

FARMING MATTERS



The many faces of resilience

■ From subsistence to resistance ■ “A revolution of thought is necessary” ■ Agroecology and the right to food

ANNOUNCEMENTS

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Contribute!

We would like to encourage you to get in touch with us via info@farmingmatters.org. Even if you only have an idea or an outline for a possible story, we can help you develop it into an article for publication. If the topic corresponds to the theme of one of our upcoming issues (see for example the call for articles for the next issue, below) and it is selected by our review panel, we offer guidance and editorial assistance from beginning to end. Detailed guidelines for authors and more information about the editorial process can be found on the ILEIA website (<http://www.agriculturesnetwork.org/get-involved/participate/guide-for-authors>).

CALL FOR ARTICLES

Nutritional values and family farming

We are told of the great advances that have been made in 'modern' agriculture in the last 60 years. Yet there are more hungry and malnourished people on our planet today than in the whole history of humanity. The solution, according to many, is to push ever harder to increase and intensify food production using any means at our disposal—more agrochemical inputs, GM crops, and even converting more rainforest to farmland. And while agricultural policies are directed towards cash crops, the income that this generates for rural people rarely covers their food needs. The world produces more than enough calories to feed everyone, and other important issues are at stake. Social inequity, inequality, inefficiency, waste, environmental degradation and biased global economic policies are but a few. Moreover, feeding the world is not just about ensuring that there are enough calories; the quality and variety of food are equally important. It is time to start looking at food and nutrition from a different perspective: the focus should shift from food security to food sovereignty and nutrition security.

The roots of agriculture lie in the need to feed one's family. But at a global scale, family farmers are being marginalised, although they produce most of the world's food. Why? Is it because most of the food they produce is consumed directly or only passes through short value chains that do not enrich large corporations? Large-scale production increases, while more people go hungry than ever before, especially in rural areas. At the same time more people are also becoming obese than ever before, and

let us not forget the 'hidden hunger' resulting from diets deficient in micronutrients, such as vitamin A or iron.

The last issue of *Farming Matters* for 2014 will focus on how family farming and agroecology support the nutrition of family members and the wider community. How and why does it achieve this? What concrete examples do we have that show the links? Have you come across families or villages that succeed in having a healthy diet whereas others in similar circumstances do not? We also want to look at nutritional challenges. Do farming families face (hidden) hunger or malnutrition? Is this problem declining or increasing? What are the deeper causes and how can they be addressed? What are your observations about changing food patterns due to changing lifestyles, and the nutritional consequences? Lastly, we are interested in your stories about efforts to (re)create food cultures, to (re)build respect for local food as an intrinsic part of an agroecological lifestyle, and to (re)create more direct linkages between food producers and consumers.

We look forward to receiving your articles on the topic of nutrition. Most are 500-1500 words long and include a personal story. For more information, see the 'guide to authors' on the AgriCultures network website (www.agriculturesnetwork.org/get-involved/participate/guide-for-authors).

Articles for the December 2014 issue of *Farming Matters* should be sent to the editors before 1 September 2014. Email: info@farmingmatters.org.



Better yields in the Sahel

My name is Souobou Tiguidanla. I am 40 years old and live in Toumbenga village, Gayeri district in eastern Burkina Faso. I have four wives and an extended family including 11 children. We grow mostly maize, millet and sorghum. In 2010 and 2011, we were hungry because rainfall was poor and we were not able to produce enough food for ourselves. Something needed to change.

Last year I began to experiment with agroecological practices. For example, I built stone contours on my fields. This keeps the rainwater from flowing away. We also started to make compost with crop residues and cow manure. In my village I was the first one to use these practices, which hardly cost anything, just labour.

The soil has become more moist and fertile. Our yields increased from 1900 kg in 2012 to about 3900 kg in 2013. My family is now able to eat well. When others in my village did not have a good harvest in 2013, we were even able to assist them with food.

I am very proud of these achievements. My children are already learning to use the new practices and I am ready to teach others too. Soon, we will buy more tools to make our work building stone contours easier, and extra cows to produce more manure for composting.

Interview by **Tsuamba Bourgou**, executive director of Association Nourir Sans Détruire (ANSND) in Burkina Faso, an organisation which facilitates farmer experiments on agroecology.



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Local food systems in times of economic crisis

In traditional farming and food systems, the road from field to table is relatively short. And those who benefited were almost all local. But the recent economic crisis created opposing effects in rural Portugal. Nationally imposed austerity measures meant that informal local trade became illegal, while the need for such systems increased...



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“A revolution of thought is necessary”

Cantave Jean-Baptiste is a Haitian agronomist and rural development practitioner with more than three decades of experience in sustainable agriculture and in working with peasant organisations. He is convinced that “rural communities can be wealthier and healthier when their organisational structures are strong”.



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Bees bring a buzz to family farming in Zimbabwe

Diversification of farming systems is seen as a vital way of increasing resilience against shocks, economic and environmental. Beekeeping is being promoted by a trust in Zimbabwe as a low cost, profitable and environmentally beneficial option, and with great success so far. Requiring little investment, a little training goes a long way, with plenty of spin-offs for local artisans and the protection of natural forests.



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Home nurseries, viable businesses

Drylands are especially vulnerable to extremes of climate. Crop yields are low if any harvest is possible at all. And drought and deforestation add to the downward spiral. But in northern Sudan, a new model of home nurseries is showing promise. Farmers are raising seedlings that other farmers want to plant, creating rural businesses while also increasing the resilience of local agricultural systems.

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Half way through the International Year of Family Farming, in many parts of the world, family farmers are celebrating and discussing their future with policy makers and civil society. But most poor rural communities struggling for their daily survival continue to be unaware of even the existence of such a year.

The IYFF is intended to put resilient, innovative, multifunctional, creative, and productive family farmers in the spotlight – *because they need more recognition*. Most are small scale producers for whom farming is a way of life, with qualities well described by Jan Douwe van der Ploug in the January issue of *Farming Matters*. This year aims to give long overdue credit to the 400 million producer families who feed 70% of the global population including themselves.

True appreciation of resilient family farmers should not just be a symbolic gesture of a few romantics. This year must be *a wake-up call* for the world's policy makers, the entire agricultural research establishment, the private sector from village processors to multinational agri-business, and in fact, for everyone who eats and produces food.

We need to think differently. A deeper understanding will result in mainstreaming effective strategies that address today's major global challenges – poverty, hunger, environmental degradation and the negative impacts of climate change. How do we ensure that millions of farming families get out of the vicious trap of hunger and poverty? How can they (re)build their resilience? Turning them into vulnerable migrants filling urban slums cannot be an option. Further neglect and inaction will be far reaching, not only for farmers, fisherfolk, pastoralists and forest dwellers, but for all of us.

This issue of *Farming Matters* presents some reflections on vulnerabilities and poverty in smallholder agriculture, and building resilience.

Edith van Walsum, director ILEIA



This issue was produced in collaboration with Groundswell International: www.groundswellinternational.org

Farming Matters welcomes comments, ideas and suggestions from its readers. Please contact us via e-mail at info@farmingmatters.org or write to P.O. Box 90, 6700 AB Wageningen, the Netherlands.

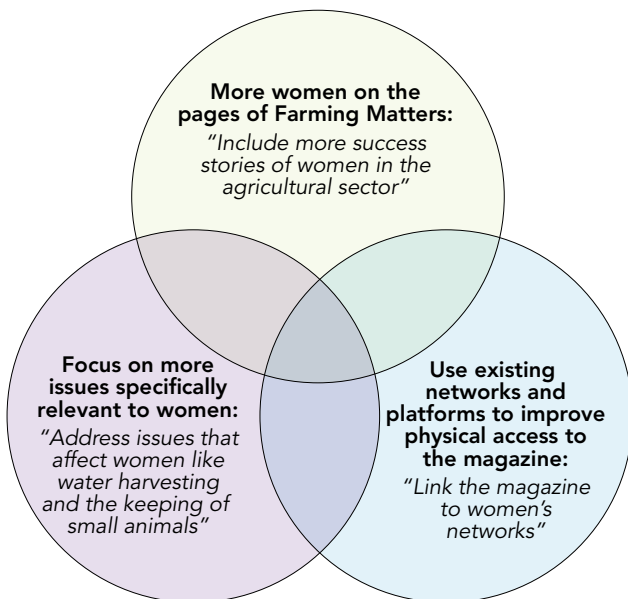


than half of those who struggle to get online now are optimistic that internet access will improve in the future. Two thirds of respondents are active on Facebook, Twitter or both, and a quarter of them use these platforms to follow ILEIA or the AgriCultures Network. However, about half did not know that it was possible to follow us in this way, and a number of you suggested our social media presence could be improved with more frequent postings.

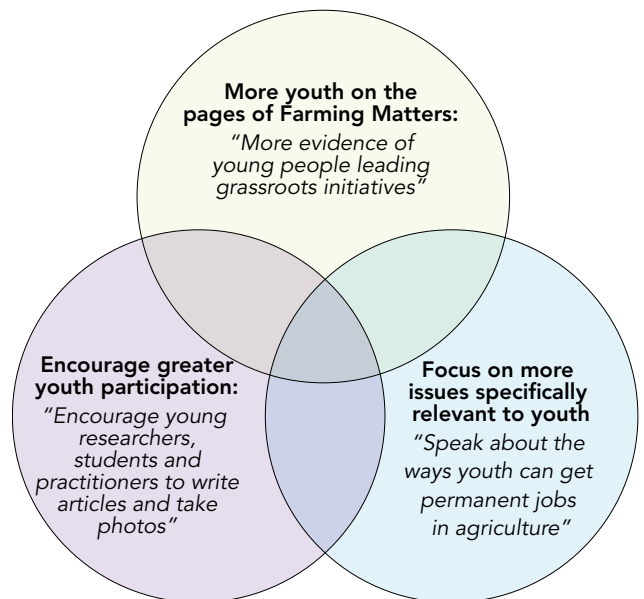
Key messages from women and youth The visibility of role models on the pages of *Farming Matters* is important for both women and youth, and both groups would like to see more articles that focus on issues especially relevant to their own situations. As suggested by the young respondents, this would be possible with a greater youth input. We agree, so please get in touch with your ideas! A practical message from the women who responded is to use existing networks and platforms to improve physical access to the magazine.

Putting *Farming Matters* to work *Farming Matters* is not only widely read but also widely shared. Half of the surveyed readers share the magazine with 10 people or more. The ways that information from *Farming Matters* is used depends in part on the readers' occupations. For example, development field workers tend to share information from the magazine within rural communities, try out approaches or technologies, or use the content for training. Researchers, however, use information from *Farming Matters* mostly as inspiration for further research, whereas decision makers/administrators tend to use the information to stimulate discussions within their organisation or with other stakeholders.

An ongoing process This is a small window into the whole set of results that emerged from the readers' survey. We have analysed all of the results in detail and we thank you once more for the useful feedback that contributes to the resilience of *Farming Matters*.



The three key messages on how to make *Farming Matters* more attractive for women



The three key messages on how to make *Farming Matters* more attractive for youth

Moving from vulnerability to resilience in Africa

In August 2012, the Seidu family had to cope with the bad harvest. Like many farming families in northern Ghana, they had to adopt the 'one-zero-one' strategy for the children and the 'zero-zero-one' strategy for themselves. 'One' represents a meal, 'zero' is no meal. So during the lean season, their four children had breakfast in the morning, nothing at midday, and a meal in the evening.

Peter Gubbels

For months, Seidu and his wife ate only one meal a day. From the plot they farmed in 2011 they only harvested three 84 kg bags of maize. "Two years ago we harvested seven bags from the same land" said Seidu.

Millions of farmers around the world are facing a similar situation. The World Food Programme estimates there are 842 million undernourished people in the world today.

Growth – but not for everyone

To better understand the causes and impacts, let's take a closer look at Ghana. In the savannah zone where over 80% of the population is engaged in farming, the Northern Region is the third most populated region in the country. The World Bank found that between 1992 and 2006, the number of people in the north living in poverty increased by 0.9 million. Even worse, a 2012 food security survey found that 12% of the poorest households had been forced to adopt 'zero-zero-zero', going entire days without eating at all.

Ghana is often touted as a global success story in reducing hunger and poverty, and in 2008-09, Ghana increased agricultural production by more than 7%, one of the highest growth rates in the world at that



Farmers in the Sahel seeing how crop yields can be maintained even in years of poor rainfall, by planting in large basins. Photo: Groundswell International

time. Export crops grown in the wetter and more fertile south such as cocoa, cashew, cotton, palm oil and pineapple are described as the engine of growth for the whole economy. As a result, Ghana has already achieved the first of the Millennium Development Goals by halving the prevalence of hunger, and is on track to reducing by half the proportion of people living on less than \$1.25 per day.

Strong economic growth co-exists with chronic poverty, hunger, debt and near emergency levels of child malnutrition, also visible elsewhere in the Sahel region where over 20 million people across nine countries are struggling with food insecurity. This paradox can be explained by marginalisation, unequal access to assets, services, and productive resources, leading to increased vulnerability of farmers, particularly women, to cope with globalisation and climate change.

Because farmers are backward?

Small scale farmers are backward, it is said. They lack technical know-how, economies of scale. To be competitive within globalisation, they must integrate in global value chains and adopt intensive, industrial agriculture. According to this view, farmers that are not capable of doing so have to make room for those that are. But the true facts paint a different picture – 70% of the world's food is produced by small scale farmers, and they have proven to be highly innovative and to have great adaptive capacity.

