

# Small-scale sustainable agriculture—

a strategy for food security and  
sustainable development

‘We will eat our own bread’ (Is 4.1)

Thematic Group on Food, Land Use and Environment

MISEREOR would like to draw the reader's attention also to its position paper "Bioenergy" amid the competing demands of climate change mitigation and poverty reduction (Breuer, Mertineit, Schröder, 2007).

Further information is available at [www.misereor.de](http://www.misereor.de) (in German), and [www.misereor.org](http://www.misereor.org) (in English, French, Spanish, and Portuguese).

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## Introduction

Agriculture is once again high on the development policy agenda. After a good 20 years of continuing lack of interest and decline in donations from the international donor community, now even the World Bank has devoted its annual World Development Report for 2008, entitled 'Agriculture for Development', entirely to this topic. Also in 2008, the World Agricultural Report of the IAASTD (International Assessment of Agricultural Knowledge, Science and Technology for Development)<sup>i</sup> was published. Prices for food, which have been constantly rising since 2006, and protests among populations worldwide since 2007 have added further fuel to the heated debate on the status of agriculture.

Most development actors are united in their acknowledgment of the overwhelming importance of agriculture in the development process, and its multifunctionality is universally emphasised.<sup>ii</sup> However, experts remain divided on the types of approaches and strategies which should be promoted. In the current debate, concepts with a unilateral orientation towards promotion of market-oriented agriculture, exports, and biotechnology are dominant.

MISEREOR is taking the opportunity afforded by the revival of the debate on the role of agriculture and rural development to present in this paper its fundamental position on this subject.

Ever since its foundation in 1958, MISEREOR has supported rural development projects. Promotion and support of self-help among indigenous families, groups, and farming communities, who are not merely passive recipients of aid, but who work hard to ensure their own survival, was and still is to this day a priority in project funding. Experience gained with project partners on all continents demonstrates that alternative paths to poverty alleviation are possible, particularly for such excluded groups, if development processes are based on human potential and sustainable agriculture.

In order to ensure that sustainable land use can be effective in ensuring the global food supply and combating climate change, desertification, and the loss of biodiversity, it is essential that not only technical but also social and political changes are made.

## 1 '...that they may have life, and have it abundantly'—All development stems from the people

In the spirit of Catholic social teaching and the 'Option for the Poor', MISEREOR prioritises support for initiatives with target groups whose economic situation is chronically precarious. Starting points for development in these situations include local resources and the will and capability of people to bring about change. Development objectives and paths that are not supported by the convictions of the people and by their determination and creativity do not offer a firm basis for sustainable development. No amount of expert knowledge, plans and projects, or low-cost loans can buy or replace self-confidence, even where technical approaches turn out to be successful.

Sustainable development requires that people have the ability and skills to innovate, use their own potential, and learn to recognise problems and develop solutions on a permanent basis in an environment that is subject to constant change.

MISEREOR chose to opt for sustainable agriculture within farming communities on grounds of principles and values. Support for the ability to feed oneself by one's own efforts, preservation of natural diversity, the linkage with available potential, reinforcement and increase of self-help capabilities, and orientation towards the common good are guiding principles for MISEREOR's rural development promotion policy.

So that 'life in abundance' in this world may also be ensured for future generations, Stewardship of Creation is of central importance for human development. It is essential that humans behave responsibly and respectfully in their dealings with nature.

Furthermore, as is shown below, development cooperation alone falls short of the target where unjust political, economic and social conditions prevail.

## 2 'Give us this day our daily bread'—Fighting hunger through sustainable agriculture in farming communities

The FAO estimates that 963 million people worldwide do not receive their 'daily bread'. They suffer from chronic hunger; around 900 million of these hungry people live in developing countries. Rural populations are particularly affected, despite the fact that food is produced in rural areas. Small farmers and landless households predominate among the hungry, although paradoxically they make a major contribution to the production of staple foods. It is against this background that the commitments made in 2000 by the international community—the Millennium Development Goals (MDGs)<sup>iii</sup> with the aim of reducing by half the proportion of people suffering from hunger by 2015—must be rigorously pursued.

Many countries of the South follow the example of the development concepts of industrialised nations with the intent of catching up on their development. In such approaches, economic growth is frequently seen as a guarantee of growing prosperity for the entire population and is equated with a reduction in poverty and hunger. As a rule, agricultural policies in the South are dominated by development models that promote rapid industrialisation (large commercial corporations, plantations using mechanised working methods) and export orientation in agriculture, and almost exclusively benefit those companies with sufficient capital to meet the high investment costs required. Small-scale farmers and tenant smallholders are not only excluded from this development, but are also forced into a competitive situation that threatens their very existence. Due to high production costs, they cannot compete with the prices of the large companies, and often lose access to their land as a result of the land hunger of these companies. As 'redundant' rural workers, often unskilled, and with little education, they can find very little employment in other sectors. Increased productivity means that demand for labour has decreased throughout the world. Migration only serves to shift hunger and poverty to the slums of large urban centres. Nevertheless, due to the lack of alternatives, the majority of people in rural areas remain directly or indirectly dependent on agriculture.

In contrast, support for sustainable agriculture in farming communities offers large numbers of people in rural areas livelihood security—that is, food security and cash income. Compared to larger commercial enterprises, small farms often have higher productivity, related to greater product diversification. Land is used more intensively, so that each unit of ground produces more and requires greater human labour input.<sup>iv</sup> Indeed, it is often these small-scale farms that produce the majority of food, thus making a significant contribution to the supply of staple foods to local and national markets.<sup>v</sup> The significant multiplier effects of agriculture on national economies is widely forgotten<sup>vi</sup>, although positive development in agriculture leads to growth in other economic sectors.

