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Best Practices for Organic Policy

What developing country Governments can do to promote the organic agriculture sector

Prepared under the CBTF Project
"Promoting Production and Trading Opportunities
for Organic Agricultural Products in East Africa"

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Note

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Foreword

Organic agriculture is a production system based on an agro-ecosystem management approach that utilizes both traditional and scientific knowledge.

Organic agriculture offers developing countries a wide range of economic, environmental, social and cultural benefits. Global markets for certified organic products have been growing rapidly over the past two decades. In 2006, sales were estimated to have reached some 30 billion euros, a 20% increase over 2005, and are expected to increase to 52 billion euros by 2012. While sales are concentrated in North America and Europe, production is global, with developing countries producing and exporting ever-increasing shares. Due to expanding markets and price premiums, recent studies in Africa, Asia and Latin America indicate that organic farmers generally earn higher incomes than their conventional counterparts.

Modern organic techniques have the potential to maintain and even increase yields over the long term while improving soil fertility, biodiversity and other ecosystem services that underpin agriculture. Crop rotations in organic farming provide more habitats for biodiversity due to the resulting diversity of housing, breeding and nutritional supply. As synthetic agro-chemicals are prohibited in organic agriculture, its adoption can help prevent the recurrence of the estimated 3 million cases of acute severe pesticide poisoning and 300,000 deaths that result from agrochemical use in conventional agriculture every year. Organic systems have 57% lower nitrate leaching rates compared with other farming systems, and zero risk of surface water contamination. In terms of benefits for climate change, various studies have shown that organic farming uses 20-to-56% less energy per produced unit of crop dry matter than conventional agriculture, and that organic fields sequester three-to-eight more tons of carbon per hectare. By way of example, it is estimated that converting the United States' 160 million corn and soybean acres to organic production would sequester enough carbon to meet 73% of that country's Kyoto targets for CO2 reduction.

Organic production is particularly well suited for smallholder farmers, who comprise the majority of the world's poor. It makes resource-poor farmers less dependent on external resources and helps them enjoy higher and more stable yields and incomes, which enhances food security. Moreover, organic agriculture in developing countries builds on and keeps alive farmers' rich heritage of traditional knowledge and traditional agricultural varieties. Organic farming has also been observed to strengthen communities and give youth an incentive to keep farming, thus reducing rural-urban migration.

This evidence clearly shows that organic agriculture is a promising trade and sustainable development opportunity and a powerful tool for achieving the Millennium Development Goals, particularly those related to poverty reduction and the environment.

It was in recognition of this potential of organic agriculture that the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Programme (UNEP) selected it as a priority issue to be addressed in the framework of the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF). Since 2004, CBTF efforts have focused on promoting production and trading opportunities for organic products in East Africa, including supporting, in cooperation with the International Federation of Organic Agriculture Movement (IFOAM), the development and adoption in 2007 of the East African organic products standard (EAOPS). The EAOPS is the second regional organic standard after that of the European Union and the first ever to be developed through a region-wide public-private-NGO partnership process.

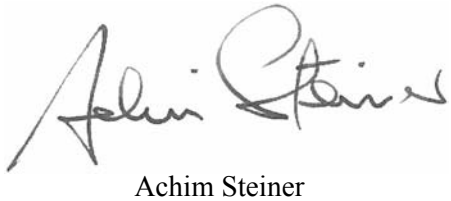
A key question faced by the CBTF is what developing-country policymakers can do to best reap the multifaceted benefits of organic agriculture. This study attempts to answer this question. It distils the lessons learnt from in-depth analysis of seven country case studies, among other sources, and makes a

number of clear and actionable recommendations. Among the key challenges are to demonstrate compliance with the organic standards (both public and private) of the importing markets in a cost-effective way; meet the quality and volume requirements of buyers; develop the domestic organic market; and build farmers' capacities in organic production techniques and documentation requirements for demonstrating compliance.

This study recommends that developing-country Governments should generally focus on playing a facilitating rather than a controlling role. They should engage in dialogue with their organic sectors to identify their most pressing needs and consider conducting an integrated assessment of the sector. Integrating organic agriculture into overall agricultural policies and poverty reduction strategies, and building organic agriculture supply capacities through education, research, extension services, local and regional market development and export facilitation, are key to realizing the benefits that organic agriculture offers.

The CBTF is fully committed to helping developing countries take full advantage of this exciting trade and sustainable development opportunity. We hope that the study will be a valuable tool to that end.

Supachai Panitchpakdi
Secretary-General of UNCTAD



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Contents

Acronyms and abbreviations

APEDA	Agricultural and Processed Food Products Export Development Authority
CAP	Common Agricultural Policy (EU)
CBD	Convention on Biological Diversity
CBTF	Capacity Building Task Force on Trade, Environment and Development (a joint UNCTAD and UNEP initiative)
EPOPA	Export Promotion of Organic Products from Africa
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
GMO	genetically modified organisms
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IFOAM	International Federation of Organic Agriculture Movements[1]
IOAS	International Organic Accreditation Service
ISO 65	ISO/IEC Guide 65: 1996(E), General requirement for bodies operating product certification systems
ITF	International Task Force on Harmonization and Equivalence in Organic Agriculture (UNCTAD/FAO/IFOAM)
KOAN	Kenya Organic Agriculture Network
NGO	non-governmental organization
NOGAMU	National Organic Agricultural Movement of Uganda
NOP	National Organic Program (United States)
OA	organic agriculture
OECD	Organisation for Economic Co-operation and Development
Organic-AIMS	Organic Agriculture Information Management System (FAO)
R&D	research and development
TBT	The agreement on Technical Barriers to Trade (part of the WTO agreements)
TOAM	(United Republic of) Tanzania Organic Agriculture Movement
TRIPS	The agreement on Trade-Related Aspects of Intellectual Property Rights
UNCTAD	United Nations Conference on Trade and Development
UNDP-GEF	United Nations Development Programme Global Environment Facility
UNEP	United National Environment Programme
UNFCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USDA	United States Department of Agriculture

[1] A sector association with 750 member organizations in 108 countries (www.ifoam.org).

Terms

The following terms are used in this report and in the organic sector:

accreditation: a third-party formal recognition that a body or person is competent to carry out a specific conformity assessment task (in the scope of this document, certification)

certification: a third-party written assurance that a clearly identified process has been methodically assessed such that adequate confidence is provided that specified products conform to specified requirements

European Union (EU) regulation: the regulation for marketing of organic products in the European Union, Council Regulation (EEC) no. 2092/91, with amendments and additional regulations

IFOAM accreditation: Accreditation by the International Organic Accreditation Service (IOAS) of a certification body to the IFOAM norms, the status of which is often referred to as "IFOAM accredited"

ISO 65 accreditation: accreditation by a certification body for compliance with ISO 65, often referred to as "ISO 65 accredited"

organic regulation: governmental rules for products marketed as organic (When there is a mandatory organic regulation, sales of organic products that do not fulfil the requirements of the regulation are unlawful. If the regulation is voluntary, producers can claim adherence to the regulation and therefore must follow the regulation, but other organic producers are not prevented from selling their production as organic.)

NOP accreditation: accreditation of a certification body by the USDA, having met requirements of the National Organic Program (NOP), often referred to as "NOP accredited"

regulation: the whole regulatory package, i.e. laws, decrees, regulations, ordinances and public standards, with the recognition that regulatory practices differ

third country list: non-EU countries that have been recognized as having an equivalent organic regulation as the European Union, according to Article 11.1 of the EU Regulations

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Note: The terms "IFOAM accredited", "NOP accredited" and "ISO 65 accredited" are used throughout this report as abbreviated forms of the more complete phrasing, such as "Accredited by the USDA to the NOP". This kind of use is widespread not only in the organic sector, but also in other sectors, for example, "ISO 9001 certified".

Executive summary

The goal of this report is to give guidance to the development of appropriate policies for the organic sector. Its focus is mainly developing countries, particularly in East Africa, but much of it is also applicable for developed countries. The report gives some general background about organic agriculture and the reasons to support the development of organic agriculture. These are among others:

- Protection of natural resources (e.g. water) and biodiversity;
- Improved quality of soils and thereby a long-term high productivity;
- Improved market access;
- Improved profitability in farming; and
- Improved health or reduced health risks for farmers, farm-workers and consumers.

The report relates experiences from the cases of seven countries: Chile, Costa Rica, Denmark, Egypt, Malaysia, Thailand and South Africa, as well as from other parts of the world. It shows that organic agriculture is developing strongly in all the seven countries, despite quite different conditions and very different levels and kinds of government involvement. Most organic production is for export purposes but countries like Egypt, Malaysia and South Africa have developed substantial domestic markets. Malaysia is even a net importer of organic food.

In almost all countries with an organic sector, the early drivers are non-governmental organizations (NGOs) and the private sector; Governments have rarely played any role in the early stages. Countries with a unified organic movement develop the sector quicker. Those factors should be considered when Governments start to engage in the sector and Governments are advised to work in close cooperation with the stakeholders and their organization when developing organic policies.

Any organic policy and action plans should be linked to the overarching objectives of the country's agriculture policies in order to make them mutually supportive. The contribution of organic agriculture to these objectives needs to be highlighted. Similarly, the current policies should be assessed to understand their impact on organic agriculture ideally leading to that all obstacles and biases against organic agriculture be removed.

A starting point for government engagement is to give recognition and encouragement to the organic sector. This also includes the recognition of the relevance of organic sector organizations and the close cooperation between them and Governments. Governments should take an enabling and facilitating role rather than a controlling one. In particular, Governments should not embark on pre-mature domestic organic market regulations which may stifle the development instead of stimulating it.

A policy process needs to be participatory and be based on clear objectives. Action plans, programmes and projects should develop from the overall policy. Critical for the development is that bottlenecks be identified and that all the various aspects of development – production, marketing, supply chain, training, research etc. – are considered. Training both civil servants and private sector actors should have high priority. Most developing countries have limited resources and have to balance their resources against the needs. Therefore, priorities are called for. The adaptation of policy measures to the conditions in the country and the stage of development and the proper sequencing of measures are vital for a successful development of organic agriculture.

The report gives a number of recommendations, listed below, divided in recommendations for:

- General Policy;
- Standards and regulation;
- Markets;

- Production; and
- Other, including training, education and research.

In addition to the highlighted recommendations, there are many other recommendations given in the report.

Summary of recommendations

General policy

1. A country wanting to develop its organic sector needs to perform an in-depth integrated assessment of its general agriculture policies, programmes and plans, to understand how they affect the competitiveness and the conditions of the organic sector.

2. The objectives for government involvement for the development of the organic sector need to be clarified before actions are undertaken. All stakeholders should be involved in the policy development and development of plans and programmes.

3. General and organic agriculture policies should support each other to the greatest extent possible to promote effective policy coherence, especially if organic agriculture is promoted as a mainstream solution.

4. An action plan for the organic sector should be developed based on analysis of the state of the sector, participatory consultations, a needs assessment and proper sequencing of actions. The action plan should state measurable targets for the organic sector to help agencies and stakeholders focus their efforts.

5. One government ministry or agency should be assigned a leading role and organic desks should be established in other relevant ministries and agencies.

6. Governments should recognize the diverse interests represented in the organic sector and ensure that all of them are considered properly as well as direct special attention to disadvantaged groups.

7. A permanent body should be established for the consultations between the Government and the private sector.

8. Governments should actively contribute to awareness raising for organic agriculture on all levels.

9. Data about organic production and markets need to be collected over the years, analysed and made available to the sector and policymakers.

Standards and regulation

10. A national or regional standard for organic production should be developed, through close cooperation between the private sector and Government. It should be well adapted to the conditions in the country and mainly focus the domestic market.

11. Governments should facilitate the access to certification services, either by stimulating foreign certification bodies to open local offices or by supporting the development of local service providers. In some countries, especially where the private sector is weak, the Government could consider establishing a governmental certification service.

12. Compulsory requirements for mandatory third-party certification should be avoided as they will not enable other alternatives to emerge. Other conformity assessment procedures, such as participatory guarantee systems, should be explored.

13. Mandatory regulations should only be considered when the need is clearly established and other simpler options have been ruled out. In the early stage of development, a mandatory organic regulation is not likely to be a priority. Regulations for domestic markets should be based on local conditions, and not mainly on the conditions in export markets.

14. The recommendations from the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) for regulatory solutions, in particular those relating to import access should be considered.

15. Producers, especially smallholders, should be supported to comply with standards, certification procedures and regulations. Special considerations should be taken for certification of smallholders. Training programmes for farmer groups to set up internal control systems should be supported.

16. Before establishing regulations, Government should clarify the objectives. Governments regulating the sector should develop the regulations in close consultation with the sector and ensure that the regulation is enabling rather than controlling in nature.

Markets

17. Public procurement of organic products should be encouraged, including featuring organic food in important public events.

18. Consumer education and awareness should be actively promoted.

19. A common (national, regional or international) mark for organic products should be established and promoted.

20. Domestic market development strategies should include measures for both the supply and demand side, including the role of imports.

21. The organization of farmers in regards to marketing, joint distribution and storage should be supported.

22. Market information systems should be established.

23. Export promotion activities should be supported, recognising the special nature of organic markets. Organic exporters should be encouraged to join forces to promote and market their products.

24. Organic products should be excluded from any mandatory phytosanitary treatments that are not permitted for organic products. Alternatives for fumigation should be supported.

Production

25. Direct support measures to producers need to be adapted to small farmers as well as to commercial operations.

26. Organic extension services need to be established and the staff trained. Organic extension should be developed and implemented in a participatory manner and have the farm and the farmer as the centre of attention.

27. Traditional knowledge about pest control treatments et al. should be surveyed and brought into the extension service and disseminated in other ways.

28. Recycling of agriculture and food waste into organic farming systems should be promoted.

29. Government (or others) should establish basic controls of biological inputs such as pest control agents and organic fertilizers.

30. Seed breeding and seed testing should be oriented to organic production. Compulsory seed treatments should be waived for organic farmers and untreated seeds should be made available. Alternative seed treatments should be developed and promoted.

31. Policies for genetically modified organisms (GMOs) need to ensure that GMO seeds are not distributed or used in a way that can cause contamination of seeds.

Other

32. Organic agriculture should be integrated into the curriculum for primary and secondary schools. Specialized institutions involved in training for organic agriculture should be supported. Higher education in organic agriculture should be developed.

33. Special research programmes should be established for organic research, and the sector should be involved in priority setting. Research and development (R&D) in organic agriculture should be participatory, build on and integrate traditional knowledge (where relevant) and be based on the needs of the producers.

34. Governments and the private sector should participate in relevant international forums such as the Codex Alimentarius, IFOAM and the ITF.

35. Regional cooperation in marketing, standards, conformity assessment and R&D should be promoted.

I. Introduction and scope

This paper identifies best practices and lessons learned in countries around the world, regarding effective and efficient government policies and actions to promote production and export of organic agriculture products. The primary use of the report is as input to the CBTF project "Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa". Within that framework, national policy recommendations for organic agriculture are developed for possible adoption by the Governments of Kenya, Uganda and the United Republic of Tanzania respectively. Recommendations made may also be relevant for other countries.

The scope of this report is organic farming and products thereof, thus it does not directly address issues related to organic wild collection[2], aquaculture and other branches of the organic sector. Nevertheless, many of the recommendations and observations have relevance for these other areas.

Countries are different and have different priorities, and their policy choices will therefore be different. Nevertheless, there are common elements in a good policy as well as in a bad policy. It is perhaps easier in some cases to recommend what *not* to do than what to do. Recommendations are made based on the assumption that Governments have identified that they should indeed promote the organic sector, i.e. the report is not intended to convince Governments that they should support organic agriculture. However, after this introduction there is an overview of organic agriculture and indications of reasons for Governments to support organic policy. This is followed by the introduction of case studies from Chile, Costa Rica, Denmark, Egypt, Malaysia, South Africa and Thailand. Other experiences and literature form the basis for the analysis and the following recommendations structured around main policy areas.

Naturally, the willingness to invest in organic agriculture is also linked to the general interest in the agriculture sector by Governments and development partners, which is fuelled by increasing market demand. In many countries, and in development cooperation, the agriculture sector has been neglected in terms of appropriate investments, policies, private sector involvement, etc., despite the fact that agriculture accounts for the main employment in most developing countries. There are some positive signs that policymakers are once again realizing the enormous potential of agriculture for poverty reduction in developing countries. In particular for the least developed countries, all experience suggests that agriculture must play a leading role for development and growth. The African Union leaders agreed in Maputo in 2003 to "adopt sound policies for agricultural and rural development, and commit ourselves to allocating at least 10 per cent of national budgetary resources for their implementation within five years". It is recommended that some of that is used to promote the further development of the organic agriculture sector.

[2] Organic wild collection is a rather important activity in a number of countries. For more information, please refer to the proceedings of the first IFOAM Conference for Organic Wild Production, Bosnia and Herzegovina 4–5 May 2006, available at www.ifoam.org.

II. Organic agriculture

Organic agriculture aims at a sustainable production system based on natural processes. Key characteristics are that organic agriculture:

- Relies primarily on local, renewable resources;
- Makes efficient use of solar energy and the production potential of biological systems;
- Maintains and improves the fertility of the soil;
- Maximizes recirculation of plant nutrients and organic matter;
- Does not use organisms or substances foreign to nature (e.g. GMOs, chemical fertilizers or pesticides);
- Maintains diversity in the production system as well as the agricultural landscape; and
- Gives farm animals life conditions that correspond to their ecological role and allow them a natural behaviour.

Organic farming is well defined in two sets of international standards, one by the Codex Alimentarius[3] and the other by the International Federation of Organic Agriculture Movements, IFOAM. Organic agriculture has grown tremendously over the last few decades, both as a market-driven commercial production and as an environmentally benign production method. A number of European countries have seen a considerable increase in their organically farmed areas. More than 10 per cent of Switzerland's farmland is organic, Sweden reached 19 per cent in the year 2005, and about 13 per cent of Austria's farms are organic. A number of developing countries are showing significant rates of adoption. In Uganda there are now about 35,000 certified organic farmers; in Mexico, nearly 120,000 small farmers produce certified organic coffee, cacao, fruit, vegetables, spices and staple foods (Giovanucci 2006). Uruguay has 5.1 per cent of its farmland under organic management (Willer and Yuseffi 2006) and Costa Rica has 2.4 per cent of its farmland organically managed.

Organic agriculture is a sustainable and environmentally friendly production method, which has particular advantages for small-scale farmers in developing countries. Practical experiences, a large number of reports, and outcomes of many intergovernmental meetings have highlighted the trade and sustainable development opportunities offered by organic agriculture for developing country farmers, particularly smallholders[4]. Organic agriculture contributes to poverty alleviation and food security with a combination of many features, most notably by:

- increasing yields in low-input areas over time;
- conserving biodiversity and nature resources on the farm and in the surrounding area;
- increasing net income and/or reducing costs of externally purchased inputs;
- producing safe and varied food; and
- being sustainable in the long term.

Most of this applies regardless of whether the production is sold as organic or not. Therefore, organic agriculture is promoted by many organizations and NGOs as appropriate for farmers producing for themselves or for the local market. Organic agriculture acknowledges the experiences of the farming communities and can build on and integrate indigenous or traditional knowledge, and thereby shows respect for the farmers as shapers of their future, rather than implementers of an agriculture production system imposed from above or from the outside.

[3] The joint FAO/WHO commission for food standards.

[4] See, for example, the UNCTAD Trade and Environment Review 2006 (UNCTAD 2006); Organic agriculture, environment and food security (FAO 2002); the outcomes of the UNCTAD Commission on Trade in Goods and Services, and Commodities in 2002, 2003, 2004, 2005, 2006 and 2007; the World Summit on Sustainable Development (2002); and the Third United Nations Conference on the Least Developed Countries (2001).

In addition, if the production targets the special market for certified organic products, there are premium prices to earn. A recent evaluation (Forss and Lundström 2005) of the EPOPA[5] programme, as well as the evaluations by the International Fund for Agricultural Development (IFAD) (Giovannucci 2005), show that the income of participating farmers can increase substantially. Certified production gives access to a premium market, or simply better market access. Most of the certified production in developing countries is intended for the export market.

The organic market

The market for organic products has grown rapidly since 1990 and global sales were estimated to be around US$ 30 billion in 2005 and US$40 billion in 2006 (Sahota 2007). The biggest market is the United States, followed by Germany, the United Kingdom, France, Japan and Italy. The share of organic products in total food sales exceeds 4 per cent in Denmark, Sweden, Austria and Switzerland, while in the larger markets it is about 2 to 3 per cent.[6] In developing countries, organic markets are still small, but growing, especially in upper-income developing countries.

The first organic markets developed in specialized health food shops and in other non-mainstream outlets. This has changed over the last 15 years, and normal supermarkets, as well as "organic supermarkets" (e.g. Whole Foods in the United States, Basic and Alnatura in Germany) in most countries from the Organization for Economic Cooperation and Development (OECD), sell organic products. Almost all major retailers and food companies in OECD countries are involved in the organic sector. In most cases, organic producers have to meet the same competitive parameters as their conventional counterparts regarding prices, logistics and packaging. Because of the stringent organic standards, organic producers often have fewer problems adapting themselves to other demanding standards such as EurepGAP. For example, traceability has already been part of the organic certification process for decades and is not perceived as a major obstacle to organic producers; the fact that no pesticides are used makes it easy to fulfil increasing demands that no pesticides be detected in products[7]. Nevertheless, especially for small producers the demand for documentation and procedures in both organic and other systems can prove to be too demanding. In developed countries, there has lately been a move for more direct sales by small producers, something that has been supported by increased interest for local and regional food and discussions about "food miles"[8].

Organic is often promoted as a solution particular to small farmers. It is true that small farmers often have a production system that is closer to organic and therefore are often early adopters of organic production methods. However, as markets develop and the policy environment changes, large producers will also enter the market simultaneously with large food industries and multiple retailers. With them, the same pressures of competition will also be exerted on organic small farms as on their conventional counterparts. Organic farms in Europe, originally small farms in marginal areas, are today more or less the same size as conventional farms (in some countries a little smaller, in others a little bigger than average). Therefore, organic should not be promoted mainly as a strategy for incorporating marginalized farmers in remote areas in the global markets. Having said that, there are some aspects of organic farming that makes it particularly suited for small farms, such as low use of inputs, diversity in production system, etc.

[5] Export Promotion of Organic Production from Africa, www.epopa.info.

[6] The market statistics for organic products are still fairly unreliable in most countries.

[7] UNCTAD has carried out considerable research on environmental and health requirements and market access for developing countries. See, for example, the Trade and Environment Review 2006 (UNCTAD 2006), Food Safety and Environmental Requirements in Export Markets – Friend or Foe for Producers of Fruit and Vegetables in Asian Developing Countries? (UNCTAD 2007), Codes for good agricultural practices: opportunities and challenges for fruit and vegetable exports from Latin American developing countries: Experiences of Argentina, Brazil and Costa Rica (UNCTAD 2007).

[8] "Food miles" concerns the transportation of food in the global food system, and the growing distance between consumers and producers. It is driven by a mixture of environmental concerns, i.e. energy consumption and pollution from transports, concerns for the survival of small producers also in developed countries, and the widening gap between consumers and producers.

Certification

Consumers want assurance that products labelled "organic" are indeed produced according to organic production methods, and producers want to know that other producers also claiming to produce organic products are competing fairly. The "organicness" of a product cannot be established by looking at the harvested product or by testing it. Rather, it is ascertained through documentation and inspection of the whole production process. Organic certification systems were developed in the early 1970s and by the 1980s there were organic certification bodies in most OECD countries. Today, there are 70 countries that have a domestic certification organization, and a dozen internationally active organizations offer organic certification services in virtually all countries in the world (TOS 2005).

The policy environment and the development of the organic sector

Organic agriculture is relevant both as a certified production method aiming at a separate marketing, as well as non-certified production for consumption by the farmers themselves and the local communities. In OECD countries, farming is assessed to cause external costs[9] ranging from US$ 30 to US$ 350 per hectare per year, by pollution of water and air, disease, loss of biodiversity, soil erosion, health costs, etc. (Pretty et al. 2000, Tegtmeier 2004). These external costs of modern farming are not incorporated into individual farmer decision-making, or in the prices for food. Artificially high prices for particular commodities, such as key cereals[10], have discouraged mixed farming practices, replacing them with monoculture. Resource-degrading farmers do not bear the costs of damage to the environment or economy, nor are the costs included in the price of food. In contrast, organic agriculture produces fewer negative externalities, and can restore ecosystems and deliver ecosystem services (Pretty et al. 2005).

Farmers are, by and large, responding rationally to the conditions they work under, including the policy environment. Most of the policy measures used to support agriculture discourage sustainable and organic farming. In the short term, this means that farmers switching from high-input to resource-conserving technologies cannot do so without incurring some transition costs. To some extent, one can claim that the premium-priced organic market lets the consumers carry the burden of failures in policy. Whilst the organic market has been instrumental for driving the development, it is questionable in the longer term if consumers are willing to, or if they should, compensate for policy failures by paying higher prices for organic products.

Summing up, there are a number of reasons for why a Government should support the development of a domestic organic sector:

- improved health, or reduced health risks for farmers, farm-workers and consumers;
- protection of natural resources (e.g. water) and biodiversity;
- improved quality of soils and thereby long-term high productivity;
- improved market access; and
- improved profitability in farming.

Each of these alone could also be accomplished by means other than organic farming. The strength of organic agriculture is that it combines and integrates solutions to so many of the pressing problems of agriculture. Nevertheless, for organic farming the general framework also needs to be right. If farmers lack access to resources such as land, organic agriculture has little to offer; if farming is unreasonably taxed, there is not much relief to get from organic farming; if women are discriminated against by legislation or customs, they are likely to be discriminated against in an organic system as well. Organic agriculture can therefore not be seen as a silver bullet that solves all problems in the agriculture sector.

[9] Costs that are caused by the production, but are not included in the final product price.
[10] Prices are kept high through a combination of subsidies, tariffs, export-subsidies, direct payments etc.

III. Summary of country case studies

Introduction

The organic policy development in seven countries was studied. The countries were selected to reflect a variety of conditions and stages of development and various levels of government involvement in the sector, from almost none (South Africa) to deep engagement (Costa Rica and Denmark). The cases are first briefly introduced and thereafter the experiences from them and from other countries are elaborated and grouped by themes. The full cases are available in Annexes 1 to 7. References to data in the cases are also in the annexes.

Chile

In Chile, organic farmland in 2004 amounted to 22,000 hectares, representing less than half of 1 per cent of total farmland. Main crops produced are grapes for winemaking and fruits, olives and berries. Exports started in the 1990s and by 2004 had reached US$ 12 million, with the United States as the main export market followed by the European Union. The domestic market is not as well developed and is concentrated in the capital, Santiago. Organic products are sold in specialized shops, in supermarkets and by direct sales. There are not many direct government initiatives for organic, but most general programmes and institutions cater also to organic producers. A government-sponsored programme, ProChile, supports export market development for organic products. There are two domestic certification bodies and eight foreign bodies active in Chile. Currently there is a structure for voluntary control of the organic exports. A governmental Chilean standard for organic production was established in 1999 and an organic mandatory regulation in 2006. A National Commission for Organic Agriculture has been operating since 2005 and includes participation from the private sector. There is one Chilean organic sector body that unifies most relevant private sector actors. Collaboration between the sector and the Government is fairly developed.