Then when a crisis does occur, humanitarian assistance isn't cheap. In 2011-12 alone, more than 18 million people in the Sahel required humanitarian assistance costing 1.6 billion dollars. Enabling small scale farmers to become more resilient would not only be far more cost effective, it would also be socially just.

The dominant food regime During recent decades, agriculture and food have become increasingly shaped by international organisations and multinational companies. The Green Revolution and waves of neo-liberal reforms have given rise to systems that undermine assets such as land, local markets and a sense of community that small scale farmers rely on for their very existence.

This has transformed farming into export-focused monocropping, and encouraged the use of chemical fertilizers, irrigation and agrochemicals. Yields have certainly increased in many areas, but this type of agriculture has also resulted in the degradation of land and other natural resources, especially in ecologically fragile, drought-prone areas. The Intergovernmental Panel on Climate Change estimated that 12 million hectares of agricultural land has now become unproductive.

Local communities had to make way for development projects, mining companies, or large scale agri-



Family farmers in Burkina Faso. Photo: Janneke Bruil

cultural enterprises. For many, this meant displacement or resettlement in less productive areas, with communities and their social safety nets often disintegrating in the process. In addition, tens of millions of farmers were caught in a debt trap and unable to repay investments in inputs like hybrid or genetically engineered seeds, fertilizers, pesticides or irrigation.

Trade policies Trade liberalisation and privatisation through structural adjustment programmes has increased the vulnerability of small scale family farmers. In many countries, markets were flooded with cheap, imported foods to the detriment of local farmers, processors and retailers. And industrialised countries are still pushing for trade agreements that further increase the access of multinational processors and retailers into developing country markets, including the sale of their own heavily subsidised agricultural products.

New alliance The World Bank, major agribusinesses including Syngenta and Monsanto, and the US government have joined the G8's New Alliance for Food Security and Nutrition. This is a continuation of the same approach to increase productivity via large scale commercial agriculture using Green Revolution technologies. But the world



Farmer managed natural regeneration has proved to be an effective way for farmers to increase tree cover on previously degraded land. Around Bankass, in Mopti region, Mali, what used to be a treeless plain is now covered in trees. Photo: Groundswell International

already produces more than enough food to feed everyone if it were equitably shared and food waste reduced.

In short, continuing poverty and vulnerability are to a large extent an outcome of the dominant agriculture and food system. A more equitable, resilient and sustainable agriculture and food system is urgently needed that builds on the well being of small scale peasant farmers. Political will is needed for governments to invest massively in farmer exchange and experimentation on low-cost and sustainable agroecological systems linked to local markets.

Building resilience with agroecology In face of the grim challenges posed by powerful corporate forces, what is remarkable is the innovativeness and resilience of small scale family farmers, and their determination to retain their autonomy and their way of life. In response to the vulnerabilities generated by climate change, increased population, and the penetration of the Green Revolution, many farmers across the globe have started to adopt alternative practices. One response has been to diversify, as is the case with the beekeepers in Zimbabwe (page 26) and farmers' tree nurseries in Sudan (page 30). In areas still untouched by the industrialisation of agriculture, farmers have continued to innovate using the resources at hand and in line with local needs and opportunities. Farmers, NGOs and scientists working with them developed and distilled a set of principles from their experiences which became known as agroecology (see box).

Agroforestry systems for example have proven to be a low cost and effective way to improve soil fertility and resilience. One of the most remarkable examples has occurred in the Sahel, where a strong farmer movement has led to the restoration of millions of hectares of degraded farmland. This has come about by farmers mimicking their centuries old, traditional methods of maintaining soil fertility through the use of natural fallows. When land was much more abundant, farmers enabled the natural revegetation of land by indigenous trees and shrubs. This slowly restored soil fertility by bringing up nutrients from lower soil layers, fixing nitrogen, providing shade, reducing high temperatures, producing leaf litter, and protecting the soil from erosion.

Trees would grow back from the extensive webs of living roots and stumps lying hidden beneath farmers cleared fields and from new seedlings sprouting from seeds dropped by birds, in animal droppings or water. The practice has returned, further developed and spread from farmer to farmer as a new form of 'simultaneous fallow'. By selecting fast growing, high biomass producing indigenous trees to grow on permanently cropped farmland through a process called 'farmer managed natural regeneration' (FMNR), farmers in parts of the Sahel have succeeded in reversing the long term trend of tree loss on agricultural land. Farmers used to see trees as reducing crop production because of shade. By radically increasing the density of trees and applying the innovation of heavy pruning at the beginning of the rainy season, farmers use the tree leaves as a mulch and source of organic matter.

Villagers, both men and women, have reported significant benefits. These include: improved soil fertility, improved agricultural production, increased volume of firewood for home use or sale, enhanced biodiversity, reduced soil erosion, and much improved soil water absorption and retention. Through FMNR, farmers have found a way to greatly increase tree density on their land while minimising competition with food crops. Besides pruning, trees require minimal maintenance and withstand drought. FMNR is accessible even to the poorest families. It requires no expenses beyond additional labour, but greatly increases the resilience of the farming system, especially when combined with contour bunds and other agroecological soil and water conservation techniques.

In combination with secure access to land, such an approach may make agriculture an attractive prospect again for rural youth and for future generations. Motivating the youth to take up a life in agriculture is a struggle in many parts of the world, as the young German farmers on page 29 attest.

As we see in this issue of *Farming Matters* the use of agroecological practices leads to increased productivity and incomes for farmers, enhanced food security, improved capacity to adapt to changing climates, regeneration of natural resources and a greater autonomy for farmers. This is the experience of farmers in Bolivia on page 20, for example.

These benefits are the building blocks for decreasing vulnerability and helping to create a more resilient agriculture. They increase the ability of farming families and communities to adapt and recover from shocks and stresses. Agroecology is now supported by an ever broader part of the scientific community as the best way to sustainably improve food systems around the world. It features prominently in the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). It is strongly recommended by the United Nations Environment Programme, the UN Special Rapporteur on the Right to Food and an increasing number of other influential individuals and organisations.

Agroecology as a social movement

Calling for such new policies is useless without a political commitment to social change. However, this is challenged by the powerful influence of neo-liberal thinking about agriculture. Social change, as much as developing the technical aspects of agroecology, is an essential prerequisite for ending poverty and hunger, and building resilience.

It is unlikely that rural hunger will ever be eliminated without the enthusiasm and social force of family farmers around the world. The causes of hunger and low productivity are overwhelmingly social and political. Favourable policies for agroecology are better

enabled through the mobilisation of small scale farmers, and collective action also leads to more innovation and learning, as in the case of ATC in Nicaragua (page 36). This is why agroecology is also recognised as a social movement.

At the global level, redirecting governments and multilateral institutions towards supporting more equitable, resilient and sustainable agriculture and food systems requires a radical shift in priorities, research, and investment patterns. It also requires the recognition of the important role of local food systems, as is seen in Portugal (page 12). This will only come about through the power of social movements in which smallholder farmers work in alliance with like-minded organisations.

Agricultural researchers, policy makers and others who are committed to ending hunger and poverty must act now to support family farmers in developing and practicing agroecology.

Peter Gubbels is the Director Action Learning and Advocacy for Groundswell International. He grew up in a farming family in Canada and has lived in West Africa for over 24 years. Email: pgubbels@groundswellinternational.org

The author would like to acknowledge the following people from whose work he has drawn: Albert Oppong-Ansah (Surviving on a meal a day, IPS 2012), Christian Aid (Farmers left behind, June 2007), F. Mousseau (The high food price challenge, 2010).

Agroecology

Agroecology sees the farm as a system built on a healthy soil as its basis. Some of the core principles of agroecology include:

- recycling nutrients and energy on the farm rather than introducing external inputs;
- integrating crops and livestock and increasing agrobiodiversity;
- focusing on interactions and productivity across the whole system rather than on individual species.

In contrast to neo-liberal modernisation, agroecology is based on techniques that are not delivered top-down, but developed from farmer knowledge and experimentation, co-created with scientists. Local knowledge systems are indispensable, and agroecology takes strength from existing socio-cultural structures such as local institutions governing natural resources.



**Subsistence
is resistance**
Local **food systems**
in times of economic crisis

The Alentejo is the largest and poorest region of Portugal. Cooperatives and other social initiatives that arose after the Carnation Revolution in 1974 were later closed under pressure from the European Union. It was hoped that massive investments would make Portugal a role model for economic development, but the financial crisis has revealed the flaws in those dreams. And more complex legal regulations make life even harder for traditional small scale producers. However, they continue to use and defend local markets even in the face of criminalisation.

Leila Dregger

Maria Isabel is 83 years old and a criminal. She has contributed her vitality and skills to the local economy for decades by making apple pies using eggs from her own hens which she sells to the local bar. Her 58 year old daughter Eusébia produces goat cheese in her kitchen that she sells for €1 each. José Manuel, a few blocks down the road, bakes a few more loaves than his family needs, which he sells to neighbours to supplement his meagre pension. Other villagers gather mushrooms for sale. And if they run out of bottles of *medronho* at the local bar – a popular local liquor made from the strawberry tree – the owner goes to the garage to get a bottle of homemade brew he bought from old Tomás, one of the village elders. The restaurant, owned by Maria Inacia Chavez (photo), is also now illegal.

These are examples of traditional and informal trade conducted without invoices. You can call it tradition, adding to quality of life and local 'colour'. But in times of crisis, such sharing and selling amongst neighbours becomes more important than this – it helps people to survive.

Austerity Under pressure from the 'troika' (the International Monetary Fund, European Commission and the European Central Bank), Portugal has been forced to act against the best interests of its own people. Unlike France, Portugal has not negotiated special conditions for its small business owners. And following the crisis, the government responded with a swathe of austerity measures. The consequences? Small producers, bars, kitchens, shops and bakeries that make up traditional culture in rural parts of the country are now illegal, in fact, because they do not

meet the new 'business' criteria. However, to obtain the required business permit, producers have to meet a list of requirements and make investments that are only feasible for large scale operations.

Negative impacts The new regulations led to the close of many local markets where before, villagers had been able to sell their products and earn a little extra money. Meanwhile, the local tax office recently employed 1000 new tax auditors. People involved in the local production and trade of food now find themselves criminalised. The government is painting many ordinary people as tax avoiders and even as those who helped create the crisis – when they are just trying to 'get by' as best they can. In the small village of Amoreiras, the local authority fined a group who made and sold charcoal as they have done for decades. The average age of the 'offenders' was 70.

Adérito Pereira is the owner of a small village bar. He had to purchase a modern cash register and became very frustrated. *"If a client asks, I have to give them a bill. If it was for an omelette, then the taxman also expects to see an invoice for eggs. If I use the eggs from my own chickens, this is not allowed and I am considered illegal."*

Former history professor Antonio Quaresma said; *"If local products disappear, replaced by industrial production, obviously the large corporations stand to profit instead of the local economy."* He also paints a bleak picture of some current practices. *"Some land in the Alentejo is leased to international companies for olive cultivation or irrigated greenhouse horticulture, often employing labour from Bulgaria, Thailand or elsewhere. After a few years the soil becomes leached and chemically overloaded."* Most of the benefits leave the area, and do such companies always pay their full due of taxes?



Selling locally grown food for local consumption would seem like common sense - though it may not be legal. Photo: Leila Dregger

Fighting back There exists a compelling slogan, ‘where injustice becomes law, resistance becomes a duty’. We think this applies in the Alentejo. The authorities and decision-makers are too far away from the reality on the ground, and it is morally wrong to deny the traditional rights of older people in their home villages as they struggle to maintain a livelihood. It is also strategically incomprehensible. The Alentejo is a region that still holds and shares traditional knowledge, methods and practices and retains strong social cohesion within communities. This rare cultural treasure is being destroyed.

But the Portuguese are increasingly raising their voices. Several times in 2013, up to a million people protested against the troika, or one in ten of the population. Many also show creativity and determination in their civil disobedience. When parliament was debating a law that would force restaurant customers to actively request an invoice, tens of thousands of people gave the tax number of the Prime Minister instead of their own. The law was hurriedly retracted. There are also many village mayors who do not accept that informal local markets should be banned. To get around

the rules, they operate under the name *mostra* (or exhibition, not sale) of local goods. If someone really wants to give something away and someone happens to put money into a donation box, well, who can prevent that?

There are also cases of civil disobedience. People in Alentejo ask at restaurants for homemade dishes using local produce and do not request receipts. Local exchange systems are developing. Shop owners find that a donation box at the entrance for certain goods brings them more profit than modern cash registers. And maybe local currencies could develop to further circumvent the rigid tax laws.

Linking together Fortunately, when facing up to a crisis, any crisis, there appears a natural tendency for people to work closer together, for mutual aid, self-sufficiency and a renewed community spirit. Such cooperation also helps to soften the negative impacts, and can help to lead the way towards its resolution. This is true not only for the Alentejo, nor for Portugal as a whole. The more unreliable the supply systems of the global economy becomes, the more we need to expand local subsistence to regional and national levels.

Sustainability models What we learn from the Alentejo is that models for regional autonomy evolve organically from crisis-stricken areas. In regions where agroecological, technological, social

Taking eggs to sell to the local restaurant. Can such ‘business’ really be breaking the law?

