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International Federation of Organic Agriculture Movements

Harmonization and Equivalence in Organic Agriculture

Volume 1

Background papers of the International Task Force on Harmonization and Equivalence in Organic Agriculture

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PREFACE

The organic market is confronted with hundreds of private sector standards and governmental regulations, two international standards for organic agriculture (Codex Alimentarius and IFOAM) and a host of conformity assessment and accreditation systems. Mutual recognition and equivalency among these systems is extremely limited. Discussions in a number of forums including FAO, IFOAM and UNCTAD, have indicated that the plethora of certification requirements and regulations are considered to be a major obstacle for a continuous and rapid development of the organic sector, especially for producers in developing countries.

In 2001, IFOAM, FAO and UNCTAD decided to join forces to find solutions to this problem. Together they organized the Conference on International Harmonization and Equivalence in Organic Agriculture, which took place in Nuremberg, Germany on 18-19 February, 2002. This event was the first of its kind, as the partnership between the private organic community and United Nations institutions offered a forum for public and private discussions. One of the key recommendations of the Conference was that a multi-stakeholder Task Force, comprised of representatives of governments, FAO, UNCTAD and IFOAM, should be established in order to elaborate practical proposals and solutions.

In response, the International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture was launched and held its first meeting on 18 February 2003 in Nuremberg, Germany. At this meeting the ITF agreed on its Terms of Reference and a work plan for the first 18 months.

The second meeting of the ITF was held on 20-21 October, 2003 in Geneva, Switzerland. Discussions centered around four background documents that reviewed the current situation in the sector and identified models and mechanisms for harmonization, equivalency, and mutual recognition. The discussion papers in this volume were prepared for the second meeting in 2003.

The third meeting of the ITF was held on 17-19 November, 2004, in Rome, Italy, and focused on new discussion papers that identified potential short-

term actions and long-term solutions. These papers will be published in a future volume of this series.

This publication is a compilation of reports of the first two ITF meetings, the four discussion papers from the Geneva Meeting, and the Terms of Reference of the ITF. Together with the earlier publication, *The Organic Guarantee System: the need and strategy for harmonisation and equivalence*[1], it provides the comprehensive record of the ITF.

We would like to take this opportunity to thank the members of the ITF for their enthusiastic participation as well as the Swedish International Development Agency (SIDA) and the Government of Switzerland for their generous financial support of the ITF.

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Overview of Current Status of Standards and Conformity Assessment Systems

Ken Commins
International Organic Accreditation Service

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1 Introduction

This paper has been prepared as a background document for the meeting of the International Task Force on Harmonization and Equivalency in Organic Agriculture to be held in October 2003. Its purpose is to provide a general overview of the current situation with respect to regulations, standards and conformity assessment systems for organic agriculture and processing.

The subject matter of several sections of this document was previously addressed in the Reader for the February 2002 conference on International Harmonization and Equivalence in Organic Agriculture published by IFOAM. In compiling this overview the author has drawn heavily on the previous texts updating the data as appropriate. In many ways what follows is a synopsis of the documents in the IFOAM publication. The reader seeking a more in depth treatment of these subjects is directed towards the Reader.

2 Current Standards and Regulations

2.1 International Standards

2.1.1 Codex Alimentarius Guidelines for the Production, Processing, Marketing and Labeling of Organically Produced Foods

The Codex Alimentarius Commission was established in 1962 by FAO and WHO with the goal of harmonization of food standards on a global level. In July 1992 the Codex Commission decided that the Food Labeling Committee should discuss and develop the "Guidelines for the Production, Processing, Marketing and Labeling of Organically Produced Foods". A first draft for a wider consultation (Alinorm 91/37) was distributed. In accordance with the general objectives of Codex the intention was to facilitate the harmonization of organic standards at the international level. The guidelines aim to prevent misleading claims and ensure fair trade practices.

As an inter-governmental body only member governments have decision-making powers in Codex. However, international organizations have observer status and in the case of the guidelines for organic production they played an active part in its development.

The Codex Alimentarius Commission at its 23rd Session in 1999 adopted the Guidelines for the Production, Processing, Labeling and Marketing of

Organically Produced Foods, with the exception of the provisions for livestock and livestock products. The Codex Alimentarius Commission at its 24th Session in 2001 adopted the sections concerning livestock and livestock products and bee-keeping and bee products for inclusion in the Guidelines

The main sections of the Guidelines establish the framework within which the more detailed standards in the annexes apply. These sections include, *inter alia*, the specific labeling requirements; the general rules of production and preparation; requirements for inclusion of input materials in the annexes; and criteria for the development of lists of inputs by countries.

Several annexes set down the detailed requirements for production, processing and handling of organic products. These include the rules for the management systems for organic crop production, livestock husbandry and processing (Annex 1) and the permitted agricultural and processing inputs (Annex 2). In addition to the standards for production and processing, the Guidelines contain some provisions regarding inspection and certification systems and import control.

In the context of harmonization efforts, two aspects of the Codex Guidelines should be noted: Codex standards, codes and related texts have received wider acknowledgment following the conclusion of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT), as Codex was specifically mentioned under SPS; and that the reference to international standards in the framework of TBT applies to Codex.

However, the foreword to the guidelines places certain limitations on its role within the arena of international trade:

> "These guidelines are at this stage a first step into official international harmonization of the requirements for organic products in terms of production and marketing standards, inspection arrangements and labeling requirements. In this area the experience with the development of such requirements and their implementation is still very limited. Moreover, consumer perception on the organic production method may, in certain detailed but important provisions differ from region to region in the world. Therefore, the following is recognized at this stage… the guidelines do not prejudice the implementation of more restrictive arrangements and more detailed rules by member countries in order to maintain consumer credibility and prevent fraudulent practices, and to

apply such rules to products from other countries on the basis of equivalency to such more restrictive provisions."

Codex revision procedures are set down in section 8 of the document. A review of the guidelines is conducted once every four years. The lists of permitted inputs for production and for processing contained in Annex 2 are subject to review every two years. Both governments and recognized international organizations are invited to make proposals on an ongoing basis.

2.1.2 IFOAM Basic Standards for Organic Production and Processing

The IFOAM Basic Standards for Organic Production and Processing (IBS) were first published in 1980. Since then they have been subject to biennial review and re-publication. The most recent edition of the IFOAM Basic Standards was published together with the IFOAM Criteria for Certification Bodies in the "IFOAM Norms for Organic Production and Processing". These documents are registered with the International Organization for Standardization (ISO) as international standards in the field of organic agriculture.

The introduction to the IFOAM Basic Standards states that these standards "provide a framework for certification bodies and standard setting organizations worldwide to develop their own certification standards and cannot be used for certification on their own. Certification standards should take into account specific local conditions and provide more specific requirements than the IFOAM Basic Standards." They should therefore be considered as standards for standards in the field of organic agriculture and processing.

The introduction also makes it clear that the standards are a reflection of the current state of organic production and processing methods. As such they should be viewed as a work in progress rather than a final statement.

The standards in the IBS are derived from the "Principal Aims of Organic Production and Processing", which are laid out at the beginning of the document. These principles not only form the basis of the IBS but have also been the guiding principles for national regulations and for international norms such as the Codex Alimentarius Guidelines for organically produced foods

The main sections of the IBS deal with standards for crop production, animal husbandry and processing and handling of organic products. The livestock section establishes generic standards for all livestock. The exception is bee keeping which is dealt with in a separate section. Additional sections of the

standards set out the requirements for ecosystems, labeling and social justice. Lists of products for use in fertilization and soil conditioning; pest and disease control and weed management; and approved additives and processing aids are contained in three annexes. An additional two annexes provide criteria for evaluating additional agricultural inputs and processing inputs.

Each section of the IBS is presented as General Principles, Recommendations, and Standards. The General Principles are the goals that organic production and processing works towards. The Recommendations provide standards that IFOAM promotes but does not require. The Standards are the minimum requirements that must be fully incorporated into certification standards

The IBS also contains a number of draft standards including standards for aquaculture, textiles and forest management. These are published within the IFOAM Norms as a reference for those establishing private standards or official regulations.

The IFOAM Basic Standards do not contain inspection and certification requirements as these are set down in the IFOAM Accreditation Criteria, also published within the IFOAM Norms. The criteria were first published in 1992 and have been revised periodically since then.

The criteria are developed directly from ISO/IEC Guide 65 *General requirements for bodies operating product certification systems*. However, IFOAM identified a need for further elaboration of the ISO document. This was partly because certification of organic agriculture is certification of a production process rather than of an end product. The other reason was because of the generic nature of the ISO Guide, which is meant for use in all sectors but is predominately oriented toward the industrial and manufacturing sector. The ISO Guide itself anticipates such a need. The introduction to the Guide indicates that the criteria should be "considered as general criteria for organizations operating product certification systems" and that "they may have to be amplified when specific industrial or other sectors make use of them."

A recently completed comparison of the IFOAM Criteria and the ISO/IEC Guide 65 brought to light the many areas of concern in certification of organic products that are not covered in ISO 65. The criteria contain several special sections covering situations specific to the inspection and certification of organic products. These include the conformity assessment requirements related to conversion periods, genetically modified organisms, partial

conversion and parallel production, grower groups and the "chain of custody". An additional section lays out the requirements and procedures for a certification body to accept the prior certification of another certification body.

IFOAM has established a procedure to allow variations within IFOAM standards to accommodate diverse regional needs. This will permit regional standards to be developed and go through the process of becoming an "approved IFOAM standard". Such standards will be for direct use for certification (not a standard for standards). In approving such a standard any variations from the IBS will be evaluated against established criteria for variations. Both the procedure and the criteria for variations are set out in section 4 of the norms. By means of this procedure IFOAM is attempting to answer the question as to how an international standard can allow for the geographical and cultural diversity of the world.

The procedures for revision of the IFOAM Basic Standards are contained within the IFOAM Norms document. Drafting of revisions in the responsibility of a standards committee. The revision process includes public circulation of drafts and a decision making procedure that allows for the submittal of motions and, if consensus is not reached, voting by the membership. Although the published procedure does not state the frequency with which revisions shall occur it is understood to be at least every three years (the period between IFOAM's General Assembly).

A study commissioned by IFOAM found that the IFOAM Basic Standards fell within the definitions of an international standard in the WTO Agreement on Technical Barriers to Trade (TBT). The IFOAM Basic Standards and the IFOAM Criteria are registered with the International Standards Organization (ISO) as international standards.

2.2 Regulations

2.2.1 Listing of countries with regard to their national regulation

Countries with fully implemented regulations (37)

For the purpose of this listing "fully implemented" has been defined as meaning that the authority has approved certification bodies or carries out certification themselves under the law.

A total of 37 countries have fully implemented regulations for organic agriculture and processing. The geographical breakdown is as follows:

Europe (26):	Austria	Belgium	Cyprus
	Czech Republic	Denmark	Finland
	France	Germany	Greece
	Hungary	Iceland	Ireland
	Italy	Lithuania	Luxembourg
	The Netherlands	Norway	Poland
	Portugal	Slovak Republic	Slovenia
	Spain	Sweden	Switzerland
	Turkey	United Kingdom	

Asia and Pacific Region (7):			
	Australia	India	Japan
	Philippines	South Korea	Taiwan
	Thailand		

The Americas and Caribbean (3):			
	Argentina	Costa Rica	USA

Africa (1): Tunisia

Countries with finalized regulations not yet fully implemented (8)
For the purpose of this listing, "Final, not yet fully implemented" means that there is a law and that the detailed standards and rules have been finalised, but the authority has not yet approved certification bodies or carried out certification under the law.

Europe (2):	Croatia	Estonia

Asia and Pacific Region (1): Malaysia

The Americas and Caribbean (4):			
	Brazil	Chile	Guatemala
	Mexico		

Africa (1): Egypt

Countries in the process of drafting regulations (15)
For the purpose of this listing, drafting regulations means that the standards and rules and/or enabling law are still in draft stage. This includes countries in the process of promulgating a first draft.

Europe (4):	Albania Yugoslavia	Georgia	Romania
Asia and Pacific Region (3):	China	Hong Kong	Indonesia
The Americas and Caribbean (4):	Canada St. Lucia	Nicaragua	Peru
Africa (2):	Madagascar	South Africa	
Middle East (2):	Israel	Lebanon	

Summary

Region	**Fully implemented**	**Final not implemented**	**In draft**
Europe	26	2	4
Asia & Pacific	7	1	3
Americas & Caribbean	3	4	4
Africa	1	1	2
Middle East	-	-	2
Total: 60	37	8	15

The above categories are of course simplistic. In reality the situation is more complex. Countries may have a finalized enabling law without having developed the rules for implementation. In some cases the law has defined detailed standards while in others it sets out only guidelines, with the establishment of the standards and system for approval of certification bodies left to the administration. In other countries a national standard has been developed and finalized before the passage of any law. In one country the government has implemented a regulatory system based entirely on administrative measures rather than the law.

2.2.2 Overview of content of standards (scope) for EU Regulation, US Rule and Japanese Standard

The EU Council Regulation 2092/9, the National Organic Program Rule 7 CFR Part 205 (“US“)(FR 65 80548) and the Japanese Agricultural Standard

(JAS) of Organic Agricultural Products all cover crop production, and processing and handling of organic products. The EU and NOP regulations also cover livestock. The Japanese livestock standards are in draft stage.

All three regulations include provisions regarding wild harvesting. EU covers mushrooms and beekeeping. The Japanese and US do not.

US exempt producers and handlers with less than $5000/year total organic sales from certification requirements, although they must comply with the regulation. EU and Japan do not allow such an exemption.

None of the regulations require retailers to be certified. US exempt handlers that process products containing less than 70% organic ingredients from certification. EU does not specifically exempt such handlers, but the EU prohibits such operations from identifying "organic" ingredients on the information panels of products. Similarly the Japanese standard requires that at least 95% of ingredients be organic.

The EU regulates not only the term "organic" (or equivalent in other EU languages) but also any other terms that suggest that the product has been produced organically. The US and Japan regulate only the term "organic" or Japanese equivalents.

The format of the EU and Japanese Regulations are somewhat similar, resembling the Codex guidelines. This is partly a result of the Japanese basing their regulation on Codex and Codex being heavily influenced by the EU Regulation. The US regulation follows a different format. Of greater significance is that the EU and Japanese Regulations contain listings of all allowed input substances for both agricultural production and processing. For farm inputs, the US lists "allowed synthetics" and "prohibited nonsynthetics," thus allowing use of all nonsynthetic inputs that are not specifically listed. A determination of whether an input is "nonsynthetic" or "synthetic" is necessary in order to establish whether it may be used as a nonlisted input.

All three regulations contain provisions for approval of private certification bodies in implementing the law and provisions for enabling imports from other countries.

2.3 Private Standards

The Soil Association in the UK published the first private organic standards in 1967. These were more a set of guiding principles rather than the detailed production and processing standards prevalent today.

It is important to realize that this initiative and other private standards that were developed in the US and elsewhere shortly thereafter, were driven by the need of organic farmers in the region to have a common definition of organic. This was both to provide assurance to the growing consumer sector and to prevent fraudulent claims and unfair competition. Farmers' associations published all of the earliest organic standards. Along with publishing standards the association then set about verify compliance with those standards. The result was that certification bodies that were established during the 1970s and 1980s also published their own standards. These standards provided an identity to the farmers' association and helped to ensure the loyalty of the farmer.

The result of this heritage is that there are a great many private organic standards for production and certification around the globe. A recent special directory edition of the newsletter *The Organic Standard* identified 364 bodies offering organic certification. Of these 65 stated that they had their own standards. The number is likely to be higher as some certification bodies that are known to have published their own standards did not answer this question.

While this plethora of standards has created some difficulties with respect to mutual recognition and trade, there have also been some advantages. As the standards are being set in the specific region in which the certification body operates, they tend to be more appropriate for the local ecosystems and local culture than standards set distantly. It has also resulted in the vigorous development of organic standards. Standards set within a small organization can react more easily to new developments or new input products being placed on the market.

A result of this dynamism is that private organic standards have been developed for activities generally not covered in regulations. These include textile processing, aquaculture, forestry and others. Regulations by their nature are more inclined to exclude these activities and adopt a more narrow scope.

The private standards determined the content of the IFOAM Basic Standards, which in turn have had a major influence on the EU Regulation 2092/91,

which itself has influenced the content of most other organic regulations and the Codex Alimentarius Guidelines. Historically, organic standards can therefore be viewed as having been developed from the bottom up rather than being imposed from above.

The large number of organic standards should not be taken to mean that there are necessarily large differences between these standards. The IFOAM Basic Standards and the EU Regulation 2092/91 (as the first implemented regulation of a large importing region) have instructed the content of private organic standards around the world. Differences tend to relate more to which sections of the standards are given most emphasis. For example in countries where organically reared livestock is in its infancy the private livestock standards are likely to be more basic than in regions where livestock plays an more important role. Differences also reflect the local consumer expectations. For example, countries where consumers have a strong awareness of animal welfare are likely to have more developed standards related to this issue.

Recently there has been some effort within the private sector to move away from the "certifier own standard" model and instead to develop regional standards. An example of this is the American Organic Standard (AOS). Such private regional standards may offer the advantages of adaptability and dynamic development without some of the problems that come with a large number of private standards.

