. It is a model that captures local production, resources, ecosystems, livelihoods and local markets and then destroys them. This model is characterized by a technology-driven 'new green revolution' that produces, from 'modern' high input, high risk farming in the best endowed lands of the continent, commodities that are 'competitive' (i.e. low cost) on the world market. These commodities may also be dumped on domestic markets, undercutting local family farm production and the sustainability of food supplies. This 'business as usual' approach, which protects those with power over the food system, is unsustainable and then enriches corporate food chains.

"Family farms produce up to 80% of the food consumed in African countries, much of which does not enter the formal market. They provide employment for 70% of the population, both directly and by stimulating local economies, and constitute the only potential solution for absorbing the growing population of unemployed young people."



5 Reasons to support the Small farmers

1. Small farmers are key for the world's food security

While 91% of the planet's 1.5 billion hectares of agricultural land are increasingly being devoted to agro-export crops, bio-fuels and transgenic soybean to feed cars and cattle, millions of small farmers in the Global South still produce the majority of staple crops needed to feed the planet's rural and urban populations.

2. Small farms are more productive and resource conserving than large-scale monocultures

Although the conventional wisdom is that small family farms are backward and unproductive, research shows that small farms are much more productive than large farms if total output is considered rather than yield from a single crop. Integrated farming systems in which the small-scale farmer produces grains, fruits, vegetables, fodder, and animal products out-produce yield per unit of single crops such as corn (monocultures) on large-scale farms. Small farms are multi-functional! – more productive, more efficient, and contribute more to economic development than do large farms. Communities surrounded by many small farms have healthier economies than do communities surrounded by depopulated, large mechanized farms. Small farmers also take better care of natural resources, including reducing soil erosion and conserving biodiversity.

3. Small traditional and biodiverse farms are models of sustainability

The traditional agricultural management offer promising models of

A production system respecting food Sovereignty SIX PRINCIPLES OF FOOD SOVEREIGNTY (from Nyéléni Synthesis Report)

1. Focuses on Food for People: Food sovereignty puts the right to sufficient, healthy and culturally appropriate food for all individuals, peoples and communities, including those who are hungry, under occupation, in conflict zones and marginalized; and rejects the proposition that food is just another commodity or component for international agri-business

2. Values of Food Providers: Food sovereignty values and supports the contributions, and respects the rights, of women and men, peasants and small scale family farmers, pastoralists, artisanal fisher folk, forest dwellers, indigenous peoples and agricultural and fisheries workers, including migrants, who cultivate, grow, harvest and process food; and rejects those policies, actions and programmes that undervalue them, threaten their livelihoods and eliminate them.

3. Localizes Food Systems: Food sovereignty brings food providers and consumers closer together; puts providers and consumers at the centre of decision-making on food issues; protects food providers from the dumping of food and food aid in local markets; protects consumers from poor quality and unhealthy food, inappropriate food aid and food tainted with genetically modified organisms; and rejects governance structures, agreements and practices that depend on and promote unsustainable and inequitable international trade and give power to remote and unaccountable corporations.

4. Puts Control Locally: Food sovereignty places control over territory, land, grazing, water, seeds, livestock and fish populations on local food providers and respects their rights. It promotes positive interaction between food providers in different regions and territories and from different sectors that helps resolve internal conflicts or conflicts with local and national authorities; and rejects the privatization of natural resources through laws, commercial contracts and intellectual property rights regimes.

5. Builds Knowledge and Skills: Food sovereignty builds on the skills and local knowledge of food providers and their local organizations that conserve, develop and manage localized food production and harvesting systems, developing appropriate research systems to support this and passing on this wisdom to future generations; and rejects technologies that undermine, threaten or contaminate these, e.g. genetic engineering.

6. Works with Nature: Food sovereignty uses the contributions of nature in diverse, low external input agro ecological production and harvesting methods that maximize the contribution of ecosystems and improve resilience and adaptation, especially in the face of climate change; and rejects methods that harm ecosystem functions, that depend on energy intensive monocultures and other industrialized production methods, which contribute to global warming

What is Agro Ecology?

The key idea of agro ecology is to go beyond alternative farming practices and to develop agro-ecosystems with minimal dependence on high agrochemical and energy inputs. Agro ecology is both a science and a set of practices. As a science, agro ecology consists of the application of ecological science to the study, design and management of sustainable agro ecosystems. This implies the diversification of farms in order to promote beneficial biological interactions and synergies among the components of the agro ecosystem so that these may allow for the regeneration of soil fertility, and maintain productivity and crop protection. The core principles of agro ecology include recycling nutrients and energy on the farm, rather than introducing external inputs; enhancing soil organic matter and soil biological activity; diversifying plant species and genetic resources in agro ecosystems over time and space; integrating crops and livestock and optimizing interactions and productivity of the total farming system, rather than the yields of individual species. Sustainability and resilience are achieved by enhancing diversity and complexity of farming systems via polycultures, rotations, agro forestry, use of native seeds and local breeds of livestock, encouraging natural enemies of pests, and using composts and green manure to enhance soil organic matter thus improving soil biological activity and water retention capacity.

2009 peoples Forum for Food Sovereignty Now! PROPOSALS

1. We commit to strengthen and promote our ecological model of food provision in the framework of food sovereignty. Our practices, because they prioritize feeding people locally, minimize waste and losses of food and do not create the damage caused by industrial production systems including crops, livestock, animal feed, agro fuels, fisheries and aquaculture. They are resilient and can adapt to and mitigate climate change.