Photo: Leila Dregger





Traditional farming in Alentejo is a way of life, but can it survive modern regulations? Photo: Leila Dregger

and economic knowledge is locally applied, the whole social landscape flourishes. This reveals a positive side of the crisis, where people tend to develop a greater openness to cooperation and experimentation.

In Portugal, unexpected alliances are consolidating. The urban youth protesting and the rural elderly realise that they have similar goals. More people from the cities want to return to the countryside, not from a romantic notion, but because urban lifestyles are increasingly difficult to sustain with rising food, energy and rental costs, and falling salaries. In the villages where perhaps their parents or grandparents came from, they hope for better opportunities. But most lack the necessary knowledge to build and develop their living conditions.

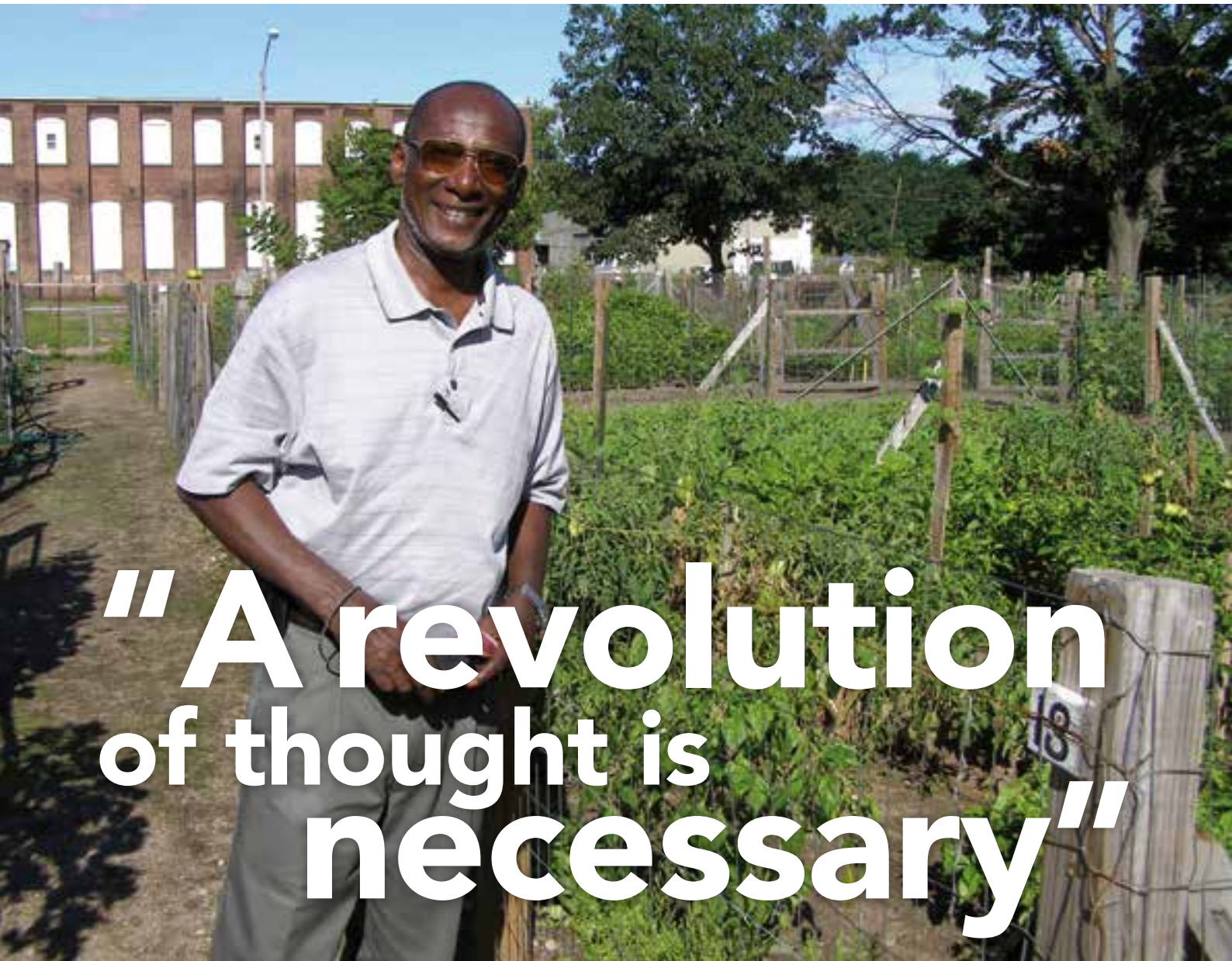
Two years ago, responding to this situation, the '12 de março' (March 12th) initiative led to the foundation of the 'Academia Cidadã', a citizens academy

where people can learn what it takes to make a living independently from the system. It is allied to the Transition Towns movement, the Global Ecovillage Network and many other initiatives. "We want to bring local and international knowledge carriers and policy makers together with the aim of collectively building up a model region", said Vera Kleinhammes, involved in the Global Campus, an education initiative based in Alentejo. "Knowledge of ecological and social sustainability which we have collected together with our partners in Africa, South America, Asia and Europe could help Alentejo transform from a problem case to a model for all of Europe."

Leila Dregger is a German journalist. She currently works for the Global Ecovillage Network and lives in the Tamera Peace Research Center in Portugal (www.tamera.org). Email: leila.dregger@snafu.de

Beyond food – options for decentralised sustainability...

- Natural water management. Large dams provide water for industrial uses, but decentralised water management approaches such as rainwater harvesting and soil and water conservation offer opportunities better adapted to local needs.
- Decentralised energy autonomy. Alentejo is well known for its sunshine, so why not focus on solar power to provide the energy?
- Farming with biodiversity. Organic farming, intercropping, agroforestry and permaculture all offer the potential to produce more food sustainably, heal environmental damage and provide economic benefits.
- Community based economies. The use of local currencies can ensure that profits are retained in the area, creating responsible growth and reinvestment in the local communities.



**“A revolution
of thought is
necessary”**

Cantave Jean-Baptiste is a Haitian agronomist and rural development practitioner with more than three decades of experience supporting sustainable agriculture and strengthening peasant organisations. He is Executive Director of Partenariat pour le Développement Local (PDL) in Haiti, and a founding member of Groundswell International. *Farming Matters* asked Mr Jean-Baptiste how family farmers can build resilience in Haiti, a country where an estimated 80% of the population lives in poverty.

Interview: Steve Brescia

For decades, Haiti has not had coherent rural development plans. Family farmers are no longer able to produce enough to feed themselves due to soil erosion, deforestation, climate change, more droughts, floods and other natural disasters, Cantave Jean-Baptiste explains. “Projects from the government and non governmental organisations are implemented by project staff with little appreciation of local realities. It would be better if they would enable rural people to take actions to improve their own lives. Haiti’s population of ten million is growing quickly, adding an extra 200,000 people each year. Many rural families do not have access to basic services, such as education, health, infrastructure, and safe drinking water, which the government should provide but does not. This is very problematic, especially since it is combined with a deteriorating quality and availability of natural resources for agriculture on which many communities rely for their subsistence.”

Why are Haitians so vulnerable to natural disasters?

The 2010 earthquake killed hundreds of thousands of people in Port-au-Prince, Leogane, Petit Goave, Jacmel and surrounding areas, and also left very many people injured. It destroyed key infrastructure and many of the devastated sites are still in ruins four years later. Moreover, families around the country spent the little money they had providing support to their relatives in the cities, resulting in a drain of resources and more poverty in rural areas. Many millions of dollars in development aid were spent on immediate assistance, but much less on longer term recovery, and especially on increasing resilience. Well before the earthquake, however, the country had been experiencing frequent disasters such as droughts and hurricanes. These forced people to migrate to the cities, which created new concentrations of misery there. Rural areas, and much needed sustainable agricultural approaches such as agroecology, are neglected by central government. Family farming remains the main economic activity for Haiti, yet it receives little attention or support. Existing irrigation systems are poorly managed and maintained and access to inputs is limited. Tonnes of fruit are also wasted in isolated rural areas because of the lack of facilities and capacity to process them and poor transport infrastructure.

How can rural communities build resilience and overcome poverty?

More than 200 years after independence, Haiti’s rural areas still bear the scars of colonisation: marginalisation, mistrust, exploitation and injustice. My 35 years’ experience has taught me that

a revolution of thought is necessary to reshape the mentality of rural people and build a common vision among family farmers to create a better future. People need to refuse to be marginalised and to overcome it – to consider themselves as citizens and human beings. People need to understand that poverty is mostly man-made rather than something that is determined by fate. I know that this is not easy to achieve. It requires time, a clear vision, and a strong determination to face adversity and stand up to the dominant trends working against rural communities.

How do you strengthen peasant organisations? *Partenariat pour le Développement Local* organises sessions at the community level that promote reflection, build confidence, and build their capacity to mobilise and use their own assets to overcome common challenges. Putting into practice our national motto ‘Union Makes Strength’, we help identify community problems that one family is not able resolve alone, and help them to pool their resources and energy to deal with it. This convinces rural people of their own potential. They first form small groups of 15-20 people which we call *gwoupman*. The *gwoupman* set up a village level organisational structure to take charge of the community development process. Then several villages unite and structure themselves into a local peasant organisation. The collective leadership leads activities and connects to partners who can provide

“People need to understand that poverty is mostly man-made rather than something that is determined by fate.” Photo: Groundswell International





“We talk with farmers and support their experiments.” Photo: Groundswell International

different kinds of support. Local peasant organisations participate in the design and implementation of their own programmes while we are still playing a support role, and take full charge of managing their own activities when they reach a certain level of autonomy. We have found that this is the best way to build community capacity and guarantee the resilience and sustainability of rural development processes.

“Farmers see that diversification increases biodiversity while providing food throughout the year”

How have you been promoting agroecological practices? Promoting agroecological practices starts with on-farm experimentation, controlling soil erosion using stone and living contour barriers, and improving soil fertility through better use of organic matter. Our technicians visit farmers in their fields and work with them to identify the constraints they are facing. Most of the

time, the farmers’ main challenges are poor soil fertility, low seed quality, crop pests, and limited access to basic tools and inputs. Then, we talk with farmers and support their experiments such as carefully selecting the seeds they save, or mixing different crops on their plots to improve ground cover and to extend the harvest period. Farmers see that diversification increases biodiversity while providing food throughout the year. Integrating fruit and forest trees in farming systems also helps to secure long term protection and resilience.

What were the factors behind the success of your approach?

Key factors of success include the need to have successful farmers who are open to experiment, adopt new practices and train their neighbours. It is also important that farmer organisations set up seed banks with part of their harvest to secure seeds for the coming rainy season, and that they lend out seeds which are paid back in kind and with interest in order to be able to respond to more and more participants’ needs over time. A good start helps, and often the first year’s results convince farmers to work on mastering the new practices and then to start teaching others. Finally, local organisational structures must develop the capacity to manage community programmes themselves to ensure long term sustainability.

What more is needed? We should not limit our actions to only promoting better food systems. We should envision the total well being of farming families. We need to develop different kinds of livelihoods aimed at increasing family and community revenue. We should promote local savings and community managed microfinance to facilitate cash circulation and protect poor families against the vicious cycle of debt entrapment. Improved sanitation, basic hygiene and education allows for better quality of life and limiting epidemics such as cholera that were introduced into Haiti after the earthquake. And finally, rural communities can be wealthier and healthier when local organisational structures are strong, and to achieve that, we need enlightened community leadership.

What do you expect from this International Year of Family Farming?

I wonder how many organisations in Haiti even know about this International Year of Family Farming! We are already in the fifth month of the year, and promoters could make more efforts in outreach and communication. I do hope, however, that the voice of family farmers echoes widely and reaches the ears and consciousness of decision makers in the South and the North.

Insanity, Albert Einstein once said, is doing the same thing again and again and expecting different results. It looks like that is what is being done in the name of poverty reduction for Africa.

There is little reflection on why poverty is deepening and ecosystems are degrading while millions of dollars continue to be poured into 'alleviating' poverty. Why are farmers still caught in this vicious cycle of remaining in poverty when so much money is being invested? One of the answers is the lack of understanding of agriculture as a system, and the focus on selected parts of the system such as seed or soil.

The common belief is that it is best to optimise the efficiency of a single unit of the system while disregarding the connectivity of all the parts. We plant improved varieties, add fertilizers and pesticides, and develop processes for storage and marketing. This linear model of development has succeeded in increasing production, but the problem is that the world does not work in a linear way. Life is full of surprises. Two years of drought and extreme flooding can reverse all the gains from such an approach. Publications after publication have documented the failures in conventional agricultural systems and shown their lack of resilience. Large tracts of barren and degraded lands, polluted rivers and soils, poisoned people and animals in developed countries are all evidence of this.

The Green Revolution in Africa is based on this unsustainable system. Under the guise of lifting 50 million Africans out of poverty, governments and big businesses are joining hands to 'sell' this approach. The G8 New Alliance for Food Security and Nutrition, led by governments from the North and joined by an array of companies, is succeeding in arm-twisting African governments into implementing unfavourable obligations. Changes are also being made to the continent's own Comprehensive African Agriculture Development Program (CAADP) through various means to suit their purpose. These are forcing African countries to harmonise seed laws with little understanding of African governance and no knowledge of farmers. These threaten the rights of farmers, destroy our biological and cultural diversity, and will help to put African heritage in the hands of multinational corporations.