3 Current Conformity Assessment System

3.1 Regulatory Conformity Assessment Systems

3.1.1 General description of the systems applied in countries to determine conformity with regulatory standards within their territories

As the first fully elaborated regulation, the EU Council regulation 2092/91 established the general system for determining conformity to the regulation. In establishing their regulations other countries have generally followed the EU example. The defining feature of this system is that it allows for recognition of private certification bodies by a designated authority according to specified criteria. The designated authority differs in countries according to the internal government structures, but in most cases it is the department of agriculture.

This system places responsibility for determining conformity to the respective regulation on the private certification bodies. The certification bodies operate according to their own procedures and policies providing these meets the criteria for approval. An exception to this is the US system, which approves certification bodies as agents to operate a certification program published as part of the rule. Thus, for example, while the EU reference to ISO Guide 65 would require that a certification body have an appeals procedure, the precise nature of which is left up to the certification body, the US rule establishes the procedure itself.

The EU recognition system covers only those certification bodies based in the European Union. Recognition of certification bodies based outside the EU can only occur when the country in which the certification body is based has been placed on the Article 11 list of countries with which the EU has established an equivalency agreement. Most other countries follow the EU example and recognize only certification bodies based in their territory. This contrasts with the US and Japanese systems which allows foreign certification bodies to apply directly for recognition.

In the case of Japan the certification body must also have a registered office in Japan. The Japanese system also does not confer automatic recognition to certification bodies from countries deemed to be equivalent. The certification body must still register with the Japanese Ministry.

3.1.2 Overview of the criteria applied by countries for approval of private certification bodies

The EU regulation requires certification bodies to comply with both Annex 3 of the regulation (minimum inspection requirements and precautionary measures under the inspection scheme) as well as comply with the requirements of ISO/IEC Guide 65 "General requirements for bodies operating product certification systems". The regulation itself does not require formal accreditation to the ISO Guide. As a result some Member States have decided upon formal accreditation while others have not.

Annex 3 of the regulation contains additional requirements related to certification of organic that are not addressed in the ISO guide. An example of such a measure would be parallel production. In this aspect the EU regulation is similar to the IFOAM system, where the IFOAM criteria have additional requirements to those in the ISO Guide. A number of other countries have identical or similar requirements to those in the EU regulation.

The US and Japan have both promulgated distinct requirements. In the case of the US Rule these are quite elaborate. Some other countries have chosen to base their criteria on the IFOAM criteria. An example would be India and revised draft requirements in Australia.

3.2 Private Conformity Systems

3.2.1 General description of private accreditation systems operating within the organic sector

In 1992, IFOAM established the IFOAM Accreditation Program to accredit certification bodies active in certifying organic agriculture throughout the world. Since 1997, this program has been operated by the International Organic Accreditation Service (IOAS), a non-profit organization incorporated in the US. The IOAS operates the IFOAM Accreditation Program under license from IFOAM. The first accreditation of organic certification bodies took place in 1994 when three certification bodies were IFOAM accredited.

The IOAS also offers ISO/IEC Guide 65 accreditation to certification bodies active in the organic arena.

Any certification body involved in the certification of organic production, whether private or state-run, can apply for IFOAM accreditation. Membership of IFOAM is not a requirement.

IFOAM accreditation was set up as an international accreditation system. This means that its personnel and Board are drawn from around the world and that it accepts applications from anywhere.

The IFOAM Seal was launched by IFOAM in 1999, and is a sign of the accreditation status of certification bodies active in organic agriculture. The IFOAM Seal is designed to be used as part of the logo of accredited certification bodies and may not be used separately.

In addition to the IOAS a number of national accreditation bodies have conducted ISO Guide 65 accreditation of certification bodies active in the organic field. Whether these national accreditation bodies can be considered as part of the private sector depends on the country in question. In some countries they are part of the government department, in others they are semi-state bodies and in some they are private with statutory recognition.

In all cases applications for accreditation by national accreditation bodies has been motivated by recognition requirements of the regulatory sector. In particular, the import requirements of some, but not all, EU countries have stressed this form of accreditation. IFOAM accreditation has on the other hand been entirely voluntary in nature and driven by the market.

The international model of accreditation practiced by the IOAS has been taken up by a number of other organizations in the field of social and environmental labeling. These bodies have formed the International Social and Environmental Accreditation and Labeling Alliance (ISEAL). National accreditation bodies come together in the International Accreditation Forum (IAF).

The national accreditation system concept is that each country has an official accreditation body that has sole rights to conduct accreditation within their territory. The accreditation body conducts accreditation in all sectors of the economy. The issue of international trade and acceptance of one accreditation by an accreditation body within another territory is dealt with by multilateral agreements between the accreditation bodies. At the international level, these multilateral agreements are still at an early stage. For example, there is currently no IAF multilateral agreement between national accreditation bodies for product certification – the only type of certification relevant for the organic sector.

The concept of international accreditation systems is that the accreditation body operates internationally in a particular sector. This brings several advantages. By limiting itself to a single sector the accreditation body can employ experts from within that sector on a full time basis. An international accreditation body also has the advantage of having no territory to protect *vis a vis* international trade.

The main function of accreditation is to provide the means by which a certification body the other side of the world can be trusted. The national accreditation model results in this certification body being accredited by a different accreditation body. The question of trust is simply transferred as to how the other accreditation body can be trusted. In the sector specific international model the certification bodies are accredited by the same accreditation body. The equivalence of these certification bodies is therefore established without further question. In the case of IFOAM accreditation the Multilateral Recognition Agreement signed by the accredited certifiers illustrates this. In this voluntary agreement the certification bodies recognize each other's competence based on their common accreditation.

3.2.2 Extent of private certification systems

A recent special directory edition of the journal, *The Organic Standard,* identified 364 bodies that offer organic certification (*The Organic Standard*; issue 28, August 2003). The Directory notes that there is an imbalance in geographical breakdown and provides the following statistics:

- The 364-certification bodies listed are based in 57 countries.
- 290 are located in the developed world (EU, USA, Japan, Canada and Brazil), the EU alone accounts for 106 of these.
- 56 work beyond their home territory. A few work in most continents.

The extent to which many of these certification bodies are actively engaged in certifying organic production and processing is questionable. The Directory identified that 97 of the organizations had no accreditation or government approvals. This means that they are likely to be very small, certifying only for the local market, and in some cases may not be active at all.

Nevertheless, it is clear that the world is not short of private organic certification bodies. The introduction of regulations has not resulted in a reduction of private certification bodies and could well have stimulated a growth in the sector. Certainly a number of certification bodies that applied and received accreditation by the National Organic Program in the USA, were not known to be actively certifying prior to the publication of the rule.

This is not surprising as none of the major regulations required replacing private certification with government certification. Instead the regulations have utilized the expertise of the private certification bodies to implement a regulatory system. At the same time anticipated continued growth of the organic sector has enticed many new organic certification bodies to enter the market and larger generic certification bodies to enter into the organic certification business.

3.2.3 Implementation of multiple organic programs by certification bodies

The growth of regulations in the organic sector has resulted in certification bodies offering several organic certification programs. It is not uncommon for larger certification bodies to offer certification against the European Union Regulation, the United States NOP regulations and Japanese Agricultural Standard as well as offering certification against its own standard.

Some regulations have required the setting up of a different program. This is true for both Japan and the US where certification under the law requires that the certification be carried out against the legal standard itself. In the EU some countries have taken the same approach. This means that certification bodies that wish to keep their private standards and logo systems have offered both systems. Operators must, of course, be certified to the legal requirement and then may choose to also be certified and licensed to use the private certification logo. In other European countries the authorities have recognized that the private standard meets or exceeds the regulation. This means that operators certified under the private standard are automatically recognized as being in compliance with the legal requirements. The certification bodies are still required to offer certification against the law itself for those operators who do not wish to meet the additional requirements associated with the logo program, but wish to label their product as organic.

Certification bodies that operate several programs face many difficulties. Ensuring that both the operators and the inspectors are fully aware of all the differences in standards is problematic. Issuing transaction certificates is also complicated as a crop may be certified under more than one program and the operator may require certificates under the different program for different lots.

It would be incorrect to view the multiple programs as simply a manifestation of a service business offering its customers several services. In this case neither the certification bodies nor their clients would be likely to choose this course were it not forced upon them. It is a direct result of the lack of harmonization of regulations and standards and of differences and lack of recognition between conformity assessment systems.

3.2.4 Labeling and certification as a marketing tool

From the early stages in the development of organic certification the private certification bodies have marketed their certification marks to the consumer as a guarantee of quality. The degree to which they have been successful differs from country to country. In some countries such as Sweden and the United Kingdom there is a strong consumer identification with the certification body's mark, whereas in other countries such as the USA, there is little consumer recognition of the marks.

The certification bodies' marks are generally officially registered as trademarks. This fact takes on an importance when considering harmonization

and equivalency issues. Solutions that deny certification bodies the right to market under their trademarks may result in compensation demands.

More recently there have been similar labeling initiatives at the accreditation level from both the public and private sectors. IFOAM, the European Union, the United States and Japan all allow use of their approvals on packaging.

Annex 1: Contact details for government departments responsible for organic agriculture and processing[1]

Countries marked with an asterisk (*) did not respond to requests for updates. The information for these countries is therefore dated at January 2002.

Countries with a fully implemented regulation

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[1] This information is printed as it was given; there is no guarantee of its accuracy.

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Current Mechanisms that Enable International Trade in Organic Products

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Executive Summary

This paper focuses on how some government organic regulations and the two international systems (IFOAM and Codex Alimentarius), provide mechanisms to enable the international flow of trade in organic products – a process that in the context of these papers, is referred to as "convergence".

Mechanisms to accommodate international trade exist in all three organic regulations that apply to the major importing markets (EU,USA, and Japan) and in the IFOAM Organic Guarantee System. Some of these mechanisms are based on determination of compliance, and others are based on determination of equivalence. This paper describes these mechanisms and the extent to which they are currently implemented.

Also addressed is the current impact of Codex Alimentarius and ISO Guidelines on harmonization and transparency. The paper concludes with an analysis of some of the limitations of the current systems to bring about convergence. These are the following:

- In general, government systems are not based on an internationally recognized standard.
- There are no precedents for international multilateral equivalence and mutual recognition in government systems, and few precedents for bilateral equivalence.
- Government systems require bilateral equivalency.
- Existing and pending government determinations of equivalence are not transparent.
- The private international system has a mechanism for multilateral equivalency, but is not integrated with the government regulatory systems.
- The private international system does not entirely reconcile equivalency.

List of Contents

1 Introduction

The three major organic importing government authorities (EU, Japan, US) have compliance, mutual recognition and equivalence-based mechanisms for enabling their systems to accommodate the flow of trade in organic products. Transparency of these processes is an important factor in achieving credible and stable mechanisms. This paper examines the current mechanisms for enabling international trade, the extent to which they have been implemented, and assesses their transparency.

It is useful to begin with definitions of the significant terms, along with some examples of their application in the context of organic regulation and trade, after which an overview of both the private and government systems is provided. Details of the specific systems follow, and a summary of the limitations of the existing systems concludes the paper.

1.1 Definitions

Convergence: Convergence refers to any process of trade coordination in a generic way that fosters the flow of products.

Compliance: This paper uses the term "compliance" to indicate adherence to the specific provisions of a standard, technical regulation, or requirement for conformance assessment. Entities that are directly regulated by a government authority or private program are required to be in compliance with all the provisions of a governing document. Compliance is at the root of a given system of technical regulation, regardless of layers of equivalence that might be built above it to harmonize differences among systems. However, compliance can also apply between nations and systems. If a government regulatory program has a mechanism to assess the compliance of foreign entities, *inter alia* certification bodies, producers, traders, with its regulation this can facilitate trade. An example of such a compliance-based approach is the USDA's direct accreditation of foreign certification bodies to the requirements of the US National Organic Program (NOP). While these certification bodies may be subject to the organic regulations of their home country, they may also design their certification program to comply with the US organic regulations. So therefore a provision based on compliance can also be regarded as a way to converge.

Equivalence: Equivalence is a mechanism to recognize and accept another system by acknowledging that variations between the systems uphold the respective systems' objectives. With respect to conformity assessment, ISO defines equivalence as the sufficiency of different conformity assessment results to provide the same level of assurance. Equivalence can be structured bilaterally or multilaterally, and is forged through determinations of equivalency of standards and technical regulations. Although achieving an equivalence determination is a complex process, equivalence mechanisms can operate far more efficiently than compliance mechanisms with respect to international trade. Currently there are no mutual recognition agreements for equivalence of organic regulations in the government sector, although some unilateral equivalence determination have been forged, including a few that recognize the organic regulations of developing countries as equivalent. In the private sector, the IFOAM Organic Guarantee System provides a platform for multi-lateral mutual recognition among participating certification bodies. The extent to which this equivalence operates is addressed later in this paper.

Mutual recognition: Mutual recognition is a tool in which only the conformity assessment bodies are deemed to be equally capable and does not include any convergence of the standards against which products are judged.

Transparency: Transparency means access to information on the mechanisms for implementation of standards, regulations and agreements, as well as for the individual processes and decisions undertaken within these frameworks. Equivalence is internationally feasible only with transparency. This premise is acknowledged and supported by the WTO Agreement on Technical Barriers to Trade (TBT). The TBT Agreement in the Uruguay Round established a requirement for governments to notify other governments when establishing any technical regulations that depart from "relevant international standards" and also when forging equivalence agreements with other governments. Because transparency is so critical to the success of harmonization efforts, this paper addresses elements of transparency as applied to the specific cases of the major importing countries and the private IFOAM Organic Guarantee System.

1.2 Overview of the Private and Government Systems

Private system

The IFOAM Organic Guarantee System is the only international private system dealing with trade of organic produce. It establishes baseline compliance

requirements for standards and conformance assessment upon which equivalence among certification bodies may be further established. Transparency of these mechanisms and their implementation is necessary to ensure that the systems are not discriminatory, and so constitute barriers to trade.

Government technical rules/regulations

All three of the organic technical regulations of the major importing countries plus IFOAM's Basic Standards differ from one another in some key respects. Neither the US National Organic Standard nor the EU Regulation 2092/91 were formally modeled on an existing international standard. Therefore, they are widely considered to have their own national basis and standing, which is not within an international context. In this respect, they may not conform to the WTO TBT Agreement, which states that technical regulations should follow relevant international standards. However, the criteria or definition of a "relevant standard" is not given.

IFOAM Basic Standards (IBS) have existed in the private sector for more than twenty years, but their longevity does not necessarily qualify them as "relevant standards" under WTO. History of the IBS development until recently shows few ties with government or international standardizing structures.

Codex Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods are an initiative of governments with private sector participation, but their development and approval came after the initiation of the US and EU organic regulations and did not influence them to any significant extent. And, although Codex Alimentarius was a reference point for the development of the Japanese Agricultural Standard (JAS), elements of Japan's organic regulation differ in significant ways from other national and international standards, of which an example is its requirements for "grading" of organic products throughout the production and distribution chain.

Conformance assessment

A number of key government conformance assessment requirements are based in some way on ISO Guidelines. IFOAM's conformance assessment requirements for certification bodies, the Accreditation Criteria, are also based on ISO Guidelines. However, the degree to which these systems are based on ISO is significantly different.

2 Private Systems

2.1 Harmonizing Standards

The IFOAM Organic Guarantee System includes a provision to harmonize various regional organic standards with the IFOAM Basic Standards (IBS), while also recognizing that it is a delicate balance combining a need for regional variations with the international harmonization that is needed for trade, fair competition and consumer trust in organic product claims. IFOAM acknowledges that there may be conditions where climate and geography, technical problems, or factors such as economics, regulations, and/or culture create a situation where a variation to the IBS is required. IFOAM also considers the IBS to be "standards for standards" and accepts that regional standards used for certification may well be more detailed than the IBS. Variations in other standards may be acceptable as long as they are consistent with the general aims of the Standards and Accreditation Criteria.

IFOAM has instituted a formal procedure for approving other standards as meeting its international norm, the IBS. The foundation of the procedure is a set of Criteria for Variations. These criteria describe how and under what conditions, variations to the IBS may or may not be approved by IFOAM. The criteria require that need and necessity for the variation is established, and that alternative methods of production and processing systems are compliant with the Principal Aims of the IBS, while not contradicting other general principles in relevant sections of the IBS. Also, variations must represent a distinguishable improvement over conventional production and processing systems, and they cannot result in substantially distorted trade. Approved standards will be recognized in the IFOAM Accreditation Program as long as the regional standard corresponds to the region in which a certification body is certifying. The practical result of this approval system is that multiple regional standards can be judged equivalent within the private system.

IFOAM's policy for harmonizing standards was completed in 2002. In 2003, IFOAM processed its first application for approval of another standard and so for the first time, evaluated another standard against the Criteria for Variations.

The IFOAM Basic Standards serve a practical function in the realm of private sector enforcement. They are the technical document upon which certification bodies (CB) in the IFOAM Accreditation program must base their standards

in order to gain accreditation. The accreditation process includes a detailed screening of the CB's standards in comparison to the IBS.

2.2 Equivalence and Mutual Recognition

IFOAM Accreditation provides a common platform upon which IFOAM Accredited Certification Bodies (ACBs) can streamline their operations and support the flow of international trade in organic products. Indeed, the ACBs have built a multi-lateral agreement (MLA) for mutual recognition in which most of them are currently participating.

2.2.1 History of the MLA

The ACBs began to work on crafting the MLA in 1997, using as resources several existing bilateral agreements, an ISO 9000 report on mutual recognition agreements, and model MLAs in other ISO settings. In 1999, nine ACBs were initial signatories to the MLA.