As several recent studies have shown,<sup>vii</sup> sustainable agriculture<sup>viii</sup> has the potential to ensure food security for the global population—even without the need for additional areas of cultivation. It facilitates increased yields in the countries of the South,<sup>ix</sup> provided that change has been made to a form of agriculture that conserves natural resources, particularly soil fertility, and optimises the material cycle of the farm, thereby enabling intensive and permanent use of the same area of land. This is particularly the case in countries and regions with relatively low levels of land productivity, which is often the case in African countries. However, as an impact study carried out in the Philippines in 2007 has shown,<sup>x</sup> even in direct comparison with farms in favoured areas that are reliant on agrochemicals and high-yield seed varieties, small farms using sustainable methods and no expensive material inputs whatsoever can achieve equally high yields. Because their costs can be reduced, if farmers use crop varieties and techniques suited to the local area, their 'bottom line' gain can even be greater. Sustainable agriculture can demonstrate its superiority over conventional

methods in arid areas in particular, as it enables stable yields even in drought years—a criterion that, in view of climate change, is increasingly important.

However, it should not be forgotten that for small-scale farms, the change to sustainable land use brings with it associated conversion problems. In cases of conversion from agricultural production systems using large amounts of external inputs, there may initially be reductions in yield, which will nevertheless be compensated for later by reductions in capital spending. But the greatest challenge of conversion is the move away from familiar methods of operation corresponding to the agricultural mainstream. Demands on farmers are very high, as agricultural policies seldom offer small farmers such benefits as advice and/or ease of access to the investment capital they need. Thus the successes that can be seen today are overwhelmingly based on the initiative of the farmers themselves, supported and mentored by development organisations. This explains why, despite the great potential of sustainable agriculture to reduce hunger and poverty, its impact continues to be limited.

#### Project example: Uganda

For around 10 years now, MISEREOR has supported partner organisations in Uganda in the provision of agricultural extension services.<sup>xi</sup> Due to prevailing natural conditions, environmentally oriented agriculture fits in well with existing production systems. Using improved, sustainable cultivation methods, small farmers can substantially increase both their food security and their cash income from agriculture. The results of an impact study carried out in 2005 bear this out. When compared to a control group with the same initial conditions, farming families advised by seven extension projects came off better at all levels.<sup>xii</sup> The cropping systems developed for growing food and cash crops are highly diversified. The vulnerability of these farm enterprises to crop losses due to weather conditions and to falling prices for market produce is reduced to a minimum. In addition, a variety of markets are supplied (local, regional, and global), which also reduces risk.



A smallholder farmer in his sustainably run banana plantation



A water infiltration ditch to catch the rain water

Uganda is just one example among many in the agricultural sector. Since the mid-1980s, MISEREOR has exclusively promoted and supported small-scale sustainable agricultural production systems, but without favouring any single specific approach, such as 'low external input sustainable agriculture' (LEISA), or organic agriculture. Farmers themselves choose which specific approach they like to follow.

However, to ensure that 'daily bread' is secure in the long term, it is by no means sufficient just to support families engaged in small-scale farming and to practise sustainable agriculture. Food security requires legally effective and assured access to the essential means of production, such as land, water, and seed.

### 3 'God's land, land for all'—Access to land and water

The distribution of access to the most important agricultural resource, land, is extremely inequitable. Four-fifths of farming families own approximately six per cent of agricultural land worldwide. The majority of producers, therefore, own less than two hectares of land. The trend towards ever smaller plots for the majority of small farmers continues. This is furthered by prevailing inheritance laws (subdivision of property among heirs). The worldwide increase in concentration of land ownership in the hands of the few and the growing influence of companies and investors who acquire vast tracts of land as income property are further threats to their livelihood.

As well as access to land for crop cultivation, access to pasture, forest resources, and fishing and hunting grounds are of considerable importance for the livelihood of poor rural households. However, in many cases, their rights of access and use (usufruct) are not sufficiently protected, a situation which particularly affects indigenous groups. Traditional systems that have governed land use for generations are often not recognised in national land law, so that such user rights can be denied, and small farming families driven from the land and displaced.

The expansion of plantations and large-scale commercial operations, often run by multinationals, is strongly supported by national governments in the South, which wish to attract investors to their countries—with increasing frequency within the framework of bilateral trade agreements. As a rule, this occurs at the expense of small farming families and other traditional groups, whose rights of use are not adequately protected. To this can be added the problematic issue of around 200 million landless families with precariously insecure tenancies. Tenancy relationships are seldom sufficiently legally regulated, so that those who use the land have little chance of protecting themselves against malpractice on the part of landowners. The investment needed for land quality and sustainable land use is hampered by existing tenancy and land-use laws.

Conflicts over land and water are increasing worldwide. While fertile land becomes ever scarcer, industrialised agriculture, with its deep wells and irrigation systems, is literally cutting small-scale farms off from the 'water of life'. Industrial and mining concerns also overexploit and even pollute local water resources. Conventional agriculture, oriented towards changed patterns of consumption, requires disproportionately large supplies of water. Crops suited to local conditions, such as millet, require much less water than rice, and the production of just one kilogram of beef uses 15,000 litres of water—compared to 900 litres for one kilogram of grain.<sup>xiii</sup> The effects of climate change mean that water is an ever more precious resource. In many places, it has become obvious that sources of fresh water are increasingly being privatised, and are thus lost to the population at large as a common good.<sup>xiv</sup> Conflicts over resources, such as those currently being played out over control of fossil energy sources, are therefore expected to increase in future.