We need to look at agriculture as a system, promote agroecology, and stop this impending disaster before it is too late. We need to mobilise African people and governments to reject this model and to develop home-grown solutions based on the knowledge, experience and innovation of our own farmers.

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A systems approach against poverty

How *Yapuchiris*

Dealing with the uncertainties of changing climates is a challenge faced by farmers around the world. Near Cochabamba in Bolivia's Andean high plateau, a group of agroecological farmers are leading the way by developing and sharing innovative practices that help their communities break out of the vicious cycle of increased poverty and vulnerability. But challenges remain...

Tania Ricaldi Arévalo and Luis Carlos Aguilar

Tapacari province near Cochabamba is one of the most vulnerable municipalities in Bolivia, with 99% of the population living below the poverty line and 89% in extreme poverty. Challa is one of the four cantons or districts, at 3500-4600 metres above sea level, with only 300-600 mm annual precipitation and an average temperature of 6.5°C. The entire population here depends on subsistence agriculture with only very limited capacity to produce excess for sale. Agricultural potential is very low, relative vulnerability is high, and temporary and permanent migration is one of the few alternative survival strategies. Yet, they have developed coping mechanisms that are based on a combination of local wisdom gathered over centuries, and knowledge of agroecological production techniques.

Enter the *Yapuchiris* Traditional knowledge has been created and preserved over many centuries, but in recent decades much has been lost for reasons such as 'modern' education, the technological 'progress' of the Green Revolution practices, and changes in the market. And in this challenging environment, enter the *Yapuchiris*. Traditional 'leader' farmers, they collect, create and share agroecological knowledge and risk management strategies in the local area. Blending ancestral knowledge with newly adopted practices, *Yapuchiris* experiment on their own land then teach other farmers and local organisations about their successes.

Anyone can be a *Yapuchiri*. In Tapacari, farmers either volunteer or are elected by their community. They incorporate their varied wisdom and experiences into a process of research, dialogue, reflection, documentation, training, and exchange of knowledge. They focus on the management of different crops, experimenting with agroecological practices, preparing and testing biological inputs, intercropping, evaluating yields, weather recording, applying risk management tools, and so on. They travel around their own and neighbouring communities, sharing their experiences with other farmers in their '*Yapuchiri* tent' at local fairs, but also via posters, flyers and radio programmes. They also collect farmers' questions and concerns which enrich their experimentation and future research.

Local attitudes and public policies are slowly seeing the true value of how traditional knowledge and practices improve the management and resilience of farming systems. In Bolivia, the new National Political Constitution of 2009 recognises the government's duty to protect the rights of indigenous peoples, and respect, value, promote and protect their traditions and wisdom. Although this is a great achievement, more effort is needed to translate these laws into concrete strategies and actions. Moreover, there are still no policies that focus on climate risk management, or that could support the evident local capacity in this area of the *Yapuchiris*.

Our research "*The most frequent threats are hail and frost which can cause losses of 50-100% in our main crops,*" says Facundo Poma, a *Yapuchiri* from Challa district. Other climate change related

build climate resilience



Farmers who learn from *Yapuchiris* improve the resilience of their farming systems. Photo: Proyecto GRAC

problems mentioned by the farmers besides hail and frost were, too much rain, crop diseases, snow and strong winds, in order of decreasing importance. To assess the impacts of climate risks, and the strategies to address them used by rural communities, we undertook a survey of farming families in the district. We divided farmers into three groups. First are the *Yapuchiris* who practice agroecology, treat plants with biological inputs and use multiple practices in response to climate threats, then farmers assisted by *Yapuchiris* or older parents who know and share traditional practices, and finally, farmers who use very few risk-avoidance practices.

The diversity of local responses

The survey identified a total of 34 different practices that the farmers used to manage climate risks. At least a few risk reduction practices were used by 72% of the surveyed farmers. This included all of the *Yapuchiris* and 82% of farmers accompanied by *Yapuchiris*. On the other hand, only 15% of farmers not accompanied by *Yapuchiris* used any such measures. We also looked at the source of the knowledge about these practices. The survey found that 57% of the climate risk reduction practices were adapted from ancestral knowledge, 20% from knowledge from external institutions, 12% from farmer exchanges and



A farmer proudly shows his crops that have withstood the vagaries of the weather that have damaged those of other farmers. Photo: Proyecto GRAC

11% from farmers' own initiatives.

Most of the practices and strategies were agronomic in nature, including the timely mounding up of soil around plants, improving soil fertility by manuring and re-ploughing, agroecological soil and water conservation measures, use of bio-fertilizers, pest and disease control, seed selection, disinfection and pre-sprouting. *Yapuchiris* identify and mark the healthiest and most robust potatoes when they are flowering, to be saved for planting the following year. And before sowing seeds, they are disinfected with a paste made from special type of animal manure, or a mixture of spicy wild plant seeds, lime and sulphur.

Other strategies were socio-cultural, and included various rituals, and predicting the weather by observing natural indicators such as flowering dates of certain plants, the appearance of animals (birds, insects, reptiles), and presence of clouds, wind or rain during holidays or certain phases of the moon.

Complementary practices The practices applied varied from one planting season to another according to the presence of climatic phenomena and to what production and risk management practices were already incorporated into the production system. *Yapuchiris* used a greater diversity of strategies, simultaneously or in complement, and were at least twice as likely to implement any of the risk reduction practices compared to other farmers. Agronomic and risk management practices at system or component level are not separate in the minds of

Yapuchiris, but are considered complementary in increasing buffering capacity in the face of extreme climate events.

These findings and the history of climatic events show that the impacts of natural phenomena are local in nature, and actions have to be taken first at the family and community level. Support should be focused on strengthening capacities for addressing climate risk based on ancestral knowledge and local knowledge but also modern scientific knowledge, complementing each other and offering various options.

To what extent has the use of these practices improved output and reduced production losses in the face of climate change? A survey of the potato harvest in Challa in 2013 clearly showed the positive impacts. The average yield was 8 tonnes per hectare, increasing to 13 tonnes amongst farmers that were helped by *Yapuchiris*, while the *Yapuchiris* themselves produced an average 21 tonnes per hectare. But even some farmers not assisted by *Yapuchiris* still use their knowledge as a reference when making decisions on production and risk management, as when asked why they use a certain practice, they replied by saying, "I watch the *Yapuchiris*" or "because the *Yapuchiris* do it".

Ideals and constraints The ideal would be for each community to have a group of *Yapuchiris* and the economic support to enable them to improve the service they provide and knowledge sharing within communities. But reality is different.

There are invisible barriers which corrode the values and principles of cooperation and interrelationships and prevent sharing, replication and building. These include individualism and egoism among the rural people, and external factors that are difficult to manage. For example, modern cultural and educational influences tend to override ancestral customs such as reciprocity, solidarity and respect for individuals and nature; aspects which should be promoted within communities to contribute to achieving and sustaining well being.

In spite of the importance of *Yapuchiris*, limitations are evident. Firstly, it is a simple numbers game. In Challa, there are only 24 *Yapuchiris* who actively assist other farmers, which is clearly inadequate given that there are 1850 families spread between 27 communities in the district. Another aspect is the time required to assist and accompany other farmers without neglecting their own farms, and who should pay *Yapuchiris* for the extra time and travel costs needed to share their knowledge?

Efforts were made to overcome these limitations in 2013. The *Yapuchiris* presented a proposal to the Municipality of Tapacarí asking for resources to strengthen and facilitate their work. They also tried to encourage local education authorities to follow new policies aimed at promoting training and education of children and youth in risk management. The municipality expressed an interest but has not yet shown the political will to fully support such initiatives and take advantage of local capacities.

Building climate resilience Using and strengthening local capacities and the role of the *Yapuchiris* are the best way for communities to manage climate risk and to build resilience in the face of climate change. It is also necessary to recover traditional knowledge and practices, study them and adapt them, especially given that most climate change impacts are local and actions by public entities are marginal. The lack of capacity to act and react makes communities more vulnerable to climatic events, reducing family and communal food security with effects on society as a whole. These are essential aspects that should be taken into account when defining public policies for the management of climate risk.

Sustainable agroecological production can address new climate challenges. But this requires observing, strengthening and building new capacities at the local level, and initiating dialogue that promotes and diffuses different kinds of knowledge. We hope that our findings about the role of *Yapuchiris* and traditional knowledge will contribute to the spread of local agroecological practices as a viable climate risk management strategy.

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Disinfecting potatoes by covering them with ash, or coating them with a special mixture of animal manure. Photos: Projecto GRAC



The world's largest safety net for family farmers?

India's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is the largest public-works based employment programme in the world. Unanimously enacted by the Indian parliament in 2005, implementation began in February 2006. With an annual budget of six billion US dollars, it now supports some fifty million rural people – larger than the population of Senegal, Mali and Niger combined. This article focuses on the successes, issues and potential of the Act to improve the well being of workers and family farmers.

KS Gopal

Rural India has a considerable landless population, often leasing farming land, but a much larger number of smallholder farmers who presently earn much of their income from off-farm labour. Rainfed agriculture accounts for 40% of Indian food production, occupying half of India's arable land and is home to the majority of the rural poor. People in these areas are suffering recurring droughts, increasing debts, migration, rising farmer suicides, and a lack of public and private investments. Furthermore, land use patterns are drastically shifting with the increasing sales of agricultural land to companies and rich urbanites.

The vision MGNREGA has two explicit goals. These are to provide employment and income, and to create productive assets. The former is immediate and ameliorative, while the latter builds infrastructure and sustainably improves rural livelihood opportunities.

One of the main aims is to provide a universal guarantee of 100 days paid work per year for the rural households involved, with employment on demand within 15 days or workers are entitled to unemployment allowance. Men and women should receive equal pay, linked to the minimum wage and the consumer price index.

The Act puts village institutions such as *gram sahha* and *gram panchayat* at the centre of decision making, helping to strengthen decentralized governance. Permissible work includes soil and water conservation, natural resource development and infrastructure improvements such as sanitation, roads and community centres. It also allows work on private land for the very poor. Guidelines stipulate a twice-yearly social audit with transparency and accountability guaranteed through the Right to Information Act.

A bumpy road so far After eight years of implementation, Indian policy makers, officials and NGOs are now questioning how they can reinvigorate



The average annual employment per household has only reached 50 days per year under the Act so far, half of the expected target. Photo: KS Gopal

the initial enthusiasm that accompanied the launch of this ambitious Act. MGNREGA has substantially increased agricultural wages, especially for women, but the average annual employment per household has only reached 50 days, half of the final target. But it has been shown that the additional income has been used as capital, to increase the productivity of family farms.

Meanwhile, critical challenges remain, and many practical issues that are crucial to rural workers and farmers have still not been overcome, affecting trust and confidence. Periods of employment are considered too short and wages are not always paid in a timely manner. A precondition for addressing these

Politicians are harvesting votes and policy makers are fire fighting peripheral issues while bureaucrats are busy making money

challenges is to stamp out the prevailing culture where politicians are harvesting votes, policy makers are fire fighting peripheral issues, while bureaucrats are busy making money.

Acting on the Act The vision embodied by the MGNREGA must be receptive to the knowledge and objectives of rural workers and family farmers and is critical for building resilient communities. Investments not yet considered that would better

fit the needs of rural communities include providing women with work tools to enhance their status and to reduce drudgery, upgrading workers' skills to meet the emerging labour market, and exploring farming techniques that enhance water use efficiency.

Family farmers have the ability to trigger the transformative potential of MGNREGA. Family farmers have rich and eco-friendly ideas that can be built upon with the addition of science and technology. This is possible however, only when academics, researchers, political leaders and NGOs actively engage with family farmers while respecting their autonomy and sense of dignity. Ultimately, improving the well being of rural workers and family farmers will have a cascading impact on food security, productivity, inclusive growth and gender equality in rural India. And the Act has the potential to play a significant role.

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Improving the well being of rural workers and family farmers will have a cascading impact on food security, productivity, inclusive growth and gender equality in rural India. Photo: KS Gopal





One way that family farmers improve their resilience to both climatic and economic shocks is to diversify what is produced. More and different crops and livestock, particularly local varieties and breeds are being promoted.

Two other options stand out too – bees and trees.

These have the added advantages of complementing the production of agricultural crops and enhancing the agroecosystem. In Zimbabwe, the Ruzivo Trust has been promoting beekeeping, and the results are showing the sweet taste of success. Bees can help farmers break out of poverty.

Chipso Gono

Agriculture in Zimbabwe is largely rainfed and so highly dependent on nature and its extremes. Many families barely manage to eke out a living from the land they farm even in good years. In this context, beekeeping is one practice where families pride themselves as working with and for nature, while deriving food, nutrition and income. At the Ruzivo Trust, we value the cultural activities of family farmers, and in our participatory approach, our resolve is not to displace but to co-create knowledge with them. Through an innovative programme we are

giving family farmers the opportunity to earn a decent livelihood from their independent work in apiculture, while also providing a platform for social change.

Social learning with beekeeping

In collaboration with district agricultural extension officers, the Ruzivo Trust identified a group of about 100 families with an enthusiasm for beekeeping in Goromonzi, and women and men were equally represented. In collaboration with Zonful Enterprises, we set up five 'RuZoBee' demonstration sites where farmers get hands-on beekeeping experience. We used discovery-based learning approaches, or 'learning by

doing'. The main objectives are to equip farmers with beekeeping basics, and ensure the engagement of community organisations to strengthen social interaction and mobilise financial resources.