Costa Rica

One of the developing countries with the highest proportion of organic farming, 2.4 per cent certified, Costa Rica has a well-developed organic sector. As in most other countries, small farmers and NGOs were the first to get involved in organic agriculture. Local certification bodies and academics have also supported its development. In 2004, there were 3,500 farmers cultivating 10,800 hectares organically. Most certified organic production is for the export market, which is estimated to be worth US$ 10 million. Main export crops include coffee, banana, cocoa, orange juice, blackberries, pineapple, cane sugar, aloe and other medicinal plants. In the domestic market, there is now a supply of most products, certified and uncertified. The domestic sales are estimated to be US$ 1.5 million. Lack of produce is a limiting factor for further market development. Various government programmes and institutions support most aspects of the sector, including domestic and export market development, food processing, credits and extension service. The National Organic Agriculture Programme was established in 1999 and, together with the sector, the agency developed a national strategy for organic production based on participatory consultations. Since 2001, there has been a mandatory organic regulation in place and Costa Rica is the only developing country, other than Argentina and India, which has acquired recognition for exports of organic products to the European Union. There is also a governmental seal available for all certified producers; however, it is not yet widely recognized. There are two domestic certification organizations and four foreign ones active in Costa Rica, with the domestic ones having the most clients. The sector is organized through one organization and collaboration between the sector and the Government is very well developed.

Denmark

In Denmark, organic farming dates back more than 50 years. In the 1970s, the development of the sector gained speed and during the 1990s it increased from 500 farmers to 3,000 farmers cultivating 150,000 hectares, or almost six per cent of the farmland. During the last five years, development has slowed and in 2004, 3,166 farmers cultivated 160,000 hectares. The Danish organic market is perhaps

the most developed in the world, reaching a market share of five per cent. The domestic market has played an important role; however, by 2003, exports had reached around US$ 39 million (compared to a domestic market worth around US$ 300 million). Sales in supermarkets started in 1982 and they are now the main outlet for organic products. There are also substantial sales in one large box scheme[11]. Denmark was one of the countries that first regulated its organic sector, in 1987, and since 1992 the EU regulation 2092/91 has applied. The inspection system is organized by the Government and is today integrated in the normal food inspection services. It is free for farmers. A public mark for organic products, launched in 1990, has been backed by the sector and is now widely recognized by consumers. Organic farming was recognized early by the Government and the rationale for support measures has been found in a range of agriculture policies, as well as in plans to protect the aquatic environment and to reduce the use of pesticides. Since 1987, there have been various forms of direct support for organic production, such as area payments, but there have also been substantial resources allocated for market development measures ranging from consumer education to support for the procurement of organic food by school canteens, and export promotion. The organic sector itself is well organized by Organic Denmark. The organic sector is mainstreamed in the sense that all the commercial actors involved in organics are also involved in organizations in the agriculture sector. The collaboration between the sector and the Government has been intensive and the sector has implemented many government-supported programmes. Through the Organic Food Council, the policy dialogue between the sector and the Government has been institutionalized.

Egypt

Organic farming in Egypt started as early as 1976 on the SEKEM farm[12] to produce organic herbs and essential oils for exports. In the late 1980s, the interest grew considerably. Today there are 25,000 hectares of organic farmland in Egypt, representing 0.8 per cent of the total farmland. Most organic products are exported, in total more than 15,000 metric tons in 2004/05, but approximately 40 per cent is sold on the local market. There are two domestic bodies certifying the majority of producers and a handful of NGOs that are actively involved in organic farming. Seven foreign certification bodies are also active in Egypt. There is no organic regulation in place (a draft is being prepared). The level of government involvement in the sector has been fairly low, with a central laboratory for organic agriculture as the main institution. General policies support the reduction of the use of pesticides and in five areas the use of pesticides is totally banned. Cooperation between the sector and the Government is not yet well developed.

Malaysia

Organic farming in Malaysia has been promoted by NGOs since the mid 1990s, and imports of organic products into the country occurred from before that date. The first domestic production was sold through a subscription scheme that reached more than 500 families. Today, sales channels include specialized shops and supermarket chains. The turnover of organic products, mainly imports, was estimated at US$ 20 million in 2004 and the production at 900 hectares, mainly in fruit and vegetables. A large proportion of organic products are imported, whilst a small amount is exported to Singapore. The market is trust-based and most domestic producers are not certified. Although there is an official voluntary national standard for organic agriculture and the Department of Agriculture operates a certification system for free, no producers are yet certified. The Third National Agriculture Policy identified organic as a niche market opportunity, particularly for small-scale producers. The Government projects that the organic industry will be worth US$ 300 million and comprise 20,000 hectares by 2010. Cooperation between the sector and the Government is not well developed.

[11] A box scheme is a marketing system where consumers order (often weekly) boxes of produce delivered to their homes.

[12] Recipient of the Right Livelihood Award 2004.

South Africa

The South African organic sector has a long history. In 1970, organic farmers and organic associations already existed in South Africa, and the South African Bio-dynamic Association was one of the five founders of IFOAM 1972. In 1990, the number of farms had reached 50 and in 1993, the first organic farms were certified for the export market. In 2002, the number of certified producers was 291 producing on 25,000 hectares. Lately, organic farming has expanded from its initial white background to also be seen as relevant by black South Africans. The value of the organic produce in South Africa is estimated to be between US$ 30 million and US$ 60 million, less than half of which is certified. Most of the products are exported, with Rooibos tea, organic wine and fruits as main products. The domestic market has developed rapidly the past five years and several supermarkets are actively promoting organic products. There was an attempt some years ago to create a regulatory framework, but that has been put on the back burner, and there is little support from the Government for the sector. Many NGOs and other organizations provide training and other kinds of support to the farmers. The sector has been divided for a long time but has lately been able to establish a unified sector body. Collaboration between the sector and the Government is not well developed.

Thailand

In the early 1980s, the Alternative Agriculture Network was founded to promote organic and sustainable agriculture. Certified organic farming has taken place since the early 1990s, driven by a combination of efforts by the private sector and NGOs. In the mid 1990s, a domestic certification body was established by the private sector. There are almost 14,000 hectares under organic management, representing less than 0.1 per cent of the total agricultural land and 2,500 farms are certified. Rice is the dominant crop, followed by fruits and vegetables. Most organic produce, especially rice, is exported, mainly to Europe. Most of the vegetables are sold locally. In 2004, many organic brands were available in small shops and in mainstream supermarkets, particularly in Bangkok, where there is a wide range available, both domestically produced and imported. The domestic market for certified organic products is estimated to be just below US$ 1 million and the non-certified and health food market is estimated to be US$ 75 million. Apart from the initial private-sector certification body, the Department of Agriculture also offers free certification through an agency. Half of the producers are certified by foreign certification bodies. There is a voluntary government standard for organic production and a governmental programme for accreditation of certification bodies. The central Government has recently adopted a programme for organic development, including massive investments in the production of biofertilizers. The royal family has promoted self-sufficient sustainable agriculture and the Royal Project has recently started organic production. One province has embarked on a large-scale organic project. The sector has a number of organizations but not one uniting body. Collaboration between the sector and the Government is still weak.

IV. Experiences from case studies and from other countries – recommendations

In this chapter, the experiences from the case countries and other countries[13] are discussed and some conclusions are drawn. Recommendations for policy are formulated when applicable. It should be kept in mind that a viable organic sector will not necessarily emerge just because the policy environment is the right one, but that good policies will provide a good foundation for the organic sector to grow. Each country is unique and therefore policy measures cannot be copied from one country to another. The recommendations try to balance the need for guidance with the need to maintain flexibility. When developing most policy, the process itself is important, both to get the policies right, and to get the energy and the support for the chosen policies. The recommendations are intended to focus Government and other authorities' actions, but many of them will have to be carried out in concert with the stakeholders to be effective. In addition, international, foreign or domestic development agencies and their programmes greatly influence agriculture development and many of the recommendations are also applicable to them.

The early development of organic farming

In all cases presented, as well as in almost all countries, the early development of organic farming has been initiated by either NGOs or by private companies, sometimes both. In many developing countries, organic agriculture has been promoted by NGOs as an appropriate technology for small-scale farmers, emphasizing its low use of inputs, its independence from agro-business and its care for natural resources rather than market potential. Lately, many NGOs have also initiated marketing initiatives, presumably to include economic sustainability in their strategies. In a few countries, e.g. in Eastern Europe, the drive to develop organic agriculture has emanated from universities and similar institutions, while in most countries the research establishment has been firmly against organic production, which is seen as (and sometimes is) a challenge to the research establishment[14].

The first organic markets in developed countries were developed by farmers' cooperatives and small pioneer companies. In some cases, e.g. in Denmark, France, Japan and the United States, there was also very close collaboration with consumer cooperatives. The private companies getting involved in organic markets in developing countries represent a mix of small pioneer organic companies and larger, often multinational companies. In Thailand, the first commercial production of organic was initiated by the country's biggest rice exporter. In many markets, transnational retail chains are the first ones to sell organic on a large scale, often in the form of imports from their "home" market. In most OECD countries, the domestic market has played an important role, while the commercial drive in most developing countries has come from export markets, with Malaysia as an exception.

With increasing urban migration of males from many communities, agriculture is experiencing an increased "feminization" (Giovanucci 2005). From many farm households, it has been reported that the woman has initiated the process for conversion to organic, often because of health concerns over pesticide use. All over the world, women are taking a leading role in the development of organic, as farmers, as consumers or in the organization of the organic sector, e.g. in Thailand and Malaysia, many of the pioneer traders have been female.

Government has played very little or no role in the early development process. In some cases, governmental policies were clearly detrimental to the sector (which often challenged these policies); in other cases, the sector was just neglected. In some countries, the Government took a relatively early interest in the sector, e.g. in Denmark by the mid 1980s, or in Cuba[15] from early 1990s, while in

[13] In particular Uganda, Kenya and the United Republic of Tanzania, the countries in focus of the CBTF project for which this report was produced.

[14] Proponents of organic farming question the research oriented to the use of chemical fertilizers, GMOs and pesticides, which often constitute a considerable part of agricultural research.

[15] When supplies of cheap synthetic inputs from the Soviet block dried up (combined with the United States

others, e.g. in South Africa, there is still very little government involvement. In some OECD countries, mainly in Europe, "environmental payments" in various forms, mainly as area payments, have become an important factor for the growth of the sector. This has in particular had a large impact in areas where agriculture is extensive. Many countries have developed a substantial organic sector even if organic has been disregarded by the Government. This appears to be more articulated in countries with more "liberalized" farm sectors, as the organic development is not as dependent on active government endorsement as it is in countries where Government is a strong actor. For example, Uganda has the largest organic sector in Africa, with an estimated growth of 60 per cent per annum, in spite of an "apparent policy vacuum" (Tumushabe et al. 2006), and in Kenya the environment of free enterprise since the early 1990s created favourable conditions for development (Kimemia and Oyare 2006).

General agriculture policies

Most countries have approached organic as an interesting market niche (e.g. Malaysia), and have not considered that it could play a role for overall agriculture development. The same country that is promoting GMOs, e.g. the United States or Argentina, can at the same time allocate substantial resources to organic[16]. This is perhaps a reasonable approach for a country with limited ambitions for organic. However, if the purpose is to promote large-scale adoption of organic agriculture, then the general agriculture policies need to be assessed to what extent they are encouraging, are neutral or are biased against organic agriculture.

Governments often subsidize input distribution systems and grant tax exemptions for conventional inputs, which represent a bias against organic methods[17]. E.g. in Zambia, the Government spends 0.7 per cent of the gross domestic product (GDP) on fertilizer subsidies, 70 per cent of which is used by the country's commercial farmers, who could afford to pay full market price (World Bank 2001). Some countries, e.g. South Africa, promote the introduction of GMOs; research and extension are oriented to conventional production; prominent representatives of Government encourage farmers to use more inputs or to "modernize" their production. All these work against organic agriculture and the introduction of other environmentally benign methods. In other cases, market regulations and monopolies, such as the Kenya Coffee Board (Kimemia and Oyare 2006), make marketing of organic products difficult.

Also, in more indirect forms, organic is influenced by issues such as land tenure and splitting of holdings. Organic farming represents a major investment in a piece of land, and it is not likely to be of interest for farmers that are squatting or otherwise have less secure tenure, something reported from Malaysia. In this context, the situation for women farmers also needs to be considered. The national implementation of the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the biosafety protocol, the recognition of the value of traditional knowledge and other policies also have implications for organic, positive or negative. This report does not go into detail over those aspects.

In few countries has there been any systematic adaptation of the overall agriculture policies to cater to the development of the organic sectors. On the contrary, most countries appear to go on with their general policies in ways not supportive of organic. Several countries have general policies that address issues of relevance for organic, i.e. reduction of pesticides (Denmark, Egypt), protection of soil and biodiversity, developing small-scale farms (Costa Rica, South Africa), and decreasing dependency on imported fertilizers (Thailand). When organic is clearly linked to such general goals, it

blockade), Cuba was faced with a situation of food shortages, and embarked on an ambitious programme to promote and develop organic production.

[16] The Argentinean Government has supported organic agriculture since the early 1990s, in particular various export initiatives. It was also one of the first countries to negotiate an equivalence agreement with the EU for its organic products.

[17] Strong lobbies currently try to reintroduce large-scale fertilizer subsidies in Sub-Saharan Africa, claiming they are necessary to accomplish the Millennium Development Goals.

appears to be easier to get direct policy support, which has been documented in the cases from Chile, Costa Rica, South Africa and Denmark.

Even if the Government is not embarking on an ambitious agenda for organic, the knowledge of how organic is affected by the overall policies will assist the design of appropriate measures for organic. For example, in the European Union the Common Agriculture Policy (CAP), through price support and support for quantities, has clearly favoured conventional farming over organic. The special support measures for organic merely compensated organic farmers from the discrimination by the CAP[18]. Some Governments are heavily promoting other quality schemes, both towards farmers and consumers, e.g. Green Food is promoted in China, and pesticide-free farming in Thailand. While there are good intentions behind those efforts, in reality they often work against organic in the marketplace (competing with the attention of consumers and shelf space) as well as in the competition for government resource allocations.

> **Recommendation 1.** A country wanting to develop its organic sector needs to perform an in-depth integrated assessment of its general agriculture policies, programmes and plans, to understand how they affect the competitiveness and the conditions of the organic sector.

Organic policy

Objectives for organic agriculture

The reasons why Governments support organic vary. In some cases, e.g. Chile, it is clearly income generation through exports that is seen as the main point; in Malaysia, it is rather the development of a profitable domestic market niche and substitution of imports. In Denmark, Costa Rica and South Africa, the key objectives are to protect the environment and promote rural development through organic farming. In a number of countries, the reasons to support organic and the objectives of policy measures are not so well spelled out, which can lead to misunderstanding and frustration among those responsible and in the sector itself. It is worthwhile to clarify explicitly what an organic policy is supposed to achieve – both for the private sector and for the Government itself. Is it to boost export markets? Is it to protect the environment? Is it to develop the local market? Obviously, the appropriate policy measures will be different for these different goals. Different stakeholders will have different objectives and it is important to reconcile these as much as possible.

The case studies, e.g. from Denmark, Costa Rica, South Africa and Thailand, show that it is important to link the organic development to general objectives for agriculture in the country. These can be issues such as:

- Increased income to the agriculture sector;
- Protection of environment, e.g. water;
- Protection of biodiversity;
- Strengthening the competitiveness of small-holders;
- Protection of human health;
- Increased exports; and
- Promoting quality over quantity as a market strategy.

> **Recommendation 2.** The objectives for government involvement for the development of the organic sector need to be clarified before actions are undertaken. All stakeholders should be involved in policy development and development of plans and programmes.

[18] The CAP has slowly been reformed in a way that this discrimination is reduced, most recently by the Mid-Term Review.

Mainstreaming organic

The most conducive policy framework is obtained when organic agriculture is recognized and integrated in main policies of the country, e.g. the agriculture policy, food and health policies, environmental policies and poverty eradication policies. Through that organic is mainstreamed and will be considered in main programmes and in budget allocations. However, even when such integration is accomplished, there are merits to formulate one consistent organic policy, to ensure that all the needs of the sector are properly addressed.

> **Recommendation 3.** General and organic agriculture policies should support each other to the greatest extent possible to promote effective policy coherence, especially if organic agriculture is promoted as a mainstream solution.

Organic action plans

Following an overall policy direction with clear objectives, the implementation of an organic action plan is a logical step[19]. The scope of the plans varies, but they typically include aspects of standard and regulations, market development, production issues, capacity-building and research. As important as the plan itself, the process to develop the plans is critical. An organic action plan should be based on a proper assessment of the existing state of the sector and identified bottlenecks, and be formed with intensive participation from the sector, such as in Costa Rica. Also, various government departments or agencies need to be involved, from agriculture, trade, and environment, etc.

National or regional action plans for organic food and farming have been developed in most EU member states (e.g. Austria, the Czech Republic, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, Switzerland and regions of Ireland, Italy, Spain (Andalusia) and the United Kingdom), with plans also under development in Slovenia and for the whole of Spain. These action plans normally include targets for adoption and a combination of specific measures, including direct income support through the agro-environment/rural development programmes; marketing and processing support; certification support; producer information initiatives (research, training and advice); consumer education; and infrastructure support. The more detailed plans contain evaluations of the current situation and problems faced by the sector and specific recommendations to address the issues identified, including measures to ameliorate potential conflicts between different policy measures. (Lampkin, Gonzalvez, Wolfert and Schmid 2004).

Danish action plans

Denmark has the longest history of policy support for organic farming, with the first measures introduced in 1987. The first Danish Action Plan of 1995 covered the period until 1999. Its target of 7 per cent by 2000 was almost achieved, with 6 per cent of agricultural land in Denmark certified in 2000. Action Plan II (Danish Ministry of Food, Agriculture and Fisheries, 1999) aimed for an increase of 150,000 hectares, to around 12 per cent of agricultural land, by 2003. The plan was drawn up by the Danish Council for Organic Agriculture, a partnership between Government, organic producer organizations, conventional farming groups, trade unions, and consumer and environmental groups. It is characterized by an in-depth analysis of the situation in Denmark and represents the best-developed example of the action plan approach, containing 85 recommendations targeting demand and supply, consumption and sales, primary production, quality and health, export opportunities, as well as institutional and commercial catering. The plan has a specific focus on public goods and policy issues, with recommendations aimed at further improving the performance of organic agriculture with respect to environmental and animal health and welfare goals, including research and development initiatives, administrative streamlining and policy development. However, the targets set for 2003 were not accomplished, and the organic land area has stabilized at around 6 per cent. (Lampkin, Gonzalvez, Wolfert and Schmid 2004).

[19] It is a matter of governance style and tradition if the policies themselves will include detailed actions or if the policy is more general and concrete actions are formulated in an action plan. It also relates to the decision-making processes involved. If the policies are set in the parliament, it is likely to be better to have the action plan separate and approved by the relevant Ministry or the Government.

Targets

Of the seven country cases, only Denmark and Malaysia have formulated clear targets for their organic sectors. A number of other countries have set area targets, e.g. Sweden decided 1995 that by the year 2000, 10 per cent of its farm land should be organic and when that was accomplished set a new target of 20 per cent for 2005, which was almost accomplished. Germany has set the official target that 20 per cent of its land shall be organic by 2010. The state of Sikkim in India has set a target that 100 per cent of its agriculture should be organic. Setting clear targets will focus the responsible agencies on their tasks, and bring energy into the sector. Targets and how they are set can sometimes give side effects that are less desirable. For example, area targets focus on the conversion of land and not on market development or production. Combined with subsidies per hectare, they are likely to result in high conversion rates by farmers in low-productive areas having a production system very close to organic in the first place and little conversion by intensive producers, those producing most products and the ones likely to cause environmental problems.

Brazilian Government sets sights high for organic agriculture

Brazilian Minister of Agriculture Roberto Rodrigues announced in his keynote speech at Biofach America Latina in 2005 the establishment of a government seal guaranteeing the origin and quality of organic agricultural products, placing Brazil in a competitive position to access international markets. Rodrigues said that the seal will help to facilitate the identification of organic products that currently are certified by private standards. According to the Minister, organic agriculture in Brazil represents less than 3 per cent of total agricultural production in the country. "There is enormous room for growth (in the organic sector), and we intend to achieve 20 per cent organic in next the five to six years, stimulated mainly by small producers," Rodrigues affirmed (IFOAM 2005).

Sequencing measures

One policy measure may be excellent at a certain stage in development and useless or even counterproductive in another. This is shown most clearly in relation to regulations regarding standards and conformity assessment infrastructure. To install an organic regulation such as the EU regulation in a country where there are no domestic certification organizations, or where most organic producers cannot afford certification, or where the Government does not have the resources to execute the necessary supervision to approve certification bodies, local market development becomes impossible instead of enabled. Similarly, initiating consumer education campaigns about the benefit of organic food, if not available in the marketplace, is likely to cause frustration rather than development. Also, efforts to enhance supply can be detrimental if there is no demand. Commercial production of biofertilizers will not be meaningful if there are no farmers to buy them, or no need for the products. In the initial stages, efforts should focus on basic production issues, extension service and organization of producers.

Implementation

As important as having proper objectives, policies and plans is making sure they are properly implemented. Most countries have very limited resources available to support the organic sector and most of the time it is not highest on Governments' lists of priorities. Also, in some countries, implementation of many agricultural programmes is delegated to regional levels. In such cases, it is important that these levels are engaged and motivated. To assign one agency, normally within the ministry of agriculture, to take the lead and have responsible desk officers in other relevant ministries and agencies gives a good administrative frame for further development of the sector.

> **Recommendation 4.** An action plan for the organic sector should be developed based on analysis of the state of the sector, participatory consultations, a needs assessment and proper sequencing of actions. The action plan should state measurable targets for the organic sector to help agencies and stakeholders focus their efforts.

> **Recommendation 5.** One Government ministry or agency should be assigned a leading role and organic desks should be established in other relevant ministries and agencies.

Involving and organizing the stakeholders

The countries that have developed their organic sector the most have had a participatory policy development with close interaction between the Government and the sector. In both Denmark and Costa Rica, the Government has actively supported the sector's organization and its participation in the policy formation process. In several of the other cases, there appears to be little collaboration, which often also leads to failure of policies. For example, the voluntary official standards for organic in Chile, Thailand and Malaysia do not seem to have been in any direct use.

The organic sector develops by the actions of individuals and entrepreneurs. Initially, they often challenge official policy. Once there is openness and an interest from Government to support organic farming, it is essential that this support is developed in close dialogue with the organic sector. Not all countries have a unified organic sector or movement, and in some countries there are apparent conflicts between organic groups. This reduces the sector's own ability to work towards joint objectives, and it also makes it difficult for the Government to consult with the private sector. Chile, Costa Rica and Denmark report one organic sector body which in the case of Denmark and Costa Rica has gotten substantial support from the Government. To get the sector well organized and unified is of course mainly its own responsibility, but Governments can stimulate this and in particular not stimulate the opposite (by favouritism or just ignorance).

A government policy process should ensure that all aspects of organic farming are addressed, and are inclusive. Consideration should also be taken for the different abilities of stakeholders to participate in consultations, e.g. distance to the capital, economic resources to travel and participate in meetings, and limits in communication infrastructure. Gender aspect and the situation of indigenous people should also be considered.

In some of the countries, e.g. Denmark, the organic sector implements many of the public programmes, strengthening cooperation. In some countries, e.g. Chile, Denmark and Costa Rica, permanent structures for the consultations between Government and stakeholders are established. They have proven to be very useful.

> **Recommendation 6.** Governments should recognize the diverse interests represented in the organic sector and ensure that all of them are considered properly as well as direct special attention to disadvantaged groups.

> **Recommendation 7.** A permanent body should be established for the consultations between the Government and the private sector.

Awareness raising

Apart from regulations, plans and programmes, Government and especially its highest representatives play a big role in forming public opinion and in raising awareness of organic farming on all levels. In Costa Rica and Denmark, substantial efforts have been undertaken by Government and the private sector in cooperation to promote organic farming to farmers, consumers and the trade. When the minister of agriculture, environment or trade speaks up in favour of organic farming, this sends a strong message which will encourage those who want to move the organic agenda ahead, within and outside the Government. These kinds of statements are also the normal precursors to a real policy development.

> **Recommendation 8.** Governments should actively contribute to awareness raising for organic agriculture on all levels.

Data

The demand for data about the organic sector is high for marketers, researchers, extension services and ultimately Governments. In most countries, including developed countries such as the United States, there is no central collection even of basic data such as the number of farmers and what they grow[20]. A country with only one certification body (e.g. Denmark or Norway) will more or less automatically get a lot of relevant data collected in one place, but it is not always the case that the data is made available. Costa Rica collects data for production, but market figures are based on estimates from an NGO. Export market data is often easier to collect, especially as the certification bodies normally issue transaction certificates for each lot, and therefore all trade is documented. Egypt and Chile can produce fairly accurate data for exports, but not for the domestic market. In unregulated markets, or markets where there is no common definition of organic, such as Thailand and Malaysia, an additional complication for data collection is the question "Who is really organic?" FAO collects data in the Organic Agriculture Information Management System (Organic-AIMS) available at www.fao.org/organicag, and IFOAM annually publishes the World of Organic Agriculture, both of which are dependent on submissions by individuals from the countries. A consortium of institutions is attempting to develop a European Information System for Organic Markets. Ultimately, any Government that wants to develop the sector needs to assure baseline data and a system to monitor the development of the sector. Initially, this is likely to be best achieved through the organic movement in the country, and Governments should consider supporting them in their data collections. When the sector is more developed, measures to include "organic" data in public agriculture statistics should be considered.

> **Recommendation 9.** Data about organic production and markets needs to be collected over the years, analysed and made available to the sector and policymakers.

Organic regulations, standards and certification

Standards

There are currently two international standards for organic agriculture, the Codex Alimentarius Guidelines for the production, processing, labelling and marketing of organically produced foods (GL 32 – 1999, Rev. 1 – 2001) - CAC/ GL32 [21] - and the IFOAM Basic Standards (published as part of the IFOAM Norms, latest revision July 2005[22]). There are perhaps 70 countries with some kind of official standards and another 100 private sector standards. Most of the standards are quite similar. Some of them clearly reference the mentioned international standards (e.g. the Indian regulation is basically identical to the IFOAM standards of 2002, the Brazilian regulation uses the list of inputs from Codex, Malaysia's standards reference both), but a number of them also reference other foreign standards, in particular the EU regulation (e.g. South Africa).

Of the case studies, Costa Rica, Chile and Denmark have mandatory organic standards, i.e. standards that have to be followed by anyone who markets organic foods. In Costa Rica, private bodies also have their own standards. Chile has had a voluntary official standard since 1999, which became mandatory in 2006. In Thailand, there are both private standards and voluntary governmental standards. In Malaysia there is a voluntary official standard, but most certified products are imported and certified to the standards of the exporting country. There is no indication that the voluntary official standards are in much use. At the same time, the South African standard for organic agriculture has been drafted since 2001 but was never approved by the Government; nevertheless, the standard is actively used in the domestic market in South Africa. In Egypt, products are certified to the EU regulation, and to various private sector standards in the European Union – a few also to local standards. In all the countries, producers for exports normally follow and are certified for conformity to the export market standard. Even in Denmark, producers wanting to export to the United States have to follow the NOP rather than the EU regulation. The cases highlight the fact that standards

[20] For United States organic acreage, in February 2006 it was only possible to get data from 1997 and 2003.
[21] Available at http://www.codexalimentarius.net/download/standards/360/CXG_032e.pdf.
[22] Available at http://www.ifoam.org/about_ifoam/standards/norms.html

development cannot be done in isolation from market realities. A standard that is not demanded in the marketplace has no value and can even create confusion and be an impediment to development.

Whether through mandatory regulation, voluntary public programmes or by the private sector, one organic standard that is applied by all organic producers, certified or not, helps to build energy and joint activities in the sector. It also facilitates extension and information to producers and consumers alike. It can also form the basis for a common mark, one of the success factors for market development. In order to ensure that the standard is actively used, the full participation of the organic sector is needed. Also, there is a need to be clear about the scope of the standard and its intended use: is it for the domestic market, the export market or both? How will it apply to imported products? It should be recognized that for export markets, the simplest solution is to follow the standards of those markets, and that standards in importing countries can be too demanding for the domestic situation.