2.2.2 Scope of the MLA

The following points define the scope of the MLA:

- It is owned and controlled by the ACBs themselves, not by IFOAM.
- The MLA is open to ACBs only.
- It provides recognition of functional equivalence among certification bodies. Functional recognition is established for the system of conformance assessment (certification) at the level of the IFOAM Accreditation Criteria, and for equivalence of organic standards at the level of the IFOAM Basic Standards.
- Its tangible result is a process for one ACB to accept products certified by another ACB. This process is known as "certificate acceptance", and stands in contrast to the process of conducting full certification document reviews and re-certifying a product. This is useful when a party certified by one ACB wishes to purchase a product certified by another ACB for use as an ingredient in a multi-ingredient product, or for re-sale. However, it does not automatically transfer the logo of a second ACB to the supplier of the ingredient or product for re-sale.

Two levels are involved in implementing the MLA. They are:

- Multi-lateral recognition
  - Certification systems are mutually recognized since they all meet the IFOAM Accreditation Criteria.
  - Organic standards are equivalent at the level of the IFOAM Basic Standards. However, certification bodies may declare to the ACB group that they

will require compliance to additional standards requirements when deciding case-by-case certificate acceptance.

- Bilateral acceptance
  - The process for accepting certificates is established between two ACBs, who will need to consider each other's additional requirements, if any, and work out a system to verify that these additional requirements were met in the production of the product.
  - ACBs accept products purchased by their certified operators.

2.2.3 Status of implementation

In order for the MLA to function at the practical level, ACBs must have complete bilateral arrangements with one another. In cases where there are frequent transactions from one certification system into another, ACBs have usually worked out bilateral arrangements. Where there are rare or no transactions of product from one certification system to another, bilateral arrangements will not have been made.

2.2.4 Challenges to full implementation

Communication: The worldwide distribution of ACBs can make follow-up on the mechanisms of bilateral certificate acceptance difficult.

Additional requirements: The provision within the MLA for certification bodies to require that accepted products meet additional standards requirements beyond the IBS have constrained the functional implementation of equivalence among ACBs. At least eight ACBs have declared additional requirements. The number of additional requirements set by certification bodies varies from just one or two to more than twenty. Where there are a few additional requirements the system works satisfactorily. However, as compliance with each of these additional requirements must be checked and verified on a case-by-case basis between the two certification bodies involved, a large number of additional requirements both weakens motivation and eliminates the justification for bilateral certificate acceptance.

ACBs have offered the following justifications for setting additional requirements:

- There may be legal constraints on the ACB in the form of government regulations that require full standards compliance.
- Consumer expectations about a particular certification seal or in a particular country/region may require compliance with certain additional standards.
- Clients of the ACB have expectations of fairness and parity in requirements.

Eliminating additional requirements altogether when there are differences in standards requires that ACBs determine "equivalence." This is a complex process requiring the establishment of criteria, and may not be justifiable or otherwise feasible at the certification body level.

2.2.5 Extent of global harmonization

Of the approximately 360 certification bodies worldwide, 26 are IFOAM accredited and of these, 22 have signed the MLA. However, these 22 ACBs tend to be large certification bodies that operate internationally, and which account for a high percentage of organic products traded internationally. On the other hand, the MLA applies only to the certification body's "IFOAM Accredited programs". A number of certification bodies run multiple organic certification programs for a variety of standards, and are IFOAM accredited for only one program. Therefore, the "IFOAM Accreditation" of a certification body may describe only a portion of its operation.

2.2.6 Transparency of the MLA

The signatories to the MLA are published on the website of the International Organic Accreditation Service (IOAS). Additional requirements of the individual ACBs are available upon request.

3 National Government Systems

3.1 European Union

3.1.1 Mechanisms for imports

Article 11 of EEC Regulation 2092/91, as amended up until late 2003, specifies requirements for importing products from countries outside the EU. EU regulations apply to all processed and unprocessed food products from animals and plants, including wild products. Currently there are three methods for meeting the requirements for importing organic foods into the EU.

1. Approval of third countries (Article 11.1)

Article 11 of Regulation (EEC) No. 2092/91 establishes the basic system for approval of third countries for the purpose of importing organic products. More detailed rules for implementing the arrangements are laid down by the Commission Regulation (EEC) No 94/92 of 14 January 1992. It requires the EU authorities to evaluate and approve a third country's organic standards and to recognize its organic inspection system.

In cases where inspections are carried out by private certification bodies, the EU will evaluate the exporting country's system for accrediting private certification bodies. The evaluation of the third country system includes physical visits by the Commission's own experts. Such evaluation visits may also occur at any time following approval of the third country.

Approved countries appear on a list annexed to Commission Regulation (EEC) No. 94/92. The list may specify approved regions, production units, or inspection bodies within the country. Through this method, inspection bodies are approved by the EU only for their work within the country on the Article 11 list, and not for certifications outside the country.

To be added to the Article 11 list, a country representative must apply to the Commission and provide sufficient information to enable the Commission to ensure that the requirements are met for organic products intended for import into the EU. Formatted tables for enabling a comparison of third country standards against those of the EU are provided. The information must include the following: types of products intended for export; rules of production; rules on the inspection system and a description of how it is organized; and any available reports on the effectiveness of the implementation of production and inspection rules. [Commission Regulation (EEC) No 04/92 Article 2.(2)]

2 Member state authorization of products: the importer derogation (Article 11.6)

Council Regulation (EEC) No 2083/92 amended the Regulation to enable the government authority with jurisdiction over organic standards in individual EU Member States to authorize an importer to import products from a country not included in the Article 11 list. This provision is commonly referred to as the "importer derogation". It is scheduled to expire on 31 December 2005. In order for imports to be approved under this method, the importer must furnish the Member State with sufficient evidence to show that:

- The imported product was produced according to organic production rules equivalent to EU standards;
- The imported product was subject to inspection measures equivalent to EU inspection requirements;
- The inspection measures will be permanently and effectively applied [Council Regulation (EEC) No 2092/91, Article 11 par 6, as amended]; and
- The certification body operates in compliance with ISO/IEC Guide 65/ EN45011.

Each importer must obtain a separate authorization for each imported product. If an importer imports the same product from different countries or with certifications from different certification bodies in the same country, a separate authorization must be obtained for each. Member States are required to notify the Commission of each authorization, and other Member States are subsequently notified.

The process to license the importer to import a particular product from a particular country not on the Article 11 list is the responsibility of individual Member States, not the responsibility of the Commission. Member States and even regional authorities implement this provision differently with respect to the nature of the evidence that must be supplied and the length of validity of the product import authorization.

3 Commission approval of inspection bodies in a third country (Article 11.7)
An amendment to Council Regulation 2092/91 allows an EU Member State to assess a third country's inspection body (certification body) and request the Commission to approve it. The Commission may approve the inspection body and add it to the Article 11 list [Council Regulation (EEC) No 2092/91, Art. 11 par.7 as amended by Commission Reg (EEC) No 1935/95, Art 1, par. 31]. The intent of this provision is to provide a mechanism under which certification organizations approved in EU countries could be approved for certifying imports from third countries into the EU.

3.1.2 Extent of implementation

As of August 2003, eight countries are listed on the third country list as follows: Argentina, Australia, Costa Rica, Czech Republic, Hungary, Israel, New Zealand, Switzerland. EU and US negotiators have taken steps toward a mutual agreement for equivalency, the realization of which would mean the streamlining of a large volume of organic trade.

A large majority of the organic products currently imported to the EU Member States is authorized through the provision of Article 11.6. In 2000 and 2001 over 85 countries were able to export organic products to the EU under this provision. However, there are challenges for access to EU markets under this article. Particular implications for developing countries are analyzed in another paper relevant to the ITF's work, "Background Paper Concerning the EU Regulation 2092/91 – implications for developing countries and relations to WTO rules."

3.1.3 Transparency

Development of detailed procedures to implement EEC 2092/91, including mechanisms for approving organic product imports into the EU is delegated to a committee of Member State representatives under Article 14 of the regulation. The "Article 14 Committee," as it has come to be known, convenes regularly. However, records of their meetings and many procedural documents are not made publicly available. While the list of third countries approved under Article 11.1 is published, there has been a lack of notification of these agreements with other countries under Article 10.7 of the WTO's Technical Barriers to Trade (TBT) Agreement, which states that "Whenever a Member has reached an agreement with any other country or countries on issues related to technical regulations, standards or conformity assessment procedures which may have a significant effect on trade, at least one Member party to the agreement shall notify other Members … of the products to be covered by the agreement and include a brief description of the agreement." At the October 2002 meeting of the TBT Committee, US representatives lodged a criticism in this matter. Neither the EU process for the determination of equivalence under Article 11.1 nor that of the individual Member States under article 11.6 is available as a public record. The criteria and process under which the current EU/US equivalency negotiations are structured is not publicly known.

3.2 Japan

3.2.1 Mechanisms for imports

The Japanese Agricultural Standards of Organic Agricultural Products and Organic Agricultural Product Processed Foods (Notifications No. 59 and 60 of the Ministry of Agriculture, Forestry and Fisheries of 20 January, 2000) provide three options for importing organic products into Japan.

1. Certification by a MAFF-registered certification organization (RCO) in Japan.

An RCO operating from within Japan certifies the production/processing operation in the exporting country. The certified foreign operator can then affix the Organic JAS label for export to Japan. The RCO may delegate inspections to a certification body in the exporting country through a "trust contract of providing inspection data", provided that the certification body conforms to two requirements: 1) It is recognized and registered as a certification body by the government of the country, the local government, or an international organization with established reliability i.e. ISO, IOAS. 2) The organization has considerable experience as a certification body for organic foods.

2. Certification by a MAFF-registered foreign certification organization (RFCO) in the exporting country.

For registration as an RFCO, a foreign organization must have its business establishment in a country that is deemed by MAFF to have a system equivalent to that of Japan. The RFCO certifies the operation in the exporting country. The certified foreign operator may then affix the Organic JAS label for export to Japan. RFCOs may also certify in countries other than the country of their business establishment (excluding Japan), provided that the foreign countries are included in "the area where the certification service is carried out" at the time of applying for registration. RFCOs may also delegate inspections (through a "trust contract of providing inspection data") to certification bodies in other countries (excluding Japan), provided that the certification body conforms to the same requirements as listed above. RFCOs intending to do so are requested to communicate in advance with Japan's Standards and Labeling Division.

3 Recertification

In this procedure, an RCO in Japan uses data obtained in past on-site inspections to certify an importer of organic ingredients destined for use as ingredients in finished products marketed as organic in Japan.

Production and processing of organic raw material is certified by a certification body in the exporting country. The RCO of the Japanese importer (processor) will assess conformity to the organic JAS for organic ingredients to be used for organic processed foods. The certified Japanese processor (importer) in Japan affixes the Organic JAS label. The RCO may use data obtained from previous inspections if the inspection was carried out by an organization that meets the criteria for certification bodies listed earlier, and if the RCO judges that the data is still "effective", i.e. applicable. Data obtained more than one year ago is not thought to be effective. If such inspection data is inadequate for certification, the RCO must perform an on-site inspection. RCOs planning to utilize such data are required to communicate in advance with the Standards and Labeling Division.

3.2.2 Extent of implementation

As of September 2003, MAFF-Japan had agreements to recognize the organic regulations and conformity assessment of Australia, the EU, and US with the Japanese regulation. There are 16 RFCOs as of August 2003. Because several options exist to create avenues for import of organic products into Japan, there are opportunities for developing countries to access Japanese markets with their organic products. The initial difficulty for foreign operators and

certification bodies (in developed and developing countries alike) to understand these options appears to have eased, and now MAFF has published an extensive question and answer section on its website (www.maff.go.jp) which provides some detailed guidelines for the options and how to deal with them. However, the cost and burden of market access is lower in the countries that Japan recognizes under equivalency, and this could confer some competitive advantage to these countries and their exporters and producers.

3.2.3 Transparency

Japan has notified other WTO members of its regulations and agreements according to the provisions of Article 10.7 of the TBT Agreement, and it has translated its law and guidance documents into English. There is an extensive English language question and answer section on the MAFF website, along with numerous other technical criteria and guidance documents.

The MAFF procedure and criteria for the establishment of the equivalency agreements is not accessible, and there are some minor but non-transparent exceptions to the equivalence agreements with the EU and the US on substances for use in organic farming.

3.3 United States

3.3.1 Mechanisms for imports

In the US National Organic Program (7 CFR Part 205) there are three official methods for meeting the requirement for importing organic products into the United States.

1. Direct accreditation by USDA

Section 205.500 of the Final Rule for the National Organic Program empowers the United States Department of Agriculture (USDA) to accredit "a qualified domestic or foreign applicant in the areas of crops, livestock, wild crops, or handling or any combination thereof to certify a domestic or foreign production or handling operation as a certified operation." Accreditation by USDA covers the operations of the accredited certification body worldwide, regardless of where the certification body is located. Once accredited, all certification bodies are to be treated equally, regardless of whether they are based inside or outside the US, and regardless of whether they are government or private programs. Furthermore, all accredited certification bodies are required by the Rule to accept the decisions made by all other certification bodies that are accredited

or accepted by the USDA. Under the direct accreditation option, certification bodies and the operations they certify must comply with the requirements of the Organic Foods Production Act of 1990 and with the Rule in order for the products they certify to be sold in the US. The Rule covers both the technical regulation and the performance of conformance assessment.

2 Accreditation by a foreign government
In lieu of direct accreditation by the USDA, the USDA will accept the accreditation of a certification body by a foreign government if the USDA determines upon the request of the foreign government to recognize that government's conformance assessment, and also that the foreign government authority assures that the certification bodies can certify the production and/or processing to meet the requirements of the Organic Foods Production Act and the Final Rule. The foreign government would need to have a program to accredit a certification body to certify to the US standards, or optionally it would have to have national standards that are essentially the same as those of the US. The certification bodies operating under this option would be "approved" but not directly accredited by the USDA. In this scenario, USDA recognizes the equivalency of a foreign government's conformance assessment system for certification bodies, but the certification those bodies perform for products exported to the US must be for compliance with the US technical standard. The USDA has approved the following four foreign government entities and their accredited organic certification bodies: Denmark, New Zealand, United Kingdom, and the Province of Quebec, Canada.

3 Equivalency
The third option is equivalency. Under this option, a foreign government authority that accredits a foreign certification body must operate under an equivalency agreement that is negotiated between the US and the foreign government. Certification bodies that are accredited by governments that have negotiated equivalency agreements with the US would be "approved" but not directly accredited by the USDA.

3.3.2 Extent of implementation

The USDA has not completed any equivalence agreements yet, although negotiations for such are underway with the European Union, and technical assessments of the two standards have been completed. However, the USDA has directly accredited 42 foreign certification bodies (out of a total of 106 USDA accredited certification bodies). The predominant means of access to US organic markets by foreign countries is through direct accreditation.

3.3.3 Transparency

The USDA publishes a comprehensive list of accredited certification bodies and applicants for accreditation on its National Organic Program website (www.ams.usda.gov/nop). A question and answer section is also posted on the site, as are the records of the National Organic Standards Board, which advises the USDA on the organic regulation. The website includes a list of countries that the USDA is evaluating for approval and those countries with which it is engaged in equivalency discussions.

The criteria and process for determination of foreign country approval and equivalence are not publicly available. According to the USDA, the Terms of Reference for the equivalency negotiation between the US and EU are based on the general provisions of the TBT Agreement, but there is no precedent under the TBT for establishment of equivalency.

4 Inter-Governmental Bodies

4.1 Codex Alimentarius

The statutes of Codex Alimentarius refer to harmonizing objectives, including the following:

- Promoting coordination of all food standards work undertaken by international governmental and non-governmental organizations.
- Finalizing standards … and, after acceptance by government, publishing them in a Codex Alimentarius either as regional or world-wide standards, together with international standards already finalized by other bodies … wherever this is practicable.

This paper analyzes the degree to which the Codex Alimentarius has already influenced harmonization of organic standards and conformance assessment internationally, and in this regard it primarily addresses the work of the Codex Alimentarius Committee on Food Labeling. Another paper in this publication, "Existing and Potential Models and Mechanisms for Equivalence and Mutual Recognition" analyzes other Codex guidelines, for their potential utility in harmonization.

4.1.1 Guidelines for organically produced foods

Guidelines for the production, processing, labeling and marketing of

organically produced foods were developed by the Codex Alimentarius Committee on Food Labeling. They are intended to facilitate the harmonization of requirements for organic products at the international level. The following table lists the current status of sections of these Guidelines.

Topic	Status	Year
General Guidelines	Final	1999
Livestock	Final	2001
Criteria for Substances	Final	2003
List of Permitted Substances (revision)	Step Five	2003

Initiated in 1993, the Guidelines are consistent although not identical with the IFOAM Basic Standards, which the Committee took into account (along with the EU Regulation 2092/91) during the development processes.

Influence on harmonization

Of the three regulations covering the major importing regions – the EU, Japan, and the US – only Japan has acknowledged the use of Codex as a reference in formulating its national organic standard. The MAFF regulation was developed between 1999 and 2000, and could more logically reference the Codex standards. In contrast, the development processes of the EU Regulation 2092/91 and the USDA NOP were initiated in the early 1990s, well before Codex had finalized its Guidelines.