A little effort, well placed, can make a large contribution to improving rural livelihoods. We will use the evidence we are generating to show decision makers in government, the private sector and development agencies the value of small climate smart enterprises such as beekeeping and how these can transform lives. There is no doubt that honey production presents an enormous potential for achieving food security in Africa, and family farmers in Mazowe and Goromonzi have started towards this goal, but a journey in which their footprint will not prejudice future generations.

Bees and honey everywhere for everyone

There are more than 50,000 beekeepers in Zimbabwe. A field workshop arranged by the Ruzivo trust in February 2014 brought some of them together to share their knowledge on the practices and benefits of beekeeping. Mr Moyo from Mhondoro amazed people when he told how he harvests 15 kg from each of his 15 hives every six months, or 450 kg per year. Mrs Manyowa of Mazowe was also very happy to share her experiences since she started keeping bees only a year earlier, and that she has already harvested 340 kg of honey and now has 20 hives. She says: *"I strongly believe that my community must have access to honey, and the surrounding areas must have greenery where bees can thrive and people can access not just honey but also water and other resources provided by nature"*. In Mazowe, beekeeping has already helped to bind rural communities by becoming a social phenomenon where families work together to develop more sustainable farming practices.

Bees in the service of the environment

Deforestation and unregulated pesticide use are major threats to beekeeping in Zimbabwe as well as to long-term environmental sustainability in general. Today, trees and woodlands are being cut at an ever-faster rate due to demands for fuel and more land for growing input-intensive cash crops such as tobacco. The Ruzivo Trust works with family farmers to promote beekeeping-centred agroforestry, maintaining tree cover by promoting the protection and planting of trees. This also helps to ensure a regular and ample supply of bee forage, and contributes to the design of interventions that help people *and* their environment.

An unexpected outcome is that beekeeping increases the participation of communities in conservation. When farmers learn about the value of trees as a source of bee forage, they are also less likely to continue with destructive activities such as charcoal burning and hunting and even begin to plant more trees. They recognise that protected environments are good for bees, and the growing of bee-friendly crops like sunflower and alfalfa could further increase honey production.

Climate change, unpredictable droughts and floods are contributing to crop failures. Yet, beekeeping has proven to offer a valuable adaptation strategy. During droughts, bees can forage in the wild vegetation and still produce honey and beeswax. While farmers such as Mrs Manyowa invest in beekeeping, she is equally investing for a future environment in which her community and physical surroundings are more resilient to climate shocks. Her efforts are not lost, because in the process of conserving nature for her bees, cash is also coming into her pocket and so helping her family and her community break out of poverty.

Benefits from bees

Demand for honey and other bee products is high in Zimbabwe. Besides a food and sweetener, honey is used in making confectioneries such as Willards Foods and Crystal Sweets, in the pharmaceutical industry, and as a medicine by religious groups. There is also a strong market for beeswax for making cosmetics, antiseptics, and for floor, furniture and shoe polish. Farmers also make their own candles, wax, soap and skin lotions at the household level. Honey has health benefits, as a detoxifier, and vitamins E, D, C, and K help strengthen the body's immune system. Honey and beeswax are

also growing export commodities along with bee venom, propolis and royal jelly. These show great potential for employment generation in rural communities.

Bees also play a significant role by pollinating crops and so contributing to increased food production. Bees pollinate wild plants including forest trees and so play a priceless ecological role in biodiversity conservation and the maintenance of attractive landscapes.



Family beekeepers benefiting from increased economic and environmental resilience.

Photo: Chipso Gono

An attractive family enterprise

Most rural development initiatives attempt to improve the farmers' livelihoods. We have observed that when crop production alone cannot provide adequate food security, beekeeping provides a feasible diversification option. It is low cost, low risk and requires minimal land and labour, making it viable for young and old alike, and other disadvantaged groups irrespective of their socio-economic and political status. Bees are self-sufficient and do not need constant attention. Beekeeping does not compete for resources with other types of agriculture. Most of the necessary equipment, hives, smokers, protective clothing and veils can be made by local carpenters, tinsmiths and tailors and this adds to the rural economy.

In Mazowe District, most families now practise a mix of activities combining beekeeping with raising crops and cattle. Local farmer Clemence Machoto said *"I can now better cater for my growing family needs and improve my quality of life. Beekeeping supplies me with an additional non-perishable food and it is not time consuming."* A neighbour Mr Musiwo explains, *"I have upgraded from using reed baskets and log hives to using improved 'Kenyan top bar' hives which make it easier to harvest honey without impurities"*.

Beekeeping for income, pride and independence

To family farmers in Mazowe, beekeeping is becoming much more than a renewed rural occupation, but an integral part of a new and much broader agriculture with diversified income sources. A survey of 26 farmers previously trained on beekeeping by Ruzivo, showed that nine

out of ten farmers improved their incomes as a result of keeping bees, diversified their diets, invested in education for themselves and their children, and reinvested in their farm to make it a more productive enterprise. Input costs are relatively low at less than 50% of the income generated, making beekeeping a thriving business that acts for many as a way out of poverty. One beehive can produce honey with a street value of almost US\$100 per year, with up to 15 kg of raw honey processed into 12 kg of pure honey that is decanted into 375 g bottles and sold for US \$3 each.

But is it all 'honey' that flows?

At the Ruzivo Trust, we have identified constraints to the further development of apiculture in Zimbabwe. Small scale farmers face uncertainties over access to finance, advice, information and reliable markets. Some beekeeping family farmers in Goromonzi district, have not yet been able to make a decent living from selling their own produce since they do not sell directly themselves and still rely on middlemen. Often, raw honey is sold to middlemen at low prices whereas pure honey and its by-products could fetch much more. Furthermore, we found that 90% of the beekeepers would benefit from improved technical knowledge at all levels of the honey value chain: in processing and value addition, record keeping and provision of coordinated market information systems.

Most families now combine beekeeping with raising crops and cattle

The importance of beekeeping and its links with trade and food security must form a critical area of attention for government and international agencies, policy makers, environmentalists and entrepreneurs. We believe that beekeeping farmers have the potential to transform Zimbabwe's agricultural sector. The challenge is a crisis of knowledge and more resources are needed to enable the necessary training and knowledge sharing, and we are confident of being able to help in covering the gap.

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The author extends her heartfelt gratitude to Oxfam Novib for funding our programmes at Ruzivo Trust, the ABC community and all our partners.

German youth struggle for land

To make a stand and demand our rights as young people who want to go into farming, in 2012 we launched the 'Stop land grabbing in eastern Germany' campaign. We are a group of young farmers, college graduates, apprentices and activists united in the Confederation of Young Farmers' (BjL). We have been working to safeguard smallholder agriculture and food sovereignty since 2012. Our collective farm in Bienenwerder (<http://olib-ev.org>) is a young peasants collective, 10 years old now. However, we are struggling against investors and agribusinesses that are trying to grab the land from under our feet. This is not an isolated case, with many other farmers also threatened.

Access to land is an increasing problem globally. In the South, transferring access rights away from local farmers has been called 'land grabbing'. But this phenomenon is not restricted to other continents. It has also been taking place in eastern Germany, here in Europe. Because of our socialist history, large tracts of land belong to the state. However, current neo-liberal policies are leading to a total sell-off to the highest bidder within the next decade. At the same time, in the wake of the financial crisis, agricultural land has become an object of speculation, with a price increase of 230% between 2006 and 2010.

Large farms dominate the landscape and are highly subsidised by the EU Common Agricultural Policy. Since 2007, the land market has been opened to financial investors and businesses without any agricultural background. These include joint ventures registered in the stock market, furniture manufacturers and dealers, opticians, real state and elder care companies, energy companies and so on... As a result, young farmers and others with farming aspirations are denied access to land as they cannot compete with such large corporations and cannot afford the price of land.



Paula Gioia is a bio-dynamic farm apprentice and member of the Bienenwerder collective farm (45 km from Berlin), Bündnis junge Landwirtschaft, and Arbeitsgemeinschaft bäuerliche Landwirtschaft. Campaign: www.stopp-landgrabbing.de. Email: paulagioia@gmail.com



Our confederation, together with the local youth wing of La Via Campesina (jAbL), produced a position paper with our demands that was presented to the German government. We call for a moratorium on any further sale of government land. We also demand support for young farmers in order to create jobs, sustain livelihoods and contribute to food sovereignty. We believe access to land must be ensured to support small scale farming, rather than sold to investors who have no local connections or ideals regarding sustainable agriculture.

Our land is being put up 'for sale'. But as young German farmers, we keep fighting against this sell-out. Food sovereignty for here and now!

Home nurseries Viable businesses with environmental awareness

Butana is a dry plateau in northern Sudan, east of the river Nile. Covering 65,000 square kilometres, less than 10% can be described as 'woodland' in the vaguest sense of the word, and even these trees are disappearing rapidly.

The Butana Integrated Rural Development Project began in 2008 with the aim of supporting the livelihoods of poor family farmers by strengthening their resilience in the face of recurrent droughts. And improving tree cover was a key means of achieving this.

Mohammed El Hassan Ali

Since time immemorial, farmers have recognised the role of trees in maintaining, restoring and improving land productivity. But trees are still being cut for fuel and posts, land is converted to agriculture, and natural regeneration is reduced by overgrazing, bush fires and droughts. To overcome this, tree planting has been promoted in Sudan and nurseries established, especially after the severe droughts of the 1980s.

From centralised to localised nurseries

In the past, the National Forests Corporation of Sudan and its partners established large centralised nurseries administered and supported by the government or external donors. Local communities played no significant role. The influx of international non-governmental organisations in the 1980s then saw a move towards smaller community nurseries with the voluntary involvement of local people. The hope was to improve effectiveness and efficiency, lessen the financial burden, and secure sustainability after the withdrawal of external support. In practice, however, many community nurseries faced difficulties soon after projects ended, often due to inadequate attention to issues of local ownership and sustainability. Lack of water, polythene bags and good soil were common, but the biggest problem was that community members were increasingly reluctant to provide free labour for tending seedlings.



With the home nurseries in the compound, the whole family helps to tend the tree seedlings.

Photo: Mohammed El Hassan Ali

Adapting nurseries to local needs

Development workers then introduced new ideas. One was to bring in a business element with the aim of making farmers more responsible and for nurseries to at least recover their costs. Community based organisations had to purchase seedlings directly or urge their members to do so, instead of receiving them for free. In El Regail in Gedaref State for example, one organisation purchased 800 seedlings from the neighbouring village in 2013 for planting in home compounds and women's communal vegetable gardens.

In the late 1990s, the 'home nursery' emerged from the Kordofan region as another working model. Community members were given portable chicken wire cages to protect seedlings from poultry and other animals. Two metres long and a metre wide, they were kept inside home compounds rather than in fields further away. Many women also appreciated the cages for another unexpected service – as drying racks after washing the dishes!

Native and exotic trees in Butana

Butana's natural vegetation is dominated by *Acacia tortilis* subsp. *tortilis* (samur) and subsp. *raddiana* (sayal), and other acacias, notably *Acacia ehrenbergiana* (salam), *Acacia mellifera* (kitir), *Acacia nilotica* (sunut), *Acacia nubica* (laout), and *Acacia seyal* (taleh). Native acacias are multipurpose, providing fodder, food, fibre, fuel and construction wood, shelter from the sun and wind, and fixing nitrogen. The most common exotic trees are *Azadirachta indica* (neem) and *Albizia lebbbeck* (dign al-basha) planted around compounds and as street trees, but few fruit trees due to water scarcity and poor soils.



Seedlings can be protected from browsing by hanging them in tree branches, and watered using water leaking from drinking containers. Photo: Mohammed El Hassan Ali

In Butana, home nurseries turned out to be cheap and effective. Their capacity of 50 to 200 seedlings is manageable for a family, and being inside the compound, all household members help tend the seedlings. Importantly, they rely solely on the use of local resources. Rather than polythene bags, tin cans, plastic bottles and empty sacks are used, and some proved much more durable. For irrigation, people used water that commonly leaks from clay pots of drinking water found in almost every rural household.

The Butana Integrated Rural Development Project was based on this model. It ran seven training courses in 2010-11, in Gedaref and Kassala (Eastern State), Gezira and Khartoum (Central State) and River Nile (Northern State), training 58 women and 97 men on nursery practices, seed collection, extraction and storage, sowing, raising seedlings, protection and outplanting.

Mr Adlan Mr Adlan is considered a wise man, respected by his community in Wad Hirz Allah. Married and with eight children, Mr Adlan is a family farmer who used to rely on variable harvests of sorghum and okra. Four of his children are enrolled in primary or secondary schools, and to pay the fees he would often have to travel far from home to seek paid work. But then, Mr Adlan was elected by the village development committee to head the 'forestry interest group', and became one of the first people to receive training in community nursery management. And that changed his life and that of his family.

In Gezira State where Mr Adlan lives, 60% of the land is rangeland, 27% is cultivated, 10% is woodland and the rest is bare ground. Tree density in Butana woodland varies from 155 to as few as 55 trees per hectare. Native trees like *Acacia seyal* are valued as a source of high quality forage especially during the dry season. However, Mr Adlan was quick to note that most farmers continue to remove trees from their farmland because of the belief that they attract birds

that eat their crops. Trees are cut for fuel and construction, but cultivation is the most widespread and destructive reason.