For organic production, it is widely recognized that local conditions vary too much to have one detailed international standard (UNCTAD-FAO-IFOAM 2005). The use of foreign organic standards is convenient for trade, but most of the time definitively not for the producers, and in particular not for smallholders. It is, of course, preferable to have a single standard that applies equally for domestic and exports, but in reality it often means that the practical choices are either to adapt the domestic standard so much to the exports that it is not any more appropriate for the local conditions or that export access is made impossible because the standard does not fulfil the requirements of importing markets[23].

Brazilian organic movement and the internal market

The Brazilian organic movement is concerned that organic regulation should be adapted to the country's geographic, climate, social, political and economic environment. It should not create internal barriers by adopting international standards established mostly by high-income countries. At present, a Brazilian organic producer wishing to export must follow the importing country's regulations. Consequently, a Brazilian regulation is not necessary for exports. Instead, its purpose should be to develop a strong organic internal market (Fonseca 2006).

Government can support the development of a domestic (or regional, as is shown later) organic standard. It is recommended that, initially, such a standard be voluntary. Regardless if it is a governmental standard or a private sector standard, the stakeholders and especially the practitioners should be heavily involved in the development of organic standards. If the standards are private, the Government should participate as an important stakeholder. It is also recommended that the initial standard be developed with local market development in mind, and that it is not too demanding and relatively easy to apply by producers and to verify by certification bodies or by other mechanisms. If national standards are supposed to also apply for imports, they should reference Codex and IFOAM standards as a basis for import acceptance.

> **Recommendation 10.** A national or regional standard for organic production should be developed, through close cooperation between the private sector and Government. It should be well adapted to the conditions in the country and mainly focus on the domestic market.

Certification

Third-party certification has been a very important tool for the development of the organic market. Through certification, organic products are given a distinct credible image, which is particularly useful in marketing situations with a distance between producers and consumers, e.g. sales through supermarkets and in international trade. However, there is no direct evidence that third-party certification is what the market or the consumers really ask for, and other kinds of quality assurance

[23] It obviously depends heavily on the attitude of the importing country how significant the differences may be between the standard of the importing exporting country, and still be considered to be equivalent.

mechanisms might also be useful. For international markets, certification can be considered a must as all major markets require certification for products marketed as organic.

There are 70 countries that have a home-based organic certification organization. Most of Africa and large parts of Asia still lack local service providers. There are only seven certification bodies established in Africa: in South Africa, Kenya, Uganda, the United Republic of Tanzania and Egypt. Asia has 117 certification bodies, but 104 of these are based in China, India or Japan. Most Latin American countries have domestic certification bodies (see table 1).

Table 1. Organic certification bodies

Number of organic certification bodies	2005	2004	2003
Africa[24]	7	9	7
Asia	117	91	83
Europe	157	142	130
Latin America and Caribbean	43	33	33
North America[25]	84	97	101
Oceania	11	11	10

Source: TOS 2005.

In all seven case studies, there are domestic certification service providers. In all of them, foreign bodies also offer certification. Domestic bodies normally dominate the certification for the local markets, while the foreign ones are oriented towards the export market sector. Certification services are available globally. For export purposes, the simplest solution is to buy the services from international certification bodies. However, there are merits in a domestic certification body. Locally-based bodies often play a big role in the local development of the sector and for the formulation of locally-adapted standards. A branch of a foreign body is rarely engaged in local development in the same way, and as the service they offer is mostly for the export market, they have little interest in developing the local market. For producers wanting to access the home market, the only certification thus available is to foreign standards and at a cost level more adapted to the export sector. In some regards, a local body can also exercise more efficient controls; only an organization with local presence can follow the market on a day-to-day basis and react quickly to important developments – such as disease outbreaks, government pesticide distribution programmes – that can affect the certification (Rundgren 2005). Government can support capacity development for local certification bodies. This has been done e.g. in India, where the Agricultural and Processed Food Products Export Development Authority (APEDA), organizes training for certification bodies.

Cost of certification is often quoted as an obstacle, especially for small producers, and sometimes also requirements such as documentation. Certification costs often represents somewhere between 1 and 4 per cent of the value of the products, but can go even higher. Moreover, they apply also to the conversion (transition) period when producers cannot yet sell their products as organic. In many projects in developing countries, certification costs are paid for in whole or subsidized by development projects or in a few cases by exporters or importers. (Damiani 2002, Giovannucci 2005, EPOPA 2006). In many EU countries, as well as in the United States, there are government programmes to support certification costs. In Denmark, Thailand and Malaysia government certification is for free for the farmers and in Tunisia the Government covers up to 70 per cent of certification costs (Belkheria and Kheder, 2006). In China, companies that are certified can get up to

[24] The change between the years is only reflecting a difference in classification as regards to what constitutes a certification body and what is just a local agent.

[25] When the United States NOP was implemented, the number of certification bodies increased, as a number of new organizations started to offer the service. However, over the years they realized that the organic certification market was not lucrative, and accreditation requirements were too demanding, so they consequently opted out of the certification business. The same pattern can be seen in Japan in 2006.

US$ 4,000 from the state Government[26]. Were premium prices to fall, costs for certification would need to be further considered.

Private or governmental certification?

In most countries, certification is provided as a private sector service. However, in a number of states of the Unites States, and in Malaysia, Thailand, Denmark, Finland and China, there are governmental certification services. The experiences and success of such governmental service seem to differ and it is hard to make any generalized statement about whether this service should be private or governmental. There are a number of potential advantages with private certification services such as competition, service orientation, better links to the organic sector, etc. However, there are also merits in a governmental certification system, mainly its stability and its automatic "acceptance" as being independent.

When Governments supervise and approve private bodies with the purpose of reaching equivalence, for example with the European Union, they will have to invest considerable resources. They have to train staff and develop systems. In contrast, a direct governmental certification organization will not be requested by trade partners to have external approval or accreditation[27]. If the sector is small and there is not a market for more than one or two certification bodies, then the resources spent for the total quality assurance system will be considerably less with a direct governmental certification than with private bodies that are approved by the Government, as the latter creates an additional layer of costs.

It should be noted that government certification bodies often have problems when it comes to cooperation with private sector bodies in other countries, i.e. it is often difficult, formally but also conceptually, for government bodies to enter into e.g. multilateral recognition agreement with private entities in other countries or to submit themselves to the private sector IFOAM Accreditation Programme. Some Governments may also have a credibility problem, i.e. that importing countries actually have less confidence in a government service than a private sector service, e.g. because of fear of corruption. The situations where there is considerable scope for government certification is in particular where the Government has a strong agenda for organic, but where the private sector is weak and where there is no certification service offered for producers for the local market. Government certification would allow the private sector to focus on market development and other pressing issues. Governments should be aware that there are greater expectations that certification shall be provided for free or for a very low cost (for the farmers) if performed by Government, something that is also reflected in the fact that most countries having government certification provide it for free or for a subsidized cost.

Participatory quality assurance and other non-third-party quality assurance systems

Brazil and Bolivia (Fonseca 2006, TOS 2006) accept so-called "participatory certification" within their regulatory systems. This is also under consideration in Costa Rica. It is a system for certification that emphasizes the participation of stakeholders, including producers, in contrast with the "objective and independent" approach favoured under international norms (IFOAM 2004). IFOAM uses the term "Participatory Guarantee System" to make a clearer distinction. They are often specifically designed for small producers. The standards used are often the same as for the third-party certified production[28]. These and other non-third-party quality assurances are now spreading quite rapidly in developed and developing countries alike. These systems often address not only the quality assurance of the product, but are linked to alternative marketing approaches (home deliveries, community-supported agriculture groups, farmers' markets, popular fairs) and help to educate consumers about products grown or processed with organic methods. Also from Thailand and South Africa (EPOPA

[26] Wei Hua, personal message Feb 2006.

[27] However, many countries with governmental certification chose to also establish accreditation mechanisms, e.g. the United States, Thailand and China.

[28] For the time being, there are no international norms for what constitutes such a participatory guarantee system, and the variation in how they operate is high.

2006c), such alternative systems are reported. It is important that Governments do not, through overly rigorous regulations, inhibit this development, as formal certification may not be what is demanded in the domestic market.

> **Recommendation 11.** Governments should facilitate the access to certification services, either by stimulating foreign certification bodies to open local offices or by supporting the development of local service providers. In some countries, especially where the private sector is weak, the Government could consider establishing a governmental certification service.

> **Recommendation 12.** Compulsory requirements for mandatory third-party certification should be avoided as they will not enable other alternatives to emerge. Other conformity assessment procedures, such as participatory guarantee systems, should be explored.

Organic regulations

In a few countries and in some states in United States, Governments became involved in the 1980s in establishing a regulatory framework for the organic market in order to protect consumers from misleading claims and producers from unfair competition. The European Union established an organic regulation in 1991[29] and the United States in 2002[30]. By 2005, 70 countries had organic regulations in various stages of implementation (see table 2). The first regulations normally contained some basic production standards and very simple rules for certification, if any. Regulatory objectives such as strengthening the competitive position of domestic producers, increasing farm income, and protecting the environment, have been added to the initial ones relating to truthful labelling. Most notably, in the European Union, the regulation for organic marketing also forms the foundation for directed support to organic farmers under the agro-environmental programmes of the Common Agriculture Policy.

Table 2. Overview of countries with organic regulations

Region	Fully implemented	Final not implemented	In draft
EU-25	25		
Rest of Europe	6	5	1
Asia and Pacific	7	1	5
Americas and Caribbean	3	5	7
Africa	1	1	2
Middle East	1	-	1
Total: 60	43	12	16

Source: Commins, 2004 and Kilcher et al. 2006.

When they start to get interested in organic agriculture, most Governments embark on an "organic regulation". Of the seven cases, Denmark has had a mandatory organic regulation since 1987, Costa Rica since 2001. Chile and Egypt are in the process of establishing their regulations, also mandatory. In Thailand and Malaysia, Governments are pursuing voluntary regulations while in South Africa there is no regulatory activity. These regulations are typically market regulations that try to limit the use of a word, "organic", to products produced according to standards set by the Government and certified by an organization approved by the Government. In OECD countries, these regulations are often, but not always, triggered by a concern for the domestic market, while in most developing countries, they have been installed mainly, and in some cases apply only, for exports. The main push for organic regulations comes from producers or organic certification bodies that want to have fair competition; consumers are rarely involved.

[29] Council Regulation (EEC) 2092/91.
[30] National Organic Program (7 CFR Part 205)12.

Three main reasons are quoted for why mandatory regulations are considered to be the right policy response to develop the organic sector:

- giving organic agriculture a more respectable and credible image;
- access to export markets; and
- development of the local market.

Giving credibility to the sector

It is quite obvious that the introduction of an organic regulation means an official recognition of organic, that will strengthen the sector, make it visible and credible and remove some biases against organic both in the public and privates sectors. Once the Government has acknowledged organic farming through an organic regulation, it is hard to ridicule or ignore organic farming. However, a mandatory regulation is not the *only* way for a Government to accomplish this.

Export market access

The European Union, Japan and the United States have implemented systems for import approval of organic products. As these are based on mandatory governmental regulations, it can be assumed that the easiest way to get access to these markets is to implement similar systems also in the exporting country and through equivalence get market access. However, in all three markets very few products[31] enter the markets through an equivalence agreement. Not even between these three markets is there any equivalence agreement: Japan has granted limited equivalence to the European Union and the United States, while neither the European Union nor the United States has granted any equivalence to the others. Some countries have been granted equivalence by the European Union based on export regulations, i.e. the use of the claim organic has not been regulated in the domestic market. Australia and Argentina are two such countries. To negotiate equivalence is very resource-demanding and time-consuming (UNCTAD-FAO-IFOAM 2007). Of the countries studied, only Costa Rica[32] has managed to get limited EU approval[33] and Denmark has managed to get limited recognition by the United States[34].

The main way for products to get access to the United States and EU markets, is by certification by a certification organization that has got acceptance in those markets (Bowen 2004)[35]. The case studies also show that exports of organic products are flowing from the countries without regulations, e.g. Chile, Egypt, Thailand and South Africa. In addition, there are promising markets for organic products, which do not have mandatory regulations, such as South Africa, New Zealand, the Gulf States, Malaysia, Singapore and the Russian Federation. The recent change[36] of the EU regulation on organic will also make it easier for certification organizations to get direct recognition by the European Union regardless if there are regulations in the country of operation or not.

Regulation is seen as a tool for assisting organic producers to access export markets through equivalence agreements, but the real need is not obvious. In any case, it is not a quick solution (e.g. Chile applied for EU recognition 2000 and this is still pending) and it is very resource consuming. Often, the result of national regulation is just another layer of complication for producers, who apart from having to fulfil the export market requirements, now also must fulfil a domestic regulation.

[31] In the EU, the estimate is that less than 20 per cent of the imported products come from approved countries, in Japan even less.
[32] Of developing countries, the EU has since 1994 only approved Argentina and Costa Rica, and lately India.
[33] This approval is partial, i.e. not all producers certified in Costa Rica are accepted, only those certified by two (of a total of six) named certification bodies.
[34] The Danish authorities have the mandate to certify producers to the NOP, i.e. the Danish system itself is not recognized – only the ability of the inspection service to control production to the United States rules.
[35] The details of the import regulations in the United States, the EU and Japan are complicated but well explained in other papers and therefore not expanded on here. In addition, the EU and the Japanese systems are in a process of change.
[36] Council regulation (EC) no. 1997/2006, of 19 December 2006.

Finally, there is no need to make a mandatory regulation if the aim is to support the export sector; it is sufficient to make a governmentally-supervised system for export marketing of organics. The key to export market access lies in competent and qualified certification organizations and efforts to strengthen them should have priority.

Development of domestic markets

The demand for a domestic organic regulation would arise from any of these situations or a combination of them:

- The marketing of many different organic products claiming adherence to different standards and thereby creating confusion in the marketplace;
- The widespread selling of non-organic products as organic in the marketplace, i.e. fraud or consumer deception;
- Lack of confidence in the credibility of organic products by consumers; and
- Lack of confidence in the credibility of organic products by organic producers, fearing that they compete with other organic producers that are not following the same standards.

Some believe that consumers will not trust organic products unless the Government has set standards and a mandatory system of certification; this is also expressed in some of the case studies. However there is little empirical evidence for this assumption. Until 2001, the United States market for organic products developed to a US$ 7 billion value without a federal regulation in force (there were, however, several state regulations). Also, the EU countries had developed quite an organic market in the early 1990s, at a time when only Denmark and France had national regulations. Looking at European Union (EU-12) averages for the period 1989–1991 (when there was no regulation), 1992–1994 (just after the EU regulation was implemented) and 1995–1997 (when there were ample subsidies allocated to organic farming), we see that the total growth of land under organic management during these three-year periods were as follows:

- 1989–1991 107 per cent;
- 1992–1994 60 per cent; and
- 1995–1997 70 per cent.

Because of the weakness of the data, it is difficult to draw any far-reaching conclusion, but in any case there is little support for the opinion that on an EU-wide level, the introduction of the regulation dramatically changed the market conditions, or the spread of organic farming. Comparisons of Denmark and France with early regulations (mid 1980s) with Sweden and Italy (with regulations from 1995 and 1992 respectively) also show no direct positive impact of regulation on the development of the sector (Rundgren 2002).

From the case studies, it is hard to conclude anything about the merits of a mandatory regulation for domestic market development. Only Denmark and Costa Rica have mandatory regulations, and there is no indication that the domestic market in Costa Rica therefore is more dynamic than the domestic markets in Egypt, Thailand, Malaysia or South Africa. Nevertheless, it sounds plausible that in a situation with real market confusion and widespread fraud, in countries with a general high confidence in Government, that a domestic market regulation might be of some use. Still, also in countries with regulations in place for 10 years, there is consumer scepticism about the reliability of organic products and there is also fraud. In countries with a widespread scepticism against Government, one might even see some negative reactions on a governmental regulation[37].

[37] In the United States, there have lately been expressions from some organic activists that the USDA has "sold out" organic to big industry, etc.

An additional market development aspect regarding organic regulations has been that in some countries other regulations may have impeded on the right to market a product as organic, e.g. the wine classification system in France, pasta classifications in Italy and meat labelling rules in the United States didn't allow any further quality claims regarding a product than those defined by law. An organic regulation has been important in order to clear those obstacles. Obviously, there are other regulatory solutions to this situation than an organic market regulation, e.g. that the regulation causing the problem in the first place is amended.

Alternatives to mandatory organic regulations

There are several regulatory options to protect the consumers and organic producers from false marketing claims. Most countries already have regulations regarding truthful labelling and prevention of consumer deception. Such rules can also be applied to organic claims. Since there are both Codex Alimentarius and IFOAM international standards available, it is quite simple to clarify (either as amendment to existing regulation or as instructions to the supervising authority) that in order for a product to be sold as "organic", it has to be produced according to internationally-recognized standards. Another option is to use regulation to back a voluntary national standard (private or public). Such a regulatory solution can either include requirements for certification or other conformity assessment methods, or leave that open. This option is also trade friendly and will allow imports with a minimum of official procedure.

If the country embarks on a mandatory organic regulation, it is of critical importance that such a regulation is "farmer-friendly" and "trade-friendly". In some countries with mandatory regulation, there are special rules for small farmers, e.g. in the United States NOP, farmers selling organic products for less than US$ 5,000 annually are exempt from certification, i.e. they can make the organic claim, they have to follow the standards but don't have to be certified. A badly drafted organic regulation will most likely do more harm than good. To "import" an organic regulation, for example from the European Union, is not likely to be successful as stated in the case study from Thailand. In Annex 8, a number of regulatory options are further developed.

> **Recommendation 13.** Mandatory regulations should only be considered when the need is clearly established and other simpler options have been ruled out. In the early stage of development, a mandatory organic regulation is not likely to be a priority. Regulations for domestic markets should be based on local conditions, and not mainly on the conditions in export markets.

Implementation

There is widespread underestimation of the time and resources needed to put in place organic regulations. In many countries (e.g. the United States and Brazil), the process from the original act or standard until all pieces are put in place has taken 10 years. Many countries have passed mandatory regulations on organic, but then failed to implement them. This is worse than having no regulation at all, as an unimplemented mandatory regulation puts everything in limbo. If there is a law that requires mandatory certification for organic products, governmental standards and government approval of certification bodies, no organic marketing can take place unless all these components are implemented. A domestic certification body can't develop its business as they are not yet approved, producers can't apply for certification if the standards are not yet defined, and the Government can't approve certification bodies until it has established its supervision and approval system. All these things also need budget allocation and trained staff. Lack of implementation is reportedly the main factor for why countries fail to get approval as a third country by the European Union (Crucefix 2007).

Government should also consider working with and using existing institutions, e.g. instead of establishing a resource demanding national accreditation system for organic, Governments may choose to work with the International Organic Accreditation Service, an offshoot of IFOAM. This can be for the whole accreditation service or for the technical assessment parts of the accreditation

process. Such cooperation with international organizations can also contribute to increased export market access.

Imports

As soon as there is an organic market, there will also be imports of organic products[38]. Governments are encouraged to ensure that requirements for imports comply with the TBT agreement. The International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF), a joint initiative of UNCTAD, FAO and IFOAM, is in the process of developing useful recommendations for how an organic regulation can be developed, based on international standards and being enabling both for domestic markets and for international trade. Some of the recommendations are:

- The organic production standards should be equivalent to a single international "reference" standard (such as IFOAM or Codex Alimentarius);
- It should use international requirements (standards) for conformity assessment;
- Mutual recognition between certifiers and accreditors should be recognized in the regulatory systems; and
- Redundancy in conformity assessment (certification and accreditation) can be largely reduced by one audit/inspection/evaluation leading to multiple approvals.

The producers of goods that are imported are almost never consulted as stakeholders in the regulatory process, and in many cases national producers are outright hostile to imports. Therefore, there is an apparent risk that imported products will be discriminated against in regulations. Some national regulations that seem to be developed primarily to satisfy export market access can in their turn become major hurdles for imports. For example, the Chinese regulation for organic has set the standards for production so high that they should comply with the total requirements of the United States, the European Union and Japan. However, this will also apply to imports to China, which in this case establishes the highest entry barrier of them all (Ong 2006). For imports, instead of setting up complicated procedures for approval of imports, certification bodies can be entrusted to assess to what extent imports follow requirements equivalent to the domestic ones.

> **Recommendation 14.** The recommendations from the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) for regulatory solutions, in particular those relating to import access, should be considered.

Assisting producers to comply with requirements

The ability of farmers to comply with standards and certification requirements is often low. Simple "instructions" should be developed by Government or NGOs where the organic "dos and don'ts" are presented in a way that is accessible for small-scale, often illiterate, producers, e.g. in pictorial form. Ensuring proper understanding and assistance in implementation to low-resourced farmers is likely to contribute to a more credible organic market, as many of the violations of organic standards emanate from misunderstandings or lack of information.

Group certification is a concept developed over the last 10 to 15 years to allow producers to organize themselves in groups with an internal control system. It is not formally recognized in most regulations, however through a consultative process by IFOAM, it has reached more or less global de facto acceptance, at least for producers in developing countries. With group certification, the role of the external certification is mainly to verify that the internal control of the group is working rather than inspecting the individual farmers. All cases except Chile and Denmark have systems for group certification. Through group certification, producers can get access to and assistance in the complicated organic certification. It can also result in substantial savings, e.g. in Costa Rica there can be a difference in costs of several hundred dollars for a small farm. However, there are substantial

[38] See in the section on market development about some of the merits of imports of organic products.

demands for qualification and resources at the group level, which pose limitations to its applications. IFOAM has developed a guide for the management of internal control systems and training manuals[39]. In some places, e.g. in South Africa, these organic internal control systems are merged with other quality management systems (e.g. EurepGAP) and training programmes are developed.

> **Recommendation 15.** Producers, especially smallholders, should be supported to comply with standards, certification procedures and regulations. Special considerations should be taken for certification of smallholders. Training programmes for farmer groups to set up internal control systems should be supported.

Market surveillance

Assuming that the main reason to regulate the organic sector is to reduce fraud in the marketplace and the misuse of organic claims by non-organic producers, it is remarkable that most organic regulations have their emphasis in regulating the certified organic farmers, and that most of them are not clear about the responsibility for market surveillance. Also regarding implementation, in most countries the main resources are allocated to check the organic farmers and the certifiers, and very little resources to check the marketplace. The market knowledge rests mainly in the sector itself and organic actors will in most cases be the first ones to detect a scam or false claims. Therefore, it is recommended that Governments work closely with the private sector to develop the market surveillance, regardless of which regulatory framework is chosen.

Setting the objectives – agreeing on the problems

Before embarking on regulatory initiatives, Governments and the private sector should carefully assess the situation and see what added value a regulation can bring. It is important that that there are common objectives agreed upon and that there is a joint analysis of what the main problems to be solved are, and to what extent these problems can be solved by regulations, or by other means. For example, and as mentioned already, access to export markets is most often not achieved just by making a regulation. For another example, there is often the perception that there is a lot of fraud or false organic products sold, but the question is if that is really the case or if this perception is rather a result of lack of cooperation and transparency in the sector. Further, it is obviously an illusion that fraud will disappear just because there is a regulation in place[40]. It is important that the impact of the regulation on all organic stakeholders is assessed and not only on the strongest lobby group, and that all stakeholders participate in the consultations.

> **Recommendation 16.** Before establishing regulations, Government should clarify the objectives. Governments regulating the sector should develop the regulations in close consultation with the sector and ensure that the regulation is enabling rather than controlling in nature.

Market development

While there is, and has been for a long time, an underlying growth of 10 to 30 per cent in most countries, some countries, e.g. the United Kingdom, experience periods of rapid increase maybe up to 50 to 60 per cent for a few years – often linked to a food scare – and then a couple of years of stagnation. People have sometimes unrealistic expectations of the organic market. The organic market is a quality market in a way that the lower grades often are impossible to sell as organic (unless for the feed market or industrial use). The *very* top-end qualities (e.g. the finest wines, coffees, teas and cheeses) at the same time, sell on other quality parameters than being organic, and the added value of them being certified organic is fairly small.

Some crops are very easy to convert to organic production; perhaps they are already grown in systems close to organic, e.g. small-holder coffee in most of Africa or extensive olive groves in the

[39] Available at www.ifoam.org.
[40] There are clearly incidences of fraud also in the regulated markets.

Mediterranean. In those cases, the supply can increase rapidly and the demand doesn't keep pace. However, after a while, prices might go down or new or bigger actors join the market and a new balance is reached. Some markets, such as the organic cotton market, were flat for almost 10 years but recently picked up.[41] All in all, organic markets should not be taken for granted and sufficient research should be conducted, and marketing activities planned, before major initiatives are taken to increase supply.

Domestic markets

All of the countries studied except Denmark have a market share for organic that is far below 1 per cent. In developing countries, one should have realistic expectations about the domestic market for organic foods or for any other foods that command a premium prices. Nevertheless, it is clearly a myth that *all* consumers in developing countries are optimizing their food expenditure to get as much energy and nutrients as possible per money unit. A look at the sales of sodas, beer, coffee, sugar and other luxury products, or at the health food sector, clearly shows that there are, even in the poorest countries, enough people who can afford to spend something extra on their food, to cater for the development of a premium organic market.

Experience show that the initial market for organic products will be found mainly in the upper end of the market. Does this mean that organic products should be reserved for an affluent minority? The price of organic products is high mainly as a result of very limited supply and inefficient distribution rather than high costs of production. When supply grows, prices to consumers will fall. Also, as was pointed out in the introduction, pricing is influenced by the agriculture policies, in essence subsidizing conventional products. Organic production is not necessarily more expensive than conventional production. If one takes into account the normally higher nutritional value and higher dry-matter content of organic food, organic products may be more affordable. Therefore, organic foods should not be seen as food for the rich, even if the starting point in the marketing often is to supply the upper end of the market.

In Denmark, 5 per cent of the food sales are organic, while in Chile, the domestic sales are very small. In Costa Rica the domestic sales were worth US$ 1.3 million 2003 and in Egypt 40 per cent of the production is sold in the country. Organic imports are reported from Malaysia, Thailand and Denmark. Specialized shops and farm-gate sales are often the first ways to sell organic. Supermarkets were instrumental in the development of organic markets, especially in Northern Europe, and also in most developing countries supermarkets are picking up organic products. This is also reported from East Africa, China and many developing countries. Domestic markets are developing in all countries where organic production is established, often with a similar divide regarding products and producers as in conventional production, e.g. larger farms with specialized production are for exports, smaller farms with diverse production are for the local markets. The case studies show a similar pattern in developing countries to the early European organic market, with the difference that supermarkets play a bigger role now than they did in Europe 20 years ago. In Kenya, organic products can now be found in 11 outlets and there is one organic restaurant in the capital Nairobi. The tourism sector, including but not limited to ecotourism, is also a key target for marketing in many developing countries.

Research in Europe has established six critical conditions for the development of organic markets [42](Hamm and Michelsen 2000):

- Strong consumer demand;
- High degree of involvement by food companies;
- Sales through conventional supermarkets;
- Moderate (less than 50 per cent) organic price premiums;
- One dominating label; and

[41] The organic production of cotton in 2004 was more or less the same as it was in the mid 1990s.

[42] Based on the conditions in Europe mid 1990s. There may be other critical factors in the early stages which have not been identified in this research as certain things have been taken for granted.

- Nationwide professional promotion.

A common mark (label) that is actively promoted has much more impact than a common standard or a government regulation (but they can obviously be mutually supportive), as most consumers can easily recognize a mark, while they normally have little knowledge or even little interest in the standards and regulations. Such an organic mark can have many forms. It can be a governmental label accessible for producers certified by an approved body (USDA, JAS or Denmark), it can be a mark of the organic association available for its members, it can be a mark owned by the trade, or it can be the mark of a certification body (e.g. BioSuisse or Demeter). In Denmark, 92 per cent of consumers recognize the governmental label for organic products; in Sweden, 96 per cent of consumers recognize the private KRAV mark (KRAV 2005). Initially, the ownership or the underlying construction around a mark is not very important. More important is that it is widely used on all organic products. Therefore, an accessible "marketing mark" is likely to be most successful[43]. By public ownership or collective ownership (e.g. by an organic sector business association or organization), the future policies for its use can be adapted to the various stages of development.