Against this background it is essential to ensure access for small-scale producers to vital resources, and to strongly promote this objective. In many countries, a fundamental requirement for this is redistributive land reform. Thorough preparation and follow-up of 'new' landowners are particularly important in such cases, so that they do not immediately lose their land once again. But even in the case of traditional ownership rights and rights of use, recognition of these rights and legal support for obtaining and securing land titles is essential to safeguard the livelihoods of producers.

### Project example: Brazil

Brazil is a country where the land tenure structure demonstrates extreme imbalances. Around 3.7 million small agricultural holdings make up 58.8 per cent of the total number of agricultural units. However, they only have tenure of 5.9 per cent of the total area of agricultural land. In contrast to this, 1.6 per cent of all agricultural units, each with more than 1,000 hectares of land, account for a 46.8 per cent share of all agricultural land currently in use. Acting as advocate for small farmers and landless people, the Pastoral Land Commission (Comissão Pastoral da Terra), founded in 1975 by the Brazilian Bishops' Conference, attempts to counter this massive concentration in land tenure. As well as a national coordination centre, the Commission also has 21 regional offices throughout Brazil, which organise farmers at grass roots level, and make a significant contribution to securing their access to land. Among the major areas of activity of the Pastoral Land Commission, which has been supported for many years by MISEREOR, are:

- development of interest groups and organisations lobbying on behalf of small farmers and/or landless people, such as agricultural workers' unions, small farmers associations, cooperatives, women's organisations, organisations of seasonal workers,
- legal advisory services in land rights conflicts, such as displacement due to dam construction and encroachment by monoculture systems, and the securing of land rights for small farmers,
- exposure of slave labour, collection and publication of documentation on land conflicts,
- development of networks for the protection and preservation of natural sources of livelihood, such as in the Amazonas region, which is threatened by deforestation,
- representation in federal-level forums in support of better monitoring of government policies on agriculture, development and the environment, and
- campaigning and political action towards the implementation of comprehensive agrarian reform in Brazil.

Promotion of small-scale family farming through sustainable production methods has just as much significance as land security, and is generally coordinated in association with institutions with particular expertise in these fields.



Photo: Zinclar

Members of the rural population of the semi-arid North-East of Brazil protesting against the planned redirection of a river. The placard reads: 'No to the redirection - living with the semi-arid region is the solution!!!'

Once small-scale producers in the South have secured their access to essential resources, they can then also achieve sustainable use of the natural resources entrusted to humanity's stewardship.



## 4 'We are gardeners in the house of the Lord'—Stewardship of Creation

From a historical perspective, it was agriculture that first enabled humans to establish permanent settlements.<sup>xv</sup> Thus agriculture was the most significant pre-industrial economic factor involved in change to the natural ecosystem.<sup>xvi</sup> The specific form of an agricultural production system dictated the extent of its incursion on the ecosystem (soil fertility, biodiversity, water courses etc.) and the landscape.

Worldwide, increasing amounts of fertile land are no longer available for cultivation. In many areas, desertification and climate change are reducing the area of productive agricultural land. In addition, there is underlying competition for agriculture from the land-use demands of mining, urbanisation, road construction, and dams, among others, as well as the establishment of nature reserves. The booming global demand for biofuels is transforming forest, pasture, and arable land into monocultures of soya, oil palms, and other energy crops, in order to satisfy the growing energy demands of industrialised and newly industrialising countries. As a rule, this takes place at the expense of the local population, who lose their (community) land, or are even evicted from it.<sup>xvii</sup>

As a result of the Green Revolution in the 1960s, a form of agriculture that relies heavily on external inputs (high-yield crop varieties, chemical fertilisers, pesticides, fossil fuels and artificial irrigation systems) was propagated in developing countries. The very foundations of this agriculture are endangered by its own production methods: it is responsible for around 20 per cent of global greenhouse gas emissions, it leads to compaction, erosion, and salinisation of the soil, loss of biodiversity, over-exploitation and pollution of water resources, and it demands large amounts of energy for production, processing, and transportation.<sup>xviii</sup>

Despite this negative environmental balance, most bilateral and multilateral development organisations continue to persist with this farming model, cast in the western agricultural development mould.

However, it is not just conventional agriculture that must bear the blame for environmental destruction. In many countries, traditional methods of cultivation that are no longer suitable for current conditions also lead to soil degradation and deforestation. Due to a lack of alternatives, small farmers are often impelled to cultivate marginal land not suited to agriculture. Increasing population density forces the curtailment of fallow periods, or can even lead to continuous use of areas under cultivation. These small farmers lack the knowledge, materials, and equipment necessary to convert to sustainable production methods.

Sustainable agriculture preserves natural resources and reduces the crisis vulnerability of small-scale farms. Working with nature using methods appropriate to the location leads to active protection of the soil. Soil fertility and plant health are improved to such an extent that environmental balance can redevelop. The selection of suitable plants and varieties and appropriate techniques facilitate water conservation, contributing to sustainable water management.