Mr Adlan and his family established a tree nursery. They were given a metal cage, seed and polythene bags. They provided the soil, water, a watering can and lots of care and attention, and produced 240 seedlings in the first three months. Mostly neem for planting as shade trees, they distributed 193 seedlings freely to their neighbours and the local school to increase environmental awareness and to gain public confidence and support. The remaining 47 seedlings were sold at 4 SDG each, earning a total of 188 SDG (almost US\$100). With no more polythene bags, they turned to re-using old tins, bottles and sacks, and used waste water for irrigation. And thanks to his training,

The poorest people depend on trees

Four types of 'interest group' were established in Butana – forestry, agriculture, livestock and rangelands – to help communities organise themselves depending on their needs and to improve their effective participation. Of these groups, forestry had the highest participation of the poorest households (84%, with 67-71% in the other groups), and the highest number of women members (54%, with 27-43% in the other groups). This showed a strong correlation between trees, women and poverty. Poor female-headed households acknowledge the importance of trees that provide fuel, poles, food, fodder, fibres and medicines that they could not otherwise afford to buy.

Mr Adlan had the skills to collect and extract seeds from the trees around him.

Mr Adlan then trained six interested villagers. Mr Saeed had an old tree in his compound, so Mr Adlan advised him to hang the cage from a branch so that the sheep and goats he also raised would not eat the seedlings. In 2012, the villagers raised and planted 688 seedlings in and around the village. With the help of the Butana project and the forestry interest group, Mr Adlan also encouraged farmers to enrich the tree cover in and around their fields and compounds.

Home nurseries as a business

Traditionally, rural communities considered trees and range resources a gift of nature. In the 1980s, seedlings became a 'gift of NGOs' that further encouraged the notion that they had no associated cost. Now the situation is changing thanks to awareness campaigns and ongoing training, and a deeper understanding of community needs.

For example, the demand for fruit trees and ornamental plants is now being met thanks to specific training from the Department of Horticulture. Mr Adlan was one of the beneficiaries, and of the next batch of 120 seedlings he raised following his return, half were lemon trees. In demand by local communities, Mr Adlan soon found buyers in three neighbouring villages.

Two years later, the Adlan family moved house to a bigger site and one that was also closer to a water supply so they could expand what was becoming a lucrative business. After relying on rented donkey carts, Mr Adlan saved and bought his own cart to deliver seedlings to other villages and to bring water for the nursery and for domestic use.

Impact Of 155 community members trained by the Butana project, 70% of them established their own nurseries. When asked why, they say that the money that they make from selling seedlings was a strong reason, even in the face of water scarcity. In Gezira State alone in 2013, 30 nurseries produced 4000 seedlings of which half were sold for a total of more than US\$1000.

There are also positive environmental impacts. In Kassala State, a total of 58 km of *Acacia seyal* wind-breaks were established in 2013 on more than 600 hectares of previously treeless farmland, directly benefiting 291 farming households. Besides protection of crops and soil against wind, the trees also provide shade, dry season fodder, soil improvement from nitrogen fixation as well as valuable fuelwood.

Experience with rural development projects that rely on community participation shows that it is very hard to sustain activities based on voluntary contributions with few tangible returns. Here it became

evident to start with individual champions such as Mr Adlan, and a manageable size of activity. This, in addition to developing home nurseries as a business, has improved community ownership of such projects. Given the success seen with this work, future projects could benefit from replicating or adapting this approach.

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Home nurseries are now supplying seedlings for planting in and around farmers fields, improving environmental resilience.

Photos: Mohammed El Hassan Ali





Who Wants to Farm? Youth aspirations, opportunities and rising food prices

J. Leavy and N. Hossain, 2014. IDS Working Paper 439. Institute of Development Studies, Brighton, UK. 44 pages.

Adding fuel to the debate on the future of agriculture, this paper explores why youth in developing countries appear reluctant to enter farming. Based on research in 10 countries in Africa, Asia and Latin America, it looks at conditions that attract young people to farming, and entry points for youth participation in policy making decisions on agriculture and food security. Contributors to agriculture's lack of appeal were a lack of access to land and capital, and social changes such as increased formal education. But agriculture proved attractive to youth when education is used to enhance productivity, and when young people mobilise in groups to enhance the freedom offered by meaningful employment. And agriculture could be made even more attractive with targeted support from public policies, and the use of young role models to show the potential of agricultural opportunities.

More on resilience and family farmers breaking out of poverty

Resilience is a term that is increasingly used, but what does it really mean? In its broadest sense it could encompass very many things, and a look into other books on the topic provides valuable insights.

What is resilience? An introduction to social-ecological research (Stockholm Resilience Centre, 2013) offers a definition, and emphatically argues that *poverty alleviation cannot take place without recognising nature's contribution to human livelihoods, health, security and culture*. It includes innovations that address social and ecological dimensions of unsustainable systems and provides compelling arguments for why initiatives such as agroecology must be scaled up. Agroecology encompasses many practical approaches that aim to build resilience and livelihoods, in the form of improved and more diversified farming practices as well as strengthened and empowered communities.

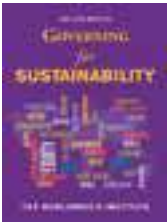
Agricultural biodiversity for resilient farming systems: What knowledge is needed to release potential and overcome constraints? (Hivos, 2013) provides a range of successful cases of increased agricultural biodiversity and the actions of smallholder farmers that contribute to more resilient livelihoods and ecosystems.

Smallholder Solutions to Hunger Poverty and Climate change (Food First/Action Aid, 2013) offers policy recommendations for governments and donors to better enable smallholders to build productive, ecologically sound and self-reliant communities.

How local resilience creates sustainable societies: hard to make, hard to break (Monhagan, 2012) further highlights the importance of transferring power to local actors with advice to both national and local leaders, and that climate change adaptation, while high on the international policy agenda, must be grounded at the local level.



Community-Based Adaptation to Climate Change – Scaling it up (Schipper et al., 2014) details the importance of upscaling adaptation that is rooted in local community strengths and capacities.



State of the World 2014: Governing for Sustainability

The WorldWatch Institute, 2014. Washington DC, USA. 252 pages.

This is the latest in the WorldWatch Institute's State of the World series. Although optimistic, the book is framed by a sentiment of crisis, with humanity at an unprecedented crossroads requiring a sharp departure from politics and business as usual. The book examines both obstacles to, and opportunities for, responsible political and economic governance. The scope is broad with contributions covering issues from appropriate technologies, markets and public goods, to the organisational capacity of civil society. The unifying message is that engaged and well-informed citizens are the key to better governance. It ends with a call to action, that we must build a culture of grassroots community engagement to improve the relationships that bind us to each other and to the planet we live on.



Feeding Frenzy - The New Politics of Food

P. McMahon, 2013. Profile Books Ltd, London, UK. 314 pages.

Feeding Frenzy addresses the question "Can we feed the world of 9 billion by 2050?" through the lens of the today's market turmoil and prevailing hunger and inequality. Following a brief history of the food system, McMahon delves into economic and political issues shaping the current food crisis. The book addresses how governments and corporations are fighting to secure control over food supply chains. Land grabbing, speculation on global food markets and export bans are a few of the topics discussed. Finally, McMahon outlines actions that would help to shape a sustainable and just food system. He states categorically that we have enough land and already produce enough food, if only we could support smallholder farmers, put ecology at the centre of farming, and make financial markets work to address real challenges.

The transformative potential of the right to food

O. De Schutter, 2014. United Nations General Assembly. 25th Session of the UN Human Rights Council (A/HRC/25/57) 28 pages.

On 10 March 2014, the United Nations Special Rapporteur on the right to food, Olivier De Schutter, presented his final report to the UN Human Rights Council. This report offers more than a call for a new paradigm for agriculture, also providing a nuanced vision on how to get there. He sets the scene with a succinct explanation on how the current exclusive focus on production efficiency has failed to reduce hunger and has also led to severe environmental impacts. He argues that the transition to sustainable production

and consumption and reducing rural poverty, requires agroecological farming and actions such as curtailing industrial meat production. Inclusive smallholder food systems and the recognition of smallholders' rights should be prioritised, and not co-opted into the dominant food system. De Schutter also highlights the level of interdependence by illustrating that rebuilding local food systems in developing countries is strongly linked to food system reforms in rich countries. And food policies can be democratised at three levels, by rebuilding local food systems, deploying national strategies, and shaping an enabling international environment. Key insights in this report come



from De Schutter's bridge between local and international action. At one level is the need to understand democracy in terms of communities choosing and shaping their food systems, while at another level is the need to harness governmental support and cooperation.

Peasant to peasant

The social movement
form of agroecology

After the electoral defeat of the Sandinistas in 1990, former land owners returned to Nicaragua from the USA. They began to take back their former estates through legal and less than legal manoeuvring, driving many rural people off the land they had been cultivating. This 'agrarian counter-reform' as it became known, left many hundreds of people landless in its wake during the 1990s and early 2000s. Now a national union has adopted agroecology and is leading the way for peasant farmers to collectively work their way out of poverty and towards a more resilient model of agriculture.

Nils McCune

Around Matagalpa in central Nicaragua, coffee plantations spread across the steeply sloping landscape between humid ever-green forests, open pasture and plots of maize, beans and *chayotes* (christophene). This is also a land that saw war twice in the past 40 years. First there was the revolutionary war in 1979 when the Sandinista rebels and a broad coalition of social movements ousted three generations of rule by the Somoza dynasty. Second was the bloody Contra war in the 1980s which divided the population along ideological lines, and included the final bullets of the Cold War. Communities of coffee pickers had much to gain during the period of Sandinista land reform and many hundreds of cooperatives of family farmers were formed, as well as worker-managed coffee processing collectives. But then came the 1990 election and the agrarian counter-reform, and a return to abject poverty for many.

Organising the farmers The Association of Rural Workers (ATC) represents more than 80,000 farm workers in 13 of Nicaragua's 17 departments and includes many landless and land-poor peasants. Since the 1990s, this association has also included a cooperative branch, the National Agricultural Union of Associated Producers, to help organise thousands of small scale family farmers who combine food production with off-farm work.

Through its participation in the transnational alliance of small farmer organisations that is La Vía Campesina, ATC also became aware of agroecology. They found it a useful and strategic tool for small farmers and their organisations to deepen territorial processes in rural areas and to increase their independence from markets otherwise dominated by transnational corporations. In 2013, the association created an internal National Commission on Agroecology to identify the most suitable methodologies for spreading agroecological practices used by other social move-



Decisions about crop management are made collectively at the ATC agroecological training center.

Photo: Edgard Rugama

ments, adapting them to local contexts and promoting them through their own structures. The commission includes graduates of the Paulo Freire Latin American Institute of Agroecology (IALA-Paulo Freire) in Barinas, Venezuela, a university created by and for rural social movement activists of La Vía Campesina.

Teaching farmers to be teachers

The Association of Rural Workers has the advantage of being a large organisation that includes both cooperatives and farm worker unions, as well as dynamic internal movements of rural women and youth. The National Commission on Agroecology carried out a process of documentation and analysis (called *sistematización* in Spanish) of experiences in peasant agroecology from across the country such as nutrient cycling, traditional seed saving, or combining animal production with reforestation. In doing so, they created a nationwide ‘directory’ of agroecological family farmers – including many who had never considered themselves agroecological or even heard the word before – and prepared the ground for peasant to peasant sharing of agroecological knowledge. Farmers are invited to training courses on the *methodology of communication* (rather than *production techniques*). For example, peasant farmers are trained in giving tours of their farms to other peasant farmers, how to explain what they practice and how to share their own experiences. Rather than trying to teach farmers to be farmers, the Association of Rural Workers is teaching them how to be teachers.

This methodology is inspired by the successful *Campesino-a-Campesino* process used by rural social movements for decades. Positive results have been seen in countries across the world, where agroecology makes the greatest territorial impact when it takes the form of a social movement among smallholder farmers. The protagonists of this movement must be the farmers themselves, including the ATC youth who carry out much of the groundwork and are vital to its development. Agroecological farmers are the best teachers of agroecology especially when they are

teaching to fellow farmers. The role of rural social movements in this setting is to provide the structure (cooperatives, territorial leadership and transportation) as well as the methodology for agroecology to multiply and spread.

Collective commitment

Connecting farmers with educational institutes and local food markets is crucial in building a strong movement. In Matagalpa, the Rodolfo Sánchez Cooperative Training Center and Technical School has become a hub for small scale farmers and rural youth interested in agroecology. Workers in nearby coffee estates formed a collective in 2013 to grow food crops such as beans, maize, plantains, taro, yuca and squash on the school grounds, selling plates of fried taro, plantains and *gallo pinto* (red beans and rice) to students at the technical school on weekends, and using the income to purchase seeds from local suppliers. Farmers from ATC cooperatives attended workshops on silvopastoral agroforestry systems with the aim of raising dairy cows where access to land was limited. Teach-ins and training on self-esteem and community relations have also attracted youth from nearby communities to spend time in the school. By consolidating this point of attraction in the territorial processes of agroecology, the Association of Rural Workers looks ahead to broader involvement and a deeper movement of popular educators in agroecology.

A rich social mosaic is emerging in Nicaragua, combining experiential educational processes and diversified peasant farms. This role of agroecology, when combined with rural social movements, is to build social and ecological synergies that can create resilience in local and national food systems. Resilient agriculture, necessary for our common future, is growing out of the daily efforts of peasant farmers, rural youth and their organisations.