Codex Alimentarius Guidelines, like IFOAM Basic Standards, serve as guidance documents for the development of national and private standards. For example, India based its technical organic regulation on the IFOAM Basic Standards and Japan referenced Codex in the establishment of its regulation. The IBS and Codex guidelines diverge in some places, as shown by comparison documents. An emerging difference is in the nature of the development of lists of permitted substances. The Codex Alimentarius Committee on Food Labeling presents its list as "indicative" of substances used in organic systems, but there is no process for technical screening of substances at the Codex level. Countries nominating substances for the Codex list are required to demonstrate that they have evaluated the substance against the Codex criteria, but Codex does not perform a technical review. IFOAM performs a technical review of substances proposed for addition to the IBS list of substances prior to taking a decision on them.

Transparency
The process to develop Codex Guidelines is designed for transparency. In the particular case of the organic guidelines, the establishment of a Working Group within the Committee for Food Labeling has enhanced transparency of the development of the documents. The Working Group is accessible by stakeholders who are given opportunity for input at sessions during the annual Committee meetings and also access to drafting groups in between meetings. Documents, including those under development, are publicly available on the Codex Alimentarius website.

4.1.2 Inspection and certification

The draft Codex Guidelines for the Development of Equivalence Agreements Regarding Food Import and Export Certification Systems (1999) provide a preliminary framework for the establishment of equivalence agreements on the certification system. Recently, they have been withdrawn, and a discussion paper regarding the scope of Codex Guidelines in this area has been circulated for comment. At issue is whether the Equivalence Guidelines from this branch of Codex should cover only conformance assessment, or if they should also include technical regulations. Another Codex document on equivalence is the recently adopted "Guidelines for the Judgement of Equivalence of Sanitary Measures Associated with Food Inspection and Certification Systems", but these do not apply directly to organic certification. They address food safety (sanitary) measures, however some of the principles are relevant to equivalence in general, especially the recommendations concerning transparency and the consideration by importing countries of the request of exporting developing countries for technical assistance. This is a recent text and it is too early to know how it will be used by member countries.

4.2 ISO Guidelines

Among the Guidelines published by the International Organization for Standardization (ISO) is the ISO/IEC GUIDE 65:1996(E) "General requirements for bodies operating product certification systems." This guideline has had a significant impact on the international harmonization of conformance assessment at the level of certification. This influence began when the EU Regulation 2092/91 required that inspection bodies conform to the provisions of EN 45011, an EU regulation that is almost identical to ISO Guide 65. Subsequently, IFOAM Accreditation Criteria have substantially incorporated ISO 65. The USDA Accreditation Program also references ISO

Guide 65. In contrast, MAFF-Japan does not reference ISO Guide 65 in the development of its registration program, and criteria to become MAFF registered bear no resemblance to the ISO Guide 65 document.

ISO Guide 65 is oriented toward product certification, and not process and production method (PPM) certification, which is conducted by organic certification bodies. This has created some gaps in the practical application of ISO 65 in the organic guarantee systems.

5 Limitations of the Current Systems

While a host of propositions regarding limitations of the current situation to bring about international harmonization could be put forward for further discussion by the ITF, this paper only puts forward six, four of which are concerned with government systems, and two with private systems.

5.1 Government Systems

5.1.1 System not based on a body of internationally recognized standards

Of the three government regulations responsible for controlling the majority of imported products, two (EU and USA) were not built on a foundation of relevant international standards and common principles. This makes it more difficult to design a harmonized approach to equivalence. Only the Japanese regulation was developed at a time when it was possible to reference a well developed Codex international guideline, but the Japanese regulations have added some significantly different provisions, most notably, the "grading" requirements.

5.1.2 No or few precedents for multilateral and bilateral equivalence

Mutual equivalence agreements between governments are relatively rare, even for technical product specifications where they are presumably easier to achieve than for product and production methods (PPM) requirements. In the case of PPM, which are reflected in organic standards, there is no precedent for forging mutual equivalence under a common international system. Individualized, and non-harmonized bilateral processes for equivalence lack transparency and consistency. Although Codex Alimentarius has been referenced in Guidelines for Equivalency of Sanitary and Phytosanitary

measures, this does not tend to translate well for the judgment of equivalence on PPM standards.

5.1.3 No mechanisms for multi-lateral equivalency

There is currently no available mechanism for negotiating multilateral equivalency. Lacking a means for multi-lateral equivalency, the number of bi-lateral equivalency agreements required to achieve equitable global harmonization is very high. If there are 56 countries with regulations, this could mean over 3,000 equivalency agreements. Codex Alimentarius organic guidelines (standards) are now established, and both Codex Guidelines and IFOAM Basic Standards could serve as a harmonizing baseline for equivalency negotiations.

5.1.4 No transparency in determinations of equivalency

Lack of transparency relative to the criteria and processes for establishing existing and pending equivalency agreements is a barrier to creating broader harmonization. Furthermore, non-transparent equivalency determinations may not withstand the scrutiny of trade rules.

5.2 Private Systems

5.2.1 No integration into the government regulatory system

Although the private international system has a Mechanism for Multilateral Equivalency, it is not integrated into the government regulatory system.

The IFOAM Organic Guarantee System is based on a visible international organic standard and an ISO-based conformance assessment system, and has a mechanism for multilateral equivalency. However this private system is voluntary, and does not guarantee organic process and production methods to the level of any mandatory government regulation. This has limited the potential of the system to formally facilitate trade, although it has informally facilitated a lot of trade, particularly for third country imports into the EU under Article 11.6,

5.2.2 No entire reconciliation of equivalency

The private international system does entirely reconcile equivalency. The need and ability of certification bodies to maintain "additional requirements" within the Multilateral Agreement means that functional equivalency is not completely achieved in cases where additional requirements are specified. Also, the current

system still requires bi-lateral arrangements between certification bodies that create inertia in the implementation of these systems of recognition.

6 Conclusions

International trade of organic products has been cobbled together and is working on a basic level. Many exporters have a mechanism (given a particular export opportunity) to gain import authorizations in a destination country. All three of the major regulations provide at least three options for exporters to comply with import requirements for organic products. However, the current system is inefficient and some producers undoubtedly face insurmountable obstacles to some international markets because of the high cost of compliance with the organic regulations. The long-term stability of the current systems is also questionable in the face of rapid growth of organic markets and opportunities worldwide.

A few unilateral equivalency arrangements have been reached between governments, but generally these agreements lack transparency. Bilateral mechanisms are not an efficient means to achieve true international harmonization. A more efficient model of multilateral international equivalence is found in the private international Organic Guarantee System, but true equivalency through this system is not completely realized due to elements of system design such as allowing for additional standards requirements. In addition, this private system is not integrated in any formal way into the government regulatory systems. Clarification of the respective roles of the IFOAM Basic Standards and the Codex Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods could be useful to future harmonization efforts in the area of technical standards.

Existing and Potential Models and Mechanisms for Harmonization, Equivalency and Mutual Recognition

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Executive Summary

This paper is one of a series of background papers commissioned by the International Task Force on Harmonization and Equivalence in Organic Agriculture, established by FAO, IFOAM and UNCTAD in 2003. Its purpose is to review the mechanisms used in other industries to facilitate free but regulated trade and to highlight those that may show promise for use in the organic agriculture sector.

The objective sought is the integrity of organic products with free and equal access to markets by all producers that comply with agreed requirements and with appropriate regulation.

Regulatory systems generally comprise a rule or standard and an agreed mechanism for ensuring conformity with the standard. Both components must be addressed in working towards the above objective.

Harmonization, equivalence and mutual recognition are tools used by many sectors to facilitate free but regulated trade. Many modifications of these tools are used and rarely in isolation.

In this study existing models from other sectors are analyzed that involve:
- Harmonization of standards.
- Equivalency in conformity assessment.
- Mutual recognition of conformity assessment.
- Mixed models that combine two or more convergence tools.

Key factors relating to organic agriculture including the dynamics of private-public actors, continuous development of standards and the importance of the coordination process are highlighted and the different ways in which convergence can proceed are summarized.

The initial lessons learnt from such an analysis include that:

- There are benefits from the involvement and collaboration of both the private and public sector.
- Trust building activities are required to provide confidence from all parties, government to government as well as government to industry.
- Equivalence of standards will certainly be a required tool, preferably built upon harmonization towards an international standard detailing core values.
- Continuous development of organic standards presents a challenge.
- Movement toward harmonization of conformity assessment procedures is necessary.
- Monitoring of conformity assessment may be achieved through an international or national model.
- A neutral international forum for bringing together the various parties and overseeing all elements, as exampled by the ISTA model, may be required.

Taking these models and requirements of the organic industry together, potential solutions are discussed in relation to convergence and rationalization of conformity assessment systems and standards.

In conclusion, a four-step approach is presented.

List of contents

Abbreviations and Definitions

Accreditation: Procedure by which an authoritative body gives a formal recognition that a body or person is competent to carry out specific tasks.

CAB: Conformity Assessment Body. In the organic regulatory environment more normally called Certification or Inspection Body

CEN: Comite European de Normalisation

CENELAC: Comite European de Normalisation Electrontechnique

Certification: Procedure by which a third party gives written assurance that a clearly identified process has been methodically assessed, such that adequate confidence is provided that specified products conform to specific requirements

Codex: Codex Alimentarius Commission of FAO and WHO

Codex Guidelines: Codex Guidelines for the production, processing, labelling and marketing of organically produced foods. GL32-1999, Rev.1-2001

EA: European Co-operation for Accreditation

EC: European Commission

ETSI: European Telecommunications Standards Institute

EU: European Union

EU Approach: EU model, known as the "New Approach" for harmonization of standards and the "Global Approach" for conformity assessment

EU Regulation: Council Regulation 2092/91 (and its amendments) on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs.

FAO: Food and Agriculture Organisation of the United Nations

Guide ISO65: ISO/IEC Guide 65 "General requirements for bodies operating product certification systems"

IASC: International Accounting Standards Committee.

ICC: International Chamber of Commerce

ICH: International Conference on Harmonization – Pharmaceutical Industry regulatory mechanism

IEC: International Electrical Congress

IEC: International Electrotechnical Commission

IECEE: International Electrochemical Commission System for Conformity Testing and Certification of Electrical Equipment

IFOAM: International Federation of Organic Agriculture Movements

IFOAM Norms: IFOAM Norms for organic production and processing comprising IFOAM Basic Standards and IFOAM Accreditation Requirements – 2002

IFOR: International Forum for Organic Regulation (as proposed)

IOAS: International Organic Accreditation Service
ISTA: International Seed Testing Association
ITF: FAO/IFOAM/UNCTAD International Task Force on Harmonization and Equivalence in Organic Agriculture
JAS: Japanese Agricultural Standard
MLA: Multi lateral Agreement
NOP: US National Organic Program
OECD: Organization for Economic Co-operation and Development
Safe Harbor: US-EC Understanding on the Principles for Data Privacy Protection, otherwise known as the "Safe Harbor Principles"
SPS: WTO Agreement on the Application of Sanitary and Phyto-Sanitary Measures
TABD: Transatlantic Business Dialogue
TBT: WTO Agreement on Technical Barriers to Trade
UNCTAD: United Nations Conference on Trade and Development
UNECE: United Nations Economic Commission for Europe
US-EC MRAs: US-EC Mutual Recognition Agreements
US FDA: US Federal Drug Administration
WANO: World Association of Nuclear Operators
WTO: World Trade Organization

1 Introduction

On 15 September 1904, delegates to the International Electrical Congress (IEC), being held in St. Louis, USA, adopted a report that included the following words:

> "…steps should be taken to secure the co-operation of the technical societies of the world, by the appointment of a representative Commission to consider the question of the standardization of the nomenclature and ratings of electrical apparatus and machinery." (IEC website)

The problem of harmonization and facilitating "free but regulated" trade is neither new nor confined to trade in products of organic agriculture.

The increasing global market for many products and the decrease in tariff barriers to trade has increased the focus of private industry and governments in general on the barriers to trade created by domestic regulations. The 1994 WTO agreement on Technical Barriers to Trade (TBT) drew wide attention to this issue and set down guidelines for members on reducing such barriers. Achieving the balance between protecting the consumer, whether in terms of safety of marine equipment or an organic label claim, and offering that same consumer free choice at competitive prices is a common challenge and one that involves many stakeholders, both public and private. From the point of view of the producer or manufacturer, free access to markets with minimal, and certainly no disadvantageous regulation, is of primary concern.

The other papers in this series explain the history and operation of the current mechanisms that regulate trade in organic products and demonstrate some of the inefficiencies and inadequacies that exist at a practical level. The International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture wishes to stimulate discussion and develop proposals that reduce the regulatory burden on the industry whilst maintaining the integrity of organic products.

To assist in this process, this paper attempts to bring together examples and models from other industries that are similarly engaged in seeking a balance of "free but regulated trade", to learn from their experience and, if possible, identify some models and/or components (structures, mechanisms) that may be applied to the organic trade.

This paper seeks to:
- Clarify the objective being sought.
- Establish a common understanding of key terms.
- Describe existing models for equivalency and mutual recognition in other industries.
- Review how such existing models or their components may contribute to regulated, free trade in organic products.

1.1 The Objective of Free but Regulated Trade

The basic objectives sought here are:
- Integrity of organic products as judged by "international" consensus.
- Free and equal access to markets by all producers in all nations.
- Appropriate regulation.

1.2 Definitions

Regulatory systems are generally made up of two parts: a "**rule**" of some kind, which can be a technical regulation, private standard or guideline against which a product or process is judged; and a "**conformity assessment system**", which is a method and mechanism of assessing operators against the standard. All three organic regulations in the EU, USA and Japan define both technical rules and the methods by which compliance with those rules shall be assessed.

The classical model of standards and conformity assessment establishes a framework for trade that is based on the principles of (1) **harmonization** and **equivalency** of standards and regulations and (2) mutual recognition of conformity assessment systems. These terms are used widely and in different ways.

1.2.1 Harmonization

Generally used, harmonization implies systems, activities or rules in agreement, working together and certainly not impeding.

The ISO Guide 2 (ISO/IEC, 1996) defines hamonization of standards as:

> "…standards on the same subject approved by different standardizing bodies, that establish interchangeability of products, processes and services, or mutual understanding of test results or information provided according to these standards". It goes on to say

that "…the term 'equivalent' standards is sometimes used to cover the same concept as harmonized standards".

The EU Commission suggests the term implies commonality or sameness and considers that:

> "….harmonization may be regarded as the drawing up of common or identical rules by a group of authorities, with the intention that the mandatory rules governing a product or service shall be the same among them" (EU Commission, 2001). The authors differentiate this from "international standardization", which has as its aim "the elaboration of a common set of requirements at international level, with the involvement of those who have a legitimate interest in them: governments, economic entities such as industry, and users, without the intention that mandatory rules and technical practice should always be the same."

This principle that harmonization is based on the notion that national standards and regulations should adopt, reference, or be based on relevant international standards is accepted by ISO, the WTO/TBT, and by OECD, the EU, and the US (Vaupel, 2001:21). However harmonization is frequently used to describe any process of convergence at less than international level and as implied by ISO Guide 2 can encompass "equivalence".

For the purpose of these papers, we therefore propose to use the term "harmonization" as the drawing up of common or identical rules, or the referencing of international standards. To describe any process of trade coordination in a generic way we propose to use the term "convergence".

A process of harmonization may aim to agree upon similar rules; this is not only difficult to achieve but may not be the most desirable outcome (EU Commission, 2001). The EU "New Approach" was born partly out of the frustration with previous attempts at total harmonization within Europe, stemming from the landmark Cassis de Dijon case in 1979 in which the European Court of Justice determined that a Member State could no longer prevent the marketing within their borders of any product lawfully manufactured and marketed in another Member State (Majone, 1999). This resulted in a change of approach, which outlined that the principle of total harmonization was to be restricted to essential health and safety requirements. This principle has also been taken up within the Codex system. Such approaches permit and protect national or regional diversity in the detail but ensure convergence and assurance of the important principles.

Harmonization or convergence in standards in itself does not imply mutual recognition (see below) of certificates (EU Commission, 2001). Even when the rules of two parties are the same, the acceptance of certificates of conformity by one party is based upon that party's trust in the conformity assessment procedures of the other. For regulated, free trade to occur, a degree of harmonization (or equivalence) needs to be combined with a level of mutual trust in the conformity assessment system of the parties.

Harmonization implies convergence; however convergence may be one-sided, such as when one party makes changes to come into line with the other. This has occurred in some of the examples considered below where parties have modeled their regulatory systems based on those of the European Commission, given the importance of its internal market. This has also been seen in the organic market where, because of Europe's strength as an import market, third country national regulations have been written to fulfill the demands of EU Regulation 2092/91.

Harmonization of conformity assessment procedures may be less difficult and less sensitive to achieve than technical standards, and some common understanding of procedures certainly facilitates mutual recognition. For example, the multilateral agreement between the International Accreditation Forum (IAF) members is founded on the basis that they are committed to developing conformity assessment procedures in line with ISO/CASCO guides and standards and adopted in accordance with ISO rules (IAF web site).

1.2.2 Equivalence

Equivalence is a mechanism to recognize and accept another system by acknowledging that variations between the systems uphold the respective systems' objectives (WTO, 1994). With respect to conformity assessment, ISO defines equivalence as the sufficiency of different conformity assessment results to provide the same level of assurance (ISO/IEC).