In Europe, some countries have applied a push strategy for the expansion of the organic markets, and others a pull strategy. A push strategy focuses on measures to enlarge production, assuming that once there is more supply, market demand will be created. The pull strategy has market demand as the driving force. The push strategy is based on generous payments to organic farms, something that is out of reach for most developing countries. Also, the push strategy has the potential to seriously harm a small and volatile organic market, at least in the short term. On the other hand, too forceful efforts in marketing can fail if there are no products to sell. A combination of market supply and demand measures is more promising (Hamm, Groenfeld and Halpin 2002). From East Africa (Taylor 2007), Thailand, Costa Rica and Malaysia, lack of supply is mentioned as a factor limiting domestic market development. It is apparent that policies seeking to influence the market need careful design and adaptation.

Pricing of organic products is, as shown above, a relevant factor. Also in developing countries, sometimes very high premium prices are quoted for organic products, often up to double the price compared to conventional, and in the case of Malaysia up to 400 per cent – much higher than the premiums in OECD markets. On the other hand, there are also a number of examples where there is no particular premium charged for organic products (Rundgren 2007). To a large extent, the premium prices in organic are a result of inefficient distribution of small quantities rather than high farm-gate prices. Most important for a decent pricing level is probably to organize the supply and the distribution, which requires collaboration by the actors. With growing volumes, distribution can be more efficient and retail prices are likely to go down, not necessarily putting pressure on farm-gate prices. Distributing organic products through mainstream channels such as supermarkets will help in this, but supermarkets are also very demanding clients and an emerging organic sector may not be able to fulfil their stringent quality and just-in-time delivery demands. The need for better market information is highlighted in several of the case studies.

Supply chain management and processing

Producer organizations are often under-resourced and the lack of proper distribution infrastructure can be fatal both for export and local markets. This is not particular for organic, but as a "new" sector, one can assume that there will be more obstacles for organic producers than for their conventional colleagues, especially as organic standards require proper separation of organic products and organic markets are generally more demanding. Training can be of value, as can direct government support (grants or credits) for joint efforts by the producers, such as establishing proper packing facilities, joint shipments and labelling, and purchasing of certain machinery for grading or sorting.

Organic farming in KwaZulu-Natal

In South Africa, organic producer groups have started to work together, and the first group of Zulu farmers was certified in 2001. This group has grown from 27 farmers to more than 200 currently in the group. Several other groups, all in KwaZulu-Natal, have been established since then, and are in the process of organizing themselves as primary cooperatives, while establishing Zulu Organics as a secondary cooperative to set up a quality management system, coordinate logistics and packaging, and assist with marketing (South African case study).

There are many technical hurdles for emerging organic food processors. Some are technological, e.g. organic processing may need other technological solutions than conventional. Others are related to inputs in mixed processed products. For example, it is common that there is a domestic production of fruits, but there is no organic sugar available for making preserves such as marmalade. Trade channels are not at all developed to import organic sugar to developing countries, and sometimes there are quotas, tariffs or other obstacles for imports. Therefore, any organic processing standards need to recognize and be adapted to the stage of development.

Imports of organic products, as shown in Malaysia and other countries, developed and developing alike, can play a role for the development of the domestic organic markets. Imports can provide high-quality exposure to organics for domestic consumers, can be necessary raw material for processing organics, and can have a demonstration effect (processed foods) or set benchmarks for the domestic industry. An organic shop in Kenya reports that only 1 per cent of products sold are of domestic origin (Kimemia and Oyare 2006). In the Philippines, the domestic organic industry is about US$ 2.5 million and imports of processed organic food products are estimated at another US$ 3 million (USDA 2002).

In the initial stage, the domestic supply is often small, qualities doubtful and the level of processing very low. In that scenario, the whole organic sector can get a boost from imported products – more products will make both retailers and consumers more interested. As modern consumers are used to year-round availability of most products, imports of off-season products can also stimulate the market. This opportunity is often lost when the early organic market is moved by producer organizations and NGOs, which rarely have imports on their priority list and sometimes outright reject imports as being competition to local producers. There is also scope for the development of regional organic trade. Imports of organic products to developing countries are to a very large extent from OECD countries rather than from other developing countries. Even products that are produced in a neighbouring country may very well be exported to Europe, processed or packaged and then imported[44]. In addition, there are imports of raw material for processing, e.g. to both the United Republic of Tanzania and Uganda organic sugar is imported from Europe (in turn imported from Latin America) to be used in fruit processing for exports.

Certified, not certified and alternative guarantee systems

A number of the case studies (Malaysia, Thailand and South Africa) report considerable sales of non-certified organic products. In some cases this is seen as a major problem, in other cases it is of no great concern. There are also a number, probably increasing, of organic producers in markets with mandatory regulations, that market organic food, but as a result of the regulation they are prevented from making the organic claim. This is also reported from Costa Rica: "Thus, many farmers chose to sell their products within the community, where they obtain better prices from direct sales to final consumers and do not necessarily have certification expenditures". If organic producers are prevented from selling their products as organic, the result will be that they introduce other terms in their marketplace, which may add to consumer confusion and weaken the organic market. In addition, there are products sold with alternative guarantee systems (see Participatory Guarantee Systems above). Whilst certification is likely to remain a very important mechanism for the development of the organic market, these other approaches should not be overlooked and in particular it might be counterproductive to make them unlawful by legislation.

Role of Government

The Government is normally not, and should probably not, get too involved in domestic markets, apart from setting the general regulatory framework. However, when it comes to consumer education, it is quite common that Governments promote the consumption of particular foods, for commercial or health reasons. Consumer education for a healthy diet can also include the promotion of organic food. General promotional activities have been supported in Costa Rica and Denmark and in many other

[44] Observations from a number of countries, last reconfirmed in training with participants from 10 Asian countries in Thailand in February 2006.

countries. Local Governments can also promote organic foods by allocating space in open markets and in trade fairs. The most important factors in an early market stage, where Governments can play a role, are availability of products, proper presentation and distribution, and clear consumer communication. Producer organizations can be supported to organize a common supply, nice packaging and an efficient distribution. Government can take the initiative to bring together the parties of the supply chains. Finally, proper market information systems can be useful for all parties, and in particular for producers. Such systems should include a directory of suppliers and buyers, price and quantity reporting, and can also include prognosis for future production. It is important that market information reaches out to the farmers, e.g. by radio programmes.

Integrating organics into public procurement stimulates market demand and improves the public information and consumer exposure to organics. In Denmark and other European countries, the Government has stimulated public procurement of organic products to schools and hospitals. For the Government to select organic foods for high-level events will send a strong signal to the domestic markets and contribute tremendously to the acceptance of organic production.

Recommendation 17. Public procurement of organic products should be encouraged, including featuring organic food in important public events.

Recommendation 18. Consumer education and awareness should be actively promoted.

Recommendation 19. A common (national, regional or international) mark for organic products should be established and promoted.

Recommendation 20. Domestic market development strategies should include measures for both the supply and demand side, including the role of imports.

Recommendation 21. The organization of farmers in regards to marketing, joint distribution and storage should be supported.

Recommendation 22. Market information systems should be established.

Export

Export markets have played a dominating role for five of the six developing country cases, especially in the initial development of organic production. Most initial exports were developed without any significant government involvement. Government involvement has mainly been on two levels: export promotion activities (e.g. Chile, Costa Rica and Thailand), and the efforts to get recognition according to the importing countries' regulations, successfully accomplished in the case of Costa Rica for the European Union. Only Argentina, Costa Rica and India have recognition by the European Union, and India has limited recognition by the United States. Organic export promotion activities by producers in developing countries have also been supported by development agencies (e.g. GTZ, USAID, SIPPO, Sida, and CBI). The Brazilian Export Promotion Agency has invested over US$ 800,000 in the Brazil Organics project, in part to increase the participation of Brazilian organic companies at BioFach organic trade fairs in Germany, the United States and Japan, and to link buyers and journalists to organic projects in Brazil by supporting their participation at BioFach America Latina (IFOAM 2005).

When designing export promotion programmes, the special nature of the organic markets need to be understood: the outlets or programmes designed for conventional products may not be the right ones for organic; exporters used to selling bulk commodities are often less inclined to understand the more demanding and quality-conscious organic markets; handling practices and treatments need to be adopted. Personal contacts between seller and buyer, important in all business, are even more important for organic exports. Organic exporters need to cooperate in their export marketing activities. Through joint promotion, supported by the Government, they can give the country a good

image as a quality supplier of organic products. Organic technical solutions to deal with problems should be developed. For example, many export crops are regularly fumigated with chemicals that are not allowed in organic farming; however, there are alternative treatments such as carbon dioxide or freezing. The Government can support the establishment of joint facilities for such treatments in a central location or in export harbours.

Export marketing of organic products also puts high demands on the certification bodies. They need to service the exports with certificates, forward inspection reports to other certification organizations, and respond to queries from importers, authorities or certification bodies in importing countries. They may also have to seek direct accreditation for export markets, e.g. NOP accreditation and IFOAM accreditation. International certification bodies have routines for this. Domestic bodies will need support to train staff and get their procedures in place to be an efficient service provider. They will most likely also need financial support for accreditation.

> **Recommendation 23.** Export promotion activities should be supported, recognizing the special nature of organic markets. Organic exporters should be encouraged to join forces to promote and market their products.
>
> **Recommendation 24.** Organic products should be excluded from any mandatory phytosanitary treatments that are not permitted for organic products. Alternatives for fumigation should be supported.

Production

The production conditions for organic farming are important for the development of the sector. Most of the success or failure of an organic farm is the result of the farmer's activity rather than the Government's. However, Governments are influencing the production directly in many cases and indirectly through supporting services such as education, extension and research. It should be recognized that there has been very little research directed to organic farming, and there are good reasons to believe that if more resources were allocated, a leap in productivity in organic farms could be accomplished.

In this context, it is worth pointing to the potential of integration of organic farming and traditional knowledge, both in extension and research. The interface between modern organic agriculture (OA) techniques and farmers' traditional agricultural knowledge and landraces offers fertile ground for innovation and improvements in local agricultural productivity. Traditional knowledge can enhance the successful implementation of organic farming, while OA techniques can enhance the productivity of traditional farming systems (Twarog 2006). Simultaneously, there is also a great potential for modern bioscience and technologies to make contributions to organic farming[45].

Direct support to production

An important means of promoting organic production is to eliminate existing disincentives for organic, such as distorting subsidies for chemical fertilizers. Direct government support for organic farming has been in place in the European Union since 1994, and some countries, e.g. Denmark, Sweden and Germany, supported organic farmers before that. This should be seen against the backdrop of the fact that only a small fraction of the population in the European Union is involved in the agriculture sector. This means that few people get the support from many. In most developing countries, the situation is the opposite; the farm households represent the majority of the population, and there are few possibilities to have any subsidy system like the European. One should also take into account that special organic support programmes in the European Union in most cases merely compensate organic farmers from disadvantages in the general agriculture policies (Pretty and Dobbs 2004).

[45] Apart from the use of GMOs, there is nothing in the organic concepts or rules that resist modern biotechnologies.

Also in some developing countries, there are examples of direct support to organic producers mainly as investment support, e.g. in Tunisia (Twarog 2006) and Malaysia; or support for certification costs, e.g. in China and India; free certification, e.g. in Thailand and Malaysia; or credit incentives, e.g. in Costa Rica. Credit and investment support are often not easily available for small farms or to women farmers, maybe because they lack information or because they are not able to make the required contribution for investments, or they are not credit-worthy because of lack of land title or because of general poverty. If that is the case, credit or investment support schemes may amount to de facto discrimination of already disadvantaged producers. Special support measures should be designed for the small-farm sector, perhaps organized through their organizations.

> **Recommendation 25.** Direct support measures to producers need to be adapted to small farmers as well as to commercial operations.

Extension service

Extension services often concentrate on conventional farming, sometimes for reasons of policy, sometimes because of lack of knowledge of organic farming. Moreover, they are permanently under-resourced in most developing countries. In many instances, they get posters, brochures and other materials from suppliers of agro-chemicals. Finally, their training methodology is often weak and based on a top-down approach, where farmers are instructed to use certain inputs or do certain things. This is hardly efficient for conventional farming, and is even less efficient for the organic farming system, which is based on continuous learning by the farmer and by the extension worker alike. In most cases, farmer-to-farmer exchange, participatory learning, farmer field schools and similar are well suited for organic producers.

To a large extent, extension can build on traditional or indigenous knowledge. This is underlined in the studies from Costa Rica, Thailand and Egypt. A challenge for the organic extension is to retrain extension workers both in the topic and in the way of working. NGOs often have a long experience in working with participatory extension in organic farming and Governments could consider supporting that. Another option is to support organic extension integrated in commercial activities by a producer organization or private companies. In Chile, Costa Rica and Egypt, Governments have established special programmes for organic extension. In Denmark there is a specialized organic extension service, but organic is also integrated in general extension services.

> **Recommendation 26.** Organic extension services need to be established and the staff trained. Organic extension should be developed and implemented in a participatory manner and have the farm and the farmer as the centre of attention.

Inputs (seeds, seedlings, pest control and fertilizers)

For many, organic is about the substitution of agro-chemicals for natural products, e.g. instead of using a chemical pesticide, a plant extract is used; instead of chemical fertilizers, manures or compost are used. With that perspective, ensuring that there are appropriate inputs available for organic farmers or even supplying them to the farmers seem like good ways to promote organic farming. Thailand and India plan large-scale establishment of organic fertilizer factories. However, organic farming to a large extent uses site-specific, on-farm resources. In most cases, a chemical pesticide is not replaced with an organic pesticide, but with crop rotation, companion cropping or the use of a resistant variety. Similarly, the need for external fertilizers is often not great for farmers having a diverse system with good crop rotations, the use of green manures, etc. Furthermore, smallholders have little capacity to purchase either organic or chemical inputs. Therefore, an input substitution approach to organic is not an appropriate starting point for government intervention.

Nevertheless, there are a number of organic production systems that are quite dependent on external inputs, especially in the horticultural sector. The integration of livestock and plant production that is a fundamental aspect of European organic farming is not the rule in most tropical production systems. Also, a number of pests pose real threats for organic farmers, and it can be a good "insurance" to have relevant inputs available. It should be recognized that there is a lot of traditional knowledge about the

use of plants and other natural substances in pest control. This traditional knowledge has often been discredited and overlooked by the agronomic establishment. Supporting the dissemination and further development of traditional knowledge can play an important role.

> **Recommendation 27.** Traditional knowledge about pest control treatments et al. should be surveyed and brought into the extension service and disseminated in other ways.

There are many leftover materials from the processing industry that are useful as fertilizers or soil improvement, e.g. coffee hulls and rice husks. Governments can survey these resources and make recommendation for the proper process to get them back to the agriculture systems. The appropriate recycling of organic matter, e.g. leftovers or waste from marketplaces and households, to the farm sector is important. This has the additional benefit of contributing to sanitation and environmental protection. Finally, the appropriate handling of human waste and its integration into the production system can provide much-needed nutrients to farms[46].

> **Recommendation 28.** Recycling of agriculture and food waste into organic farming systems should be promoted.

Industrial production of agriculture inputs, whether they are organic or conventional, should not be subsidized in the long term[47], unless it also provides additional services; e.g. the establishment of a composting facility in a city may play the double role of being an efficient and hygienic waste-handling facility and a provider of quality compost to periurban farmers. The Government can perhaps stimulate the emergence of the production of needed inputs through targeted interventions, e.g. support to the introduction of new technology in processing and support to a farmers group in establishing a composting facility. Governments should support the development of (including research and field-testing) useful inputs, e.g. biological controls. Farmers are easily tricked by marketers of various inputs and Government could support proper field testing of the products or other quality control measures, e.g. that the nutrient content of a sold fertilizer is indeed what is declared, or that they don't contain dangerous levels of harmful substances such as heavy metals. Care must be taken though that such controls are not becoming overly complicated or expensive, as that would defeat their purpose. Another complication is that many countries handle organic inputs under an identical regulatory framework as their synthetic counterparts, e.g. biological pest control products have to be registered as pesticides with the same requirements and fees as for synthetic pesticides (TOS 2004, Envirocare 2006).

> **Recommendation 29.** Government (or others) should establish basic controls of biological inputs such as pest control agents and organic fertilizers.

Regulations in importing countries are increasingly demanding that organic products be produced with organic seeds, even if there are some exceptions. A recent study in three African countries[48] shows that organic seeds are basically nonexistent in the formal sector. In the informal seed systems they are available, but then even if they are organic they are not certified as such. The study concludes that it is not at all realistic to demand the use of organic seeds in these countries at present (EPOPA 2006b). The use of treated seeds poses another obstacle. In many countries, seed treatments are prescribed by authorities or they are just used as a general measure. Treated seeds are only accepted in organic farming under exceptional conditions and the lack of untreated seeds can pose insurmountable problems for producers. There are many alternative seed treatments under development, e.g. warm

[46] Some organic standards reject or severely limit the re-circulation of human waste, and in some cultures there is a strong resistance to their use.
[47] Subsidies of inputs may lead to suboptimal outcomes (e.g. overuse of a certain input) and an economically unsustainable use.
[48] United Republic of Tanzania, Zambia and Uganda.

water, use of microorganisms, but most of them are not available or not known in developing countries.

> **Recommendation 30.** Seed breeding and seed testing should be oriented to organic production. Compulsory seed treatments should be waived for organic farmers and untreated seeds should be made available. Alternative seed treatments should be developed and promoted.

Another pressing issue is the availability of varieties that are well adapted to organic farming. Seed breeding hasn't been made to take consideration of the conditions for organic farmers, and the varieties available might not work so well under organic management. Finally, the potential of contamination of seeds with GMOs is an apparent risk that can seriously affect organic farmers. In Costa Rica, a seed network of farmers is supported to assist farmers to deal with the challenges of seeds for organic agriculture. Organizing the informal seed sector for organic production may be a way forward.

> **Recommendation 31.** Policies for genetically modified organisms (GMOs) need to ensure that GMO seeds are not distributed or used in a way that can cause contamination of seeds.

Training and education

Education on all levels plays a big role in shaping the future. In many developing countries, the only education children from farming communities will have is primary school. Does this education address farming practices, and if so how? What image does it convey? In Costa Rica, a programme for inclusion of organic agriculture and the establishment of organic gardens in schools was introduced in 2002. There are no indications that other countries have introduced organic farming in any systemic way in primary or secondary schools.

Denmark established a dedicated organic college in 1981. The National Institute of Training in Costa Rica has an organic training centre. In most countries, organic training is conducted by NGOs. In South Africa, the Government is involved in accreditation of institutions and curricula. In the United Republic of Tanzania, the Government provides training institutions with a curriculum for organic and the course performance certificates (Envirocare 2006). A few training institutions in Africa have been engaged in organic for a long time, e.g., the Kenya Institute of Organic Farming has been training farmers and extension workers in organic production since 1986, and there are now 35 training institutions involved in organic (Kimemia and Oyare 2006). In Egypt, two universities have departments for organic agriculture and offer courses for graduation. In Uganda, the Martyrs University has courses in organic agriculture and the Sokoine University of Agriculture in the United Republic of Tanzania is planning to do the same. In Costa Rica, two universities offer master's degrees in organic agriculture or agro-ecology. In Thailand, courses for master's and bachelor's degrees are in the making. Training programmes for government employees and other relevant staff need to be developed. Regional institutes can also be an effective way to develop and convey organic knowledge while sharing cost between nations with similar conditions; for example, the Institute for Mediterranean Agriculture covers the Middle East, Southern Europe and North Africa.

> **Recommendation 32.** Organic agriculture should be integrated into the curriculum for primary and secondary schools. Specialized institutions involved in training for organic agriculture should be supported. Higher education in organic agriculture should be developed.

Research

Public expenditures on agriculture research in low-income countries generally total less than 0.5 per cent of their agricultural gross domestic product. By comparison, higher-income developing countries spend about 1 per cent, and industrialized countries spend 2 to 5 per cent. It is not only necessary to

spend more, but also to re-direct research. Today, most research money is spent on application of agrochemicals and gene technologies, but little is spent on areas useful for organic and sustainable agriculture. A complication is that when the private sector is expected to fund research, this normally means that input suppliers are the main funders, and it is not in their interest to support research that supports a farming methodology that emphasizes self-reliance and use of fewer inputs. Another complication is that the holistic nature of organic farming calls for more systems research rather than research on isolated issues, such as the control of a certain pest, or the function of a biological fertilizer.

As organic agriculture is knowledge-intensive, one could believe that research would have played a major role in the establishment of organic agriculture, but it is hard to find any indication that research has been important for the *early* organic development. Nevertheless, it is obvious that the organic sector is depending on investments in research for its *future* development, to allow it to reach higher levels of productivity, to cope with certain pest problems, etc.

There is a strong inertia and sometimes outright resistance from the research establishment against organic research. Therefore, dedicated funds and programmes for organic research are often needed to ensure that sufficient attention is given to organic. This has been the strategy in most EU countries, and even after 10 to15 years of organic research, Governments continue to allocate special research funds to organic programmes. Danish research in organic farming has been deliberately decentralized into all agricultural research institutes since 1995, and is coordinated by DARCOF, a research centre collaborating across the institutes. There have been three major organic research programmes with a total budget of more than US$ 80 million. Similar approaches are reported also from Costa Rica and Egypt. In addition, there is a need that production-oriented research is tuned to the needs of the producers. Research priorities should therefore be developed in close consultation with the sector.

Public funding of organic-related research and programmes is increasing in both the European Union and the United States, although European Governments are financing more programmes with a broader range. European funding supports innovation in production techniques, food processing, food marketing, and food retailing, and is estimated at €70 million to €80 million annually from 2003 to 2005. Germany, the Netherlands, Switzerland and Denmark accounted for 60 per cent of this. In fiscal year 2005, the United States Government made approximately US$ 4.7 million available exclusively for an organic research grant programme. This amount is supplemented by other programmes that benefit organic producers, including funding for organic research and technical assistance by federal, state and local agencies that focus on organic agriculture (Dimitri and Oberholtzer 2005). From Denmark comes so-called grassroots research, a participatory collaboration between researchers and farmers, which has been generously funded. Also in Costa Rica, the Government supports participatory research. The case study from Egypt makes a strong call to include smallholders and traditional knowledge in research.

> **Recommendation 33.** Special research programmes should be established for organic research, and the sector should be involved in priority setting. R&D in organic agriculture should be participatory, build on and integrate traditional knowledge (where relevant) and be based on the needs of the producers.

Development programmes

In many developing countries, foreign development assistance plays a rather important role in forming the agriculture sector, either through budget support or through special projects and programmes. Most of the recommendations here are also applicable for their efforts. Egypt reports five such projects. In Uganda, the Export Promotion of Organic Products from Africa programme has worked with more than 30,000 small-holders over eight years (EPOPA 2006). FAO gives technical assistance to Governments, e.g. in Tunisia. IFOAM's I-Go programme has organized training and capacity-building in many countries. The interventions by foreign development assistance often cover issues such as subsidizing costs of certification, technical advice to farmers or extension workers,

export promotion activities and support to the development of farmers' organizations or local certification agencies. Lately, there is greater interest in policy dialogue, e.g. the UNEP-UNCTAD CBTF project in East Africa. In many developing countries, development assistance has supported the development of a regulatory framework for organic agriculture. Many development programmes work with the private sector or NGOs as partners. From Uganda it is reported that "the government initiatives which receive funding from the national budget and the civil society efforts which receive funding from donors seem to be largely disjointed" (Tumushabe 2006). Donors need to identify existing initiatives and specify in project design that there be linkages or direct interactions between them to ensure more effective organic development and avoid unnecessary competitive friction or projects reinventing the wheel.

Regional and international cooperation

There are many fields where regional or international cooperation could be meaningful:

- Research;
- Regional trade;
- Harmonization of standards;
- Regional and international trade agreements;
- Policies to support the development of the organic sector;
- Biosafety; and
- Traditional knowledge.

By participation in the Codex Alimentarius committee for labelling, Governments can contribute to the development of a basis to establish equivalence. They can also ensure that international standards take due consideration of the conditions in their countries and the expectations of domestic producers and consumers. Governments can also consider participating in the work of IFOAM, and supporting the participation of their private sectors in IFOAM's work. There are also other international treaties and processes that directly or indirectly influence the organic sectors, such as TRIPS, CBD, and UNFCC. A Government that has mainstreaming organic as its target needs to assess how all these influence organic.

FAO, UNCTAD and IFOAM have embarked on an ambitious effort to reduce barriers to trade in organic products. In the International Task Force for Harmonization and Equivalency in Organic Agriculture (ITF), the three organizations invited Governments, private-sector bodies and international organizations (e.g. OECD, the United Nations Economic Commission for Europe (UNECE) and the World Trade Organization (WTO)) to analyse the current situation (the review phase) and seek solutions (the proposal phase). The ITF was initiated in 2002, and has conducted a number of studies and meetings. It is premature to assess what concrete agreements might spring directly out of the ITF[49], but it is already evident that it has created a dialogue that is influencing both private-sector actors and regulatory authorities. Currently the ITF is developing two tools: 1) a common set of International Requirements for Organic Certification Bodies (IROCB) to serve as a benchmark for equivalence, a catalyst for convergence of requirements and direct accreditation as possible and 2) the ITF Guidelines for Equivalency. Governments and the private sector should consider participating in this process and utilize ITF results and tools. (UNCTAD-FAO-IFOAM 2006 and 2007).

> **Recommendation 34.** Governments and the private sector should participate in relevant international forums such as the Codex Alimentarius, IFOAM and the ITF.

Failing any grand international agreement on organic standards and certification, Governments in developing countries could consider including organic standards and organic certification services in

[49] The agreements in the ITF are not binding for the participating organizations, but can be seen as negotiated proposals.

regional trade agreements. They should learn from the experiences of other regulations and try to work out simple procedures that do not create unnecessary obstacles for the establishment of local bodies, or hinder regional trade. The development of regional standards can form a basis for regional trade. It is also more likely that there will be greater possibilities to negotiate equivalence (with importing OECD countries) on the basis of a regional standard than on the basis of a multitude of national standards. An East African Organic Standard was developed by organic stakeholders, including Governments, and was adopted by the East African Community Council of Ministers in 2007[50]. The International Fund for Agricultural Development (IFAD) in cooperation with IFOAM is supporting similar work in the Pacific Islands. Also, more technical cooperation on the regional level is feasible. In Central America, there is cooperation between the authorities in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic concerning organic regulations (Alonso 2005). FAO supports a regional project for Bolivia, Chile, Paraguay, Peru and Uruguay, which covers areas of national legislation, harmonization, certification and the development of domestic markets.

> **Recommendation 35.** Regional cooperation in marketing, standards, conformity assessment, policies and R&D should be promoted.

[50] This was supported by the UNEP-UNCTAD CBTF and IFOAM.

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Annex 1. Chile

Agriculture conditions

As Chile stretches from north to south, its landscapes range from arid desert in the north to windswept glaciers and fjords in the south. The country can be divided in seven zones from north to south: Great North (horticulture, camelid raising); Little North (horticulture, pisco production, goat raising, fruit production); Centre (horticulture, fruit production, viniculture and wine production, annual crops); Central South (annual crops, viniculture and wine production, forestry); the Frontier (cereals, livestock: raising and fattening, forestry), South: The Lakes Zone (cattle: milk production, forestry); and Extreme South (sheep and cattle, forestry).