2. We call for a reframing of research, using participatory methods, which will support our ecological model of food provision. We are the innovators building on our knowledge and skills. We rehabilitate local seeds and livestock breeds and fish/aquatic species for a changing climate. We commit to promote the Findings of IAASTD (International Assessment of Agricultural Knowledge, Science and Technology for Development). We call for accountability by researchers.

3. We will strengthen our interconnecting rural - urban food webs. We will build alliances - linking small-scale food providers, processors, scientists, institutions, consumers - to replace the reductionist

approach of the Codex Alimentarius. We commit to shorten distances between food provider and consumer. We will strengthen urban food movements and advance urban and peri-urban agriculture.

African farmers' platform Proposals

In order to defend and promote family farming, sustainable food systems and food sovereignty, it is necessary:

- to realize a common approach in the face of harmful agricultural investments that are capturing productive resources, imposing industrial models of production, and implementing policies, strategies and research and other programmes that undermine local food systems;

- to redirect agricultural investments towards more agro ecological, biodiverse and resilient models of production supported by participatory research, development and extension systems under farmers' control;

- to give priority to agricultural investments that support the infrastructure and input requirements of sustainable family farming

Only agro ecological methods (also called sustainable agriculture, organic farming, ecological agriculture, etc.) can restore soils and agro ecosystems that have been degraded by industrial agriculture. Even chemicals do not work after severe degradation, but with agro ecology we can restore soil organic matter and fertility, along with functional agro ecosystem processes and services like nutrient recycling, soil biology, natural pest control, etc. We have seen that small holder agro ecological systems have much greater total productivity than industrial monocultures, with little or no purchased inputs, reducing the dependency and increasing the autonomy and well-being of rural families while producing abundant and healthy food for our peoples. - Via Campeina-Shashe Declaration

Proposals for Actions:

1. Analyze the food production systems in your area and discuss it in a group.
2. Buy diverse local organic foods and organize a local fair of organic crops.
3. Make a field visit to ecological/integrated/organic farm and discuss with farmers.
4. Inform the community about the harm of high input, chemical oriented production GMO-products and its harm to human and nature.
5. Make a survey about the different chemicals and fertilizers used in food production in your region and analyze its health impact.
6. Organize a Meeting of local producers and have discussion about their method of cultivation
7. Organize workshop to help farmers in preparing natural fertilizers, pesticides and Create Seed banks with the contribution of your community, challenging corporate control over seeds and GMOs
8. Create a health desk to discuss about the impact of the use of chemicals in Agriculture and its impact on man and nature
9. Support local research towards ecological transformation through farmers groups
10. Lobby the political leaders to convince them the need to support sustainable food productions systems

Ref: Securing Future food: towards ecological food Provision briefing by UK food Group
IAASTD-Securing Future Food, Food Crisis and Climate Change by Third World network 2008,
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Agro ecology: The Science Of Sustainable Agriculture by Miguel Altieri, Nyeleni Forum 2007
Theme7_PRODUCTIONMODELS

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Importance of Agricultural Biodiversity

Agricultural biodiversity, a highly threatened component of biodiversity, is fundamental to realizing food sovereignty. Agricultural biodiversity is the sub-set of biodiversity developed by or co-evolving with people. It embraces not only all species harvested by people but the support species – e.g. pollinators, predators, soil microorganisms and the ecosystem functions provided by these species – which enable the harvested species to flourish. In all types of environments (and at all levels - genetic, species, ecosystems) on land, in water and in the seas, it is the result of the resilient, biodiverse, ecological food production systems developed by knowledgeable women and men who, at smaller scales, currently provide food for more than 70% of the world's peoples. The dynamic selection, development and exchange of seeds and other planting materials, as well as exchange and dissemination of livestock and other terrestrial and aquatic food species, have created the myriad agricultural biodiversity in local production systems that not only feeds the world but also improves human health and well-being and sustains the environment.

Agricultural biodiversity encompasses the variety and variability of cultivated and 'wild' species – plants, animals, and micro-organisms – which are necessary to sustain key functions of the agro-ecosystem. Over millennia, agricultural biodiversity has developed. But since the advent of industrial agriculture, it is rapidly eroding and in some regions 90% or more of the diversity of varieties, breeds and aquatic species from production systems are no longer present. Similar impacts can be found in the presence and diversity of pollinators, predator insects

IAASTD concludes that unless agriculture, and the way society engages with food, agriculture, livestock production and fisheries, is fundamentally changed, it will not be possible to feed the projected 9 billion world population, ensure equity and sustain the planet.

Reversing Environmental Damage

"When Agricultural Knowledge, Science and Technology is developed and used creatively with active participation among various stakeholders across multiple scales, the misuse of natural capital can be reversed... A powerful tool for meeting development and sustainability goals resides in empowering farmers to innovatively manage soils, water, biological resources, pests, disease vectors, genetic diversity, and conserve natural resources in a culturally appropriate manner."

IAASTD, 2008a

Options for sustainable productivity

"...include improving nutrient, energy, water and land use efficiency; improving the understanding of soil-plant-water dynamics; increasing farm diversification; supporting agro ecological systems, and enhancing biodiversity conservation and use at both field and landscape scales; promoting the sustainable management of livestock, forest and fisheries; improving understanding of the agro ecological functioning of mosaics of crop production areas and natural habitats; countering the effects of agriculture on climate change and mitigating the negative impacts of climate change on agriculture."

IAASTD, 2008b