Equivalence, therefore, refers to achieving the same end even though either standard and/or the conformity assessment mechanism is/are not the same. Within Europe, this was another outcome from the Cassis de Dijon case, in which the court reasoned that the basic aims of national regulations such as protection of human health are generally the same everywhere and since they all try to achieve the same objective they should normally be accepted as equivalent even though the specific methods to achieve the aims may be different.

The TBT sets out an obligation for members to "give positive consideration to accepting as equivalent technical regulations of other members, even if those regulations differ from their own, provided they are satisfied that these regulations adequately fulfill the objectives of their own regulations." (WTO/ TBT Article 2 2.7).

The issue of equivalence arises in international trade when an importing country requires imported goods to meet its national regulatory requirements. If there is no equivalency agreement, the goods must meet the regulations of the exporting country as well as those of the importing country. If there is an equivalency agreement between the countries the regulations of the exporting country are deemed equivalent to the requirements of the importing country and the goods need to meet only one set of requirements: those of the exporting country.

Where a regulation in one territory has the same regulatory objective as that in another, and the two sets of regulations both actually fulfill this objective, the authorities can agree to regard them as equivalent. Agreement can then be reached that products conforming to the exporting territory's requirements (including conformity assessment measures where necessary) can be placed on the market in the territory of either party as though it conformed to the rules in force in that jurisdiction. The end point is the same, but the cost and problem of converging standards is not necessary. The strength of "equivalence" as a tool of convergence is that it permits regulatory autonomy of the parties and allows for flexibility through some differences in national rules.

The disadvantage of equivalency is that the assessment to determine equivalence may be technically complex and when requirements are revised, a new determination is likely to be needed (EU Commission, 2001). This has particular relevance to the organic industry where standards are evolving and will continue to do so through a process of continual improvement, parallel to further development of the sector.

Recognition of equivalence, like harmonization, does not itself imply recognition of conformity assessment unless specifically included (EU Commission, 2001). Together with recognition of conformity assessment, recognition of equivalence of technical regulations ensures that a product needs to comply with only one set of technical requirements and is tested and assessed only once. Such assessments are carried out by the public or private conformity assessment body that is most familiar with the requirements against which the product is being assessed.

Such reduction of duplication is most easily achieved when the technical regulations are very similar in their objectives, and the requirements of each regulation can be seen to satisfy the objectives of the other. This is most likely to occur when both are based on a common international standard, i.e. there is some degree of harmonization at least of core values (EU Commission, 2001).

1.2.3 Mutual recognition

Used in isolation, mutual recognition is a tool in which only the conformity assessment bodies are deemed to be equally capable and there is no attempt to converge the standards against which products are judged.

Such a mechanism reduces regulatory burdens by avoiding duplication of testing but demands no regulatory changes by the parties involved. For a product to be sold on both the home and export markets, two conformity assessments would be required. With an added equivalence agreement, one test would suffice for both markets.

Mutual recognition agreements (MRAs), therefore, do not require or assume harmonization or recognition of equivalence of the technical requirements, though some mutually acceptable basis for the conformity assessment procedures must be in place (EU Commission, 2001).

In the private sector, mutual recognition is generally understood as the process by which conformity assessment bodies develop confidence that the reports or certificates of another body have the same value. To achieve mutual recognition, confidence must be established in the technical competence of each body (Vaupel, 2001: 23).

Mutual recognition between accreditation bodies usually means that each body recognizes the technical equivalence of the accreditation system operated by the other body, but it does not mean that they grant their own accreditation to bodies accredited under the other system. MRAs are generally managed so that lists of approved certification bodies, and the standards against which they must certify, are clear (Vaupel, 2001: 23).

In practice, harmonization, equivalence and mutual recognition may be utilized in support of each other. Indeed, in some of the examples detailed below all three are employed in some way. For example, mutual recognition does not rely on harmonization or equivalence of standards, but does rely on at least recognition of equivalence of the conformity assessment system. Similarly,

an equivalence judgment is made easier if there has been at least some harmonization of core values and objectives.

2 Existing Models in Other Sectors

With the goal of increased coordination to facilitate "free but regulated trade", regulatory trade regimes use harmonization, equivalence and mutual recognition as tools of coordination in different ways, sometimes in combination with each other. Adding another layer of complexity, some of the models presented below have their focus on standards, while in other models, the focus is on conformity assessment. In others still, the regulatory framework addresses both. This following section has tried to categorize the tools used to provide clarity, but even where models are presented as examples of mutual recognition or harmonization, it should be noted that these examples have arisen out of a historical process that may have included previous harmonization or other coordination activities, which led to the development of the particular model outlined here.

2.1 Harmonization of Standards

Within the global pharmaceutical sector, a major harmonizing effort is through the **International Conference on Harmonization** (ICH). The objective of the ICH is "the elimination of unnecessary delay in the global development and availability of new medicines while maintaining safeguards on quality, safety, efficiency and regulatory obligations to protect public health (OECD 1999: Para. 128 in Vaupel 2001). The main actors in the ICH are the EC, the Japanese Ministry of Health and Welfare, the US FDA and their corresponding pharmaceutical industries, the European Federation of Pharmaceutical Industry Associations, the Japanese Pharmaceutical Manufacturers Association and the US Pharmaceutical Manufacturers Association. The International Federation of Pharmaceutical Manufacturers Associations (IFPMA) was asked to provide the secretariat for the ICH. The ICH functions through three primary groups (safety, quality and efficacy) with a number of expert groups (EWGs) established under each area to work on specific topics proposed by the ICH steering committee. The steering committee is made up of two senior officials from each of the six principals, while the expert groups are comprised of scientists, clinicians and/or regulators from the six parties. ICH has held major conferences periodically since 1991. Through these processes, the ICH

develops trilateral guidelines. The three regulatory bodies have agreed that once an ICH document is official, it will be "regarded as the prevailing guideline on the subject" and if necessary, "national regulation or legislation will be created or modified…" (Lubiniecki, 1997: 351). By 2000, 45 guidance documents had been generated (Murano 2000: 303).

The EC, through the European Agency for the Evaluation of Medicinal Products (EMEA) played a leadership role in the development of the ICH, contacting the other players in the mid-1980s[1]. While the US was initially reluctant to participate, given EU dominance in the industry and Japanese agreement to cooperate, the US was compelled to join the negotiations by 1991 (Braithwaite and Drahos 2000: 372: 381). This power dynamic has had certain impacts on the negotiations. There have been cases where US FDA agreed to an ICH consensus and then had to back away from that consensus when faced with a backlash from the US pharmacological research community. At the same time there have been a number of important accomplishments through the ICH process. Through these negotiations, the US FDA moved to approve drugs on the basis of foreign data for the first time, a significant breakthrough in saving costs through duplicative testing (Braithwaite and Drahos 2000: 372). The harmonization process through the ICH also seems to have made an impact on making products available to consumers faster (Braithwaite and Drahos: 2000; 394 quoting Vogel). The harmonization in pharmaceutical regulations between the EU, Japan and the USA however, leaves little room for third countries to do anything other than follow suit.

Useful lessons from the International Conference on Harmonization model

- The market dynamics described above highlight similarities with the organic industry where the regulatory impacts of the EU, being one of the largest organic markets, results in third countries following EU regulatory leadership in order to gain access to its market.
- A further point to note from this model is the strong role played by the private sector in the ICH represented in all major research and decision-making forums. Industry views of the process are generally positive as participation of industry allowed the ICH guidance documents to be created with access to industrial data, allowing for more consistent and science-based regulatory outcomes (Lubiniecki 1997: 355).

[1] The EMEA was established by the Commission resulting from Council Regulation (EEC) No. 2309/93, and is managed by a board consisting of two representatives from each Member State, two representatives of the Commission and two representatives appointed by the European Parliament.

A second example of harmonization of standards is seen in the **US-EC Understanding on the Principles for Data Privacy Protection, otherwise known as the "Safe Harbor Principles**". This is a unique de facto model of one-way standards (and to some extent, conformity assessment) harmonization that targets firm behavior directly, rather than through convergence of government regulations. Under this agreement, firms based in the USA can self-certify that they meet the Safe Harbor Principles, allowing them to receive data from Europe without threat of legal challenge from European Member Sates. As these principles go beyond US regulatory requirements, they constitute a "regulatory floor" only affecting specific firms involved in specific activities (Shaffer 2002: 39).

This agreement was reached as a solution to the very different regulatory regimes for data privacy protection of the US and the EU. Under the new EC Privacy Directive's criteria, there was concern that the US would not provide for "adequate" data privacy protection (Shaffer 2002: 44). US and EC officials began negotiations with the aim of avoiding a ban on data flows to the USA. The Safe Harbor Principles were developed to be in line with the EC's internal requirements. These principles are:

- *Notice* (to individuals about the purposes and uses for data collected).
- *Choice* (to opt out of the provision of personal information).
- *Onward Transfer* (in the case of disclosure of information to third parties).
- *Security* (to protect the data).
- *Data Integrity* (to ensure integrity of processing).
- *Access* (to ensure individuals may access personal information held about them).
- *Enforcement* (requiring mechanisms for enforcement and sanctions for non-compliance).

Companies join the program by self-certifying compliance to the "Principles". The US Department of Commerce then places the company's name on its website. This self-certification is backed by a meta-regulatory pyramid to ensure compliance. The first level is the company declaration followed by audits from private certification organizations such as BBB Online or TRUSTe, and finally backed by the US government[2].

While technically allowing both the EU and the US to maintain sovereignty over their data protection regulatory regimes, the program has encouraged

[2] Another way for US firms to secure unchallenged access to EC data is to sign *ad hoc* agreements with Member State data privacy authorities.

the ratcheting up of private industry standards whereby the EU's more demanding requirements become a baseline standard given the high costs of working with two different sets of rules for European and US databases. Similarly private certification bodies in the US (such as BBB Online) have strengthened their own standards to comply with the Safe Harbor Principles (Shaffer 2002: 50).

Useful lessons from the Safe Harbor Principles model:

- This model is interesting for organic regulators in a number of ways. The use of private-public networks is due at least in part to the recognition that government officials in both the US and EU do not have the resources to enforce the Safe Harbor Principles (and the EC directive) on their own (Shaffer 2002: 53).
- This example also illustrates a new approach to reducing the impacts of regulation of one jurisdiction on another, although the result is a type of one-way (not mutual) recognition of US certification bodies to verify an EU level standard but with impact on the US implementation by firms directly.
- The effects of the "dominance"[3] of one party over another is also demonstrated here.

2.2 Equivalency in Conformity Assessment

One example that focuses primarily on the convergence tool of equivalency in conformity assessment is the **Codex Guidelines for the Development of Equivalence Agreements Regarding Food Import and Export Inspection and Certification Systems**.

The Codex Alimentarius Commission was created in 1961 as a joint establishment of the FAO and the WHO. With 165 countries as current members, Codex is the most important international organization in the globalization of food standards, a sector with a long history of regulation. While it is generally categorized within the classical model of standardization as it is an international body comprised of national government representatives (see Vaupel 2001: 5, 14), Codex seeks substantial participation of NGOs that receive observer status. The make up of delegations is the responsibility of member countries. The Codex Rules of Procedure outline the role of observers including international

[3] Dominance in the sense of one party having something the other party wants, in this case EC data.

government organizations and international NGOs, allowing for their participation except in final decision-making (Vaupel 2001: 15-16).

In terms of the legal status of Codex standards, in order for a Codex Standard to be effective in a given national context, it must be incorporated into legislation or accepted in some other way by the nation state. Among international bodies, Codex standards for food safety have generally been recognized with support for the referencing or adoption of standards into national law (Vaupel 2001: 16). Under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), Codex standards, guides and recommendations are explicitly referenced (Vaupel 2001: 15-16). In the WTO Appellate Body decision regarding the EC-Sardines dispute, the panel determined that Codex Stan 94 was a "relevant international standard" within the meaning of Article 2.4 of the TBT Agreement. Contrary to the arguments of the European Communities, it was also confirmed that the "relevant international standard" does not have to have been arrived at by consensus. Accordingly, the TBT agreement also covers documents that are not explicitly based on consensus (Mosoti 2003).

The objective of Codex is the establishment of international standards that will facilitate harmonization. In this context, Codex has looked increasingly to other principles of coordination, such as equivalence. The Codex Guidelines for the Development of Equivalence Agreements Regarding Food Imports and Certification Systems (CAC/GL 34) provide a structure, and outline a process to follow between countries acting bilaterally or multilaterally, to develop equivalence agreements concerning food import and export inspection and certification systems. These may cover trade in one or multiple directions between trading partners. The model is intended to provide a framework for the facilitation of the international trade of food products while at the same time, ensuring their safety and integrity. While it is focused primarily on equivalence of conformity assessment, the guidelines state that this process will be "…facilitated by the use of Codex standards, recommendations and guidelines by both parties" (Codex 1999: S7 5.27). Again, harmonization will facilitate equivalence.

The process outlined in the guidelines includes considerations necessary before entering into discussions and an initial discussion stage that would articulate the scope of the proposed agreement. This is followed by a consultative process whereby the importing country makes the texts of its relevant control measures available and the exporting country provides information that demonstrates

that "its own safety control system achieves the importing country's objectives and/or level of protection, as appropriate" (p. 4 – S7, 3.36). As this is necessarily an information intensive exercise, information should be exchanged on aspects such as legislative frameworks, control programs and operations, decision criteria and action, facilities, equipment, transportation and communications as well as water quality, laboratories (and information about accreditation) and "details of the exporting country's systems for assuring competent and qualified inspection through appropriate training, certification, and authorization of inspection personal…" (S.7 28).

In order to ensure that the exporting country's control systems operate as outlined, procedures for periodic audits and the correction of any problems identified should be established where the importing country determines that "the exporting country's control measures, even if different than those of the importing country, meet the importing country's objectives." (S.7 26). The guidelines also provide an opportunity for public comment on the draft agreement and for the possibility of a trial or pilot study before entering into the agreement. Both these measures are designed to enhance public and partner confidence in the equivalency of the control systems.

Useful lessons from the Codex Guidelines for the Development of Equivalence Agreements:

- Given that Codex is the main intergovernmental international standards body on food issues and thus has organic agriculture within its scope, and as one of its parent organizations, the FAO, is actively engaged in facilitating international coordination of organic regulatory regimes, Codex is a likely catalyst for any future process of convergence in the organic sector.
- Advantages of the process described in the Guidelines compared with current bilateral arrangements are the neutral space provided by Codex, clear and transparent procedures and the possibility of multi-party discussions leading to multilateral equivalency agreements. A process to facilitate equivalency agreements for organic conformity assessment systems is certainly an important component in the organic regulation coordination toolbox.
- The role of private sector actors in such a process is less clear. Consistent with the classical model, the guidelines recognize non-governmental actors only as players in inspection and certification through a process by which they have been "formally approved or recognized by a government agency having jurisdiction" (S2 9). Given this, the IOAS, a major private actor at the level of accreditation in international organic regulation, would currently fall outside the scope of the guidelines.

2.3 Mutual Recognition of Conformity Assessment

While the previous model illustrated how equivalency agreements for conformity assessment systems could be developed, the next example focuses on the more limited coordination principle of mutual recognition. Following on from the so-called New Transatlantic Agenda, the **US-EC Mutual Recognition Agreement** was signed in 1997 in order to reduce duplicative regulatory compliance costs and address concerns about access to the EU single market by US firms. The framework agreement was negotiated by the Office of US Trade Representative and the European Commission's Trade DG, while each of the six sectoral annexes were negotiated by the appropriate regulatory agencies responsible for the sector. The six sectoral annexes cover telecommunications equipment, electromagnetic compatibility, electrical safety, recreational craft, medical devices and pharmaceutical good manufacturing practices (Shaffer 2002). While the agreement was negotiated between government officials, the Transatlantic Business Dialogue (TABD – see below), representing large business interests in the USA and the EU, promoted the concept of mutual recognition agreements and pressured officials to move forward with the MRA process.

With the exception of the pharmaceutical annex, the scope of the agreement is the mutual recognition of test results by "conformity assessment bodies" in the exporting country, in accordance with the required standards and procedures of the importing country. These bodies are evaluated for compliance with relevant international standards set forth in ISO/IEC Guides. Within the sectors covered under the agreement, the relevant international standard-setting bodies are ISO, the IEC (International Electrotechnical Commission), Codex, the ICH, the Global Harmonization Task Force (for medical device standards) and the International Maritime Organization. While the EC-US agreement is focused on mutual recognition, this coordination of conformity assessment is based on harmonization through international standards and conformity assessment guidelines (Shaffer 2002: 9).

Within negotiations for the sectoral annexes for telecommunications and electromagnetic compatibility, the parties have agreed to recognize test reports and conformity assessment certificates issued by Conformity Assessment Bodies (CABs) located in each exporting jurisdiction and designated by the responsible authority. The recreational craft annex was relatively simple to negotiate given that the US Coast Guard had previously allowed self-certification of products by firms, while this is not the case in the EU, the

simple regulatory regime in one country allowed for straightforward negotiations of MR, given that each importing country still requires compliance to its own standards. Negotiations for the other sectoral annexes have proven more difficult. The electrical safety annex has not been fully implemented given disputes with OSHA (a division of the US Department of Labor) over European designation of CABs, the very objective of the MRA. The medical devices annex is even more limited as instead of CABs selected by each responsible authority, the FDA insisted that the process be conducted by "joint assessment". In the final annex on pharmaceuticals, the intent was to permit regulatory authorities in the importing country to rely on their corresponding regulatory authorities in the exporting country to conduct on-site visits of facilities along with an inspection report regarding compliance with good manufacturing practices. This then relies on the determination of equivalence of the regulatory systems; the FDA has recognized equivalence of only two Member State systems. It should be noted that the FDA has a more onerous task than its EC counterparts given the number of regulatory authorities in Europe for which equivalence assessment is required.