In addition, sustainable agricultural systems make a contribution to climate protection. The use of fertilisers and other agrochemicals is substantially reduced, thus also reducing the production of greenhouse gases. Mixed farming systems have a better CO<sub>2</sub> balance than large-scale monocultures, as a part of the biomass (a carbon store) enriches the soil. As it helps farming families to achieve more intensive cultivation and higher yields from the same amount of cultivated ground through use of environmentally friendly methods, sustainable agriculture reduces the need to take further areas of forest into cultivation, thus preserving important carbon sinks and storage.

Biodiversity is preserved not only through diversity of cultivated plants, but also through protection of their accompanying flora and fauna. In this way, agriculture can make a contribution to the conservation of biodiversity which is complementary to that of nature reserves. Through the preservation and continuing cultivation of locally appropriate plant varieties and animal breeds,

small farmers also make a considerable contribution to agrobiodiversity. In view of climate change, the value of this genetic diversity for future food security must not be underestimated. The more diverse the plants that are preserved, the greater will be the number of adaptable plant species and varieties available to us in future for food security.

Project example: India

MISEREOR supports ADS (Academy for Development Science) in its targeted facilitation of farmers' associations and small development organisations throughout India in the documentation and further dissemination of traditional land-use systems. Indigenous groups in marginal areas in particular use a broad range of cultivated plants and animals, as well as 'wild' flora and fauna, for their food security and to earn income. Such diversified systems are highly productive and sustainable, as they make use of environmental cycles, rather than destroying them. As an example, comparative economic studies have shown that the productivity of diversified farms cultivating a range of around 14 different varieties of grain, pulses, and vegetables surpasses that of rice growers. They produce larger amounts, have fewer outlays and generate more income.



A farmer harvesting amaranth



Traditional varieties of maize

So that the Creation entrusted to our stewardship as human beings is preserved for the future and for our children and our children's children, a rapid rethink and a global change in the way we use resources and shape the landscape is essential. In this connection, basic conditions must be oriented towards ecological sustainability and social justice, that is to say for the benefit of the disadvantaged.

## 5 'One who sows righteousness gets a sure reward'—Farmers' rights and patents

Seed stocks are increasingly coming under the control of agroindustries, which have been developing high-yield and hybrid seed varieties since the 1960s and spending vast advertising budgets marketing these seed varieties worldwide—generally selling them as part of a complete package along with fertilisers and pesticides. These new varieties are protected by law, which is contrary to the traditional rights of farmers to enjoy free access to seed and to exchange it amongst themselves, a situation which 'sows new injustice'. After the Green Revolution, seed-producing

companies are now attempting to push ahead with 'green gene technology'. Supported among others by the Rockefeller and Bill and Melinda Gates foundations, they aim to prepare the way for a 'new green revolution' in Africa, and suggest that it is possible to eradicate hunger and poverty using only these one-dimensional technical solutions.

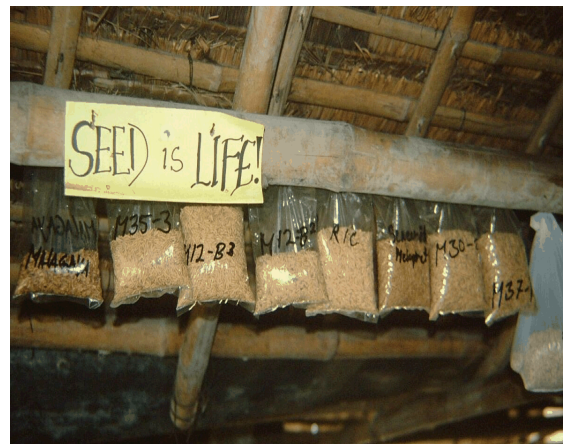
Green gene technology certainly does not offer an appropriate solution to the problem of hunger eradication in developing countries, as research and application is primarily focused on herbicide tolerance and pest resistance in industrialised production for the global market. No genetically engineered varieties have yet demonstrated any benefits for small farmers. A variety of cotton modified with genetic material from a bacterium is supposed to reduce the use of insecticides.<sup>xix</sup> However, studies carried out in India and China have shown that these new varieties still require high-cost inputs (even for pest management),<sup>xx</sup> while yields show little or no improvement, which means producers' income tends to fall rather than increase.

Until now, seed companies benefit most from the sale of seed. They are making use of international patent laws (trade-related intellectual property rights—TRIPS), which allow private companies to register patents to protect new plant varieties and animal strains they have developed. This privatisation of seeds, which penalises unauthorised propagation of registered seed varieties, runs contrary to the belief of small farmers that seed is a freely accessible common good. In the worst case, farmers must pay fines if they exercise their age-old traditional rights to propagate and exchange their farm-saved seed, even where they have played the major part in developing these varieties. The TRIPS Agreement, negotiated under the aegis of the World Trade Organisation (WTO), circumvents the United Nations Convention on Biological Diversity, which recognises farmers' rights and provides for benefit-sharing in cases of patenting.

A positive contrast to current research, which is largely financed by the commercial seed-producing industry, is offered by a counter-model of research focused on the needs and interests of small-scale producers. In many places, these producers were themselves able to breed varieties with optimum characteristics for local conditions, varieties which are by no means inferior in terms of productivity to those developed by seed technology companies and international research centres.