In the last decade, the Chilean economy has experienced an important transformation process in the production and trade sectors. Agriculture represents 4.5 per cent of the GDP. In the last eight years, Chile has doubled its food exports, reaching more than US$ 7 billion in 2004. In 15 years, the area of annual crops has decreased 25 per cent, while the area with fruit trees and vineyards has increased 40 per cent and the surface for horticulture and flowers increased 79 per cent. The agricultural sector still presents two realities, one associated with exports and the other oriented to the domestic market, which is generally represented by smallholders.

Organic agriculture

There are no official statistics for the organic sector; however, it is possible to get information from governmental institutions, certification agencies and surveys made by the Chilean Organic Association. The organic land represents 0.44 per cent of the total arable area of the country (5.1 million hectares). In 2004, the organic area reached 22,489 hectares, including areas of wild harvest. Beekeeping is also an important sector, and there are 18,844 organic beehives.

Table 3. Evolution of the organic area

Sector	1997/98 (ha.)	1999/00 (ha.)	2002/03 (ha.)
Fruits	566	683	2 311
Vineyards	44	437	1 914
Annual crops and vegetables	132	139	1 169
Medicinal herbs, rosehip	123	121	358
Others			55
SUBTOTAL	1 813	1 920	5 806
Pastures	245	370	2 016
Wild harvest area	1 568	1 550	17 968
TOTAL	2 678	3 300	25 790

Source: ODEPA 2005.

Organic markets

Actors in the organic market are very heterogeneous. While small-scale farmers are associated with the domestic market and big farmers with the export market, there are different combinations. The domestic market is small and most organic production is export oriented. The domestic market is centred on the capital, Santiago. Major obstacles to the development of the domestic market are the lack of information to consumers and the difficulties in having a wide range of products offered through different channels in a permanent way. The main products in the domestic market are fruits, vegetables and wine.

A few supermarkets have incorporated organic products. However, the diversity and quantity remains limited. Specialized shops, of which most are in Santiago, do not sell 100 per cent organic; they also sell products considered as natural. Some organic farmers have their own shops. The best known is Tierra Viva, a group composed of small organic farmers selling their products through their own shop in Santiago. Finally, there are farmers who sell their products directly to consumers, either on the farm or through a home delivery system.

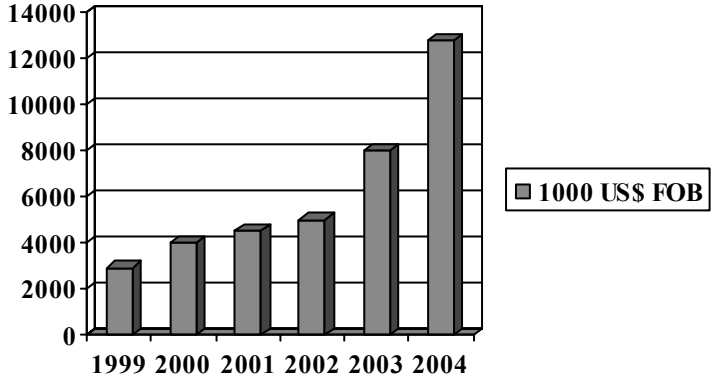
Export markets

The value of organic exports in 2004 reached US$ 12,722,978 (FOB) and was distributed in the following way: fresh products (51.1 per cent), frozen products (28.2 per cent), products with some level of processing (13.5 per cent) and dried products (7.2 per cent). The main export products according to the value of export are fresh apples, frozen raspberries, red wine, kiwi, avocados and fresh blueberries.

In 2004, the destinations for Chilean organic exports were:

- United States (58.4 per cent);
- Europe (29.4 per cent);
- Japan (5.7 per cent);
- Canada (4.9 per cent); and
- Other markets (1.6 per cent).

Figure 1. Evolution of Chilean organic exports (1999–2004)



Source: ProChile, 2005.

Supporting structures

There are general supporting structures to develop agriculture, which the organic sector can use to develop its own activities. The main services the organic sector uses are related to promotion, marketing, organic association support and information sources. Training, education and extension are implemented by private and public initiatives through seminars, courses, specific programmes, publication of training materials, study visits in Chile or abroad and participation in fairs. Research is done by universities and the National Institute of Agricultural Research. The research on organic agriculture is very small compared with research on conventional agricultural issues.

Sector organization for organic farming

The Chilean Organic Association (AAOCH) [51] was created in 1999 to promote the organic sector in Chile. Nowadays, this organization has approximately 90 members including farmers, certifiers, traders, consultants, students, professionals and others. Since its creation, AAOCH has been recognized as a valid representative for the organic sector by governmental authorities. Another interesting initiative is the network of small organic farmers created by INDAP, which is the institution of the Ministry of Agriculture in charge of supporting small farmers.

Regulations, standards and conformity assessment

Certification is done by national and foreign certification agencies. There is a governmental control system in place, which is voluntary and only for primary products that are exported. Exported products fulfil standards required by destination markets (NOP, European Union, JAS, etc.).

[51] Web Site: www.agrupacionorganica.cl.

The Chilean Organic Law was approved in the Parliament in January 2006 and the system will change. The law establishes the national system for certifying organic products; requires the elaboration of specific regulations; protects the organic, biological and ecological labelling; recognizes a competent authority; evaluates and authorizes certification agencies operating in the country; creates an official seal; and establishes sanctions. Certification agencies operating in Chile are:

- National bodies: Agroeco, CCO; and
- Foreign bodies: Argencert, Letis, Lacon, BCS, CERES, IMO, Biocertificación, Ecocert.

In Chile, there is no certification of groups. However, access to certification for small farmers is a topic under discussion and one of the options can be the certification of small farmers groups as a whole. This issue has been considered in the new law.

Agriculture policy

In 2001, the Ministry of Agriculture published the document "A State Policy for the Chilean Agriculture, Period 2001–2010". The document stresses the importance of quality and sustainability of agriculture. Some important aspects of this are: implementation of programmes of good agricultural practices; modernization of inspection systems (i.e. HACCP); regulation for using GMOs; improvement of the national policy of pesticides; strengthening traceability mechanisms; national programme for controlling residues; and consolidation of the animal production system under official control. In the policy, the ministry also states the establishment of a quality indication system, which allows the development of initiatives related to organic production, integrated production, origin denomination or other denominations linked to environment-friendly practices, social considerations and animal welfare issues. In order to achieve this objective, the policy proposes having a group of norms, certification procedures, accreditation procedures, verification and a system of traceability. This policy document has had an important role as a reference for the development of the organic law and the establishment of the national system for mandatory certification of organic products.

Chile has taken precautionary measures for the use of GMOs, which are allowed only for seed reproduction for exports and in other crops only for research purposes. It is prohibited to grow GMO crops for other reasons.

Table 4. Overview of organic agriculture policies and programmes

Item	Government policy and programmes
General Development of Organic Agriculture and Coordination	The Ministry of Agriculture has constituted a group, with public and private actors involved in the organic sector, to coordinate actions for developing organic agriculture. This is mainly an instance of discussion and coordination.
Information	The Office of Agricultural Studies and Policies (ODEPA) has information and statistics on organic agriculture in the country. This information is useful to visualize trends, but the data is still not completely accurate in the sense that not all the sources of information are considered.
Organic regulations, standards and certification	The Ministry of Agriculture has worked together with the private sector (AAOCH) to have an organic law in Chile.
Export market development	ProChile, an agency under the Ministry of Foreign Affairs, has supported the participation of Chile at BIOFACH during many years. It also provides market information.
Inputs (seeds, seedlings, pest control and fertilizers, irrigation)	The Agriculture and Livestock Service is oriented to help farmers recover fertility and productivity of soils. Recently, it has incorporated organic fertilizers and practices recommended in organic standards. The Chilean Commission of Irrigation has incorporated a special area of work on water quality and sustainable agriculture, including organic agriculture.

Item	Government policy and programmes
Research	The National Institute of Agricultural Research (INIA) and universities have few research projects. The Foundation for Agricultural Innovation finances private sector projects.
Extension service	INDAP established a network of small organic farmers and provides them technical support through extension services.
Others	The Corporation of Production Promotion (CORFO) provides different institutional support lines related to investment promotion, finance, innovation, quality and productivity. There are no specific lines for organic production, but organic farmers can use CORFO Services.

Other policy influences, projects and programmes

There is an agreement between the Governments of Chile and Switzerland to develop a project in two regions of Chile. The aim of the project is mainly oriented to obtain technical information and validation of organic systems in vineyards and dairy production. There is an FAO regional project (Bolivia, Chile, Paraguay, Peru and Uruguay), which covers areas of national legislation, harmonization, certification, commercialization and promotion of organic products in domestic markets.

The organic policy development process

NGOs were the first actors in promoting organic agriculture through different programmes of sustainable development. These programmes were more oriented to issues such as self-subsistence food security in rural areas. Organic agriculture was not considered by the Government as an important activity and was considered appropriate only for small farmers. Accordingly, no policies were implemented to support the organic sector during the 1980s and most of the 1990s. The first policies were implemented when the area under organic cultivation and the organic exports increased. New stakeholders appeared (medium size farmers and enterprises) and the private sector started to organize itself.

(a) In 1999, the Chilean Organic Production Norm, NCh 2439, was published. This norm was developed by a technical committee with people from the private and public sectors. The production norm was updated in 2004. The norm has been a voluntary standard, but with the new law will be the basis for the technical requirements of the regulation.

(b) In 1999, a new committee started to operate in order to write the Chilean norm on requirements for certification bodies that certify organic products, NCh 2079.

(c) In 1999, the Chilean Organic Association, AAOCH, was created.

(d) In 2000, the National System for Certification of Primary Organic Products for Export was created. During this year, Chile applied to be recognized as a "third country" by the European Union (still pending).

(e) In 2003, the Ministry of Agriculture started to write the Chilean organic law and the proposal for the law was sent to the Congress in 2004.

(f) In 2005, the National Commission of Organic Agriculture was created. This is a private and public commission to discuss and coordinate action and policies that support organic farming. This is an important step, because it is possible to guide governmental actions through a direct channel of communication. Members from the public sector belong to different institutions and the private sector is represented by AAOCH. The president of this commission is the Vice Minster of Agriculture.

(g) In January 2006, the organic law approved by the Congress was published.

Opportunities and challenges

Organic agriculture has a great opportunity to grow in the coming years, because it has demonstrated its technical and economical viability. The new organic law will allow the Government to play a key

role in the control of certification agencies. It will improve transparency and the domestic market will be regulated, resulting in more clarity. However, Chile still has many challenges: running the new control system with a governmental institution as competent authority; developing the internal market; improving consumer information, research and technical assistance; getting accurate statistics in the organic sector; increasing the organic area and getting more involvement of small scale farmers. From the policy side, it is necessary to have more specific instruments to support organic farmers.

Lessons learned

The main lesson learned during the process was the importance of the organization within the private sector so that it can express clear needs and consensual proposals. Also, it is important to create platforms for discussion in order to establish a common agenda between private and public stakeholders. Small sectors don't get as much political support as bigger ones. One way to attract the interest of policymakers is to link organic agriculture to the main agriculture agenda and to issues such as the environment, sustainable agriculture and food quality.

Annex 2. Costa Rica

Agriculture conditions

Costa Rica has a territory of 51,100 km^2. Of this territory, 25.2 per cent (1,288,565 ha), is dedicated to environmentally protected areas or ecological reserves and 25.6 per cent (1,308,160 ha) to farming. Costa Rica is a country well known for its enormous biodiversity (around 4 per cent of the world's total), which makes it possible to produce a wide variety of crops, from grains to vegetables and fruits, most of which are produced by small farmers for the domestic market.

In 2003, farming directly represented 10.2 per cent of the GDP, and 32.5 per cent when considering the real contribution[52]. In that year, export crops represented 76 per cent of the total agricultural value. The main export products were bananas, pineapples, coffee, food preparations, ornamental plants, melons, palm oil, seafood, bovine meat and sugar. Both large holdings and small farmers (usually organized in associations) are involved in export crop production, but the exporting activity is mainly controlled by the large holdings.

Organic agriculture

With regards to organic agriculture, in 2004 there were 10,800 ha, belonging to some 3,495 farmers, certified and registered as organic at the official registry of the Organic Agriculture Accreditation and Registry Office of the Ministry of Agriculture and Livestock (MAG). This area represented 2.42 per cent of the total cropland. During the past five years, the proportion has been continuously growing.

Table 5. Organic certified cropland in Costa Rica, in relation to conventional cropland, 2000–2004

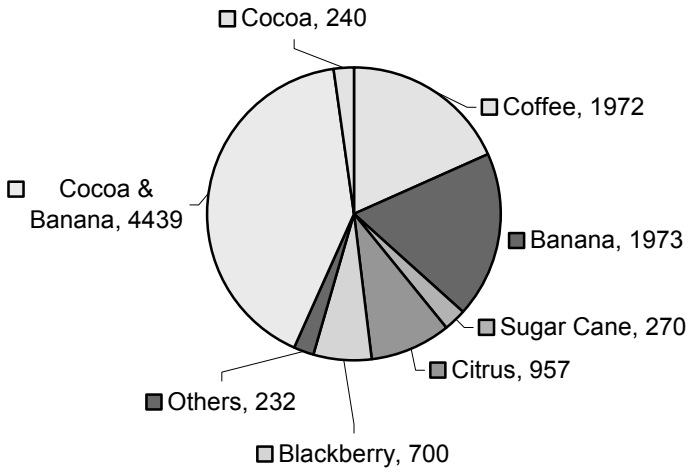
Year	Certified organic ha	Total cropland	Organic share of total
2000	8 606	448 453	1.92%
2001	8 870	440 435	2.01%
2002	9 003	435 514	2.06%
2003	9 100	438 967	2.07%
2004	10 800	444 783	2.42%

Source: PNAO-MAG, 2005.

In Costa Rica, commercial organic agriculture has been slowly growing since the late 1980s. Around 85 per cent of the certified and probably 100 per cent of the non-certified organic farmers are small and medium size holdings (on average 2–3 ha per farmer), most of whom, assisted by NGOs or organized in farmers associations or cooperatives, control the whole production chain (from farm to market), with some exceptions in the export markets. Many small organic farmers work under the "integral farming" approach, with a strong emphasis on family food security and self-sufficiency, usually selling their surplus production at the closest farmers' markets. There are currently no certified organic animal products.

[52] IICA, 2003. La Real Contribución de la Agricultura a la Economía. In this study, a social accounting matrix was used to determine both direct and indirect effects of the agricultural activity on other sectors of the national economy.

Figure 2. Distribution of organically certified production in Costa Rica (in ha)



Organic markets

The first organic products were vegetables for the local market and organic banana puree exported to Germany. Apart from vegetables, tubers, rice and medicinal plants, which in 2004 represented less than 1 per cent of total certified products, most certified production is for the export markets. The main organic products currently being exported include coffee, bananas (mashed for baby food and dried), cacao, orange juice and concentrate, blackberries, pineapples, raw sugar, aloe and other medicinal plants. In addition to the above-mentioned products, it is possible to find almost anything that the regular consumer needs at the national market, including animal products, although many of these are not certified but are backed by NGOs or sold at the community level. As the regulation for organic marketing requires mandatory certification, these products are not advertised or labelled as organic. Most of them are sold in direct marketing situations.

The main export markets are the United States, Europe and Japan. There are no official data on the size of the organic export market, but one of the main certification bodies (EcoLogica) calculated the exports to the United States and Europe, in 2003, to be worth US$ 10 million. Actors in the export market are both small-scale farmers, organized in farmers associations or cooperatives, and larger holdings or even transnational corporations (in the case of pineapples, orange juice and part of the banana, sugar and cocoa exports). The large holdings that export organic products may or may not have some production of their own, but usually buy most of the product from small and medium-sized producers. Sometimes these large exporters pay for the certification and therefore farmers can't sell to other buyers.

As to the domestic market, local community sales, weekly farmers' markets in different regions and supermarkets are the main selling points. The national market is still very small but has been rapidly growing during the past five or six years. No confirmed data is available, but it can be stated that the national market for organic products is currently in strong expansion. In 2003, EcoLogica calculated that the domestic sales of organic products amounted to US$ 1.5 million. Three or four years ago, there were only three places were national consumers could buy organic products and they were all located in the capital. Today, there are at least 15 places and many of them in other cities or towns in the rural areas.

The main limitation for the growth of the domestic market is the lack of supply. One of the main supermarket chains that offer certified organic products has said its demand is only 50 per cent satisfied but it is unable to find new suppliers. One of the reasons for this is that many organic farmers, in addition to being very small, are dispersed all over the country and, therefore, it is not

economically feasible to gather and distribute production to the main selling points. Thus, many farmers choose to sell their products within the community, where they obtain better prices from direct sales to final consumers and do not necessarily have certification expenditures.

Supporting structures

In Costa Rica, training for farmers is offered by several actors. The National Institute of Training (INA), which is a governmental technical training centre with nationwide coverage, offers theoretical and practical training on a wide variety of issues related to agriculture. This institute has an organic agriculture training centre, which has been training farmers since 1998 on both basic and advanced technologies, such as compost making or on-farm-developed biological control methods. In relation to organic farming, the National University offers a master's degree in Agroecology. The University of Costa Rica has developed a Programme of Organic Agriculture, which carries out research, teaches an optional basic course for the agricultural engineering students, and is in the process of establishing a master's degree on organic agriculture to be launched in 2006. The Escuela Agrícola para la Región del Trópico Húmedo (EARTH), which is a sustainable agriculture semi-private university, has a didactical farm and teaches organic agriculture courses both for agricultural engineering students and farmers. The Centro Agronomico Tropical de Investigación y Enseñanza has a programme on organic coffee, which carries out both research and training, and the Costa Rican Technological Institute also carries out research and training, with emphasis on organic fertilization methods, at one of its regional centres.

At the governmental level, the recently created Institute for Innovation and Transfer of Farming Technology (INTA) is in charge of all agricultural research. Although most of INTA's researchers are not trained to work on organic agriculture and there is not yet a specific programme for this purpose, there is interest and some small-scale research. Publications have been produced on organic the last two years.

Within MAG, there are two offices specialized in organic agriculture services: the National Organic Agriculture Programme (PNAO)[53], in charge of offering support and promotion services; and the Technical Office for Accreditation and Registry of Organic Agriculture (GTARAO)[54], in charge of managing the national organic guarantee system. Both these offices are under the Direction of Phytosanitary Protection. In 1999, PNAO established an inter-sectoral working group on research and technology transfer for organic agriculture called PITTA-P.O.[55], which involves representatives from the main universities, organic farmers' associations, NGOs and the public sector. PITTA-P.O. promotes a participatory on-farm research approach, and among its main activities is the organization of yearly organic agriculture technology exchange meetings at the national level.

Extension is mainly carried out by the National Extension Programme of MAG, which provides for extension services in over 90 locations throughout the country. PNAO has one organic agriculture coordinator in every region of the country, eight in total, and has, over the last two years, made efforts to train a group of around 25 extension workers from different regions. These efforts are still widely insufficient compared to the current farmers' demand for training and extension services in organic agriculture.

Sector organization for organic farming

The small-scale farmers and NGOs were the first actors to get involved in organic agriculture. The national organic movement, now organized and called MAOCO (Movimiento de Agricultura Orgánica Costarricense), has developed over the past 10 to 15 years. Some actors from the academic sector as well as exporters and certification bodies have also played important roles. Coordination among the different sectors and the scarce support from government institutions have been some of

[53] Programa Nacional de Agricultura Orgánica del Ministerio de Agricultura y Ganadería.
[54] Gerencia Técnica de Acreditación y Registro de Agricultura Orgánica del Ministerio de Agricultura y Ganadería.
[55] Programa de Investigación y Transferencia de Tecnología Agropecuaria de Producción Orgánica.

the biggest challenges since the late 1990s. During the past seven years, however, there has been a more active involvement from the public sector, as well as more openness to develop alliances among the different sectors involved, which has brought about a considerably stronger organic movement, in which the Government is one of the actors along with the other stakeholders.

Regulation, standards and conformity assessment

The national organic guarantee system is managed by the Technical Office for Accreditation and Registry of Organic Agriculture (GTARAO). The main functions performed by GTARAO are: (a) accrediting the certification bodies; (b) keeping a registry of certification bodies, inspectors, certified farmers, processors and others; and (c) supervising and auditing the whole system. To do this, GTARAO bases its work on the national legislation included in the following laws and regulations: Environmental Law No. 7554 of 1995; Phytosanitary Protection Law No. 7664 of 1997 and its Regulation; and the national standards for organic production contained in the Organic Agriculture Regulation Decree No. 29782 of 2001[56]. Compliance with ISO 65 procedures is required for accreditation.

Costa Rica was included in the "third country list" of the European Union in March 2003. It is approved by Switzerland for organic imports. The processes for equivalency recognition from the United States and Japan have been initiated.

Currently, there are two national certification bodies (EcoLogica and AIMCOPOP) and four international ones (BCS Oko Garantie, OCIA, Ecocert and SKAL) accredited by GTARAO. Certification bodies have to comply with the national standards as a baseline but are also allowed to certify to more stringent standards. Considering the number of clients, EcoLogica is the main certification body, controlling around 65 per cent of the clients. EcoLogica and BCS are the only ones accredited by the Government for EU export purposes and all of them, except AIMCOPOP, have obtained the United States' NOP accreditation. A national seal to back up all nationally accredited certification has been developed by GTARAO and it may be used by farmers and exporters, at no charge. It is not yet widely recognized.

For the domestic market, certification in compliance with the national standards is mandatory and can be performed by any of the accredited certification bodies. In Costa Rica, most certification of small and medium-scale organized farmers is organized through group certification[57]. This is about the only feasible option for small farmers in terms of costs but, even so, this is not always a "low-cost" option, since many indirect costs, such as training and management of the internal control system, are added to the direct costs, which are often too high, especially if the group is small. As an example of direct costs, if EcoLogica certifies a group of 1,000 farmers, each one will have to pay approximately US$ 10, but if the group consists of only 10 farmers, each one will pay approximately US$ 150 and, in addition, both groups would have to pay 0.25 per cent of the gross farm sales per year.

Other options, such as participatory guarantee systems, are currently being developed by a committee involving members of MAOCO and farmers in a couple of regions.

Agriculture policy

General

Pesticides have been taxed in Costa Rica for many years, and the income from these taxes supports a large portion of the Ministry of Agriculture's budget for Phytosanitary Protection Direction. With regards to GMOs, national policies are rather cautious and express some concern about the possible adverse impacts on biodiversity, the environment and health. In practice, though, the mechanisms for the development of GMO-related activities (research, environmental liberation, seed production,

[56] This decree modifies No. 25834 of 1997 and 29067 of 2000.
[57] Where farmers are organized in groups with internal control systems.

marketing, etc.) are being set up by the Technical Office of Biotechnology of the Phytosanitary Protection Direction.

The main document containing the current agricultural policies is called "Políticas para el Sector Agropecuario Costarricense 2002-2006" (Policies for Costa Rican Farming Sector 2002-2006), and it contains a wide range of policies oriented to support the development of four priority areas: (a) strengthening competitiveness of the farming sector; (b) development of human capacities and opportunities for agriculture and the rural areas; (c) agriculture in harmony with the environment; and (d) modernization of institutional services.

Organic agriculture policies and programmes

With the above policy, for the first time, official agricultural policies include several actions to promote and support the development of organic agriculture, which are contained in the chapter about agriculture in harmony with the environment. Some of these include promotion of indigenous farming practices, agro-biodiversity protection and enhancement, discouragement of contaminant pesticides use, promotion of native seed production, support for certification alternatives and support for conversion of production. In practice, the implementation of these general policies has been limited by the scarce resources available in the public sector.

Governmental organic agriculture policies and programmes are mainly promoted by the National Organic Agriculture Programme of the Ministry of Agriculture and Livestock (PNAO). This is a coordination office whose main objective is to support and promote production, processing, international trade and local marketing of organic products. PNAO, with a small central staff and budget and eight regional organic agriculture coordinators from the national extension programme, develops diagnostic activities at the national level, in order to identify organic farmers' needs. It coordinates with both public and private institutions, as well as with the financial and technical cooperation organizations that support agriculture, to see that organic farmers have access to at least the same services as conventional farmers.

Since 1999, some of the most important tasks carried out by PNAO have been to support and strengthen the national organic movement (MAOCO) and to develop awareness both within governmental structures and the general public, and to promote policy development. As a result of these efforts, the official national agricultural policies now include organic agriculture as a priority issue, and MAOCO is currently recognized by both Government and media as the main reference with regards to organic agriculture development interests.

Table 6. Overview of governmental programmes for organic

Item	Government policy and programmes
General awareness of merits of organic	PNAO develops and distributes materials, articles, presentations and reports for both government decision-makers and the media. Training workshops for the national media have been organized.
Organic regulations, standards and certification	A national guarantee system has been established and is successfully managed by GTARAO.
Domestic market	PNAO coordinates actions with both supermarkets and farmers' markets to assist in the inclusion of new suppliers to these markets. There is also substantial financial support for promotion activities such as national fairs and festivals.
Export market	Both PROCOMER (national export promotion office) and PNAO support participation of organic farmers at Biofach.
Food processing	The National Production Council (CNP) in alliance with researchers from the Centre for Food Technology Research (CITA) of the University of Costa Rica support organic farmers in the development of simple food processing methods.
Production	Information on organic farming methods is available through PNAO and its organic agriculture coordinators nationwide.

Item	Government policy and programmes
	A programme called Programme for the Promotion of Sustainable Agriculture Production (PFPAS), which involves a US$ 14 million fund from the Inter-American Development Bank (IDB) and MAG for credit incentives, training and studies, for both sustainable and organic agriculture, has recently been approved by the national congress.
Inputs (seeds, seedlings, pest control and fertilizers)	Technical assistance on natural pest control is available at the laboratory of biological control of INTA, as well as at INA. PNAO provides information on biological control methods and organic fertilizers. PNAO supports the development of local farmers' seed exchange networks.
Research	Some small research projects have been developed by INTA. PITTA-P.O. promotes small farmers experimentation exchange activities.
Extension service	PNAO has supported the training of a group of approximately 25 extension workers on organic agriculture methods. Some of them provide technical assistance and training for small farmers and other colleagues.
Other	Through an alliance among the Ministries of Agriculture, Education and Health, a programme for the inclusion of organic agriculture teaching and the establishment of organic horticulture gardens in schools has been put into practice during the past three years.

Other policy influences, projects and programmes

The international cooperation sector in general, and specifically through NGOs such as VECO (Belgium) or HIVOS (The Netherlands) or United Nations programmes such as the Small Donations Programme of the United Nations Development Programme Global Environment Facility (UNDP-GEF), support projects for small farmers' associations, NGOs and more recently for MAOCO's organizational strengthening process. The Inter-American Institute for Agricultural Cooperation (IICA) has provided technical support on information and organizational activities. At the national level, the Catholic Church's social and environmental programme (Pastoral Social) conducts training, produces information materials and supports community-based networking activities in different parts of the country. Within the national financial sector, the *Banco Popular,* a state bank, has recently developed an alliance with MAOCO to develop financial products that are adjusted to the organic sector's needs.

The policy development process for organic agriculture

In the process of organic agriculture government policy development in Costa Rica, there have been both "internal" and "external" driving forces working together. The internal forces were mainly the staff of the National Organic Agriculture Programme, which since 1999 could count on political support from the highest level and a few allies within the public sector (mainly some agricultural professionals and extension workers who were interested in organic agriculture at a personal level). The external forces came from NGOs, farmers' groups and the international cooperation sector, which were willing to develop an informal alliance with PNAO in order to work together towards common goals and proposals.

A group of NGOs, farmers' associations, and representatives from the public sector, with the support of the international cooperation, carried out a consultation process to develop a long-term concerted action plan, both at the regional and national levels, resulting in the National Strategy for Organic Agriculture Promotion. This process, in which over 1,500 farmers of some 50 organizations around the country participated, was the basis for the construction of MAOCO. This umbrella organization has been able to influence regional and national policies. MAOCO has also carried out a participatory process for the drafting of an act for the support and promotion of organic agriculture, which is currently being discussed at the National Legislative Assembly.