Useful lessons from the US-EC mutual recognition agreement:

- Prior to the MRA, a common practice was for an importing country CAB or "notified body" to sub-contract the services of a domestic testing body in the exporting country. Given this, it has been noted that the impacts of the MRAs are relatively limited given that this is a slight extension of the already existing practice (Shaffer 2002: 14).
- A major problem in the negotiation of the MRA was that given that the sectoral annexes were negotiated by government agencies representing a particular sector, the EC agencies involved had a dual mission of ensuring free trade within the internal market and ensuring public safety. Conversely, the facilitation of trade was not covered in the mission of US agencies such as the FDA and OSHA (though trade facilitation was added to the FDA's mission in 1998 by Congress). Such structural differences between negotiating parties are critical to keep in mind during any process working toward organic regulatory coordination.
- Mutual recognition must depend on regulators who are unfamiliar and uneasy with different foreign standards, which poses significant challenges for regulatory cooperation (Shaffer 2002: 5). This example may have direct lessons to be learned for any future convergence of organic regulation along these lines. For example, it should be noted that market forces can also constrain implementation of such agreements. Manufacturers have not reacted as favorably to the EC-US MRA as had been expected. Manufacturers

typically develop long-term relationships with certifying laboratories. Given the investment of time and knowledge in that relationship, the cost of changing laboratories could be significant. In addition, a laboratory's mark in some markets may be important. Given these issues, many companies have preferred to use their same laboratories and work through sub-contracting arrangements. The parallels with organic certification bodies and their markets are strong. Similarly, the cost of gaining the status of an approved Conformity Assessment Body may be significant, including the attendance of seminars, training programs, audits and joint inspections that may be required (Shaffer 2002: 36-37).

- The bilateral MRA model may hold further benefits. Such a bilateral MRA can be seen as a stepping-stone to reaching similar agreements with third countries. The WTO TBT and GATS "explicitly encourage and lend legal support to the expansion of transatlantic MRAs" (Nicolaidis: 1996 in Shaffer 2002: 29). Nicolaidis notes that a "contagion effect" could influence third countries into entering into negotiations out of fear of missing out on opportunities for their own firms (Nicolaidis 2001 in Shaffer 2002: 29). For example, in addition to the US-EC agreement, the EC has signed MRAs with a number of countries including Canada, Australia, Israel, Japan and New Zealand (Shaffer 2002: 29-30).

2.4 Mixed Models with Harmonization of Standards

2.4.1 Equivalency in conformity assessment

Linked to the US-EC MRA framework above but broader in scope is the **US-EC Mutual Recognition Agreement on Marine Equipment**. The text was agreed in June 2003 but the agreement has yet to be signed (Lantz 2003). With the objective of allowing marine equipment approved by the US Coast Guard to be used on ships registered in the EC and vice versa, this agreement is interesting in the fact that it is based on the coordination principle of equivalency, both in terms of standards and in conformity assessment. Unlike the last example, coordination to the extent of equivalency was made possible through pre-existing harmonization of standards through the International Maritime Organization (IMO) (Shaffer 2002: 26).

Using the US-EC framework agreement as a starting point, the parties commissioned Bureau Veritas to do a comparative study of the relevant US and EC equipment standards with the idea being that where the standards were similar or the same, equivalency of the standards could be determined

while where there were differences, harmonization efforts would take place (US Coast Guard website 11/27/01). The study was presented at a workshop where the goal, scope and process for the development of the agreement were outlined. A staged approach was agreed upon in which the first round of items to be included would be those where there was significant agreement on standards, with other items added over time. Under this agreement, "each party's standards and procedures" are recognized as "equivalent" for the purposes of certifications issued by conformity assessment bodies located in either party's territory" (articles 3 and 4 in Shaffer 2002: 25). This was further facilitated by up-front approval of the certification bodies designated by both parties.

Useful lessons from the US-EC Mutual Recognition Agreement on Marine Equipment:

- In this example, significant prior harmonization of standards through an international forum paved the way for an agreement based on equivalency. The linkage between harmonization of standards and equivalency of conformity assessment procedures is a strong one.
- The staged approach is also important to consider, allowing relatively rapid regulatory coordination and trade facilitation gains in the first instance with further progress over time as confidence builds and more difficult issues are addressed.
- While the model is important to consider, it is significant that in this particular example, there were only two parties to this agreement and both were governments.

2.4.2 Conformity assessment

The models presented in this section are based primarily on the principle of harmonization, applied both to the standards and to conformity assessment procedures. These include a UNECE model for technical harmonization, the Technical Barriers to Trade Agreement of the World Trade Organization (WTO), an international standards and international accreditation model of the International Seed Testing Association (ISTA) and the private regulatory regime of the World Association of Nuclear Operators (WANO).

In its Recommendation "L", the United Nations Economic Commission for Europe (UNECE) proposed "**an International Model for Technical Harmonisation Based on Good Regulatory Practice for the Preparation, Adoption and Application of Technical Regulations via the Use of International Standards**". This model, proposed by the UNECE ad hoc team

of specialists on Standardization and Regulatory Techniques (START), sets out a platform and a process for the creation of sector-based harmonization of technical regulations, based on UNECE experience in the harmonization of national technical regulations such as in the area of motor vehicles. Within this model, the nature of the harmonization task is limited to the " Common Regulatory Objectives" (CROs). It is proposed that the scope of the CROs will include both specifications applicable to products and the relevant conformity assessment procedures, though a distinction should be made between the two. According to the model, "Countries that have agreed on a CRO would assure that products, which comply with the CRO, could be placed on their market for free circulation without being subject to any additional product or conformity assessment requirements (e.g. testing or certification)" (UNECE Secretariat: S10). Interestingly, if a country imposes additional requirements despite having agreed on a CRO, it must inform the other parties. In this case, the other countries would be free to take appropriate measures including restricting the circulation of products from that country.

The UNECE Model is primarily based on two basic principles: 1) to persuade regulators to base their technical regulations on (preferably) international standards, or in their absence, on applicable regional/national standards, with the goal of creating a level playing field for companies, and 2) that the " Common regulatory objectives", which form the basis of technical regulations, should be based on mutually agreed safety and other legitimate requirements (i.e. environmental). This means that regulators should not harmonize existing regulations but try to agree on what safety levels (etc) they would like to achieve and what standards could be used for this purpose (Kouzmine 2003).

The process for establishing a CRO is the following:
A UN member country can ask the UNECE to launch a call for participation by other member countries in order to explore the interest in creating a CRO. The next step is that interested countries cooperate to develop a draft. The model allows other UN member countries to join the group as observers. International standards should be referenced in the CRO; where these do not exist, a parallel standards development process could be undertaken through international standardizing bodies. The participating countries then announce their intent to implement the CRO in national technical regulations with other member countries invited to do the same. In terms of implementation, this may take the form of a Supplier's Declaration of Conformity or third party assessment through recognized Conformity Assessment Bodies. The procedures for designating such bodies (specifically the technical competence

requirements) will be set out in the CRO. A list of CABs should be made publicly available. Participating countries are responsible for market surveillance in their own jurisdiction and have the right to withdraw products where they are not in compliance with the CRO (UNECE secretariat: S12-21).

Useful lessons from the UNECE International Model for Technical Harmonization:

- This example provides another possible platform and process for the convergence of organic regulations. With the use of international standards and the development of harmonized technical regulations addressing product and conformity assessment requirements, "regulated but free" trade is facilitated. The objectives of the model are certainly in line with organic regulatory convergence requirements.
- The deterrence approach for countries with additional requirements is interesting but may not work on countries with large internal markets and significant imports.
- Like Codex, this is also based on the classical model of participation by member states.

A second example is the **Technical Barriers to Trade Agreement (TBT) of the World Trade Organization.** As part of the Uruguay Round documents signed at the Marrakesh Ministerial in April 1994, the Agreement establishing the WTO contained two specific categories of rules on standards: the Agreement on the Application of Sanitary and Phyto-Sanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT). The TBT Agreement was developed with the objective of facilitating the conduct of international trade and improving efficiency of production through encouraging international standards and conformity assessment systems while at the same time ensuring that such systems do not create unnecessary obstacles to international trade (TBT, preamble, p. 117 in WTO 1994; Sajeev 2001).

Like the UNECE model, the TBT is a classical model of international standardization, with the only "members" or parties to the agreement being WTO member states. While the TBT recognizes that other actors such as local governmental bodies and non-governmental bodies, may undertake standard setting and conformity assessment activities, members have the responsibility of taking "reasonable measures" to ensure compliance by these other bodies to the TBT provisions (TBT Articles 3, 7 and 8). In order to extend its reach to non-members, Annex 3 of the TBT, the Code of Good Practice for the Preparation, Adoption and Application of Standards, is open

to acceptance by any standardizing body within the territory of a WTO member, including a central government body, local government body or NGO. It is also open to any regional governmental or NGO standardizing body that has at least one member in the WTO or is located within a WTO member (TBT Annex 3, Paragraph B). Many of the core TBT principles are included in the Code. However, it has been noted by UNICE that a weakness in the Code is that, unlike central government standardizing bodies, many private bodies are not bound by the Code of Good Practice (UNICE 2003: 3).

The TBT Agreement creates a broad framework for harmonization of standards and conformity assessment, within which equivalence and mutual recognition principles are also located. The core GATT (1947 Article 1, Article III) principles of Most Favored Nation and National Treatment are integrated in the TBT, with respect to both standard setting and conformity assessment of imported products (TBT Article 2 2.1, Article 5 5.1.1). In terms of harmonization of standard setting, the TBT requires members to use international standards (where they exist), or "the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued, for instance because of fundamental climatic or geographic factors or fundamental technological problems" (TBT Article 2 2.4). Such exceptions are potentially interesting for organic agriculture. In addition, it continues to state members "shall" play a full part in the preparation of relevant international standards by international standardizing bodies (Article 2 2.6). The principle of equivalence is supported in the TBT as members are required to give "positive consideration to accepting as equivalent technical regulations of other members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfill the objectives of their own regulations" (Article 2 2.7).

With respect to conformity assessment, similar principles are set out. Conformity assessment procedures are not to be more strict than necessary to give sufficient confidence for the importing member that products conform to the applicable technical regulations or standards, based on risk assessment (Article 5 5.1.2). There are also requirements for timely completion of conformity assessment procedures and for the publication of anticipated processing times and equitable fees. As in the Articles on standard setting, the TBT requires that central government bodies use technical regulations of standards and relevant guides or recommendations used by international standardizing bodies as a basis for their conformity assessment procedures

(where they exist or their completion is imminent) except where these are inappropriate for reasons such as the protection of human health or safety, animal or plant life or health, or the environment, fundamental climatic and other geographical factors, among others (Article 5 5.4). As in the standard setting articles, in facilitating harmonisztion of conformity assessment procedures, members are required to participate in the preparation of conformity assessment procedures by international standardizing bodies (Article 5 5.5). Where relevant guides or recommendations do not exist, there are also procedures set out for members to notify, justify, receive and take written comments into account on the development of conformity assessment procedures where they may have significant trade effects (Article 5 5.6) with specific procedure for emergency situations (Article 5 5.7). The TBT also supports the principles of equivalence and mutual recognition in conformity assessment. It is stated that members shall, whenever possible, accept the results of conformity assessment procedures carried out by other members, even when those procedures differ from their own, provided " they are satisfied that those procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures" (Article 6 6.1). It is recognized that this will require information exchange and consultation with accreditation as one possible way of ensuring confidence in the continued reliability of conformity assessment. Mutual recognition agreements that would allow the mutual recognition of results of each party's conformity assessment procedures are encouraged through the TBT (Article 6.3). A final note of interest is the support within the TBT Agreement for international systems for conformity assessment that comply with Articles 5 and 6 (Article 9). This includes requiring participants (wherever practicable) to adopt international systems for conformity assessment, become members or otherwise participate in such systems.

While business recognizes that the TBT Agreement goes beyond the traditional GATT non discrimination principle and obliges the membership to ensure that technical regulations do not become unnecessary obstacles to trade, business groups such as UNICE (Union of Industrial and Employers Confederations of Europe) criticize it for leaving too wide a margin of discretion on the part of the members, with vague definitions (such as the definition of an international standard) and vague writing, i.e. members shall use international standards as a basis for technical regulations "wherever possible" (UNICE 2003). Furthermore, from the perspective of developing countries, the technical cooperation outlined in the TBT (Articles 10,11, 12) is seen as inadequate and the implementation of the TBT may require

developing countries to modify their technical regulations to conform to those of developed countries, regardless of the impact and actual need for them (Sajeev 2001).

Useful lessons from the TBT model:

- The exceptions for harmonization of standard setting and conformity assessment are interesting for organic agriculture in that there may be a need for different regulatory approaches based on climatic or geographic conditions.
- One of the weaknesses of the TBT is its vagueness in definitions and requirements for application by members. Any move towards organic regulatory harmonization would need to be specific on any exceptions or flexibility allowed.
- The TBT lends support to the harmonization of conformity assessment through the promotion of international conformity assessment systems. As the only international conformity assessment system in organic agriculture, the IOAS could be examined in this light. However, compliance of the IOAS to the relevant Articles of the TBT would have to be examined (Articles 5 and 6). This is difficult conceptually given the fact that the TBT is based on the classical model of central government membership and participation.

A third example explored here which provides a model based on harmonized standards and harmonized conformity assessment through an international accreditation system is the **International Seed Testing Association (ISTA).** The ISTA's objectives are "to develop, adopt and publish standard procedures for sampling and testing of seeds, and to promote uniform application of these procedures for evaluation of seeds moving in international trade" as well as to promote research in this area (ISTA 2003: 2).

The ISTA is an interesting hybrid of private and governmental actors, with multiple but related activities ranging from standard setting, training, assessment leading to accreditation and research promotion and dissemination through conferences and journal publications. Since 1931, it has published procedures and techniques used in seed testing, known as ISTA Rules; which has allowed internationally harmonized rules to be applied all over the world. The ISTA comprises 201 members, representing 155 laboratories in 72 countries. Of these member laboratories, 86 are accredited. ISTA also works in close cooperation with a number of international organizations including regional seed associations, the EU, the FAO, the International Laboratory Accreditation Cooperation, ISO, WTO, World Bank and the OECD (Muschick

2003). This coordination aims to reduce duplication and facilitates a "uniform approach in the field of seed quality evaluation with regard to the international trade of seed lots" (ISTA 2003: 6).

Membership is by laboratory and by person, with specific fees for each. Within each laboratory membership, one personal member is included. Personal members do not have to be affiliated with a laboratory but they should support the aims of the ISTA. In terms of structure, the ISTA has an elected executive committee, a secretariat based in Switzerland, 17 technical committees and task forces that perform comparative studies, surveys and exchange of information. Every three years a two-week congress is held including technical committee meetings (that propose revisions to ISTA rules), a seed symposium and an Ordinary Meeting where the ISTA rules are discussed and revised and the executive committee is elected. Since 2002 ISTA has held Annual Ordinary Meetings where rules proposals and general items regarding the Association's policy and strategy are discussed and decided (Muschick 2003). It should be noted that only "Designated Members" are allowed to vote at the Ordinary meeting. These are persons "designated by their respective Designated Authority" (ISTA 2003: 3). A Designated Authority is one designated by a government to act on its behalf in designating Designated Members. So while Designated Members and Designated Authorities may not necessarily be representatives or agencies of government, the ultimate authority for determining who votes in the ISTA is held by governments.

The accreditation procedure can be explained in five steps. First a laboratory interested in becoming accredited becomes a member of the ISTA. Second, the laboratory successfully participates in the ISTA inter-laboratory Proficiency Test Program. Third, the laboratory is required to set up a quality assurance program according to the ISTA Accreditation Standard, based on ISO/IEC Standard 17025 but amended to meet the needs to seed testing laboratories. Fourth, the laboratory must undergo an audit by two ISTA auditors (Muschick 2003). Accredited laboratories undergo audits every three years. Fifth, once accredited, "authorization to issue the ISTA Certificates is obtained through agreement of the Designated Authority" (ISTA 2003: 5).

The Certificates issued by accredited member laboratories, under the authorization of their respective governments, are color coded. Orange International Seed Lot Certificates are issued when sampling and testing are carried out by the same laboratory. Green certificates are issued when these are carried out by different accredited laboratories and Blue International Seed

Sample Certificates are issued when the issuing laboratory tests the sample as submitted (ISTA 2003: 4).

Useful lessons from the ISTA model:

- The ISTA model is interesting for organic regulatory actors in many ways. ISTA is essentially a hybrid system as it is largely an epistemic community for seed testing overlapping with a self-regulatory structure for its accredited members, authorized indirectly (in terms of the designated voting structure and the issuance of certification) through national governments. The organic industry has an epistemic community structured through IFOAM membership that carries out similar functions to the ISTA in terms of continual development of standards, promotion and dissemination of research through publications and conferences, and accreditation (through the IOAS). However, the main difference is the lack of government integration, and therefore legal authority, into the IFOAM system.
- The color coding of certificates is another interesting idea, allowing for coordinated work by different laboratories but also providing a simple and transparent communication tool.
- The accreditation is an international, sector specific model, which is fully supported by governments.
- ISTA coordination with international organizations is critical in ensuring that it is truly facilitating a "uniform approach".