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Land is worked collectively and agroecological production shared by ATC members, supplementing incomes from work on coffee estates.

Photo: Humberto Zeledón



Cultivating resilience is a practice that we see arising in many corners of the world. A seed is sown, it is watered and tended, and a stronger farming system emerges. Here, from four different continents, we see diverse examples of such development and how they are helping family farmers.

Alliances for agroecological transition

In southern Brazil, growth in the agroecological movement is being reflected in the positive experiences of family farmers. This is happening when supportive government procurement policies, farmer cooperatives and local market strategies are combined. Initiatives like the Food Acquisition Programme (PAA) and the National School Feeding Programme (PNAE) prioritise food purchases from smallholder farmers, and include

a 30% price premium on organic products supplied. The Cooperative of Itati, Terra de Areia and Três Forquilhas (COOMAFITT) for example, helps family farmers market their products especially through these procurement programmes. Together with NGOs,

a local women's association and a participative guarantee system for certification, they also work to upscale agroecology through local markets and ecologically-based production techniques. Eliane, one of the farmers, says, "Now I can diversify my production and have vegetables for my children. Agroecological practices make more sense to me. We used to grow only beans and sell them at a very low price to middlemen." This freedom of choice has become possible by marketing products through farmers markets and cooperatives. Farmers are now receiving fair prices that reflect the quality of their produce, are enjoying higher incomes, and are living proof that local sustainable food systems are possible.

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Sharing free seeds

Saving, multiplying and distributing seed are key activities of Eco Ruralis, a peasant association in Romania. Varieties of tomatoes, peppers, squash and other crops are displayed in a colourful catalogue of free seeds, and in 2014, more than 800 envelopes containing up to five varieties of seeds each were sent out. The association also grew by several hundred members. One of the poorest countries in Europe, Romania has almost five million peasant farmers, a quarter of the population. But national and European policy is driving many farms out of existence. Those in Eco Ruralis say: "Peasants in Eastern Europe feel threatened by new European seed law proposals because they are not able to go through all the necessary bureaucracy

and to pay for the required private safety testing. We need regulations that work for the people, not the industry." Hundreds of thousands of peasants already serve as migrant farm workers in Western Europe, while others, old and discouraged, stay only to face the speculative influence of large multinational investors. Seeds have become the interface of a rapidly developing agroecology movement in Romania, a country drifting towards dependence on agroindustries. Eco Ruralis remains determined to keep seeds free and available for peasant farmers.

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Mozambique

Building adaptive capacity

Mozambique is exposed to many extreme weather events and climate change is exacerbating the problems faced by smallholder farmers. This contributes to a cycle of increasing poverty and decreasing resilience to future shocks. To facilitate farmers' adaptability to these challenges, CARE International has established Farmer Field Schools in the northern Mozambican Province, Nampula through its Adaptation Learning Programme for Africa. The story of Muahera Antonio, a 32 year old mother of seven, reflects how this approach has improved food security and household resilience. Muahera's livelihood is based on the crops she grows, but declining rainfall in recent years has meant that her yields have also fallen drastically. In the Farmer Field School, Muahera and fellow community members learn about sustainable farming practices like minimum tillage, permanent soil cover using green manures/cover crops. As a result of applying the techniques she has learned, the fertility and water retention capacity of her soil has improved, enabling Muahera to increase her harvests. She

declares that she is better prepared to face climate change now. *"I am still eager to learn more and I will keep working hard to continue increasing yields to sustain my family"*, she says.

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Local seed systems for enhancing food security and farm resilience

Small millets are a resilient group of crop plants, high in nutritional value, and can grow well with few external inputs. In South Asia they also have high cultural value due to their long history of cultivation. But despite these advantages, we have been seeing a decline in the area and the number of different varieties planted. There is a need to protect and nurture local seed systems, but government research and NGO efforts were not adequately addressing farmers' needs. In 2011, the DHAN Foundation started the 'Revalorising small millets in rainfed regions of South Asia' (RESMISA) project which significantly enhanced diversity of small millet varieties in each project site after three years. This was achieved by strengthening local

seed systems and bringing together various varietal improvement efforts used on four species of small millet. The guiding methodology was farmer-led research, building on indigenous knowledge systems and complemented by gender sensitive scientific and participatory methods. The experience proved the value of traditional varieties so often ignored by formal seed systems. However, varietal improvement must be a continuous process of integrating small millet into community seed systems if it is to carry on meeting the evolving needs of farmers.

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This is a summary of an article that appeared in LEISA India 16.1, March 2014.





Agroecology and the right to food

“Agroecology is really common sense. It means understanding how nature works, to replicate the natural workings of nature on farms in order to reduce dependency on external inputs. Agroecology preserves the ability for future generations to feed themselves. I believe we should teach more about agroecology and encourage exchanges between farmers. We cannot continue in this impasse of an oil dependent food production system.”

Interview: Margriet Goris

As the United Nations Special Rapporteur on the Right to Food (2008-14), Olivier De Schutter has spoken out many times on the urgent need for changes in global food systems. In March 2014 he published his final report, making strong recommendations in favour of agroecology.

Why do you recommend supporting small scale farmers?

We know that small farms are very productive, and more so than large monocropping farms per unit area of cultivated land. The confusion arises because we calculate output only by looking at the commodities that these large farms deliver. And yes they are productive, but small farms combine *different* outputs and are much more efficient in the way they use resources. Taking into account all the different products, yields from a small farm can be very impressive. The key problem is that we have developed a situation with industrial farming systems where we have become addicted to fossil fuels and have accelerated greenhouse gas emissions as a result. Food systems have become highly dependent on petrol, but we're running out of oil. So in the future they may not be sustainable. We need alternatives, and there are good arguments from the points of view of resource efficiency and resilience to support food systems that are much more agroecological and make much better use of our natural resources.

How is agroecology linked to the right to food? First, agroecology is not the same as organic agriculture. It means understanding how nature works, to replicate the complementarities between plants, trees and animals and the natural workings of nature on your farm in order to reduce dependency on external inputs such as chemical fertilizer. This is a sustainable way of producing food as it preserves the ability of future generations to feed themselves. It supports the health of the soil much better, reduces dependency on fossil energies, and is also a low cost way of farming. So for farmers in developing countries who have little access to credit and who are much more vulnerable to risk than farmers in developed countries, agroecology is a very interesting solution for agricultural development.

You say production systems should respond to 'needs' and not 'demands'. Indeed. The problem is that once food is a commodity that responds to the laws of supply and demand, it will serve only the needs of those who have the greatest purchasing power. In other words, it will not serve the basic needs of the poorest people who have no money or not enough money to spend. Food production will be geared towards satisfying the tastes of the richest segments of the population. Markets for land and water are increasingly global and populations with widely diverging purchasing powers in the North and the South that have to compete for the same resources. This is creating a paradox in which the luxury tastes of some parts of the world's population are satisfied whereas the basic needs of others are not recognised and cannot be satisfied.

What is the role of consumers in changing food systems? Consumers have much more power than they generally acknowledge, and I am hopeful that this next generation will make choices that are much more responsible and informed about the social and environmental impacts of their ways of purchasing and consuming food. In fact, 15 years ago, very few people had concerns other than to have a large diversity of cheap food available all year round. Now people are much more attentive to the impacts of their purchasing practices and they ask questions about labour rights, sustainability, food miles, et cetera. I think it's a good thing. Does it go far enough? Maybe not. In part because it still only concerns a relatively small part of the population, the best informed and the most aware. And also because we have to accept that consuming more responsibly, also means consuming less of certain things and less meat in particular. We are coming to realise our overconsumption of

meat has a huge impact on natural resources, making land and water more scarce. Our current level of meat consumption in the EU is 75 kg per person per year on average. This is far too much for the environment and also creates a range of health problems. So a move towards healthier lifestyles and changes in how we consume food are desirable and perhaps on the horizon.

Why is access to land so important? For many years we thought there was plenty of land available and that there would be no competition for this resource. But the 2008 global food price crisis drew the attention of many governments to the need for securing access to land because global markets were not sufficiently reliable. There was interest for farmland not just from governments but also from private investors. This led to what many call 'land grabbing'. Huge areas were bought or leased from 2008 to 2011, though the trend is declining slightly now. So land has become a commodity for which there is competition. The problem is that in many regions, those who use and depend on the land for their livelihoods have no secure access to it. They risk being priced out from land markets and being evicted from the land on which they depend because someone with more purchasing power can buy it instead of them. It is becoming a serious problem,

"There are good arguments from the points of view of resource efficiency and resilience to support food systems that are much more agroecological and make much better use of our natural resources."





Olivier De Schutter speaks about sustainable and fair food systems at a conference in Wageningen, the Netherlands. Photos: Joyce Fabriek

including for younger generations in industrialised countries. Access to land for them is becoming problematic, just like for peasants in the global South. Because of the inflation in land prices, it's becoming very difficult for 25 year-olds to start in farming today unless their parents were farmers. For young farmers in the European Union, it is hard to enter into farming because land and machinery is becoming so expensive. It is therefore necessary to have programmes to improve access to land and to credit, and to ensure that land is used by those who treat it best.

What policies are needed for fairer and more sustainable food systems? We need policies that are much more coherent from the local to the global. I see many examples of local food systems being rebuilt, with consumers being more active, linking with producers and supported by municipalities. Local resources can be better used to shape food systems that are more sustainable and fair for both consumers and producers. However, very often, such local initiatives are *not* supported by national policies or by the global framework. Most of the time, national agricultural policies do not pay attention to local dimensions of food systems. And the global framework supports the expansion of export-led agriculture but does not support governments to take into account dimensions of food systems other than those that increase production volumes. We need more coherence across different levels of governance and much more food democracy. People must be able to hold governments accountable for the results of what food systems

deliver. There is a need to move agricultural policies into food policies so that these other dimensions are taken into account. That is why issues of governance are key in achieving the transition towards sustainable food systems.

In which international body should trade in food and agriculture be discussed? There was an attempt in the past four to five years to improve the coherence of different sectoral policies that affect global food security. That led to a reform of the Committee on World Food Security that convenes in Rome under the auspices of the FAO (the Food and Agriculture Organization of the United Nations). It is a widely representative committee, including all governments, all international agencies with a relationship to food and agriculture, the private sector, NGOs and farmers organisations, who work together to deliver recommendations for governments. It is my hope that in future, this committee, because it is inclusive and transparent, can have greater influence in shaping reforms at global and national levels. Unfortunately, trade is very much off limits, and the committee is not authorised to discuss in any depth the impact of trade policies on food security. This is all under the mandate of the WTO (World Trade Organization). I think that this is a mistake, and this should be seen as part of the problem. It makes no sense to discuss agricultural investment, food security and climate change and not to discuss trade, as it has such a huge impact on the shaping of agricultural and food policies.

The food system in the United States is deeply racial. Historically built on slavery, dispossession and the exploitation of people of colour, the food system today continues to discriminate against farmers and farm and food workers of colour. With few shops, communities of colour only have access to cheap, processed 'junk food' and suffer disproportionately from diet-related diseases. For these communities, taking control of their food system – from production to consumption – is not a lifestyle choice; it is a matter of livelihood and health. This is the basis for the food justice movement in the United States.

From the corner shop to Capitol Hill, communities are making waves implementing innovations on the ground and fighting for fairer policies in the corporate and governmental sectors. Hundreds of organisations play a part in the movement, as demand is rapidly growing for real solutions that enable access to affordable, healthy, ecological, and equitable food choices. As momentum grows, so too does the urgency. Even while climatic shifts, corporate concentration, and income and health disparities linked to broken food systems accelerate, the many forces that comprise this movement often appear disparate and even at odds with each other. Advocates for improved food access are often pitted against those working for the environment; farmers against workers...

Urban Tilth, a grassroots organisation in California, is one such model. It is reclaiming land for a food forest, planting vegetable gardens and providing food for low-income residents in Richmond's vulnerable communities. By hiring locally and using consensus-based decision-making, Urban Tilth is keeping the food dollar in the community. In doing so, they are confronting a legacy of racism and classism that has left their community under-resourced and over-criminalised. These efforts mirror those of the Detroit Black Food Security Network and Texas' Southwest Workers Union among others.

We must share power, control, and management of our food systems. Relationship-driven efforts like these, that work towards bioregional and place-based food systems can build political power, honour ecological limits, celebrate culture and stimulate community growth. As a movement, we can learn from grassroots initiatives such as Urban Tilth, that focus on building the economic and political power of workers to thrive in ecologically integrated farming systems. Together, if we each use our skills, expertise, and relationships to support food justice leaders who are cultivating renewed food systems centered on equity and ecology, we forge pathways not only to empower historically exploited communities, we provide an example of how the food system can be transformed for the better – for everyone.

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Food justice moving forward in the USA

Turning vicious circles into virtuous cycles

We have read about poverty, vulnerability and resilience of family farming. The articles in this issue of *Farming Matters* have shown that there is an urgent need for a change in mindset regarding family farming, agriculture and food systems. And resilience must be the central concept in this new thinking.

Edith van Walsum



Resilience The term ‘resilience’ has become fashionable in development circles, and when a word gets fashionable it tends to be used in many different ways. But clearly, it refers to the capacity of farming families to *resist* crises, natural, economic or social. What helps? An ability to anticipate, to have more options, to be able to better manage, and to have reserves to be able to bounce back. Resilience is about food sovereignty: having control over your food system, diversifying agriculture and ways to generate income, to innovate and share what we learn. Depending on the context, one or other aspect of resilience comes out stronger. Individual farm families can be resilient, groups of resilient farmers can form a movement. Resilience makes for virtuous cycles.