The action plan proposed alliances between public and private institutions to try to solve the main limitations identified. In terms of implementation, some of the main activities in this action plan, under the coordination of PNAO, include:

1. Development and facilitation of general information for decision-makers through printed materials, presentations and a Web page;
2. Strengthening of PNAO by appointing regional coordinators and the inclusion of organic in government priorities and planning processes;
3. Support of research, experimentation and technology transfer through the establishment of PITTA-P.O.;
4. Promotion through media, meetings with decision-makers and activities with consumers;
5. Support of MAOCO and the national strategy development process;
6. Support of regional production projects through coordination with national and international cooperation agencies;
7. Development of organic agriculture in schools initiative; and
8. Support of participation at Biofach, Germany.

Opportunities and challenges

Some of the most interesting opportunities for organic agriculture development in Costa Rica also present the main challenges. Two of these opportunities and challenges are to be able to take advantage of the international recognition of the national organic guarantee system, in order to enter more international markets; and to take advantage of the rapid growth of the national market, in order to promote local marketing of organic products.

The challenge is to develop the proper conditions to increase the current production. This, of course, is related to other challenges such as strengthening the extension services' technical capacity, developing appropriate financial products and incentives, strengthening small and medium-sized farmers' organizations and finding effective solutions to support farmers during the conversion period. In general, policies put in place, as well as those currently being proposed by MAOCO, seem to be oriented in the right direction. The main constraint seems to be the lack of available human and financial resources, which hinders a full implementation of the policies at the rapid and constant pace which is needed.

Lessons learned

Although some investment has been made by the public, private and international cooperation sectors for the development of policies to support organic agriculture in Costa Rica (especially for the implementation of the organic guarantee system and more recently for the strengthening of MAOCO), to this date, the achievements in organic policy development have been mainly the result of public-private alliances rather than of any heavily funded policy development project. The process for policy development might take more time but it is certainly more participatory and concerted. Most interested actors have participated in the processes and, therefore, are willing to defend and back up these policies, which should give sustainability and stability to the proposals as well as to the related organizational processes. This is especially important in the case of organic agricultural policy development, since it first developed in the private sector and many are concerned that if Governments get involved, the original orientation and goals will be lost. The policy development process in Costa Rica shows that this does not necessarily have to be the case, as long as the right alliances can be developed between the public and private sector actors and the process for policy development is given enough time to facilitate a transparent and widely participatory approach.

Annex 3. Denmark

Agriculture conditions

Denmark has a temperate climate, especially suitable for growing grain (wheat and barley), which is done on 60 per cent of the farmland. Most of the grain is used for the pig industry, and 23 million pigs are produced for slaughtering every year, three quarters of which are exported. Dairy is another important sector, for both the domestic market and export. In total, two thirds of agricultural production is exported, which constitutes seven per cent of total Danish exports. Farming represents 2.7 per cent of the GDP[58], 62 per cent of the Danish surface is cultivated and the proportion of marginal land is low.

For centuries, farming has been the main industry in Denmark and, even though the impact of farming in the Danish economy is declining, it still plays a vital role. The number of farms has rapidly declined as farm size has increased and employment has shifted from primary agriculture to the processing industry. Owner-occupancy is widespread and the majority of the enterprises within the Danish food industry are cooperatives owned and governed by the farmers themselves[59].

Organic agriculture

Six per cent of the agricultural land is organically managed. The average size of an organic farm (50.6 ha) is a little smaller than for conventional agriculture (54.5 ha), but there are many small organic farms, as well as large ones (>100 ha). There are few organic pig producers compared to conventional farming, but the share of organic dairy farms is large.

Table 7. Development of organic farms and farming area, 1989–2004[60]

Year	Number of farms	Organic area	Per cent of conventional
1989	401	9 554	0.4%
1990	523	11 581	0.4%
1991	672	17 963	0.7%
1992	675	18 653	0.7%
1993	640	20 090	0.8%
1994	677	21 145	0,8%
1995	1 050	40 884	1.5%
1996	1 166	46 171	1.7%
1997	1 617	64 329	2.4%
1998	2 228	99 163	3.7%
1999	3 099	146 685	5.5%
2000	3 466	165 258	6.2%
2001	3 525	173 497	6.5%
2002	3 714	178 359	6.6%
2003	3 510	168 022	6.3%
2004	3 166	160 209	6.0%

Organic markets

Organic farming in Denmark originally developed for the domestic market. In the beginning, it was mainly vegetables that were sold at the farm gate and at farmers' markets. The situation is very different today, with 85 per cent of all organic products being sold through the supermarkets. In 1982,

[58] Statistisk tiårsoversigt 2005. Danmarks Statistik 2005. DK.
[59] Danish Agriculture at home and abroad. Danish Agricultural Council 2005 (www.landbrugsraadet.dk).
[60] Statistik over økologiske jordbrugsbedrifter 2004. Plantedirektoratet juli 2005. DK.

the first vegetables were sold in the Coop retail shops and in 1988 the first organic fresh milk was launched, organized by organic and biodynamic farmers. The sales grew slowly until 1993, a turning year for the organic sector, when an intensive marketing effort combined with a lowering of the prices of organic products, and supported by a growing public and political awareness of environmental issues, boosted the market. In recent years, new forms of reaching consumers have emerged; in particular, a large box-scheme Internet sale has had success.

Since then, the domestic market has grown rapidly, reaching 5 per cent[61] of the total Danish food turnover, and some organic products can be bought in almost all food shops in Denmark. The Danish organic label is recognized by 93[62] per cent of consumers and 81 per cent have confidence in the label. However, growth has slowed in recent years. The market share of organic differs widely for different products.

Table 8. Market shares for main organic products (2004)[63]

Product	Organic share of total market
Oak flakes	26.6%
Milk	27.9%
Eggs	17.2%
Fresh pasta	17.2%
Carrots	16.5%
Wheat flour	9.6%
Butter	5.8%
Coffee	3.2%
Potatoes	3.0%
Meat	1.7%
Pork	0.4%

Export market

As production grew, the need to export Danish organic production became pronounced. The organic association, exporters and businesses initiated a targeted export effort (supported by governmental funding) towards the United Kingdom, Sweden and Germany. In 2003, the total export value of organic produce was US$ 39 million. The main products include milk products, groceries and specialties, and the organic products are more refined than conventional products for export. In spite of a large effort, export has declined slightly in recent years. In particular, obstacles to accessing private labels[64] used on the targeted markets are found to be a strong barrier for export, and the Government has spent some resources to find agreements of recognition with strong private labels. Failing any EU–United States equivalence agreement for organic products, Denmark negotiated directly with the United States and is currently recognized by the United States for certification according to the NOP.

Research

Research and development have been the main priorities in governmental support of the development of organic farming in Denmark. Danish research in organic farming has been deliberately decentralized into all agricultural research institutes since 1995, and is coordinated by DARCOF, a research centre collaborating across the institutes. There have been three major organic research

[61] In 2002. Source: GfK ConsumerScan 1999-2002, GfK Danmark.
[62] Wier, M. and Andersen, L. Mørch (2003) Amterne og Kommunernes Forskningsinstitut Forbrugernes efterspørgsel efter økologiske fødevarer.
[63] Source: GfK ConsumerScan consumer panel, published at www.alt-om-okologi.dk.
[64] e.g. KRAV in Sweden and Soil Association in the United Kingdom.

programmes with a total budget of more than US$ 80 million. Recently, the European Union has financed a growing number of projects[65].

Grassroots research

The Danish Association for Organic Farming (LOJ) launched the idea of developing projects closer to daily farming practice. This should be a tool for stimulating practitioners to overcome challenges occurring in production, for example in the animal husbandry sector, giving faster results than traditional research projects. The aim is to stimulate an innovative environment among organic farmers and to ensure that ideas and achievements of use for others are described and examined further. The farmers launch the ideas but the project is carried out in dialogue with researchers, who at the same time get inspiration for more in-depth research programmes. Grassroots research was financed for the first time in 1997, when it received US$ 3 million. In 2000, an additional US$ 3 million was allocated over four years, and in 2001, an information effort to spread the results was established[66].

Training and education

Denmark has an organic agricultural college, founded in 1981. It offers an education with the same standards as the traditional Danish education for farming, but with organic farming perspectives. It also offers additional training courses and management consultant and counselling functions related to organic farming projects. In 2003, it started an international two-year course in organic farming. Other agricultural colleges in Denmark offer organic courses and training. Besides the colleges, agricultural advisers and farmers' associations offer many two and three-day courses for organic farmers[67].

Extension

There is a solid extension system, owned and run by the farmers themselves. In 1985, the Danish Family Farmers and the Danish Association for Organic Farming, in cooperation with the Biodynamic organizations, established a special service for organic farmers as part of this system. A regional net of advisors gives advice, reaching from conversion of the farm, over plant production to stable interiors and EU support measures. Not all advisors specialize in organic farming, but there is a central technical organic support division inside the organization. In 1998, the Danish Association for Organic Farming ("Organic Denmark") established an all-organic extension service system, which is growing[68].

Sector organization

Denmark has a long tradition of farmers' organizations, and very strong collaboration between the farmers' associations and the Government. The biodynamic association has existed since the 1930s, but does not play a major role today. The main organization is the Danish Association for Organic Farming, established in 1981. In 2001, it merged with a number of subsectors (milk, egg, etc.) and market organizations and changed name to Organic Denmark[69]. Today, Organic Denmark is the main non-profit association for organic farmers, manufactures and consumers. It has a staff of more than 30 employees engaged in agriculture, lobbyism, public relations, marketing and foreign trade, and is a member of the Danish Agricultural Council[70]. The House of Organics functions as a common project organization for Organic Denmark and received funding from the state budget for its establishment in 1999. Since then it has been given support both directly from the state budget and as keeper for many of the projects laid down in the overall Danish governmental supported strategies for organic farming. As such, Organic Denmark has been the main actor in most of the campaigns regarding information, marketing, export and so forth, often in very close cooperation with the main companies and retail

[65] www.foejo.dk, www.vmp3.dk.
[66] www.eksperimenter.dk.
[67] www.oekoskolen.dk.
[68] http://www.lr.dk/oekologi/diverse/org_agri.htm.
[69] www.organic-denmark.dk.
[70] Other members are the conventional farming associations and the cooperative processors e.g. slaughterhouses and dairies.

stores dealing with organic farming and organic products in Denmark, but also in close cooperation with the Agricultural Council and others. Organic Denmark is also a main lobbyist for the members cooperating with the Danish Consumer Council, the Danish Nature Conservation Organization and the Organization for Protection of Animals, for example.

Regulation, standards and conformity assessment

Denmark was one of the first countries to introduce an organic market regulation and an official set of organic standards, in 1987. Unlike most EU countries, in Denmark the Government, not private organizations, undertakes inspections directly. All farmers who sell their products as organic must be authorized. In nearly all the years since the state inspection started, certification has been offered for free. The Plant Directorate inspects farms and feed companies and the Food Directorate inspects processing and trading. All cases of non-conformity with the standards are made public.

The "Ø" label is a governmental inspection label launched in 1990 and strongly supported by the sector. The regulations associated with the "Ø" label are based on EU legislation, although Danish rules still apply in a few areas because EU legislation still does not cover all aspects of organic production. Foreign labels can be seen on many products, but mostly together with the Danish label. In 2004 the Government, in cooperation with the Danish organizations, launched a campaign for the EU logo, which it sees as instrumental to use against EU internal trade barriers. The Danish Association for Organic Farming (LOJ) certified its own standards from 1981 to 2002.

Agriculture policy

Organic farming emerged with growing environmental consciousness and became part of a new kind of agricultural policy with many constraints on farming: to lower the nitrate levels, reduce use of pesticides and to focus on animal welfare issues. An important political base for the support measures for organic farming has been the three aquatic environment plans and two plans for reducing the use of pesticides carried out during the last 10 years, all including organic farming as a tool for a better environment. Organic farming is also an important part of the Danish implementation of the EU agro-environment scheme, which has funded conversion support as well as the ongoing area payment since 1992. Organic farmers receive the general EU (first pillar) support as well. In 2001, the Danish Ministry for Food, Agriculture and Fishery initiated the process for the EU Action Plan for organic agriculture through the conference: Towards Partnership and Action in Europe.

In June 2004, Denmark introduced a law on the coexistence of genetically modified (GM) crops and crops grown on conventional and organic farms. This law includes a number of protective measures for organic farmers, such as compensation for losses in income due to GM contamination of organic crops, as well as separation distances for different crops to be kept by the growers of GM crops. Until now, there has been no commercial growing of GM crops in Denmark.

Table 9. Overview of organic agriculture policies and programmes

Item	Government policy and programmes
General awareness of merits of organic agriculture	Organic as an environmental tool and as a market opportunity
Organic regulations, standards and certification	State certification to EU regulation and some stricter interpretation regarding animal welfare and environment
Domestic market development	Support for consumer information since 1987 and for generic marketing
Export market development	Support for reaching the markets, including certification issues
Food processing	Support for innovation and marketing
Production	Support for conversion and ongoing production (area support)
Research	Extensive research and development programmes
Extension service	Support to extension and training

Since 1987, there have been a number of government programmes and policies supporting organic farming. They can be divided into the following areas:

- Area payment[71] as conversion payment and ongoing payment (The area payments have been going on since 1987, for both conversion and converted land. The levels have varied, and in periods there have been extra high levels of support for specific productions needing a boost, e.g. pig and plant production.);
- Development and innovation projects;
- Funding for research and development;
- State certification and inspection; and
- Organic farming using programmes not specifically targeted to but very useful for organic farming, e.g. the general innovation programmes for product development and the regionally distributed funding under the EU rural district programme.

From 1992, organic support became a part of the EU agro-environment scheme. Besides the area payment, many ways to support market-led development have been developed. This includes support for information about organic farming and organic products for consumers; support for the conversion of public kitchens; product innovation, marketing, export activities; and support to the House of Organics. Ways to build knowledge through research and development have been prioritized. Most of this funding has been through targeted programmes applied for by NGOs, manufactures, farmers and researchers. Mostly, the funding of major programmes to support organic farming has been connected to larger policy initiatives, such as the aquatic environment action plans and the pesticide action plans.

The policy development process

Denmark had the first law on organic farming, in 1987[72]. It included support for conversion and development projects, introduced public certification (based on the existing private standards) and established the Council of Organic Agriculture (later the Organic Food Council). Two action plans for organic farming formulated by the Council (in 1995 and 1999), have guided the support for organic farming. The first plan developed the groundwork required to establish a structure developing the primary production and encourage conversion. The second plan was to be an extension of the first, putting Denmark in the forefront of the development, production and sales of organic foods. Action Plan II identifies and assesses initiatives and actions that secure continued growth within organic food production and the sale of organic foods within Denmark, and improved opportunities for the export market. Most of the recommendations from the action plans have been implemented.

Cooperation between the sector and consumer-cooperative shops, from the very start, made organic products easy accessible for all consumers and the rapidly growing domestic market proved to be important for further conversion. This was supported by extra premiums for milk paid by the large dairies to cover the growing consumer demand, which started in 1993. The large and growing consumer demand nursed the political interest as well, supported by very positive interest from the media. Involvement and cooperation can describe the Danish policy development process, both between the various stakeholders and between those and the public authorities. The organic sector has been quite united and strong enough to initiate new policy measures and push for activity when needed. The conventional farmers have been participating positively towards organic farming, even though there are differences in views, for example whether organic farming mainly is a market niche or an environmental tool delivering public goods. The policy environment has been described as a creative conflict[73].

[71] I.e. payment per hectare for organic production.
[72] Law no. 363, 10/6 1987. Law on organic farming.
[73] Organic Farming Development and Agricultural Institutions in Europe: A Study of 6 countries. Michelsen et al. Stuttgart-Hohenheim, 2001.

The Organic Food Council

The Organic Food Council was established by the first law supporting organic farming in 1987. The members are NGOs from organic and conventional associations (but all representing only organic issues), representatives from ministry departments relevant to organic, and consumer and trade unions. Later, it was expanded with representatives from organic food processors and the retail sector. The aim of the council is to advise the Minister of Agriculture in all issues regarding the organic sector; to encourage, monitor and assess the opportunities to develop Danish organic food production; to assess the extension and research work; to formulate proposals for additional activities; and to comment on standards for production, marketing, storage, transport, labelling, distribution and retailing of organic goods[74]. The Organic Food Council has been important for the strong network between the members and has institutionalized the connection to the ministry. Still, the Danish Association for Organic Farming has had close direct contact with the Minister for Food and Agriculture, with formalized meetings.

Opportunities and challenges

The level of organic agriculture, both with regard to the converted area and the organic share of the domestic food market, is high compared with most other countries. The Danish organic food and farming sector stands as a fully professionalized business sector, able to compete with conventional food and farming organizations in the domestic market, and ready to meet major export challenges. At the same time, the area under organic production has stagnated, very much due to surplus production, especially in the dairy sector. Even though new organic dairies have been very innovative and the market share of organic fresh milk in Denmark is very high, the export possibilities have not followed the growing production. Reaching new consumer groups in the domestic market is a difficult challenge, but one that is taken very seriously by the sector. Overcoming export barriers and finding ways to develop products for the still-growing markets in the European Union and the United States are other important tasks.

Public attention towards organic issues is decreasing; organic isn't "good news" anymore, it is a normal part of the food market. A new Government, which is less supportive of the sector, puts more responsibility on the private sector. Until now, the policies responsible for supporting and developing organic farming have been successful. Potentially, they have also made both the institutional and the knowledge base strong enough, not only to keep the current high level, but also to cope with the next steps developing the organic sector even more.

Lessons learned

The following has contributed to the strong development of organic farming in Denmark:

- A high level of involvement in the public policy of the organic associations and of consumer and environmental organizations;
- Targeted support from the Government, not only for conversion and ongoing farming, but very important targeted support for information to consumers, product innovation, extension service, conversion of public kitchens and capacity-building (The support programmes have been implemented with strong involvement of the organic farming sector itself.);
- Development of a strong home market, which supports conversion and development of the sector;
- Action plans for organic farming developed by the Organic Food Council, and used as guidance for the policy development;
- Organic farming used as an environmental tool in several large political agreements;
- Media attention and information, in which organic farming has been "the good news" in the "bad news" sector of agriculture – only recently, news on organic farming could be "not so good";

[74] Danish Directorate for Development, action plan II summary 1999.

- Monitoring of the press by the organic organizations (If bad publicity appears (fraud, animal welfare problems, etc.), they react immediately often supported by other organizations and sometimes the ministry.);
- Large targeted research programmes with involvement from the sector (including the action plans) concerning target areas.

Annex 4. Egypt

Agriculture conditions

The main economic activity in Egypt is agriculture, with 35 per cent of the manpower employed. Until the 1980s, the Government (Ministry of Agriculture) was responsible for the whole sector, including policies, cultivation plan, rotation and marketing. Nowadays, the agricultural sector is privatized and the Government is only responsible for research, extension and general policies. Egypt has three different agricultural zones, all of them subtropical. The first is the Delta area in the north, where crops such as wheat, barley and potatoes are grown in the winter, cotton, rice and sunflowers in the summer. The second zone is the middle, where wheat, different vegetables and medicinal plants such as chamomile, marjoram, and fennel are cultivated in the winter and cotton, sesame, corn and sunflowers in the summer. The third zone is Upper Egypt, or the southern part of Egypt, where onions, garlic and vegetables are grown in winter and corn and sesame in the summer. There is almost no rain in the middle and southern Egypt. Between 90 and 95 per cent of farmland is managed by smallholders; the reminder, especially in the newly reclaimed area, is under the control of large estates involved in the export sector.

Organic agriculture

Certified organic agriculture started in Egypt in 1976 on 17 hectares in the farm of SEKEM, to produce herbs and essential oils for export. Expansion was quite slow until 1988. Thereafter, a rapid growth occurred in the biodynamic production of vegetables, cereals and cotton, in addition to medicinal plants. In 1996, the Egyptian Bio-Dynamic Association was established and in 1998 the union of growers and exporters of organic and biodynamic agriculture was established. Members of these associations produce and trade in organic products. Soon thereafter, many large companies were established. The organic movement was also spread among small farmers.

The total organically cultivated area is currently 25,150 ha and organic agriculture represents 0.08 per cent of agricultural lands. The number of registered companies dealing with organic agriculture (processors and/or exporters) is 94. A large number of crops are now produced organically such as:

- Vegetables: potatoes, onions, garlic, beans, sweet and hot peppers, cucumbers, melons, strawberries, tomatoes, cherry tomatoes, squash, iceberg lettuce, carrots and peas;
- Fruits: grapes, apricots, peaches, apples, lemons, limes, oranges, mandarins, pears, pomegranates and mangoes;
- Fibre and field crops: cotton, peanuts, sesame and flax; and
- Medicinal and ornamental plants: marjoram, caraway, anise, calendula, spearmint, peppermint, basil, thyme, hibiscus, cumin, celery, parsley, dill, leeks, geraniums, fennel, lemongrass, coriander and chamomile.

Organic markets

Total exports are estimated at 15,542 tons (vegetables, fruits, medicinal plants, etc.) representing 50 to 60 per cent of production. The other portion of organic products (40 to 50 per cent) is sold in local markets. Organic herbal teas, packed in tea bags, are consumed a great deal in the local market.

Table 10. Organic exports of various crops in tons during 2004/05 (data from four certification bodies)

	Metric tons
Vegetables	10 182
Fruits	984
Medicinal plants	571
Crops	485
Essential oils	104
Textiles from organic cotton	67
Cotton	13
Total	**12 406**

Agriculture policy

A number of general governmental programmes and policies are influencing the organic sector. The Government has a programme to reduce the use of pesticides. In 1971, Egypt consumed 34,000 tons of pesticides; in 2004, it was reduced to only 3,000 tons. The agricultural policy promotes Integrated Pest Management (IPM) technology in pest control. In 1994, The Ministry of Agriculture established a laboratory for chemical residue analysis (heavy metals and pesticides) in food and other commodities. In 2000, it banned the use of pesticides in five zones.

Special organic programmes

In October 2002, the Ministry of Agriculture issued a decree to establish the Central Laboratory for Organic Agriculture. The functions of this lab are to:

- Promote organic farming among extension workers, farmers, processors, exporters and to raise public awareness;
- Establish a database of organic farming;
- Coordinate the work of the certification bodies working in Egypt;
- Control organic products sold in the local market, not as a certification body but as an authority to control the market itself; and
- Carry out research to solve problems of organic agriculture.

Besides the Central Laboratory for Organic Agriculture, there are several departments within the National Agricultural Research Center and faculties of agriculture of universities which deal directly or indirectly with organic agriculture. These include:

- The Department of Organic Farming within the Central Laboratory of Agricultural Climate, which carries out research and extension;
- The Department of Soil Microbiology within the Soil, Water and Environment Research Institute, which carries out research on compost, nitrogen-fixing organisms, etc.;
- The Department of Biological Control within the Plant Pathology Research Institute, which carries out research on agents controlling plant diseases; and
- The Department of Biological Control within the Plant Protection Research Institute, which identifies biological control agents against insects.

Further, the faculty of Agriculture at Azhar University established the Department of Environment and Organic Agriculture in 1997. Formal teachings started in 1999/2000 and the first graduates were in June 2001. The faculty of Agriculture at Ain Shams University has approved the establishment of a Department of Organic Agriculture. Teaching started in the winter semester 2005/06.

Sector organization

NGOs play a significant role in supporting the organic movement in Egypt. Some of these include:

- The Egyptian Biodynamic Association (EBDA), established in 1997;
- The Union of Growers and Exporters of Organic and Biodynamic Agriculture (UGEOBA), established in 1998;
- Fayoum Organic Agriculture Society (FOAS);
- Ecological Agriculture Protection Association (EAPA);
- Egyptian Center of Organic Agriculture Society (ECOAS);
- Wafaa Society for Organic Agriculture Development (WSOAD); and
- Council of Organic Agriculture within EAGA (Egyptian Agribusiness Association).

All these organizations provide training and extension services in organic agriculture to its members.

Regulation, standards and conformity assessment

There are two national certification bodies: Egyptian Center for Organic Agriculture (ECOA) and the Center of Organic Agriculture in Egypt (COAE). Both are accredited by a European accreditation body and are members of IFOAM. There are seven foreign certification bodies working in Egypt.

Egyptian legislation for organic agriculture

No official legislation for organic agriculture is issued in Egypt as yet. However, there is a draft "Regulation to Process and Handle Organic Products in Egypt, Part I on Plant Production". This draft was prepared by a committee assigned by the Agriculture Council, Ministry of Trade. It will be submitted to the National Assembly for ratification. When this law is ratified, it will be submitted to the European Union for Egypt's approval as a third country.

Table 11. Overview of organic programmes and policies

Item	Government policy and programmes
General awareness of merits of organic agriculture	Training programmes for extension staff and farmers exist.
Organic regulation, standards and certification	A draft regulation of organic agriculture exists.
Research	The Government supports research in the Agricultural Research Center and universities.
Extension service	Some of the extension staff is trained in organic agriculture.
Others (credit, education)	For all farmers, not only organic farmers: credit lines with agriculture banks and revolving funds for certain projects.

Other policy influences projects and programmes

There are several international programmes that promote organic agriculture:

a. Italian technical assistance programmes: there are two projects being implemented in Fayoum and Mersa-Matrouh which assist farmers with the establishment of farmers' associations and training on organic agriculture principles and application.
b. CARE international is providing similar services for 750 farmers in the governorates Quena, Sohag and Fayoum. CARE is also establishing associations for marketing of organic products.
c. A USAID project provides training for farmers in organic production in Egypt. It also organizes study tours for selected farmers to visit organic agriculture in some developed countries, e.g. the Netherlands, Germany and Spain.
d. FAO provides technical assistance to the country to enhance organic development.

e. The European Union has commissioned a study on organic agriculture in Egypt and methods to enhance the organic sector.

Opportunities and challenges

Egypt has high potential for organic farming and has reached an important stage in implementing this practice for a large number of crops. Newly reclaimed areas (more than 500,000 hectares) are available to expand the cultivated area with organic practice. The Government of Egypt, NGOs and the private sector should develop organic agriculture through:

- National laws for organic agriculture to put Egypt on the European Union's third country list;
- Production of Egyptian standard specifications (ESS);
- Encouragement of the central laboratory of organic agriculture as a research and extension body with help from the NGOs to coordinate the organic movement and disseminate the knowledge and the culture of organic agriculture among farmers and extension staff;
- Encouraging and supporting the establishment of organic and consumer protection associations;
- Establishment of a database and information centres for organic farming;
- Establishing a market information centre for organic products;
- Encouraging exports to international markets;
- Increasing the public awareness of organic agriculture and the need for safe food; and
- Investing in education.

The association of organic exporters has identified the following limits for the competitiveness of the organic sector in Egypt:

- Limited methodologies available for processing organic foodstuffs that avoid the use of prohibited substances;
- High cost of organic ingredients for processed products, some of them imported, e.g. sugar;
- High cost of the machinery (i.e. composting machinery and steam sterilization machines to disinfect products from bacteria and fungi);
- Low availability of organic seeds, seedlings and vegetative materials; and
- High cost for logistics, keeping organic products separate.

Tapping unused local knowledge and smallholder access

Subsistence farmers living under various ecological conditions have acquired invaluable knowledge of genetic stock, cultivating techniques and natural resource management that can contribute to developing organic farming systems. However, little of this heritage of learning and insight is recorded and disseminated. A key to further advances lies in building institutional bridges between farmers and research and extension services. The initial focus has to be on the knowledge and wisdom of the local farmers and their capacity to innovate and develop cultivation procedures, pest control and harvesting procedures, which enhance the productivity and quality.