The fourth example in the international harmonization of standards and capacity building is the **World Association of Nuclear Operators (WANO)**. While nuclear operators do not engage in international trade, there are some interesting aspects to this example for organic regulators. WANO's mission is to maximize the safety and reliability of the operation of nuclear power plants by exchanging information and encouraging communication, comparison and emulation among its members (Braithwaite and Drahos 2000: 317). WANO members include every nuclear power plant operator in the world. This is significant in two ways. Insurance agencies would not cover nuclear agencies that were not members of INPO, the US national equivalent to WANO. There may have been fears that the same would happen at the international level, which has " encouraged" full membership. Secondly, full membership illustrates an understanding of the common fate of all nuclear operators (Rees 1994, Heimer 1985, both in B&D 2002: 302). WANO was formed in 1980, after Chernobyl. Given its membership, there are world leaders in nuclear power plant management and "nuclear basket-cases" (Braithwaite and Drahos 2000: 302).

WANO's focus is fostering a safety culture, supported by nuclear professionalism. Through identifying best practice among its members, it is committed to the continuous improvement of its standards. In order to ensure the capacity of all its members to implement the standards, it carries out significant training and assessment programs. These include WANO inspections where 15-20 engineers from plants all over the world are sent to inspect a given power plant. These are voluntary but most members participate as they focus on learning, improvements through exchange of experience, rather than sanctions. WANO operates in this way, as it is felt critical that all nuclear power plant operators in the world remain members and have the opportunity to improve practices. WANO also facilitates user groups of plants of similar design and has a pairing program to match stronger and weaker members, encouraging information exchange and learning. As a self-regulatory body, WANO has no legal enforcement powers; however, state regulators have moved to shut down plants when its legitimacy was repeatedly challenged by WANO (Braithwaite and Drahos 2000: 301-320).

Useful lessons from the WANO model:

- Of note in this example is the strong capacity building role leading to a ratcheting up of international standards. The conformity assessment component in this case, also takes on a capacity building focus, leading to improved and harmonized approaches.
- The common fate notion is to some extent applicable within organic agriculture, as food safety or other scandals could dramatically undermine the trust that consumers have in organic products, regardless of where the incident takes place.
- This is not a formal conformity assessment system, the participating actors are not in competition and no trade takes place between them (although energy export:import is increasing).

2.4.3 Mutual recognition in conformity assessment

One example that has significantly influenced approaches toward regulatory convergence across a range of sectors and institutions is the **EU model, known as the "New Approach" for harmonization of standards and the "Global Approach" for conformity assessment**. The New Approach was set out in response to market distorting and market segregating impacts of multiple national standards and the difficulty in appropriately overcoming them at the EC level (Shaffer 2002). Under the New Approach, EC institutions legislate framework directives for technical standards covering "essential requirements"

and then delegate the determination of more detailed technical standards to quasi- public European standards organizations operating under the umbrella of CEN (Comite European de Normalisation), CENELAC (Comite European de Normalisation Electrontechnique) and ETSI (European Telecommunications Standards Institute). As noted in Vaupel (2001: 18), the "essential requirements" are " considered threshold levels of protecting health and safety, and environment." CEN, CENELAC and ETSI are made up of national standards bodies comprising representatives from government, industry and other social groups. The private sector standards developed and adopted under EU directives are not internally binding on Member States; however, compliance provides "a presumption of conformity with the essential requirements in Directives" (Vaupel 2001: 19; Shaffer 2002: 7). These standards have become *de facto* harmonized requirements for selling products within the EC (Shaffer 2002: 6-7; Vaupel 2001: 18- 19).

Under the "Global Approach" to conformity assessment, products may be evaluated and certified within any Member State. Certification allows products to receive the "CE" (Communite European, or "EC") marking. Mandatory mutual recognition of CE certification between Member States allows for the free circulation of certified products through the EC market. Accreditation of certification bodies at the national level plays a key role in this model, with the use of EN 45000 series to ensure consistency of approach across national accreditation systems. According to DGIII for industry, national accreditation bodies include private or semi-private organizations structured so that the state maintains certain influence, a public agency of a part of a ministry. This approach establishes single national accreditation bodies that oversee certification bodies (notified bodies) within their respective jurisdictions. These national accreditation bodies meet periodically through the European Co-operation for Accreditation (EA) to exchange information, build capacity, develop mutual recognition mechanisms, and build and maintain trust (see Shaffer 2002: 7-8 and Vaupel 2001: 19-20 for more information).

Useful lessons from the EU New Approach/Global Approach:

- Of interest to organic regulators is the integration between public and private actors at different stages in the regulatory process from the level of technical standard setting through to accreditation and certification.
- As in the US-EC MRA example, market forces play a role in mitigating the effectiveness of efforts to facilitate trade of products through this approach. While the CE marking is the only legal requirement, within certain Member States, trade names and trade marks of national certification bodies (notified

bodies) are advantageous for marketing purposes. National distributors and suppliers may also prefer national body certification as well (Shaffer 2002: 8). As has been mentioned already, the role of preferred certification marks is also an issue in organic regulatory regimes, so this is an important point to note when looking at future models of regulatory convergence.
- Equivalence of accreditors is facilitated through the use of common conformity assessment guidelines and an MLA between EA members.

A final example of regulatory convergence through a combination of harmonization of standards and mutual recognition of conformity assessment is the **International Electrochemical Commission System for Conformity Testing and Certification of Electrical Equipment (IECEE)**. The main objective of the IECEE is "to facilitate trade by promoting harmonization of the national standards with international standards and cooperation among product certifiers worldwide in order to bring product manufacturers a step closer to the ideal concept of "one product, one test, one market, where applicable" (IECEE nd: 1).

The IECEE is managed by the Certification Management Committee (CMC), that reports to the Conformity Assessment Board of the IEC (International Electrical Congress). Given that the IEC is one of the classical international standardization bodies, countries that have membership in the IEC can join the program with the possibility of participation by non-member countries as well. In each country there is a National Committee that is responsible for designating National Certification Bodies (NCBs). These NCBs are, in turn, responsible for issuing and recognizing CB Test Reports and Certificates. In order for the scheme to operate, national standards must be "reasonably harmonized with the corresponding IEC standard for which participation in the CB scheme is desired" (IECEE nd: 1).

Participation in the IECEE scheme by NCBs is on a standard-by-standard, basis with NCBs needing to seek recognition for each standard that they intend to use within the scheme. The IECEE secretariat takes responsibility for providing relevant and up to date information to all participating actors in the system, including standards accepted for use in the scheme, statistics on CB Test Certificates issued previously and information on participating NCBs.

A manufacturer interested in obtaining a CB Test Certificate for a given product may submit an application to any "Issuing and Recognizing" NCB accepted for the relevant IEC Standard. The NCB will undertake the assessment and,

assuming compliance with the relevant standard, a CB Test Certificate will be issued. If the manufacturer then wants to obtain product certification for a different country, an application is made to an NCB in the target country (the recognizing NCB) including the CB Test Certificate and CB Test Report from the Issuing CB. A sample of the product may be requested to ensure that the product is the same as initially tested by the Issuing NCB. A Standardized report format is used for the CB Test Report to facilitate understanding and recognition between NCBs. Through mutual recognition between NCBs, a secondary certificate can be issued for the target country.

Mutual recognition only works as a principle for regulatory coordination where there is sufficient trust in the quality and consistency of all participating conformity assessment bodies. The application process to become a recognized NCB within the IECEE CB scheme is as follows:

Interested NCBs submit applications through their member bodies in IECEE. The secretary reviews applications and appoints assessment teams. On-site assessments are undertaken to verify compliance with the requirements of the system and to ensure that member NCBs have the necessary technical capability and experience. Assessment teams include experts from NCBs and CB Testing Laboratories with reports circulated to all CMC members. The CMC evaluation group makes recommendations on the application to the CMC. The application process to become a CB Testing Laboratory is similar with the additional step of endorsement of the responsible NCB prior to the submission of the application. There are currently 43 member countries in the IECEE, with 56 participating NCBs and 147 CB Testing Laboratories (IECEE nd; de Ruvo 2003).

Useful lessons from the IECEE model:

- Of interest in this scheme is the approach to national differences in standards. The scheme allows some variations in national standards compared with the international standards of the IEC. Any differences from the IEC standards are openly declared and made available to the IECEE secretariat that will disseminate the information.
- Manufacturers can request NCBs to test products to national differences of a target country. NCBs are able to do this if they have demonstrated that they have the necessary expertise and equipment and any additional tests for the national country differences are included as supplements to the CB Test Report.
- Despite the mutual recognition of NCBs in this model, the process still

requires the forwarding of documents to the importing country NCB, rather like that which sometimes occurs in the organic certification industry under recertification. However, the IECEE Executive Secretary stated that within the context of third party voluntary product certification, submitting an application set of documents that shows compliance with the initial testing is reasonable. As a matter of fact, the Recognizing NCB, by issuing its certification mark, engages its responsibility by endorsing the CB Test Certificate and CB Test Report. Until the last decade, manufacturers were obliged to seek multiple certifications associated with multiple type-testing to be entitled to market their products in the target countries (de Ruvo 2003).
- The use of common report formats is interesting.

2.5 Lessons Learnt

A number of useful lessons can be teased out from the models described above and applied to the organic sector:

- There are various ways in which the private sector can interact with governments to their mutual benefit. Such interactions can be beneficial in reducing cost to government and making the resulting regulatory system appropriate for the private sector (see below).
- Construction or agreement on standards and conformity assessment takes time and requires trust and confidence building exercises between the parties.
- Equivalence is likely to be a required tool in convergence of organic standards even if some harmonization is achieved.
- The continuous development of organic standards is an important facet that creates some problems that are not well addressed by many of the models investigated.
- Harmonization of conformity assessment procedures is necessary for mutual recognition.
- Models address consistency of conformity assessment through accreditation/ approval by the importing country, mutual recognition of approval by the exporting country or in one case an international, sector specific model.
- The construction of some kind of international forum that engenders neutrality, participation and respect from all actors is frequently used to co-ordinate the truly international mechanisms.

The issues of public-private sector interaction, continuous development of the standards and the processes of co-ordination are further investigated below.

2.5.1 Dynamics of private-public actors

Any future organic regulatory model of convergence will need to consider how best to address the existence of public and private regulatory actors. In seeking to identify examples that may provide useful insights for organic agriculture, a number of models were examined for the characteristics of the actors involved. These include examples in which convergence is driven by private actors, government-led systems and initiatives that illustrate possible public-private networks. Examples of international regulatory convergence led by private actors include the World Association of Nuclear Operators (already examined above), the Transatlantic Business Dialogue (TABD), the International Chamber of Commerce (ICC) and its International Court of Arbitration and the International Accounting Standards Committee (IASC). The national level equivalent and precursor to WANO, INPO, was developed, at least in part, "…to accomplish what they [industry] believe the state cannot…to regulate the sector more effectively in areas where they felt the NRC's [national US government regulator] had been, and would probably continue to be, ineffective" (Campbell 1988: 2 in Braithwaite and Drahos 2000: 302). As mentioned, INPO and WANO are self-regulatory systems with "conformity assessment" conducted through peer-review mechanisms. The other models primarily driven by private actors are briefly reviewed below.

Transatlantic Business Dialogue

The TABD was originally established in 1995 as part of the New Transatlantic Agenda. One of four dialogues (consumer, environment, labor, and business), the TABD's creation was led by the US Administration (in fact led by the Commerce Department in cooperation with the State Department and USTR) and the European Commission to identify areas of consensus for EU and US business and tap industry's expertise on how to best foster transatlantic trade and investment opportunity. While the TABD was convened by the governments, the process has always been industry driven and funded. It has been criticized for being an exclusive club of large corporations with participation criteria that ensures it stays that way: the CEO supports liberation and trade, represents a transatlantic company and is deemed constructive to the policy process. Currently under reform and leadership transition, the TABD has a small secretariat in Washington and Brussels, and works through five working group themes that are Standards and Regulatory Policy (promoting a regulatory model based on " approved once, accepted everywhere"), business facilitation, global issues, small and medium size enterprises and the new digital economy. Approximately twenty specialist-working groups, each with a joint EU/US company chair, operationalize the policy process while the

CEOs meet once a year to make recommendations to the EU and US Governments. While TABD has been successful in the areas of promotion of mutual recognition of conformity assessment and harmonization of standards, taking a leadership role in e-commerce, standardization of "third-generation" wireless telecommunication systems and encouraging better understanding of different US and EU positions, it is essentially a well-placed lobby group of highly influential players rather than a private regulatory system of its own accord (Coen and Grant 2001; Braithwaite and Drahos 2000; Werner 2003).

International Chamber of Commerce

The ICC (International Chamber of Commerce) was founded in 1919 and exerts its global influence through a network of national committees and working parties. These national organizations, representing business in most developed and developing countries, nominate experts from their member companies to participate in the different ICC commissions and task forces on all major issues of trade and investment policy, as well as on vital technical and sectoral subjects – financial services, telecommunications, information technologies, marketing ethics, the environment, transportation, etc (Bauer 2003). On the basis of actual business practice of merchants, the ICC formulates standard codes for the regulation of financial instruments from this " database of custom". For example, the "Uniform Customs and Practice for Documentary Credits" were first adopted in 1933 and by 1966, it had been applied in 173 countries. Another universally used set of terms is the Incoterms (International Commercial Terms) issued for the first time in 1936. These have been revised several times to keep up with changes in trade practices. Among the most current terms used in international contracts are standard clauses such as FOB (free on board) or CIF (cost, insurance and freight) (Bauer 2003). Its power comes from its membership and the realization by international business of the need for harmonized standards. Of interest is its International Court of Arbitration (ICA), established in 1923, that has administered over 12,000 cases involving parties and arbitrators from over 170 countries and territories. It claims that it is able to do what national courts cannot, given the unique nature of disputes between actors from different countries, allowing for less costly and time consuming processes compared with court litigation. Its authority comes from the 1958 UN Convention on the Recognition and Enforcement of Foreign Arbitral Awards, signed by over 130 countries. The ICC and its Court of Arbitration do constitute a private regulatory system for its members. They provide global regulatory services to business actors that are not provided by state bodies. Given the powerful business network that the ICC comprises, it has been effective across a range of issues, from working

to prevent financial fraud and piracy to addressing double-taxation and the harmonization of international commercial law. The ICC has been effective in developing private regulatory systems where needed (where states have not been active), in working with governments to improve and harmonize regulatory systems and, at times, taking a leading role in enforcing government regulation. (ICC 2001a; 2001b; Braithwaite and Drahos 2000).

International Accounting Standards Committee

The final example of a private regulatory system is the IASC (International Accounting Standards Committee). The IASC developed out of the 10th International Congress of Accountants in 1972 and is committed "to a process of continuous improvement in the development of international accounting standards for financial reporting by business" (Braithwaite and Drahos 2000: 121). It represents a hundred professional accounting bodies in 50 countries. The accounting standards that the IASC develops are not norms of law but norms of good practice. The Committee then works to persuade various actors to use and support its standards. It has been effective in this endeavor, with the 7th EC Directive on Consolidated Accounts being influenced by IASC standards, and with the World Bank requiring its borrowers to comply with its rules. Through an agreement reached in 1995 with the International Organization of Securities Commissions (IOSCO) since 1999, companies that meet IASC standards can list on any capital market stock exchange. Furthermore, securities regulators in countries such as Italy, Japan and the USA, have insisted that domestic companies and foreign insurers comply with IASC standards. This is an effective example of private international standard setting with harmonization occurring through the implementation of these standards across a range of public and private forums. Given the current participation of government regulators in organic agriculture, it is clear that the future of organic regulation does not lie solely in the hands of the private sector and that some form of coordination or integration is needed.

Many of the examples outlined in this paper are government-led. These include the EU New and Global Approach, the US-EC MRA with its six sectoral annexes, the US-EC MRA on Marine Equipment, the US-EC Understanding on Principles for Data Privacy Protection, the IECEE CB scheme and the Codex Guidelines for the Development of Equivalence Agreements. While most of these examples include private bodies in some capacity within their structures, perhaps as representatives on a standard setting committee or as a certification body or laboratory, the actual decisions on the structures of convergence, using harmonization, equivalency and mutual recognition tools

in different ways, are made solely by governments. While important insights into convergence between organic regulatory bodies can be gleaned from these models and the spaces for convergence provided by them, this is a potential obstacle for meaningful participation by the organic industry and its own standard setting and accreditation systems. Other examples such as the International Conference on Harmonization and the International Seed Testing Association provide ideas on how public and private interests can be integrated, building on the strengths of the different actors involved. However, apart from the ICH to some degree, no model surveyed for the development of this paper, provides a clear example of how coordination between private and public regulatory bodies could be structured.

2.5.2 Continual development of standards

It is inherent in the nature of organic standards that they will continue to develop, both with overall development of the sector and as research brings new technologies and management systems to light. For IFOAM, the continual development of its Basic Standards is a main function of the Federation. This process of standards development and revision provides a cultural core of its activities, providing a platform for IFOAM members to come together, to debate and to decide on changes that will shape the future of organic agriculture. Being able to participate in defining the meaning of organic agriculture ensures a strong sense of ownership among its members. The process of continual improvement of standards is a critical one in any dynamic regulatory system, ensuring that the standards reflect best practice and support innovation. Convergence examples featuring continual improvement of the standard setting process include the IASC, WANO and ISTA. The IASC is committed to continuous improvement of its standards so that accounting standards around the world are harmonized to progressively higher standards, creating a regulatory ratcheting up effect (Braithwaite and Drahos 2000: 121).