#### Project example: Philippines

Around 20 years ago, small farmers from the Philippines asked scientific experts at a conference what it would cost to develop a variety of rice to meet their criteria. This question led to the foundation of MASIPAG,<sup>xxi</sup> a dynamic network of small farming families and scientists, which is supported by MISEREOR. With the assistance of researchers, rice farmers not only collected more than 750 traditional varieties of rice, but have also used these to breed 500 new varieties. These are optimally adapted to local conditions, and are superior to the so-called high-yield seed from seed companies. Seed that is freely exchanged or given is the central pillar of MASIPAG's work. This secures access by all small farmers concerned to this vital production factor, which was first subject to commercialisation in the course of the Green Revolution. Along with these traditional varieties came a resurgence of the local knowledge linked to them, and small-scale producers regained their self-confidence as experts in their own field of production. Thus, an approach to facilitation and research developed that is driven by the farmers themselves, is focused on their requirements, and is not dependent on external resources.



Different varieties of rice at MASIPAG

MISEREOR supports the right of small farmers and their organisations and associations to save and use seed, to further develop such seed on the basis of local biodiversity and available knowledge systems, to monitor this themselves, and—by no means least—to reap financial and economic benefit from this. Farming families themselves and their special interests must once again become the central focus of agricultural research and breeding work. In addition, farmers must be protected from the misappropriation—consciously and to their detriment—of their efforts and achievements, as a result of biopiracy by private companies. In order to implement this, the rights enshrined in the UN Convention on Biodiversity must be transposed into national legislation and be subject to effective monitoring mechanisms.

The example of MASIPAG shows that self-determined development by those affected also promotes the common good, and thus social justice. The same principle applies not only to production, but also to the marketing of produce.

## 6 ‘May he defend the cause of the poor of the people’—Secure income and fair markets

The development of global markets in agriculture, and export-oriented national agriculture policies have a significant influence on local markets and economic cycles. They are instrumental in the misery suffered by many small farmers, the ‘poor of the people’ of the world community.

Since the mid-1950s, world market prices for agricultural commodities have fallen in real terms by 70–75 per cent.<sup>xxii</sup> In addition to the loss of income earned for produce on the global markets, small farmers were confronted by falling prices for their products on local markets as a result of increasing competition from imports of cheap and often low quality food, or dumping of agricultural surpluses from industrialised countries. Encroachment by transnational food corporations and supermarket chains endanger marketing opportunities for local producers. In the wake of a turbulent period of spiralling prices for staple foods (wheat, rice, maize) on the world markets since mid-2007, it now appears that in comparison to the previous decade, prices are stabilising at a comparatively high level. Nevertheless, it seems that much greater price fluctuations will have to be reckoned with in future, which creates more difficulties for the policies of countries which are dependent on food imports.

Indeed, increasing price fluctuations seem to be highly likely. Due to the continuing process of concentration of agricultural land tenure described above, it is also to be expected that any positive effects for producers of agricultural commodities will predominantly benefit large industrial farms. The expected negative effects, such as scarcity and price increases in the worldwide reserves of food, have serious consequences, particularly for the urban and rural poor, who are to a great extent dependent on purchases of staple foods, as the ‘price explosion’ for many foods since September 2007 has demonstrated.<sup>xxiii</sup>

As a rule, rural households pursue diversified strategies, which they constantly adapt to changing circumstances and new opportunities, to ensure income and food security. These strategies include production for their own needs, marketing of surpluses, and special production for specific markets, which in the best cases means that the product range is diversified. Sources of income include the sale of agricultural commodities, forest products, gathered fruits (including e.g. nuts), and extra-agricultural activities. The processing and refinement of agricultural crops are also regarded as ways of earning extra income. Furthermore, work-related migration of family members—seasonal or longer-term—often makes a significant contribution to the family income. As a cornerstone of their economic strategy, the ability of farmers to meet their own requirements for agricultural products makes a decisive contribution to food security. In conjunction with other income strategies (e.g. wage labour) that are not capable of sustaining livelihood alone, producing their own agricultural products allows many families to make ends meet. For a farming family, a high level of self-sufficiency can reduce dependence on fluctuating market prices and create space for other

economic activities. Subsistence production therefore offers small-scale producers a significant means of limiting exposure to risk.

#### Project example: Bolivia

ACLO, a MISEREOR partner organisation based high in the Andes in Potosi, Bolivia, uses the example of a small farmer, Don Gregorio, to illustrate the success of its methods. Previously, his annual sales on the markets in Betanzos and Vila Vila amounted to 500 kg<sup>xxiv</sup> of potatoes, 250 kg of maize, 150 kg of peas and 250 kg of wheat flour. In addition, he earned money from seasonal wage labour in the lowland regions of Santa Cruz and Chapare. To do this, he had to leave his family on their own for months at a time. Since converting to sustainable methods of agriculture, there have been many noticeable differences. Don Gregorio and his family now concentrate attention on their best plots of ground, which can be irrigated, on soil conservation techniques (more than 20 terraces), and on intensive cultivation (lucerne, potatoes, maize, wheat, barley, peas, onions, cabbage, carrots, beans and peaches) using permanent crop rotation. He has been able to increase his flock of goats and sheep, and rears cattle using fodder he has grown himself. His income has increased significantly. Today, he sells 500 kg of potatoes, 2,700 kg of carrots, 1,200 kg of onions, 12 sacks of cabbage, 10 sacks of green beans, 600 ears of cooked maize, and 12 fattened beef cattle. He no longer goes away to work, as he now earns more working his own land.<sup>xxv</sup>



Don Gregorio selecting nectarines to sell (ACLO)



A panorama view of the plots of land belonging to Don Gregorio (ACLO)

For the most part, local markets—provided that they are not controlled by trading oligopolies or even monopolies—offer favourable conditions for efficient marketing of a variety of produce, thus making an important contribution to supplying local demand for food. In addition, refining and processing agricultural produce are activities which provide promising opportunities for local value creation. If such products are also consumed locally, thereby strengthening the local economic cycle, locally generated profits will be available for further investment in the local economy.