Because smallholders are quite isolated, they often don't receive the technical information needed to enable them to improve their livelihoods. Connecting them to knowledge networks, particularly those that allow them to learn from each other, is essential for the development of organic farming systems. Many opportunities to increase the rate of development are missed because the smallholders are seldom listened to, learned from, and engaged in the development process. Only if partners have a say in why, what, and how programmes and projects can be made to work for them, can real development occur. This participatory approach may be slower and more difficult, but it works better.

Annex 5. Malaysia

Agriculture conditions

Malaysia is divided into West (or Peninsular) Malaysia and East Malaysia, with a total land area of 330,000 km^2. The climate is hot and humid throughout the year. Average temperature is 26°C and average humidity is 80 per cent (peaks to 94–100 per cent). Daily temperature varies between 21 and 32°C and 13 and 27°C on the coast and in the highlands respectively. Annual average rainfall is between 200 and 250 cm (higher for East than Peninsular) with a north-east monsoon from October to March (wet period) and a south-west monsoon from May to September (dry period).

Malaysian agricultural production consists of commodity tree crops (mainly for export), rice and livestock (mainly for domestic consumption), and fruits and vegetables (for both export and domestic consumption). The main export crops include oil palm, rubber, cocoa, pineapples and pepper, and cover over three quarters of the cultivated land. Production is divided between self-employed smallholders and plantations. Smallholders hold the majority of land, but the more efficient larger plantation sector dominates production. Green Revolution agriculture has been promoted, together with infrastructure and technical support to smallholders, to increase yield and income. The Government is encouraging a shift of production to higher-value crops. A minimum area will remain under paddy because of its strategic importance. The domestic rice self-sufficiency production target is set at 65 per cent. New growth sectors identified include: floriculture, aquarium fish and biotechnology products, including plant cell tissue culture techniques for producing metabolites for pharmaceuticals, dyes and food additives; use of hormones to improve animal productivity; enzyme action in fermentation processes; and GMOs.

Organic agriculture

There were two streams of development initiatives, NGOs and the private sector. NGO involvement started in the second half of the 1980s. In the early 1990s, a number of pioneer organic production initiatives started up. Parallel to the above, consumer demand for organic produce, primarily from cancer patients on diet therapies, began to catch on. Imported organic products of limited selection were reportedly available as early as 1985, at a retail shop in Kuala Lumpur. But it was only in the mid 1990s that regular importation of organic products was organized.

A major breakthrough came about in 1995 with the conversion of a number of commercial vegetable growers. The produce was distributed through a subscription system, where subscribers paid a monthly fixed price in advance for their weekly pack of vegetables. Distribution covered several major cities of Peninsular Malaysia, reaching more than 500 families. The company drew a lot of press attention, including a feature on national television. Although small, the Malaysian organic sector is a growing niche sector. Production is now mainly undertaken by professional (commercial) operators. Early NGO-type initiatives are now largely taken over by small and medium-sized market entrepreneurs.

Production

In 2001, the Department of Agriculture (DoA) reported there were 27 organic producers in the country with a total area of 131 ha, a five-fold increase in the number of organic initiatives listed in an earlier NGO country report on sustainable agriculture in 1996. In a local press report (NST, 6 March 2005) the DoA estimated that organic farming involved about 900 hectares with a sector value of about US$ 10 million a year. Domestic production is largely limited to vegetables and fruit with possibly one organic poultry operator in East Malaysia. Whilst growing, total estimated acreage is still statistically insignificant. This may change, given signs of interest from the palm oil industry.

A number of local retail bakeries are using organic ingredients (imported). There is small-scale processing of tofu, soymilk, soy sauce, tempeh, various sauces and pickles.

Sector organization for organic farming

The first of several efforts to form a national network was the Malaysian Organic Farm Network (MOFAN) initiative in 1990, but it is currently not active. In 2001, Organic Alliance Malaysia (OAM) was founded as a membership-based private sector association to fill the gap. It currently has over 30 members, mostly from the trade (importers and retailers). OAM hosts a monthly lunch meeting for organic operators in Kuala Lumpur and publishes the Organic Directory. It is also considering a private label scheme. Besides MOFAN and OAM, there are two other groups.

Markets

Most local production is sold domestically with some export to Singapore. Today, sales channels include dedicated organic/health food shops and supermarket chains. No reliable market statistics are available. Market turnover was estimated to be about US$ 14 million for 2004 (market interviews), and growing. The market has largely been developed through personal recommendations and word of mouth, with each dealer cultivating his/her own group of consumers. Adverts are occasionally found in health-related magazines, but rarely in newspapers. In the late 1990s and early 2000s, when organic was relatively new, press coverage was frequent. Press coverage is now infrequent and incidental. Public seminars are held now and then, often in conjunction with events such as world food or environment days. An annual fair called Organic Search has been staged by an NGO since 1999.

Imports

Imports comprise the larger portion of organic products sold in the country. The main import items are grains (wheat and beans), pasta, juices, cereals and beverages. Imports also include vegetables and fruits. Fresh produce is mainly imported from Australia and New Zealand. Processed products are also shipped from the United States and Europe. Some items are sourced from Thailand and China. It is worth noting that Malaysia is overall a net importer of food products with imports of US$ 3.4 billion in 2003 (Source: Statistics Department 2004).

Distribution

As retailers and supermarkets were not keen to stock organic products earlier, distribution in the 1990s was mainly through home-based dealers, who are mostly consumers of organic products themselves or advocates of natural/alternative health systems and diets. The pioneer organic importers and distributors were new companies set up and dedicated to handling only organic products. Some of them have since been taken over by conventional business corporations interested in expanding into organics. The major importers, distributors and a majority of retailers are located in the Klang Valley, where the capital city Kuala Lumpur is located. Markets are also developing in other major cities in the country.

Supporting structures

Training: There is no formal organic agriculture training available in the country. Introduction to organic agriculture is available through the occasional seminars and workshops organized by NGOs and more recently by the DoA. Technical development in the field comes mainly from self-initiative and learning from experience. Few private-sector, NGO activists or government personnel are trained in organic agriculture.

Advisory service: The DoA has service stations spread over the country and employs a visit and training system for extension in general. Information about organic agriculture is likely to be disseminated through the existing visit and training system, as is IPM. Professional private sector advice on organic production and certification is available from a limited number of people in the country.

Research: Few studies on organic agriculture have been made. Previous and current organic production experiences are largely not documented. MARDI (Malaysian Agriculture Research and Development Institute) has started research in this field. Nevertheless, reliable data about productivity, fertility, pests and diseases management, and cost-benefit analysis, are not yet available.

Regulations, standards and conformity assessment

There is currently no regulation on organic labelling in the country. Except for a few operators certified by foreign certification bodies working in the region, most farms, processors, importers, wholesalers and retailers are not certified. Most processed products are imported and sold as finished certified packed products. Bulk items such as grains and dry food are repackaged and relabelled by importers under their own organic brands. The market basically works on trust. Fraud has not been a serious problem. Retailers generally purchase from producers they trust and consumers buy from retailers they trust.

In August 2001, the Malaysian Standards for the production, processing, labelling and marketing of plant based, organically produced foods (MS1529) was approved and published by the Department of Standards Malaysia. MS1529 mentions three major references in its development:

- FAO/WHO Codex Guidelines for the production, processing, labelling and marketing of organically produced foods;
- IFOAM Basic Standards, September 2000; and
- Concepts, Principles and Basic Standards of Organic Agriculture by the Indian Standards Committee.

MS1529 is not written as a standard for producers. The DoA has since finalized more detailed standards. The Government has established a certification programme, Skim Organic Malaysia (SOM), within the DoA. Registration for certification, currently covering only primary crop production, was officially opened in December 2003. There are about 40 applicants on the list. No certification has yet been issued.

Agriculture policy

The first National Agricultural Policy (NAP) in 1984 was oriented towards stemming rural–urban migration. It was thought at the time there would not be enough urban jobs to absorb migrants. Because of rapid industrialization and economic growth in the late 1980s, Malaysia experienced labour shortages in the manufacturing sector. The second NAP in 1992 turned to facilitating rural–urban migration with a focus on encouraging the evolution of larger farms and intensifying human resource development for rural youth to migrate to higher value added jobs in other economic sectors.

Organic agriculture policies and programmes

Though previously ignored, the Third National Agriculture Policy (NAP3) identified organic agriculture as a niche market opportunity, particularly for fruit and vegetables. The Government plans to encourage small-scale producers to venture into organic farming as part of the strategy to raise producers' incomes, overcome problems of chemical residues in food production, protect the environment, reduce food imports and enhance the country's export of high-quality safe food. Setting up an accreditation scheme to facilitate domestic market development is included in NAP3.

Under the Eighth Malaysia Plan (2001–2005), the Government targeted an increase of organic production area by 250 ha. It includes provision of additional one-time assistance of up to US$ 1,300 per hectare in infrastructure development, for example farm road, irrigation, drainage, electricity and water. Organic producers are also eligible for existing credit schemes as well as a special loan for agriculture enterprises. At a public seminar announcing the DoA organic certification scheme (August 2002), the Minister of Agriculture noted that in the future, support comparable to that given to conventional agriculture, such as credit facilities, extension, research and development, will be devoted to developing organic agriculture in the country. The Ministry, he said, was studying the DoA's proposal to establish special organic production areas.

Under the Ninth Malaysia Plan (2006–2010), the Government is targeting the organic farming industry to be worth more than US$ 200 million in five years. The Ministry of Agriculture plans to have 20,000 ha under organic farming methods by 2010, increasing local production by 4,000 ha per

year. Organic consumption is expected to grow by 20 per cent per annum. Allocation for organic farming is expected to increase substantially from the US$ 135,000 allocated under the Eighth Malaysian Plan. Various courses are lined up to teach the benefits of organic. (*Source:* press report, NST 6 March 2005).

Table 12. Summary of government measures to support organic farming

Item	Government policy and programmes
General awareness of merits of organic	Activities projected in Ninth Malaysian Plan (2006–2010).
Organic regulations, standards and certification	No regulation. National voluntary standards published. Government certification programme established but not fully operative.
Domestic market development	Government certification programme.
Production	20,000 ha expansion by year 2010 is planned.
Research	MARDI is conducting some research.
Extension service	Conducted through current visit and training system.
Other (credits, education, etc.)	Access to existing support for conventional agriculture.

Policy development process

In the late 1990s, although organic agriculture was in its infancy stage, the need for Malaysian Standards was raised at a number of forums by NGOs in the country. A working group in the DoA was formed and draft standards were prepared in 1999/2000. A request was subsequently made by the DoA to the Department of Standards Malaysia to adopt Malaysian Standards on organic foods. A Working Group on Organic Foods under the authority of the Food and Agriculture Industry Standards Committee was established to follow up deliberations on the standards initially prepared by the DoA working group. Members of this group include a mix of government bodies (e.g. DoA, Ministry of Health, Malaysian Agriculture Research and Development Institute, Malaysian Palm Oil Board, Malaysian Palm Oil Association, Malaysian Pepper Board, NGOs and a private company).

In August 2002, the DoA introduced the government certification programme, including an innovative public–private partnership implementation arrangement on inspection with Organic Alliance Malaysia (OAM), the private-sector organic association. Less than a year later, in July 2003, with the change of programme manager, the arrangement was rescinded. Acceding to requests for greater support, the DoA announced that it will offer certification to all operators (primary production) free of charge. The certification scheme targeted for the domestic market will be implemented on a voluntary basis. It is projected that certification could eventually be private-sector based. The DoA is expanding the scope from primary production to cover processing, repacking and retailing.

Implementation of other aspects of the government support for organic agriculture, for example research, extension and promotion, is not open to private-sector involvement.

Opportunities and challenges

The Malaysian organic sector is a young growing sector and lacks sector organization in many respects. Sector development is partly constrained by the absence of support services, for example research and training, and a strong common platform to provide clear sector leadership and direction.

Production and conversion: Although market premiums are high, farm conversions are still low due to the risk and cost of conversion. Conversion support requires time and resources. Technical development currently is largely dependent on the producer's own initiative and self-learning from practical experience. Many farmers are reluctant to invest time and resources in soil improvement due to insecurity of land tenure.

Agriculture production in Malaysia is also segregated. Crop cultivation and animal husbandry are normally farmed separately. Animal manure and/or plant residues have to be brought and transported over distances for composting. As vegetable holdings are small, restructuring the farm to incorporate animals is not generally feasible.

Quality assurance and regulations: Although approved in 2001, MS1529 has so far had no impact on the Malaysian organic industry. Few are even aware that it exists. The DoA certification programme scheduled for implementation in January 2003 has yet to emerge in the market. Whilst appreciating the Government's initiative, producers and market players are concerned about the lack of transparency and efficiency in the process. The sector is also concerned of the possible establishment of mandatory labelling regulations that would be premature for sector development.

Pricing, selection and product development: Prices for imported as well as local organic products are generally high. Retail prices for fresh organic fruit and vegetables can be up to four times the conventional prices. The high price tag for organic products is an impeding factor for wider market uptake. Total market volume is relatively small. There is still a lack of selection. Many food items are still unavailable, for example animal products. Local processing is in its infancy and available products do not always meet consumer taste preference.

Sector development: There is plenty to do, mainly in the area of research and extension, product development and private sector norms and certification. The sector is somewhat trapped in a comfortable, high-margin "bubble" market and not quite able to address the infrastructure deficiencies to get out of its niche situation. Unfortunately, government involvement is focused on certification and not on the critical gaps in research, extension and consumer education.

Impact of government policies: The private sector is worried that the Government's interest in pushing the supply side could flood and destabilize the market. Imports have been instrumental to the development of the domestic market (regarding the availability of a variety of products). The private sector is also concerned that the Government's interest to reduce the national food import bill may lead to regulations that will also restrict organic imports. The above may rally private sector actors to a more cohesive private sector–NGO advocacy position that would inform government intervention.

Lessons learned

The two major lessons or challenges are building sector consensus and better public–private partnership.

Sector consensus: NGO activists continue to be sceptical of private sector intentions to collaborate well together. The private sector, made up of "competitors", has also yet to find ways and means of collaborating in common sector building initiatives.

Consistency in policy implementation: Frequent changes of leadership in the public sector, from Ministerial to Department head levels, make it hard to maintain consistency in policy implementation. Over three years of the DoA certification programme, there has been a change of the Minister of Agriculture, three programme managers and three chairpersons of the steering committee.

Lost opportunity: Although it is projected that certification could eventually be private-sector based, the DoA later rescinded the joint implementation arrangement due to requests from parties wanting free service or opposing the appointment of OAM as the private sector inspection body. The DoA turnaround placed OAM in a quandary. OAM suspended its founding objective to establish private-sector certification in favour of collaboration with the DoA. Having waited and waited for the Government to roll out its certification programme, private sector actors and NGOs are beginning to recognize their needs may be better served by a private-sector initiative.

Annex 6. South Africa

Agriculture conditions

South Africa, with its apartheid history, still suffers from a dual economy, and this is particularly true of agriculture. In the 20th century, 60,000 white commercial farmers were heavily subsidized by the State. Of these, 3,000 highly efficient farmers produced 40 per cent of the Gross Agricultural Product, while another 10,000 produced a further 40 per cent[75]. Other farmers made little profit, or in many cases substantial losses, but they were supported by low interest loans. Much of the indigenous agricultural tradition was destroyed by the British colonial and South African nationalist administrations. Land reform is a priority of the new democratic Government, and although the practical support for emerging commercial farmers is often poorly implemented, slow but steady progress is being made[76].

A second factor affecting South African agriculture is the arid to semi-arid nature of the country. Although the eastern seaboard is reasonably well watered, the further west one travels, the drier the country becomes. Typically, the sub-tropical east coast enjoys annual precipitation of 900–1200 mm (forestry, sugar, vegetables, dairy, tropical fruit); the central rain-fed cropping areas have 600–900 mm (maize, sheep, beef cattle, goats, wheat); while the arid west has annual rainfall of 300–900 mm (sheep, goats, with pockets of fruit, tobacco, cotton, groundnuts, mohair and Rooibos tea). Only 3 per cent of the country's 122 million ha can be irrigated, and more than half of this is already developed (about 14 per cent of the total is arable). Maize is the staple food. Although the overall contribution of agriculture to the Gross Domestic Product has fallen steadily from the middle of the 20th century, agricultural exports have risen sharply over the past 12 years (US$ 0.4 million in 1992; US$ 2.2 million in 2002[77]). In spite of this, there has been a dramatic exodus of skilled agricultural workers from the sector[78], with totals dropping from 1.7 million in 2000 to 1.2 million in 2003.

Organic agriculture

Within this context, organic farming, too, suffers from the "dual economy" syndrome. Whereas in 1970 there were fewer than 20 certified organic farmers and about 50 small-scale organic gardeners actively involved with Bio-Dynamic or Organic Associations, all of these were South Africans of European origin, except for one, the notable Zulu organic pioneer, Robert Mazibuko. He inspired many young South Africans, black and white, to become involved in organic farming, and to build on the African tradition of organic farming. Many traditional farmers were still organic, carrying on with the indigenous traditional knowledge which is part of the African heritage. However, much of this tradition had been deeply damaged by limitations on land ownership (first imposed by the British in 1897, under the Glen Grey Act, which forbade black South Africans to own more than four ha of land), and the whole apartheid land deprivation, which saw 13 per cent of the land allocated to over 80 per cent of the people.

Organic farming among white farmers grew from its low base in 1970 to about 50 small commercial organic farmers farming actively by 1990. In 1993, the first organic farmers were certified, by the United Kingdom Soil Association, and the export market developed, with a few large commercial enterprises exporting avocadoes, tropical fruit, and later Rooibos tea, wine and some seasonal vegetables. By 2001, the number of certified farmers had risen to 291, covering over 200,000 ha of land, most of which was extensive grazing land in the dry Karoo. A survey established that at that stage, approximately 25,000 ha of arable land was certified organic[79].

[75] Land Policy: Towards sustainable development, 1990. RMB Auerbach, Indicator South Africa: Policy Review, vol. 8 no. 1, University of Natal, Durban.
[76] National Skills Development Strategy Implementation Report, 2003/04. Dept of Labour, Pretoria.
[77] Ibid. p.238.
[78] National Skills Development Strategy Implementation Report, 2003/4. Dept of Labour, Pretoria.
[79] Organic Farming: A world revolution in agriculture, 2001. R Auerbach in Farmers Weekly.

Leonard Mead, Chair of Organics South Africa, estimates that in the year 2005 there were about 200 certified organic farms in South Africa covering some 515,000 ha. Of this, he estimates that about 500,000 ha is natural veld (grass), and about 11,000 ha is Rooibos tea. Of the balance, 59 per cent is fruit, 6 per cent essential oils, 4 per cent wine, and the rest vegetables[80]. The domestic and export markets are both currently showing healthy growth.

Organic markets

The past five years have seen the development of a small but vibrant domestic market in South Africa. Several supermarkets are actively promoting organic products, and some are supporting small farmer producer groups[81]. However, the supermarkets tend to insist on exclusive supply to one market by a farmer group, and are reluctant to provide meaningful developmental support to farmers, even though they use their support of the farmers extensively in advertising campaigns. The organic export market continues to grow steadily, with the main lines being Rooibos tea (to Japan), organic wines (mainly to Europe) and subtropical fruits (mainly to Europe and the United States). Pack houses are inadequate for current needs of the organic sector. Food processing is mainly developed for wine, soy, wheat and fruit.

The table below gives a rough estimate of the value of the organic industry in South Africa. There are only about 200 large and medium-scale farmers certified in the country, producing perhaps US$ 16 million to US$ 19 million in (mainly export) earnings per year. Then there are a substantial number of small commercial farmers, only a few of them certified. This sector represents a tremendous potential for the growth of the organic industry, and will largely respond to the demands of the domestic market. These farmers, like the large and medium sectors, comprise mainly white farmers, but increasingly, emerging black farmers are showing interest in organic agriculture, seeing it as a development of their indigenous knowledge systems, and also recognizing the potential of certified organic production in opening up access to the marketplace. The category of emerging farmers shown in the table represents the subsistence farmers, most of whom are not organic by design, but rather organic by default. The estimated total value of organic produce is therefore between US$ 30 million and US$ 60 million, but a big share of this is neither certified nor sold as organic.

Table 13. Estimate of the value of organic produce in South Africa[82]

Number per category	Intensively farmed area and value	Total yield value/ category
100 large (500–5,000 ha)	R5,000/ha x 200 ha = R1 million	R100 million
100 medium (50–500 ha)	R2,000/ha x 100 ha = R200,000	R20 million
5,000 small (5–50 ha)	R1,000/ha x 10 ha = R10,000	R50 million
1 million emerging (0.5–5 ha)	R200/ha x 1 ha = R200	R200 million

Sector organization

Four main farmer organizations exist in the organic sector. The oldest is the BioDynamic Agricultural Association of Southern Africa. Organics South Africa is the largest organization and has now established itself as a credible mouthpiece for commercial organic farmers. The Cape Organic Producers' Association is a small but highly commercial, and highly focused group in the Western Cape. The Network of Community Organic Farming Associations works with small-scale emerging farmers.

[80] Key developments in the global organics market, and their potential for KwaZulu-Natal, keynote address by Leonard Mead, Chair, Organics South Africa, 23 November 2005.
[81] The Organic Journey, 2005. Woolworths (www.woolworths.co.za).
[82] The organic industry in South Africa, 2003. Dr. Raymond Auerbach, Director, Rainman Landcare Foundation. R1 = US$ 0.16. Paper delivered to the Symposium on the Potential Contribution of Organic Farming to South Africa's Economy.

Supporting structures

Support for organic farmers through government research and extension has been non-existent to date. An important development over the past five years is the establishment of Quality Management training and procedures, which are broader than just organic certification, but include EurepGAP requirements. Organic producer groups have started to work together, and the first group of Zulu farmers was certified in 2001. This group has grown from 27 farmers to over 200. Several other groups, all in the province of KwaZulu-Natal, have been established since then, and are in the process of organizing themselves as primary cooperatives, while establishing Zulu Organics as a secondary cooperative to set up a Quality Management system, coordinate logistics and packaging, and assist with marketing[83]. Several training organizations and non-government development organizations are providing some assistance with project implementation and training. The Rainman Landcare Foundation is currently the only government-accredited training organization offering training in organic agriculture, and these courses are now offered through a number of organizations which have arrangements to use the accredited training manuals.

Regulation, standards and conformity assessment

Organic standards were developed by a national group, based on the European regulation 2092/91, but modified to suit South African conditions. Representatives from the National Department of Agriculture assisted with this process, and took the draft to the Minister of Agriculture and Land Affairs as a proposed amendment to the Agricultural Product Standards Act in 2003. Despite repeated enquiries by Organics South Africa, the standards have yet to be presented to Parliament. The draft standard is however in practical use for the local market, that is, the local certification bodies certify producers according to the standards. Many producers are selling their products as organic without having obtained certification. By 2001, five foreign-controlled certification agencies were operating, and two local certifiers had been established.

Agriculture policy

South African agricultural policy has three major thrusts: increase commercial production through the use of biotechnology; increase the number of black commercial farmers through black economic empowerment strategies; and assist small-scale, resource poor farmers to move towards household food security. In the past, government financial aid policies insisted that small-scale farmers should use "development packages" in order to qualify for loan finance. Thus, the KwaZulu Finance Corporation would only lend money to farmers for crop production if they purchased fertilizer, pesticides and hybrid seed – in fact, much of the money went directly to the input suppliers. More recently, many of these practices have been discontinued. The State's "Strategic Plan for South African Agriculture"[84] aims to set up a cooperative structure to assist emerging farmers into the marketplace. There are programmes to promote trade opportunities for poor rural communities, and programmes to support agricultural exports.

Organic policies

The Department of Labour is actively supporting Organic Farmer Training, and the Department of Trade and Industry is assisting with the formation of cooperatives. Elements within the Department of Health are strongly interested in the potential of organic home gardens to assist those living with HIV and AIDS, both through the beneficial effects of small-scale market gardening on motivating people not to give up on life, and because of the support given to the immune system by adequate quantities of fresh, organically-produced vegetables. The National Department of Agriculture does have a national Landcare Programme which actively encourages soil and water conservation, and which supports many community projects of organic farming groups. However, this programme does not support organic agriculture directly. In the past, the National Department of Agriculture showed little

[83] Key factors influencing KwaZulu-Natal organic producers in the context of market demand, keynote address by Raymond Auerbach, Rainman Landcare Foundation, 23 November 2005.

[84] Strategic Plan for South African Agriculture, 2004. National Department of Agriculture, www.nda.agric.za/docs/sectorplan/sectorplan/htm.

support for organic agriculture (Landcare Directorate Keynote address, Landcare Conference, Pretoria, 2003). However, in 2006, the Department of Agriculture and the Industrial Development Corporation decided to develop a value chain strategy for sustainable development and growth of organic agriculture[85]. Provincial support for organic farmers is rudimentary in two provinces, and non-existent in the other seven. Support for organic farming is now discussed in many forums, but it is still often tacit support (as through the Landcare Programme to some projects which happen to be organic). More recently, the KwaZulu-Natal Department of Agriculture and Environmental Affairs has come out in support of organic agriculture[86].

One of the major reasons for reluctance to support organic agriculture at the national level appears to be the strong commitment of the South African Government to the use of Genetically Engineered (GE) seed. It was pointed out at the Regional Consultation on Genetic Engineering/GMOs for Development in Eastern and Southern Africa[87] in Nairobi that South Africa has signed the Cartagena Protocol, and yet has supposedly approved a number of GE crops without following the Protocol.

Table 14. Organic agriculture policies and programmes

Item	Government policy and programmes
General awareness of merits of organic agriculture	Little awareness, some indication of change lately
Organic regulations, standards and certification	Draft standards have been waiting three years for approval; little progress
Research	Little activity so far
Extension service	Poorly developed
Other (credits, education, etc.)	Education and training developing

Other policy influences, projects and programmes

The South African Government has a major interest in the New Partnership for Africa's Development (NEPAD). Although the Comprehensive Programme for Agricultural Development advocates sustainable agriculture, conservation farming and natural resource management, the emphasis is still strongly on biotechnology and GE in particular. Developmental organizations have produced a triple strategy for the development of the organic industry in South Africa[88]. The document recommends that one strategy is required for organic food gardens, and that these initiatives should be seen in the context of health, welfare and social security. A second strategy, involving research, training, extension support and pilot project implementation, is required for the development of the commercial organic sector. Finally, since few would actually choose to be subsistence farmers, a bridging strategy is required to help those who so desire to move from subsistence farming to semi-commercial organic farming through the cooperative movement.

The policy development process

Through long-term engagement with Government at the national, provincial and local levels, a number of development professionals have been able to lobby for a less negative approach to the organics industry. In KwaZulu-Natal and the Western Cape, with the help of the Dutch development group HIVOS, effective processes of integrating support for organic farmers into the Extension Services are currently underway.

[85] Invitation to tender from IDC.
[86] The relevance of organic farming to KwaZulu-Natal, introductory address by Harry Strauss, Deputy Director-General, KZN Dept Agriculture and Environmental Affairs, 23 November 2005.
[87] Regional Consultation on Genetic Engineering/GMOs for Development in Eastern and Southern Africa, 2004. K. Attah-Krah, F. Gasengayire, J. Ndun'u-Skilton and N. Nsubuga, International development Research Centre and International Plant Genetic Resources Institute.
[88] Rainwater harvesting, organic farming and Landcare: A vision for uprooting rural poverty in South Africa, 2005. Dr. RMB Auerbach, Rainman Landcare Foundation, Durban, South Africa.

Opportunities and challenges

At this point, there is an urgent need for lobbying so that the international developments within the organic sector are more appreciated by senior policymakers. Those policymakers who visit overseas countries, especially in Europe, return with a deeper appreciation of the growing role of organic agriculture in addressing social, environmental and economic problems within the agricultural sector. It would be very useful if senior policymakers could be shown developmental projects in the course of their overseas visits (e.g. SEKEM in Egypt, EMBRAPA in Brazil).