Why have vulnerabilities increased? Farmers have become increasingly vulnerable as crises have multiplied, while policy support has been largely inadequate. In Haiti, already impoverished farming communities deal with the consequences of a devastating earthquake. In Ghana

In the Alentejo, Portugal, models for regional autonomy in food systems evolve organically in periods of crisis. Photo: Leila Dregger

and the Sahel, governments focus attention on agricultural growth in high productive areas while dryland farmers suffer from lack of investment and recurring droughts. In India, small scale family farmers fall into debt, some after using ineffective pesticides and BT cotton seeds that did not deliver on their promises, with an alarming and increasing number of suicides. Increased vulnerability is the result of accelerated degradation of the natural resource base, increased outmigration, the aggressive role of agrochemical industries, policy neglect towards communities living in these areas, and on top of this, comes climate change and natural disasters.

What we see is a *resilience deficit*. Rural communities struggle to handle crisis after crisis. Eventually they have no reserves left. Poverty and hunger become ever-present threats or realities. A small crisis then becomes a big crisis. The response? Expensive disaster relief or preventive measures to enable farmers to better cope with future disasters!

Agricultural policies rarely appreciate farmers' own inbuilt resilience, the essence of family farming. Farmers are approached as recipients of emergency aid, of 'climate-smart' crop varieties developed by plant breeders who have never talked to a real farmer. There is a gross underestimation of the self learning and self organising capacity of family farmers. Traditional farming practices are far from stagnant. Family farmers are supremely innovative, and with just a little of the right type of support, they will leap out of the poverty trap with incredible speed.

Today's dominant agricultural thinking is grounded in a linear model of development, searching for higher and higher yields of a very limited number of crop varieties and animal breeds and produced by ever fewer farmers. In the Netherlands, one of the biggest agricultural exporting countries in the world, there are only 70,000 farmers left; in Germany, young farmers have to compete with multinationals for land. There is an increasing focus on only one part of the global food and agriculture system without adequate consideration of the whole. Huge environmental costs are seen as externalities. And although highly vulnerable and unsustainable, this model has taken over in many countries in the developed world, has created severe imbalances in many Asian and Latin American countries, and is now being rolled out in Africa. As Million Belay says, this is a dead end road, and as a result, small scale farming families are going hungry. We need to look at agriculture as a system and see clearly the strong interdependencies of its component parts.

Change happens Farming communities all over the world are moving forward and building their resilience. Some are capitalising on new democratic spaces generated by the IYFF. The



In the Sahel, a strong farmer movement has restored millions of hectares of degraded farmland.

Photo: Tsuamba Bourgou

agroecological movement in Brazil especially in the semi-arid *Nordeste*, the growing Non Pesticidal Management movement in South India, and Farmer Managed Natural Regeneration in the Sahel – these three serve as learning examples and as sources of inspiration for us all. In such dryland regions, local knowledge is still more alive than in highly productive areas, and farmers and scientists are also co-creating knowledge and practices that build the resilience of farming systems.

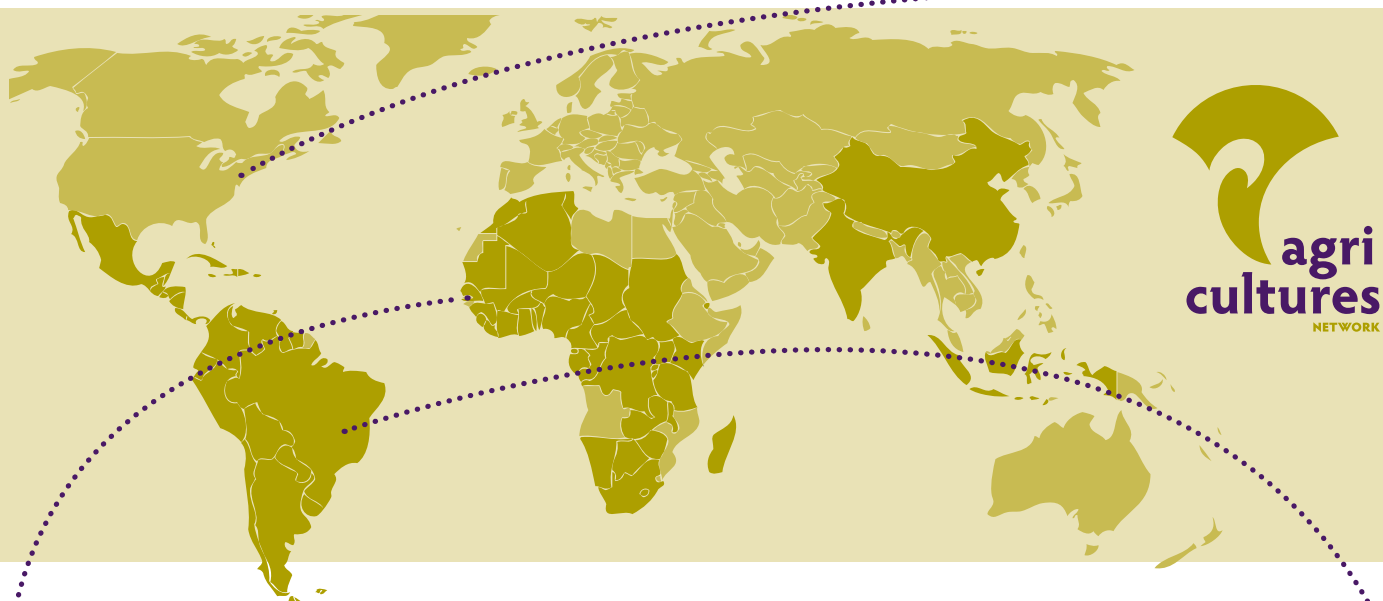
Six more months left in the IYFF A false notion of emergency has been created – we have to feed nine billion people in 2015. The reality is that there is enough food produced, but that it is unequally distributed, and with unacceptable amounts of food going to waste. There is still time to make a u-turn, however, and to start creating possibilities for poor rural and urban communities to access food, and to rebuild their capacity to resist shocks in a variety of very practical ways.

A resilient farming system starts with the holistic management of nutrient cycles, water, energy and biodiversity. Breaking out of poverty can only happen *with* nature, not against it. Without agroecology there will be no family farming. In the remaining half year of the IYFF this message should resound clearly, in the villages, in the cities, in Rome, Washington, and the world over.

Farming Matters wants to give a wider voice and visibility to family farmers building resilience.

Do cast your vote in the photo competition organised by World Rural Forum and the AgriCultures Network (from July 1st via the agriculturesnetwork.org website). Do write to us, and please tell us if there is other information you would like to see in the magazine, or ideas for new regular features. Do share our magazine with others. And do visit our website and subscribe!

Email: info@farmingmatters.org



Members of the AgriCultures Network are working together to advance family farming and agroecology by drawing lessons from farmers' fields, sharing knowledge and working with social movements for policy change. Read our latest news.

Cultivating diversity in advocacy

Using the last edition of the magazine as a vehicle, many network members engaged policy makers and academics in debates on the importance of agrobiodiversity in the past two months. IED Afrique organised a seminar on agrobiodiversity in Dakar and a field visit, in partnership with the Senegalese National Coordinating Committee for the International Year of Family Farming. This brought together 50 participants representing NGOs, farmer organisations, government departments, the media, etc. AS-PTA in Brazil presented the latest issue of their magazine during a high level meeting related to the new National Plan on Agroecology and Organic Production in which agrobiodiversity is one of the main thematic areas. The AME-Foundation in India organised a half day debate, with presentations by some of the authors in the LEISA maga-

zine. ILEIA in the Netherlands launched the magazine at a consultation about food security and agroecology at the Dutch Ministry of Foreign Affairs in the Hague. ETC Andes-Peru organised a roundtable event in cooperation with UNAM University and the University of La Molina. On our website you can watch a video that was presented at these events.

National Agroecology Encounter in Brazil

While the rest of Brazil is getting ready for the FIFA World Cup, the Brazilian agroecology movement held its third National Agroecology Encounter in Juazeiro on 16-19 May. AS-PTA was one of the organisers, and the Encounter was an explosion of colours, energy, diversity, determination and friendship. More than 2000 farmers, civil society organisations, students, scientists and government officials gathered to exchange experiences in building

an agroecological 'model' of development. Seventy percent of the participants were farmers, and half of them were women. AS-PTA also hosted an international panel discussion with a presentation by ILEIA around the slogan 'No family farming without agroecology'.

Highlights included the 14 parallel sessions in which people from different territories of Brazil shared their testimonies of struggles, intensive learning, solidarity and achievements. Each group presented their stories using many inventive and artistic means. And visual artists captured the essence in a series of beautiful posters that visualised the essence of these rich territorial learning processes.



Presentations built on the 'agroecological cultural caravans' which had been travelling throughout the country during the past six months (see FM issue 29.4). Hundreds of communities that took part in these caravans sent representatives to share their experiences in the Encounter, expressing that the only way forward in agriculture is one that respects nature, people, seeds, health — *life*. Together they will continue to fight for their right to practice agroecological farming.

Documenting the IYFF

As the implementing agency of the International Year of Family Farming (IYFF 2014), the Food and Agriculture Organization of the United Nations (FAO) is supporting the AgriCultures Network to systematise the main messages and recommendations coming out of regional conferences and dialogues around the world.

Halfway through the year, it is becoming increasingly evident that farmer organisations find that, as formulated by European civil society, "the celebration of the IYFF directly contrasts policies imposed on a global scale, which do not



recognise the fundamental role played by the social model of peasant production in terms of food, employment and respect for nature." In Africa, civil society noted the "failure of mechanisms and financing tools tailored to the needs and realities of family farms". Asian civil society calls upon the FAO to "continue dialogue on the concept of family farming" and to "initiate policies and programmes that serve small food producers and their communities."

The AgriCultures Network will compile the main messages of the IYFF into a multimedia publication to be presented in four languages at the IYFF closing ceremony in New York, in December 2014.

Photo competition: more than 1300 entries

By the deadline, we had received in excess of 1300 photos in the family farming photo competition. We are very grateful to all the photographers and participants for such an impressive response. During June, an international jury of farmers and artists will select their top choices for each continent. Between 1 July and 31 August, the public will also be able to vote for their favourite photos. Winners will receive a cash prize and the best photos will be published as part of a 2015 family farming calendar. Stay tuned at www.agriculturesnetwork.org and www.ruralforum.net!

COLOPHON

Farming Matters

Experiences in family farming and agroecology

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ileia

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The AgriCultures Network

ILEIA is a member of the AgriCultures Network; seven organisations that provide information on small-scale, sustainable agriculture worldwide, and that publish: LEISA revista de agroecologia (Latin America), LEISA India (in English, Kannada, Tamil, Hindi, Telugu and Oriya), AGRIDAPE (West Africa, in French), Agriculturas, Experiências em Agroecologia (Brazil), 生态农业 (China), and BAOBAB (East Africa, in English).

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Cover photo

The sweet taste of resilience: a family enjoying their harvest in Burkina Faso. Photo: Tsuamba Bourgu

The editors have taken every care to ensure that the contents of this magazine are as accurate as possible. The authors have ultimate responsibility, however, for the content of individual articles.

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“RESILIENCE IS ABOUT CHANGE BUT ALSO ABOUT RECOGNITION THAT YOU CANNOT CHOOSE THE FUTURE BUT A SPACE FOR THE FUTURE TO EMERGE”

Professor Brian Walker, Chair of the Board of International Resilience Alliance, at the Third International Science and Policy Conference on the Resilience of Social and Ecological Systems, Montpellier, France, May 2014

“We often believe that innovations can't come from the grassroots level. But farmer managed natural regeneration, in response to land degradation, can enhance human security. Enhancing soil anywhere, enhances life everywhere”

Luc Gnacadja, former executive secretary of the United Nations Convention to Combat Desertification, in the Iscol Lecture at the Atkinson Center for a Sustainable Future, 22 April 2014

“A new paradigm focused on well-being, resilience and sustainability must be designed to replace the productivist paradigm and thus better support the full realisation of the right to adequate food”

Olivier De Schutter, former Special Rapporteur on the Right to Food, in 'The transformative potential of the right to food', March 2014

“THE GOVERNMENT CRIMINALISES DIRECT FARMER TO CONSUMER MARKETING. BUT IF WE ALLOW THIS TYPE OF BUSINESS THERE WILL BE A TRUE EXPLOSION OF PROFITABLE BUSINESSES”

Joel Salatin, US farmer, author and innovator, at a lecture given at Wageningen University, the Netherlands, 9 May 2014

“WE ARE NOT SEEKING SUBSIDIES, WE ARE SEEKING LEGISLATION THAT FACILITATES THE LIVES OF SMALL SCALE FARMERS AND FISHERFOLK”

Natalia Laiño of the World Forum of Fisher Peoples, at the CSO consultation with FAO in Romania, March 2014



Farming Matters is published by ILEIA, the Centre for Learning on Sustainable Agriculture. ILEIA is a member of AgriCultures, a global network of organisations that share knowledge and provide information on small scale, sustainable agriculture worldwide.
www.farmingmatters.org