Local capital markets are also closely linked to local markets for agricultural produce. Poor families engaged in small-scale farming do not have the financial reserves to invest in external farm inputs. Because of the absence of locally based financial service providers or the lack of financial services appropriate to the needs of poor farmers, they often borrow from local moneylenders at horrendous interest rates, or from the same traders who buy up their produce. As a rule, the pressure to pay off these debts forces small-scale producers to sell their harvests quickly, when market prices are low because of oversupply. These low earnings are then often used up on the purchase of food over the course of the year.

Diversified agriculture with low capital requirements, linked to local marketing and access to loans under fair conditions, would offer small farming families the greatest possible income security and allow indebted families to escape the debt trap. At the same time it is important that small-scale

farming is promoted and supported by national agricultural policies and that food security is given priority over export-oriented agricultural production. Nation states must therefore retain the capacity to protect their local markets, and by means of regional agreements focus on investment in the expansion of regional markets.

Nevertheless, in a globalised world, national and international markets can offer opportunities to small-scale producers, if they are appropriately prepared. The application of ethical and fair trade practices enables consumers, through their purchasing choices, to facilitate the participation of small farmers in international trade under fair conditions.

#### Project example: Peru

Fourteen years ago, MISEREOR began helping small farming families in north-west Peru to organise themselves and improve their local coffee production. They have succeeded in selling their coffee to Europe directly through fair trade organisations, thereby gradually reducing their dependence on local traders. In so doing, they have considerably increased their incomes. In the process, they have not focused only on coffee, but have also diversified into other products. By processing their own produce locally, they have been able to give it added value. For instance, they have used a simple process to convert traditionally cultivated sugar cane into unrefined cane sugar. This sugar is sold both locally and internationally through fair-trade channels. In recent years, they have also extended into the production of jams and fruit spreads for the local market. This means that seasonal surpluses of fruit can be used to generate income.



Market in Abancay, Peru

The provision of adequate basic conditions to ensure the material basis for small-scale producers is not in itself sufficient to procure rights for the 'poor of the people', and to promote socially just development.

## 7 'Righteousness exalts a people'—Emancipation and political participation

Another characteristic of poverty is the lack of social inclusion and political participation. Social justice can only be ensured through social negotiation processes involving political participation by the poor. However, small farmers are seldom sufficiently educated or organised to be able to articulate their own issues and interests and bring them effectively to the fore in the political or economic arena. Not only in development cooperation, but also in framing local policies, the poor, in this context specifically small farmers, are not active participants in the various programmes and measures taken in their interests, but are passive recipients of aid.

Sustainable agriculture changes the role of farmers in farm development. Interactive learning through experimentation and practical experience, as well as re-evaluating and reclaiming traditional knowledge, puts them once more in a position to expand their knowledge of their local ecological and production systems and to develop their agricultural activities further in a sustainable direction. Their skills are enhanced and extended. They regain confidence in their own

problem-solving abilities, and carefully assess which innovations are useful in their specific situation, and which traditional practices are worth preserving. Instead of following instructions, they make their own decisions. Women, who have traditionally played a major role in agriculture, are also further empowered and are no longer marginalised by the development of conventional capital-intensive agriculture.

A process with these characteristics facilitates both participative research oriented towards the requirements of small farmers and advisory services that are based not on knowledge transfer but on knowledge generation. For effective implementation, what is required are highly professional intermediary organisations, which regard themselves more as adult educators than technical experts, and which act accordingly, with their paramount role being that of moderators in the processes of exchange of experience and self-organised learning.

With cultivation methods that are based on traditional seed varieties, farmyard manure, and mechanical methods of plant protection, rather than relying on drip-feed transfusions of external inputs and advice, producers regain control over their own resources and production processes, and find ways to avoid the debt trap. The self-confidence and independence they gain through this lead them to engage more with the wider community and to take on responsibility.

Farmers' groups that organise themselves and form networks can also mobilise politically, stand up for their rights, and participate in (formal and informal) political processes.

#### Project example: Burundi

Since the mid-1990s, INADES Formation in Burundi has been supporting coffee farmers in their continuing process of self-organisation. Whereas to all intents and purposes coffee-farming families within the state-controlled coffee production system had the status of dependent 'wage labourers', the establishment of farmers' organisations helped local organisations make the bottom-up transition to self-administration in progressive stages. Widespread organisation among coffee farmers meant that pressure could be exerted on the marketing board and a higher price for the producers negotiated. Today, these organised coffee farmers are actively campaigning so that within the framework of privatisation, they too can gain ownership of the coffee processing plants which are currently still in state ownership



The government-run coffee authority responsible for Burundi's coffee policy



Coffee beans ready for harvesting

Organised associations of small farmers are starting to make ever more insistent demands for changes in national and international agriculture policies. With the formulation of the term food sovereignty, they have developed the concept of the right to nutritional food and demand the basic structure and conditions that will not only allow for small-scale sustainable farming and the prioritisation of local food security and marketing, but also protect this system against global

interventions, such as dumping, and national interventions, such as unilateral support for export-oriented industrial agriculture.