Lessons learned

It is essential that the organic industry speak with one voice in communicating with the Government, and understand and respect the developmental objectives of the new South Africa. Proposals need to emphasize how organic farming can contribute to sustainable rural development. The potential for organic agriculture to help South Africa deal with low and erratic rainfall (through combining organic farming and rainwater harvesting), with degradation of natural resources (through increased biodiversity and reduced pollution), with household food insecurity (through low external input approaches to local food production) and with the development of a vibrant small commercial organic agricultural sector (through skills training, development of quality management systems and the establishment of secondary co-operatives to support the emerging primary co-operatives) needs to be illustrated with practical projects. A number of successful pilot projects will serve to show that these are practical propositions; the need is for professionalism, both in commercial organic production, and in developmental work with resource-poor communities.

Annex 7. Thailand

Agriculture conditions

Thailand has three types of climates: a savannah type climate, with low precipitation and distinct dry winter season, is found through out the north-east, north and central regions; the south-eastern part of the central and upper southern regions experience a tropical monsoon climate, with heavy annual rainfall and a short dry season; and the lower southern region enjoys a tropical rainforest climate with high humidity throughout the year and no month with less than 61 mm of rainfall. Once a predominantly agricultural country, Thai agriculture has been on the decline since the 1950s. In the last 20 years, the contribution of agriculture to the national economy has dropped from 25 per cent to less than 10 per cent. Similarly, agricultural export has fallen from a dominant role in bringing foreign income into the country. Despite this decline, agricultural production is still expanding, though with a reducing rate, and over 60 per cent of the population is involved in the agricultural sector.

Rice is the main staple crop and its production occupies more than half of the farmlands. Rice surplus after domestic consumption is exported and represents a third of the agricultural export value. Fishery exports, both from wild catch and aquaculture, especially shrimp, have been the number one export earning activity. The second most important agricultural export commodity is rubber. Average land holding size is just above four hectares.

Organic agriculture

Thai organic agriculture has its roots in traditional farming. Such practices have been developed and enriched through farmers' knowledge of local agro-ecology and environmentally sustainable ways of farming. Around the early 1980s, many farmers and local NGOs came together to establish the Alternative Agriculture Network (AAN) to foster sustainable agriculture activism in Thailand. The AAN provides a discussion forum for experience sharing and policy advocacy for sustainable agriculture, including organic farming.

Table 15. Recent chronology of organic development

Year	Key events
1991	Chai Wiwat Agro-industry and Capital Rice Co started an organic rice project in Chiang Rai and Phayao.
1992	Alternative Agriculture Network organized its first national conference, requesting the Government to promote sustainable agriculture and organic farming. First Fair Trade rice from Surin was exported to Fair Trade groups in Europe.
1993	Green Net established.
1994	First public fair on "Chemical-Free Food for Health and Environment", Bangkok. Capital Rice began selling organic jasmine rice in Thailand and overseas.
1995	ACT was established, and first Thai organic crop standards were drafted.
1996	IFOAM-Asia Regional Workshop on "Certification for Organic Agriculture and Alternative Market".
1997	ACT commenced organic farm inspection and certification.
1999	Thailand Institute of Technological and Scientific Research, the Export Promotion Department of the Ministry of Commerce, and the Department of Agriculture (DOA), started drafting organic crop production standards.
2000	ACT obtained IFOAM accreditation and its first certified products appeared in Thai markets. The Cabinet approved US$ 15.8 million (633 million baht) to support a three-year pilot project on Sustainable Agriculture for Small-Scale Producers. The project was coordinated by the Sustainable Agriculture Foundation and covered 3,500 farming families
2001	DOA published organic crop production standards. First IFOAM Organic Shrimp Consultation held in Thailand.
2002	Ministry of Agriculture and Cooperative (MoAC) established National Office of Agricultural and Food Commodity Standards (ACFS), responsible for implementing/enforcing national agricultural and food standards as well as accreditation.

Year	Key events
	ACFS completed drafting "Organic Agriculture: the Production, Processing, Labelling and Marketing of Organic Agriculture". They cover crop production, livestock and aquaculture. Swiss Government recognized the competency of ACT, allowing ACT to conduct organic inspection and certification according to the Swiss Government's organic standards. First produce bearing "Organic Thailand" label appeared in the Thai market.
2003	First major international conference on organic agriculture held in Thailand – the 2003 International Organic Conference, co-hosted by FAO, Green Net and Earth Net Foundation. The Surin province set up a large-scale organic project, planning to convert 16,000 households (with 37,760 ha.) into organic jasmine rice farming, of which 2,735 households (covering 2,735 ha) would apply for organic certification from ACT. ACT was recognized by the Swedish competent authority for organic certification according to EU regulation 2092/91.
2004	ACFS launched an accreditation programme for organic agriculture. The Organic Agriculture Fair was organized by the MOAC and the Cabinet resolved that organic agriculture would henceforth be part of the national agenda.
2005	A government programme for organic is launched.

The Green Net and the Earth Net Foundation estimate that the area under organic farming increased from just below 2,000 ha in 2001 to 13,899 ha in 2004, representing 0.07 per cent of the total agricultural land area. The number of farms increased commensurately, with 2,498 organic farms, representing 0.05 per cent of the total number of farms in the country in 2004.

Table 16. Organic certified production in Thailand (ha)

Year	Rice and field crops	Fruits and vegetables	Other	Total
1998	1 005	-	-	1 005
1999	881	-	-	881
2000	1 120	563	-	1 683
2001	1 584	563	-	2 147
2002	5 254	3 581	123	8 958
2003	7475	3 561	123	11 159
2004	9 606	4 169	123	13 899

Thailand's organic sector is still in its early stages of development. Most production systems are still simple, without sophisticated technologies. Most organic products are basic unprocessed commodities such as fresh fruits and vegetables, and rice. Increasingly, more intermediate processed products are being developed, such as sugar, tapioca starch and palm oil. Processed organic produce, as finished consumer products, are relatively few, as the raw material is usually insufficient to supply processing plants, and the supply is often not reliable.

Organic markets

Organic products were introduced into the Thai market in the early 1990s, but did not gain market profile until a decade later. Most Thai organic products are exported, mainly to European countries. The collapse of the Thai economy in the mid-1990s depressed the domestic market for organic food and it was not until 2002 that Thailand began to see signs of a revitalized domestic market for organic produce. However, urban consumers were just becoming aware of the benefits of consuming organic food. This was partly due to the lack of available information to help consumers differentiate organic produce from chemical-free produce, which was also available in the market, and promoted by two separate government schemes. By the end of 2004, many certified brands of organic farm produce appeared in local supermarkets and modern trade outlets, particularly in Bangkok. These new entrants into the market led to an increasingly competitive environment and helped reduce prices to the consumer.

Reliable sources of data on organic produce are hard to find. The situation is confused by the various standards or systems of certification for organic produce and other safe produce (with no organic

certification). This makes it impossible to categorically differentiate between the two markets. Despite such limitation, Green Net and Earth Net Foundation estimate the domestic market for certified organic products in 2004 at US$ 940,000. The non-certified organic and health food market is much harder to quantify, but the total market value may be as high as US$ 75 million. In the domestic market, organic products currently carry around 10 to 50 per cent premium prices. The premium has gone down as more producers offering new organic products have entered the market. The main sale channel is modern trade outlets, such as supermarkets and discount stores. Specialized health shops, though booming in the mid-1990s, are unable to compete with the modern trade outlets and very few are now in operation. Direct marketing exists only to a very small extent, mainly in the countryside, where farmers' markets are a preferred sale channel for fresh organic produce.

Supporting structures

As organic farming is a rather new phenomenon in Thailand, there is no well-developed organic extension methodology available. The Government's training and extension utilize a conventional training module emphasizing classroom lecturing. Also, most of the public agencies' training programmes do not have a clear objective of bringing farmers into certified organic production. Trainees might adopt some specific organic farming practices, such as bio-fertilizers, but not necessarily adopt all organic principles and convert the whole farm. The organic conversion programmes developed by local NGOs are more successful, with a combination of participatory learning and market incentives. Several tertiary education institutions are preparing curricula on organic or sustainable agriculture courses for bachelor's and master's degrees. None of these are available at this stage.

There are many research projects on organic agriculture as many research institutions see organic agriculture as a way to promote Thai exports and sustainable rural development. There are two streams of research, one focusing on local producer groups as well as assessing constraints and conditions for conversion; and the other on specific crop production technology with high export potential, for example organic rice, baby corn, okra.

Sector organization

No specific organic producers' organization exists at the national level. Small-scale producers are organized at the local level, especially for the benefits of organic certification and logistic arrangement. The Green Net's producer network is the largest network of organic producers' organizations, representing around half of all organic producers in the country. There is an informal group of individual government civil servants and researchers interested in organic agriculture, the "Organic Agriculture Society", which serves as a forum for discussion and policy advocacy among the active members. Many of its activities are linked to the Government's organic projects. The Thai Organic Trader Association was founded in November 2005. Although it has fewer than 10 members, the founding members are all the key players of organic trade, representing close to three quarters of organic trade in the country.

Regulation, standards and conformity assessment

There are many certification bodies offering service to Thai organic producers. For domestic markets, the Organic Agriculture Certification Thailand (ACT), a Thai national organization, is the largest, followed by the Organic Crop Institute, a public agency under the Department of Agriculture, Ministry of Agriculture and Cooperative. There are a few more organizations offering organic certification services but their scope is limited to a particular area/region. All these national and local certification bodies have their own organic standards (as well as their own labelling schemes), not harmonized to any particular standards. The National Office of Agricultural and Food Commodity Standards (ACFS) has set voluntary national standard guidelines for organic agriculture, but so far no one has shown strong interest in adopting the ACFS standard guidelines. The introduction of the ACFS national standards guidelines is an attempt to set up a regulatory framework compatible with the EU system. No official application has yet been submitted for the European Union's third country recognition.

Many foreign-based certification bodies, mainly from the European Union, offer certification services to Thai producers. Most certifications are based on EU regulation 2092/91, but some also have NOP and JAS organic certification. The majority of organic products sold in Thailand are certified by local bodies, which account for half of the certified producers in Thailand, while the other half is certified by foreign-based certification bodies. Because Thai organic producers are small scale, they are often certified under "grower group" schemes. The costs of inspection vary greatly from one certification body to another, with a range of US$ 500 per day (foreign certification) to free of charge (e.g. Organic Crop Institute and local certification bodies).

Agriculture policy

General agriculture policies still favour conventional farming with subsidized agro-chemical farm inputs. As Thailand cannot produce its own agro-chemicals, all pesticides and chemical fertilizers are imported. The import taxes of these products are set lower than for other farm inputs. There is also an indirect subsidy of pesticides. For instance, on the perceived outbreak of crop pests and diseases, the Government would distribute free pesticides to farmers. Or if there is a special promotion project, the Government may give away farm inputs, often chemical fertilizers and pesticides, to participating producers.

There has been a strong lobby for allowing GMO crop production in Thailand by some Thai research institutions and private companies engaging in GE technologies. Some unlawful field trials of GMO crops by research institutions also exist, already resulting in GMO contamination at the seed level for at least two crops, papaya and cotton. The push to allow GMO crop production or more GMO field trials will inevitably lead to further GMO contamination, endangering Thailand's organic agriculture development.

In support of organic agriculture, Thai consumers are aware of the risks of pesticides residues in the food chain, and there is a general concern about food and human health, thanks to the successful campaign of the public health organizations. This puts pressure on producers to adopt a safer use of agro-chemicals. Also, with the escalation of oil prices, the costs of all agro-chemicals have risen, and producers are further pressed to cut use of agro-chemicals and adopt some organic farming methods, such as organic fertilizers and botanical insecticides.

The efforts by the royal family, especially the king, to promote a "self-sufficient economy" concept, have led to acceptance of self-sufficient sustainable agriculture among public agencies and the Thai public. As a result, many sustainable agriculture projects were initiated (both pilot production and research projects). The Royal Project has recently converted part of its vegetable production to certified organic farms. The organic vegetables are sold in several shops and supermarkets throughout the country.

The National Agenda's Organic Agriculture is a new government programme implemented since October 2005. The five-year programme is aimed at supporting 4.25 million farmers (0.85 million in 2006) to use organic inputs instead of agro-chemicals covering an area of 13.6 million ha (2.72 million ha for 2006), reducing total import of agro-chemicals by 50 per cent as well as boosting organic export by 100 per cent annually. The programme aims are to be achieved through various supports and intervention mechanisms, including seminars, training, general promotion, and setting up organic fertilizer factories. There are 26 agencies from six ministries involved in this programme, which is coordinated by the Land Development Department. A 1.26 billion baht (US$ 31.5 m) budget is allocated for this programme in 2006.

Table 17. Overview of organic agriculture policies and programmes

Item	Government policy and programmes
General awareness of merits of organic	Done through publication and government websites, e.g. publications of Department of Agriculture (DoA) and Department of Agricultural Extension (DoAE).
Organic regulations, standards and certification	Set up voluntary national standard guideline for organic crop, aquaculture and livestock (ACFS). Set up public certification body (Organic Crop Institute).
Export marketing	Some public seminar and more specifically subsidizing traders to participate in organic fairs.
Production	At provincial level, some governors started organic projects, e.g. Surin and Burirum organize organic rice projects. Several local and national agencies started organic agriculture training courses for producers. Very few training programmes are linked to certification.
Inputs (seeds, seedlings, pest control and fertilizers)	No specific activities so far. Plans to set up several hundred organic fertilizer factories.
Research	Some research funding institutions start offering specific funding support for organic agriculture, e.g. Thailand Research Fund, National Research Council of Thailand. No clear budget allocation or research goals.
Extension service	Many public agencies have organized seminars on organic farming, normally one-day courses. These are not really an extension activity, more like a general promotion.

Other policy influences, projects and programmes

A few international institutions play a supportive role in influencing Thailand's organic agriculture policy development. The most prevalent influence is from FAO and IFOAM, especially since FAO's regional seminar on "Production and export of organic fruit and vegetables in Asia" and IFOAM's Trade Conference on "Mainstreaming Organic Trade" held in Bangkok at the end of 2003. The international seminar and conference helped promote the general interest among public agencies and the private sector on organic agriculture. The recent project of the International Trade Center (ITC) on "Strengthening the export capacity of Thailand's organic agriculture" in early 2005 has added some impacts on promoting organic agriculture among government agencies.

The Santi Asoke, a Buddhist sect, has, along with its religious preaching, long been promoting "non-toxic" farming, a system that does not use chemical fertilizers and pesticides. There are many followers of this group throughout the country. They have a strong influence on organic production, especially at the extension level. Similar to most of the Government's projects, the Santi Asoke's programme only aims at encouraging producers to adopt some organic farming technology, but does not require full farm conversion or organic certification.

The policy development process

The development of Thai organic agriculture has so far been driven by the private sector and NGOs, who play key roles in organizing organic conversion projects and marketing, making a major contribution to the growth of organic agriculture. The cabinet has set up a national organic agriculture committee, whose term of references focus on advising the Government on organic agricultural policy development. The private sector is not represented in the committee. Most of the organic policies are by and large initiated through national politicians and other government agencies, especially the Ministry of Agriculture and Cooperatives.

Opportunities and challenges

Opportunities for Thai organic agriculture are mainly:

- Growing markets overseas (export opportunities);
- Favourable policy environments (especially the National Agenda's Organic Agriculture);

- Good infrastructure and high standard food-processors; and
- Favourable agricultural resources (food exporting country).

Challenges include:

- Poor coordination among public agencies on supporting and promoting organic agriculture, sometimes leading to competition among public agencies;
- Confusion among Thai consumers on organic agriculture and organic labelling schemes;
- Lack of interest among food processor to develop new organic products; and
- Lack of comprehensive supports for producers during conversion.

Lessons learned

- The Government has prioritized national standards and regulations and the setting up of public certification bodies, which is less important compared to farm conversion support.
- Regulations imitate importing countries' regulations, especially EU regulations. Conditions and special conditions of organic agriculture within the country were not taken into consideration when the national regulations were developed.
- The Government attempts to introduce too many "food safety" labelling schemes at the same time. Consumers often confuse the definition and value of the different schemes.
- Organic agriculture is often more knowledge-intensive and extension services need to address the knowledge aspects of farm management.

Annex 8. Options for organic market regulations

As laid down in the main report, there are many reasons to exercise caution before introducing mandatory organic regulations in a country. Producers can get export market access without a mandatory regulation and for domestic markets the need is often not apparent.

In this annex, a number of regulatory options are explored. Regulation here means the whole regulatory package: laws, decrees, implementing regulations, ordinances, public standards, etc. When there is a *mandatory* organic regulation, sales of organic products that do not fulfil the requirements of the regulation are unlawful. If the regulation is *voluntary*, producers can claim adherence to the regulation and thereby must follow the regulation, but other organic producers are not prevented from selling their production as organic. With voluntary regulations, Governments take on a servicing role rather than a controlling role, something that may be less common in some countries.

There are many different ways to regulate, but there are four basic options:

- No regulation;
- Use of general consumer protection regulation;
- Voluntary regulations; and
- Mandatory regulations.

The scope can be for domestic markets (which would normally also include requirements for imported products), or for exports or both. For each main regulatory option, there are many options for how to regulate the various components of an organic regulation, in particular the aspects of standards and conformity assessment. **How they are regulated is perhaps often more important than whether or not they are regulated.**

Before embarking on regulatory initiatives, Governments and the private agricultural sector should carefully assess the situation and see what added value a regulation can bring. It is important that there are common objectives agreed upon and that there is a joint analysis of what the main problems to be solved are, and to what extent these problems can be solved by regulations. Possible objectives are:

- Facilitating exports;
- Preventing fraudulent claims in the marketplace;
- Stimulating local market development;
- Reducing consumer confusion about different standards, labels and conformity assessment systems; and
- Clearing other regulatory obstacles for organic production.

The components of organic regulations

An organic regulation will normally address issues relating to:

- Use of organic statements in the marketplace;
- Production standards and other requirements the suppliers must fulfil;
- Conformity assessment systems and procedures;
- The responsibilities of authorities;
- The use of a special organic label; and
- Market surveillance[89].

[89] Market surveillance refers here to the monitoring of the marketplace to discover possible fraudulent statements by non-organic producers, or the proper labelling, etc., by organic producers.

The tables below outline the main approaches for standards of production and conformity assessment – the two main components in most organic regulations. It should be recognized that the use of one organic label and efficient market surveillance mechanisms are often more important for the development of the market than refined systems for conformity assessment or very detailed standards.

Table 18. The standard component

Reference	Standards	Comment
S1	Organic products have to be produced according to a standard equivalent to international standards, i.e. IFOAM or Codex Alimentarius.	Organic producers have to follow defined organic standards. The standards owner should ensure adherence to international standards. Authorities can demand demonstration of compliance.
S2	Organic products have to be produced according to private sector standards registered (and approved) by the Government.	The approval can be made based on a technical assessment by the Government or by another body, e.g. IFOAM is assessing standards for adherence to IFOAM standards.
S3	Organic products have to be produced according to a national organic standard, set by the national standards body.	This can be either a prescriptive standard or a framework standard (standard for standards).
S4	Organic products have to be produced according to general rules laid down in a regulation.	This leaves details open for interpretation by certification organizations.
S5	Organic products have to be produced according to detailed standards set in a regulation.	This is the model chosen in most organic regulations.

Table 19. The conformity assessment component

Reference	Conformity assessment	Comment
C1	Producers are allowed to claim conformity and are considered organic unless otherwise is proven.	This means that there is no active quality assurance mechanism, but rather the Government can act on suspicion or complaints, quite similar to the case in many other trades.
C2	A producer shall be able to demonstrate conformity by adherence to some kind of conformity assessment/quality assurance system.	All producers bringing goods to the market have to be part of some quality assurance system, which can be third-party certification, a sector organization's internal scheme, participatory guarantee, etc.
C3	There is random inspection of producers by the Government.	The Government takes a more active role in ensuring compliance.
C4	Various conformity assessment systems can be registered and approved by the Government.	Same as above with the difference that the Government is more actively assessing and approving certain systems.
C5	All producers have to be certified by approved or accredited certification bodies.	This is the model chosen in most organic regulations.

Governments are advised to consider how the components will contribute to the objective of the regulation and the development of the sector. The strictest (most onerous) level of regulation is represented by the application of options S5 and C5. It is the solution chosen by the European Union, Japan and the United States. Most organic regulations so far, including those of Costa Rica and the ones under development in Chile, are of this type. This is also the case for Thailand, but in this case adherence to the regulation is voluntary. Options S1 and C1 represent the use of consumer protection legislation rather than any special organic regulations. The components can be applied in different combinations, e.g. option S3 for standards with any of the options for conformity assessment.

The regulatory options

No regulation

If there is a unified organic movement, it can deal with most of the problematic situations without any call for regulations. The biggest challenge is widespread real fraud. However, it is not so difficult for

an organized sector association to approach shops selling fraudulent products and convince them to cease marketing of these products. Failing results, one can always go to the media. Most businesses are protective of their brands and would not, once exposed, risk loss of consumer confidence for minor short-term gains. This strategy was successful in Sweden until the membership of Sweden in the European Union in 1995 and also fairly successful in Germany. Smaller-scale fraud or roadside sales and the like are not likely to be taken care of in a no-regulation scenario, but the question is if that is a major problem for the sector in the first place. In most non-regulated countries, there is unfortunately no well-organized organic sector to take up this role and consumer awareness is generally low; both represent challenges for a no-regulation scenario. Government can support the sector organizing itself and in its efforts to take actions in the marketplace, as well as contributing to consumer education.

The New Zealand Standard for Organic Production

The New Zealand Standard for Organic Production was released in November 2003. Currently, it serves as a benchmark for certifiers operating in the domestic market. It is a voluntary standard. Consumer protection is through the Fair Trading Act, with reference to the New Zealand Standard as required. There are no specific organic labelling laws in New Zealand (Seager Mason in Willer, Helga and Minou Yuseffi, The World of Organic Agriculture 2006).

Use of general consumer protection regulations

The simplest level of regulation is to work within existing consumer protection or marketing regulations, i.e. regulations which state that claims in the market should be truthful. By linking to such regulations (assuming they exist), very little if any regulatory efforts are needed[90]. A regulation can basically state that any product that is marketed as organic must have been produced according to an organic standard which could be a private sector domestic standard, a standard adopted by the Government or a standardizing body[91] or a regional standard. In the simplest form it could state that any organic product should be produced according to standards which are equivalent to the IFOAM Basic Standards or the FAO/WHO Codex Alimentarius guidelines. Such a regulation need not have the requirement that products are also certified by an approved or accredited certifier.[92] In that way, it would be open to both certified and non-certified farmers and for participatory guarantee systems. This kind of regulation can be a good starting point, which can be built on later. If it refers to a united national or regional standard, it will promote coherence in standards and counteract fragmentation in labels and standards.

Voluntary domestic organic regulation

If the main objective is to boost the credibility of organic products by a government-supported system, one option is to set up a voluntary organic regulation[93]. Similarly, as with the option above, it can be based on a different set of standards. It can in addition include some verification mechanism. These can be of various levels of rigour; some of them could also be used in parallel:

[90] In many cases, the responsible authority can use existing consumer protection regulations even without making any amendments to existing laws or implementing new regulations.

[91] In some places, e.g. in East Africa, Canada, New Zealand and some Latin American countries, organic standards have been formulated by national standards organizations, while in most others, the standards are embedded in regulations, mostly developed by the Ministry of Agriculture.

[92] This was the case for the first organic regulation in California 1979.

[93] Voluntary regulations are often found in governmental eco-labelling schemes, such as the EU flower scheme. These offer producers an opportunity to claim adherence to a set of standards and conformity assessment procedures, without limiting the right of other producers to make environmental claims (provided they are truthful).

- Voluntary registration, with occasional random inspections (can also apply to groups of farmers);
- Participatory certification; and
- Third-party inspection and certification.

A voluntary system will allow different markets to choose which level of verification it needs in order to maintain consumer confidence. Such a system could be complemented with a national label for organic products, a component that probably means more for market development than any other.

Both the use of consumer protection regulations and the voluntary domestic organic regulation will have their main application for a domestic market. They can therefore be based on standards that are developed based on the local conditions, i.e. the conditions for the domestic producers and the expectation of the domestic consumers. However, for allowing imports to access the markets, a clear reference to international standards (IFOAM and Codex Alimentarius) is recommended.

Exports can also take place based on a voluntary domestic organic regulation, to unregulated markets or markets with less demanding import rules. For access to the strictly regulated export markets, producers would have to rely on certification bodies, domestic or foreign, that certify production to these regulations.

Voluntary organic export regulation

If the main objective is to support exports, one possibility is to make a voluntary government scheme to support exporters. The main way for this to be of any use is through achieving an equivalence agreement (such as with the EU and possibly United States markets), or acting as an accreditor (as with the United States market). It can also give credibility to products sold in other, as yet unregulated, markets.

A voluntary export regulation is normally based on standards in line with the requirements for the export markets. In the simplest and most market-oriented form, a voluntary organic export regulation sets no standards at all, but will use the standards of the relevant import markets, i.e. it provides a framework for the Government to take responsibility for the credibility of organic products exported from its territory to any standard demanded[94]. For example, when acting as an accreditor for the United States NOP, the full NOP will be applicable and the domestic standard is of no relevance[95]. In this way, the scope for recognition (of equivalence) is limited to the conformity assessment system only. Such a system will be much easier to implement and will be quicker to get recognized as there is no need for time-consuming comparisons of standards. The drawback of this approach is that it forces producers to produce according to a standard that might be less well adapted to local conditions.

Obviously, there is nothing hindering the products certified for export from being sold on the local markets[96], with indications that they are produced under a system of government acceptance. In that way, an export scheme could also be used for the domestic market. If the market shows appreciation, it can become a de facto domestic standard over time.

Mandatory organic export regulation

In order to protect the credibility of exported organic products, Governments may consider a mandatory organic export regulation, i.e. a regulation that requires that all products exported as organic from its territory should fulfil certain standards and conformity assessment procedures[97]. It can be constructed similarly as the voluntary export regulation. The main difference is that it also will restrict exports to unregulated markets; exports to the regulated markets are already restricted by the rules of the importing country. It is hard to see that there are many advantages of a mandatory rather

[94] This could also mean a private standard.
[95] This is done e.g. by the Danish and Indian Governments.
[96] To foreign or local standards.
[97] This is done by Australia.

than a voluntary export regulation. For both, it should be recognized that reaching equivalence is a very time-consuming process, not only to put the system in place, but also to apply for recognition, to accommodate audits and to make necessary adjustments (see the main report). To get certification directly to the standards of the importing countries is always a quicker solution for producers.

Mandatory organic domestic regulation

With a fragmented organic sector with many competing groups and with the use of many different marks and standards in the marketplace, a mandatory government regulation may be an appropriate measure to support market development. This was the situation in the European Union at the end of the 1980s, which triggered the introduction of the EU regulation, a mandatory organic domestic regulation. With a mandatory organic domestic regulation, it is understood that there are rules governing all sales and marketing of organic products. The reason to embark on a mandatory organic domestic regulation would mainly be the need to combat apparent fraud in the domestic market, or widespread confusion about different organic standards. Despite this, most mandatory regulations do not specifically address direct fraud, e.g. the situation where non-organic producers sell their products as organic in the marketplace. If Governments embark on a mandatory organic domestic regulation, they should draw on the lessons from the last decades, and avoid repeating the mistakes made by others. They should also consider the situation of farmers, in particular small farmers and women farmers, or other possibly disadvantaged groups, and how they can cope with the requirements. For example, one can consider exemptions for small farmers and direct sales such as done in the United States NOP.

A mandatory organic domestic regulation requires substantial resources for establishment and implementation, such as trained staff, and incurs high costs. It has the risk of being less conducive for development as details are set for all aspects, something that hampers innovation and development. In any case, it is easier to start with a lower level of regulation and later make it more stringent than to start with the most onerous regulation.