'Righteousness exalts a people'. This also applies to the world community. A paradigm shift in policy towards sustainable development in all its dimensions is essential for dealing with the crucial problems of the future such as global food security, desertification, and climate change, among others. World society bears a responsibility to future generations for the Stewardship of Creation and for social justice. This guiding objective must also determine the way in which the global economy is shaped.

## 8 Areas for political action

Hunger and poverty can only be successfully alleviated if small farmers are brought to centre stage in national and international politics. The following points are pivotal:

- i Access to land and rights of use of natural resources (soil, forests, pasture, water) must be secured. The primary responsibility for this lies with national governments in the countries of the South. Where access is lacking, it must be provided, for example through redistributive land reform, underpinned by appropriate agrarian reforms and support programmes.
- ii The food sovereignty of a nation must take priority over trading interests. Nations must retain the right to self-determination of their policies on domestic food provision and agriculture. Countries must be allowed sufficient scope to establish supportive trade policies. Promotion and support of local markets and producers must be given priority over export-oriented production and imports of food.
- iii The right to food must be established in national constitutions and must be legally enforceable. To this end, a legal framework must be set up and monitoring and control responsibilities assigned.
- iv The development efforts of bilateral and multilateral donors must be systematically assessed in respect of their suitability for realising the right to food. The right to food should be the central point of reference for bilateral and multilateral development cooperation, and all development actors should commit themselves to its implementation.
- v Sustainable agriculture must become the benchmark standard for national and international promotion and support. This requires a paradigm shift for all development actors both in the South and in the North. The Federal Government of Germany must adopt support for sustainable agriculture as the standard for its bilateral development cooperation, rather than driving forward the Western model of agricultural intensification. Only a determinedly courageous change of direction will rise to the challenges of climate change, the worldwide destruction of ecosystems, loss of biodiversity, and the alleviation of hunger. A broad diversity of varieties and species, and lower levels of resource dependency will facilitate the adaptation of agricultural systems to climate change. In addition, the continuing cultivation of locally adapted crops will be enabled, as will the rapid exchange of successful strains and varieties amongst farmers within their own region.
- vi The contribution made by farms to the common social good through preservation of resources and biodiversity, maintenance of water purity, and landscape and soil conservation must be recognised. National and international policies must establish monetary and non-monetary incentive systems for the active promotion of environmentally sustainable production systems. Soil degradation, and the use of environmental pollutants such as pesticides must be reflected in pricing structures, and environmentally damaging production methods penalised.
- vii Sustainable agriculture requires comprehensive financial support and support programmes based on intensive facilitation and consolidation. Support programmes should be centred



around farmers as principal actors, sources of local know-how, and as multipliers, and should reinforce their self-confidence and invigorate organised interest groups. Support programmes should take local systems as the starting point for working together with farmers to develop optimised land-use systems. Instead of a transfer of know-how from North to South, the intention should be to facilitate and support exchange of knowledge and expertise within and between the countries of the South. Appropriately structured decentralised systems of service provision enable small farmers to develop working methods appropriate to their long-term needs. This must be supplemented by availability of financial services provision, market development, and infrastructures for marketing, storage, processing, and other requirements.

## Abbreviations

|            |  |
|------------|--|
| FAO        | Food and Agriculture Organisation of the United Nations          |
| GEF        | Global Environment Facility                                      |
| UNDP       | United Nations Development Programme                             |
| UNEP       | United Nations Environment Programme                             |
| UNESCO     | United Nations Educational, Scientific and Cultural Organisation |
| World Bank | International Bank for Reconstruction and Development            |
| WHO        | World Health Organisation  |

## Endnotes

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- <sup>i</sup> The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) was initiated as a global process and is supported and financed by the following international organisations: FAO, GEF, UNDP, UNEP, UNESCO, World Bank, and WHO. This consultative process involved 900 experts and 110 countries from all regions of the world. (Further information at: <http://www.agassessment.org>).
- <sup>ii</sup> D. Beyerlee, Alain de Janvry, 'Agriculture for Development: The World Bank's 2008 World Development Report', in *Entwicklung und Ländlicher Raum* (2007), pp. 4-6.
- <sup>iii</sup> [www.millenniumcampaign.de](http://www.millenniumcampaign.de). In English at <http://www.undp.org/mdg/basics.shtm>.
- <sup>iv</sup> This has been demonstrated by numerous studies in recent years, cf. Oduor Ong'wen and Sarah Wright, *Small Farmers and the Future of Sustainable Agriculture*, EcoFair Trade Dialogue Discussion Paper No. 7 (Berlin, Aachen, March 2007).
- <sup>v</sup> In Brazil, for example, family farms produce 70 per cent of food, thereby contributing 10 per cent of the GDP (according to information on the website of the Brazilian Ministry of Agriculture ([www.mda.gov.br](http://www.mda.gov.br)) in July 2008).
- <sup>vi</sup> Where agriculture contributes 30 per cent of the national economy, a value added of 1 per cent in the agricultural sector results in 0.45 per cent growth in the gross national product. Cf. H. Brandt, U. Otzen, *Armutorientierte landwirtschaftliche und ländliche Entwicklung*, (Nomos: Baden-Baden, 2004); H. Brandt, U. Otzen, *Poverty Oriented Agricultural and Rural Development* (Routledge: London, New York, 2007).
- <sup>vii</sup> E.g. C. Badgley et al. (University of Michigan), 'Organic agriculture and the global food supply', in *Renewable Agriculture and Food Systems*, Vol. 22 (Cambridge University Press: 2007), pp. 80–86, Nils Halberg et al., 'The impact of organic farming on food security in a regional and global perspective', in Halberg et al. (eds.), *Global Development of Organic Agriculture – Challenges and Prospects* (Oxfordshire, UK: CABI Publishing, 2006), and Halberg, N. et al (Danish Institute of Agricultural Science), quoted in: Brian Halweil.: 'Can organic farming feed us all?', *World Watch*, Vol. 19, No. 3 (2006). The global agricultural report compiled and published by the IAASTD stresses the necessity to support small-scale farming systems, and calls for a change of direction towards agroecological principles and sustainable agriculture. *Global Report of the International Assessment of Agricultural Knowledge, Science and Technology for Development* (IAASTD: Geneva, 2008).
- <sup>viii</sup> A form of land use can be designated sustainable if it maintains the income of the rural population and the productivity of the land over the long term without having any adverse effects on the environment (erosion, contamination, etc.) or on people (increase in social inequalities, increased risks, etc.). Thus the land use system must be economically, ecologically, and socially sustainable. (cf. *Fertile Soil: The Basis for Sustainable Development* (MISEREOR: Aachen, 2000)).
- <sup>ix</sup> Pretty and Hine show that subsequent to the introduction of sustainable agricultural methods, small-scale farm systems with low external inputs achieve yield increases of 30–500 per cent. J. Pretty and R. Hine, *Reducing Food Poverty with Sustainable Agriculture: A Summary of New Evidence* (Sussex, 2001).
- <sup>x</sup> Impact study by the MISEREOR partner organisation MASIPAG, Bachmann et al., *Household Impact Survey, More than 20 years work of MASIPAG and MISEREOR on sustainable and organic agriculture practices in the Philippines* (Pohlheim, 2007), or MISEREOR, *Jahresevaluierungsbericht* (Aachen, 2007), pp. 47–49.

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- <sup>xi</sup> MISEREOR, Jahresevaluierungsbericht (Aachen 2006), pp. 50–51.
- <sup>xii</sup> Impact study by MISEREOR, Bachmann et al., Impact household survey—Ten years work of MISEREOR partners on sustainable and organic agricultural practices in Uganda, (Pohlheim, 2005).
- <sup>xiii</sup> R. Clarke, J. King, *The Atlas of Water. Mapping the world's most critical resource*, (Earthscan Publications Ltd: London, 2004), p. 33.
- <sup>xiv</sup> cf. *Die globale Wasserkrise—Ein Plädoyer für eine nachhaltige Wasserpolitik* (MISEREOR: 2005).
- <sup>xv</sup> R. P. Sieferle, *Rückblick auf die Natur. Eine Geschichte des Menschen und seiner Umwelt* (Munich, 1997).
- <sup>xvi</sup> In contrast to other livelihood systems (hunter-gatherers), and viewed from a historical perspective, agriculture enables humans to establish stable settlements with higher population densities in a given area, due to its greater land-use efficiency. *Ibid*, p. 53, p. 75.
- <sup>xvii</sup> „Bioenergie“ im Spannungsfeld von Klimawandel und Armutsbekämpfung (MISEREOR: Aachen, 2007) / “Bioenergy” amid the competing demands of climate change mitigation and poverty reduction (MISEREOR: Aachen, 2007).
- <sup>xviii</sup> BUND / MISEREOR (eds), *Zukunftsfähiges Deutschland / Sustainable Germany* (Basel, 1996); *Slow Trade – Sound Farming, Eco-Fair Trade Dialogue*, (MISEREOR, Heinrich Böll Stiftung: Aachen, Berlin, 2007).
- <sup>xix</sup> Genetic material from the bacterium *Bacillus thuringiensis* has been introduced into the cells of cotton plants—the resulting Bt cotton is thus engineered to be poisonous to its major pests.
- <sup>xx</sup> In place of the European corn borer, other pest varieties are multiplying, and even the pests that were specifically targeted quickly develop resistance in the course of a few generations. For example, cf. A. Qayum and K. Sakhari, *False hopes, festering failures – Bt cotton in Andhra Pradesh 2005–2006* (2006) (<http://www.grain.org/btcotton/?id=384>).
- <sup>xxi</sup> [www.masipag.org](http://www.masipag.org).
- <sup>xxii</sup> H. Brandt, *Ugandan Agrarian Policy Framework* (Hollenstedt, 2008).
- <sup>xxiii</sup> The topic of how price fluctuations on the global agricultural markets affect the food supplies of the urban and rural poor deserves in-depth consideration elsewhere. To this end, within the framework of the EcoFair Trade Dialogue, MISEREOR and the Heinrich Böll Foundation have commissioned a study that will be available in October 2008.
- <sup>xxiv</sup> Translator's note: the weights in the source text (German) at this point were given in Zentner (Ztr) and have been converted into kg. The Zentner is a unit of weight used for farm produce, coal, and some other bulk commodities. It is equal to 50 kilograms and roughly equivalent to the imperial (UK) hundredweight, which is 112 pounds, rather than 100 pounds, and equal to 50.8 kg.
- <sup>xxv</sup> *Cuando lo pequeño se hace grande* (Fundación Acción Cultural Loyola: Potosí, Bolivia, 2005), p. 51.