In a technology driven sector, WANO's standards are continuously improved to ensure the best possible regulatory environment to ensure nuclear safety. The ISTA has a well-structured system whereby outcomes of technical committee discussions are fed into ISTA rules decisions taken at Ordinary meetings. Its objective of promoting research in the area supports the primary standards setting function of the association. Given the importance of dynamic standard setting to organic agriculture, any future model of harmonization or equivalency needs to take into account the need for continual improvement of standards in a timely manner.

2.5.3 Coordination

A critical lesson to be learned from the examples of harmonization, equivalency and mutual recognition, is that regulatory convergence between parties is a process that takes place over time, and requires information exchange, mutual learning, training and trust building. For example, in order to overcome its mistrust of European Conformity Assessment Bodies, in the process of establishing the US-EC MRA sectoral annex on medical devices, the US FDA organized a "joint confidence building program" including seminars, workshops, joint training exercises and observed inspections (Shaffer 2002: 22). In the WANO example, movement toward harmonization is achieved through capacity building activities that bring nuclear safety standards up, from peer assessments, mentoring programs between strong and weaker members and user group exchanges, among others. Within the Codex Guidelines, it is recognized that "information exchange, joint training, technical cooperation and the development of infrastructure and food control systems can serve as building blocks toward the later development of agreements" (CAC/GL 34 s5 20 in Codex 1999). It is also stated that importing developed countries should consider providing technical assistance to importing developing countries. A further example is the ISTA structure with its standard-setting role complemented by its research and information dissemination functions actualized through seed symposia, the publication of a scientific journal, the development of a wide range of technical handbooks and the organizing of the ISTA proficiency test program. The TBT Agreement of the WTO has specific articles devoted to information and assistance in the implementation of the Agreement (Article 10) and to the provision of technical assistance and special consideration for developing countries (Articles 11 and 12). Through these diverse examples, a common thread is information exchange and training leading to better understanding of partner competencies and trust building, necessary prerequisites to any effective regulatory convergence.

2.6 Ways of Convergence

As has been seen in the examples outlined above, regulatory convergence at the international level takes place in a number of different ways. Conceptually, these approaches can be categorized according to the specific structures and drivers of convergence. In some examples, leadership **by one powerful actor** has been critical in driving regulatory convergence. This is seen in the

International Conference on Harmonization (ICH) case study with European leadership driving the process. Industry associations also played a strong leadership role in moving the ICH process forward. This is also true in the accounting sector with the IASC taking on a leadership role in the international harmonization of accounting standards and in the work of the ICC. A second typology is the **bilateral (or tri-lateral) negotiation** of convergence that leads to a ratcheting up of global regulatory convergence. In this case, a convergence mechanism established at the bilateral level becomes a model for third countries to follow, leading to a globalized process whereby the convergence bar is raised over time, affecting more jurisdictions than originally intended. This is seen in the case of the US-EC Mutual Recognition Agreement of 1997. A third approach is the **treaty or protocol model** whereby all parties agree on the convergence model and "signatories" work to implement the model over time. This approach is seen in the IECEE CB scheme and the UNECE Model for Technical Harmonization. The Codex Guidelines for the Development of Equivalence Agreements appear to be a hybrid between the bilateral ratcheting up approach and the treaty approach. A further approach is a **communication strategy approach** whereby a process is set up between the affected parties to talk to each other and share experiences. With every meeting or interaction, the strategy is to move, step by step, toward regulatory convergence. This is evident in the WANO model. This approach often co-exists with other approaches as has been seen in the US-EC MRA sectoral annex on medical devices. The approaches described here are not exhaustive but serve to illustrate that there are a range of different possibilities of processes that can lead to convergence. By better understanding how other regulatory convergence examples have developed, we can examine what approaches might be most usefully applied within the context of the organic sector.

3 Potential Solutions in Organic Agriculture

The previous sections have illustrated some of the successes and difficulties in facilitating regulated, free trade in different sectors. There may be no one model that can be applied to cater for the characteristics of the organic industry but there may well be some ideas and mechanisms that may be incorporated into a solution.

3.1 Specific Aspects of Organic Agriculture

The existing mechanisms for regulation in the organic sector have been described in the other papers in this series but it is useful to clarify the special characteristics of trade in organic products; who is involved and what mechanisms already exist to regulate the sector. These should be borne in mind when assessing the usefulness of other models in the next section.

Organic product trade and regulation is characterized by:

- Movement of mostly food items, often perishable, bought directly by consumers as opposed to, for example, a medical device that is purchased by a business or health organization.
- Cross-cuts government sector interests – agriculture, food, environment, trade, consumer affairs.
- Many small producers involved.
- Process not product certification, i.e. an organic product cannot yet be tested in the marketplace to determine its organic integrity. Only a paper trail can establish this.
- Organic label currently secures a price advantage, so mislabeling and fraud is a danger.
- Standards in continuous development.
- Third party certification (as opposed to self declaration).
- Certification bodies may be public or private sector and private certification standards and certification "brands" in some countries.
- Two "international" guidelines (Codex and IFOAM).
- National and supra-national legislation – in many countries but not all and not necessarily based on the international standards.
- Several conformity assessment guidelines available – ISO65, IFOAM Norms.
- Approval of certification bodies performed by government, national accreditors (government or quasi-government) and an international private

accreditor (IOAS).
- Several dominant markets – EU, US and Japan.
- Overall market value relatively insignificant compared to the food industry as a whole or the market for pharmaceuticals or motor vehicles.
- Market surveillance – in some countries only e.g. EU Member States.

3.2 The Starting Point

Some of the current mechanisms utilized for facilitation of trade in organic products are listed here and are categorized to some extent to help relate the situation with the organic industry to the models described above.

3.2.1 Harmonization

Both IFOAM and Codex Alimentarius have published international guidelines for organic agriculture.

The IFOAM Basic Standards have been a considerable force for harmonization as they were the first international standards published and to a degree, most subsequent standards have been influenced by them. The IFOAM Criteria for certification bodies were a later development and have had a less harmonizing effect. The ISO65 guideline could be said to have had a bigger harmonizing effect as both the EU and US regulations refer to it and it is the basis for the IFOAM Criteria.

Within the European Community organic products can move freely due to the single regulation providing for one inspection and one mark (the EU Organic Farming mark). In theory, this is sufficient to allow free movement and sales in all Member States without further conformity assessment procedures. In practice, however, recertification often takes place in the import market because consumers prefer to see the local certification mark. This is as true of the national AB logo of France as it is of some private certification labels in, for example, Sweden and the United Kingdom.

3.2.2 Equivalence

The organic regulations (containing technical rules and conformity assessment guidelines) of the three largest import regions, the EU, Japan and the USA, were developed without much reference to each other or to international guidelines, and have since sought equivalence. Smaller exporting countries interested in sending products to these markets have either had to seek approval

of equivalence or individual conformity assessment bodies have sought separate approval.

Negotiations on equivalence have occurred between the European Commission and MAFF in Japan, such that MAFF have unilaterally accepted the EU Regulation as equivalent. Japan has not, however, recognized the European control bodies as competent without an individual evaluation from MAFF. The EU has not reciprocated the recognition at any level.

MAFF, Japan has recognized that the USDA's national organic standards for the production, handling and processing of plant-based organic agricultural products meet the requirements of the Japanese Agricultural Standards[4]. Again, Japan has not, however, recognized the US control bodies without individual evaluations from MAFF.

One-way equivalence, with a unilateral recognition of the conformity assessment mechanisms, is seen in the acceptance by the European Commission of Third Countries. The applicant country is required to demonstrate equivalence of production rules and system of inspection and approval is dependent upon physical visits.

Under both the Japan Agricultural Standard (JAS) and USDA regulations, all registered conformity assessment bodies are required by law to accept as equivalent all other registered conformity assessment bodies. This is not the case under the EU Regulation but free movement is required.

The active multilateral agreement between IFOAM Accredited certification bodies is based on accreditation by IOAS to common baseline standards and conformity assessment guidelines. This is an equivalence agreement based on a strong harmonization component, in which each CAB can accept other certificates as equivalent.

3.2.3 Mutual recognition

USDA has determined that several foreign governments (Denmark, United Kingdom, New Zealand amongst others) conformity assessment programs are sufficient to ensure conformity to the technical standards of USDA's National Organic Program (NOP), the so-called Option 2 of the NOP.

[4] Therecognition agreement does include some limitations stipulating, however, that certain ingredients may not be used in raw or processed organic food exported to Japan.

Within the EU, individual CABs mutually recognize each others' competence based on approval or accreditation by their respective authorities. This is supported by the basis of a common Regulation containing standards and conformity assessment procedures.

Mutual recognition of a type occurs between CABs at certification level when CAB X sub-contracts an inspection by CAB Y to the standards of CAB X. CAB X recognizes the competence of CAB Y to perform the procedure. Often this recognition is based upon being an approved body under a national regulation but also occurs between IFOAM Accredited certifiers based on their common accreditation.

3.2.4 Other tools

The USA and Japan perform direct approval ("accreditation") of individual foreign certification bodies, recognizing them as competent to inspect to the NOP or JAS rules respectively to allow exports to these countries. The foreign inspection bodies must bring themselves into line with the requirement of the importing country.

For more details see other papers of this series.

3.3 Models and Mechanisms for Future Investigation

3.3.1 Conformity assessment

Mutual recognition agreements

As has been seen above, moves to facilitate trade that involves the need for harmonization of standards or conformity procedures, can be problematic as deep-seated changes in national legislation may be required. Such changes may not be acceptable or even feasible given the legislative and institutional framework of certain participants. Mutual recognition agreements may be the simplest first step towards reducing over-regulation (although some examples had and still have their problems, which may be related to the degree of previous harmonization).

One possibility is the negotiation of mutual recognition in a similar manner to the Agreement on Mutual Recognition between the EC and the USA. In this scenario, negotiations would largely be in the hands of the public sector, with the possibility of input from the private sector such as the role the TABD played in the US-EC example. The end point would, at least, be that CABs in

the exporting country would be recognized as competent to verify compliance of organic producers to the standards of the importing country. This recognition would not be based on approval or accreditation of the CAB from the importing country, as is now the case, but by the authorities in the exporting country. This could deliver some regulatory saving.

Both the EU and US regulations refer to the ISO65 Guideline as a basis for conformity assessment providing a good basis for understanding. JAS law however, does not refer to ISO65 and its conformity assessment criteria have a quite different basis. Many other countries (or where regulations do not exist, individual CABs) however have been forced to use ISO65 (or become ISO65 accredited) as a result of the demands set down by the EU Regulation that CABs must "satisfy the requirements of EN45011 (ISO65). Therefore, apart from Japan, there is a considerable common basis for conformity assessment upon which such mutual recognition could be agreed.

The positive aspects of this approach would be that it may be "relatively easy" (politically) to secure, given that national standards remain unaffected, governments can maintain jurisdiction and organic standards in one nation or region can retain their local character at least for the local market. On the import side, market access should be assured as the organic production has already been assessed to the required standards. Of course market access does not mean market acceptance and the issue of preferred certification brands at different levels may remain in some countries.

The negative side is that producers and CABs will have to deal with an increasing number of different standards as more and more national standards are drafted and those producers who are exporting will be obliged to comply with a standard set for another country. A trader exporting products to a number of markets would have to demonstrate, through audit trail, that all the product were certified to each appropriate standard of the target market – a considerable administrative burden. At the level of approval or accreditation of CABs there is currently a mixture of private national accreditors, government authorities and the private IFOAM Accreditation involved in the process. Rationalization or mutual recognition at this level would be required, which would first require some agreement on the conformity assessment guidelines to be used.

Such a process of negotiation could be encouraged by the private sector but it is likely that the organic private sector will remain with relatively little power

compared to a group such as TABD and so the will to negotiate would rest in the hands of governments.

Issues for discussion and clarification:
- The retention of local standards and legislation without any equivalence is both a positive and negative point. The negative aspect of dealing with many standards would need to be addressed.
- Given the current approval/accreditation of national CABs by governments, national accreditors and an international accreditor, how would equivalence be assured between them?
- Ideally, the participation of the private sector would be addressed.

Government model – through Codex

The Codex Guidelines for the Development of Equivalence Agreements could offer a solution to the limited benefits of the above mutual recognition approach by adding in equivalence agreements on organic standards and by providing a neutral platform for the negotiation of such agreements. The clear benefit would be the reduction in the number of standards that operators and CABs would have to deal with, and one inspection to one standard in one country would suffice for the country of origin and any other country that had signed the Equivalence agreement.

The already existing Codex Standards for Organic Production would offer a good basis for developing such equivalence. The problem, as has already been stated, is that few national regulations to date have referenced the Codex Guidelines, so there is little common structure to commence the process (see other papers in this series). There would either have to be considerable government will to move standards towards the Codex Guideline or some complicated equivalence judgments would have to be made, and continue to be made as standards evolved. However, given that there is likely to be common regulatory objectives in many national regulations, equivalence agreements could be reached if all participants focused on essential elements in the spirit of the EU New Approach.

Although the Codex Guideline suggests that this process can occur on a multilateral basis, experience from the models from other sectors described above suggest that such negotiation is difficult enough on a bilateral basis. However, as has been pointed out above, if initial discussions took place between the EU, the US and/or Japan, other nations would be forced into the system. For many export oriented countries, the priority is gaining access to

the EU, US or Japanese markets. This may raise the problem of inappropriate standards being developed for one region solely to comply with the demands of another.

The role of the private sector also remains uncertain in this model, although there is no reason why negotiations on equivalence could not involve private sector participation on a country basis. Mechanisms for allowing meaningful participation of international private sector bodies would need to be investigated.

Issues for discussion and clarification:

- What willingness is there on the part of the main three regulatory blocks to move toward more harmonized standards such as the Codex Guideline or the IFOAM Norms?
- Based on the experience from other sectors, it is difficult to see how such a process could commence other than on a bilateral basis given the complicated nature of organic standards and the quite different regulatory environments. This would force other nations to comply, which is not in keeping with the idea of appropriate regional standards. However, the hybrid approach of the Codex Guidelines for the Development of Equivalence Agreements may provide a mechanism by which bilateral or trilateral negotiations may take place within the context of wider transparency and participation by third countries.
- The role of the private sector would need to be addressed again.
- As for the mutual recognition model above, the nature of equivalence of accreditation would also need to be addressed.

Private sector model: IFOAM accreditation

IFOAM has continuously promoted the IFOAM Accreditation model as a way of facilitating regulated, free trade in organic products. The operation of the accreditation program and aspects of harmonization have been described in other papers of this series.

The model is international in nature and is based on international technical standards and conformity assessment requirements (the IFOAM Norms) set by IFOAM, an ISO recognized international standards body. The accreditation program has been operational since 1992. The scheme is currently voluntary, is not officially integrated into the government regulatory systems (although is referenced in some) and operates alongside it as a private guarantee system.

Accreditation is performed currently by one international accreditor (IOAS), which is specific to the sector, much like the ISTA model.

The advantages of the IFOAM model cited by its proponents are its international nature, its sector specific rules and conformity assessment criteria (an adaptation of ISO Guide 65, similar in approach to the ISTA accreditation standard, based on ISO Guide 25) and its implementation by one international body, the IOAS. This negates the need for mutual recognition at the accreditation level. It also has the ability to operate without the need for local national legislation, thus allowing access to markets from exporting countries with less well-developed legislative and institutional infrastructures. Accredited CABs recognize each other as equivalent, permitting the acceptance of each other's certificates as their own. This does not prevent the existence of private certification labels (as discussed above) and in some cases their existence can be considered remaining as a barrier to acceptance.

The main disadvantage of the IFOAM model is its current lack of integration with the governmental regulatory authorities. The reasons for this lack of acceptance include the following:

- Governments do not recognize the legitimacy of a small sector-specific private organization such as IFOAM to either set standards or operate an accreditation program within their jurisdictions.
- As a private membership organization where voting members must be significantly involved in organic activities, governments have no say in the setting of Norms or the operation of the accreditation program.
- IOAS is not part of a peer review system, which provides for the basis of mutual recognition between national accreditors such as in the case of the International Accreditation Forum. Essentially, IOAS is not subject to oversight so there is no check on its operation to internationally accepted norms.
- For operators and CABs, alongside the already heavy and unavoidable burden of regulations, IFOAM Accreditation is one further obstacle, remains voluntary (not required for government regulations) and is an "extra" cost.
- International convergence models are based on coordination between national accreditors. IOAS, as an international accreditor is an anomaly. Given this, national accreditors view the IOAS position as monopolistic.

Given the distinct attraction of the "one certification, one accreditation" approach that the IFOAM model proffers, there may well be reward in reworking the model to address some of these concerns.

Looking at the examples of models discussed above, the ISTA model has some parallels and further investigation may assist in addressing the concerns of legitimacy and lack of involvement by bringing government representatives into the IFOAM Accreditation system. If IOAS were the right vehicle for this process then they would certainly be required to give up some of their independence and autonomy and cede more influence to government and international organization membership, such as is the case with ISTA where FAO, ISO, OECD have a role. Alternatively, the role of a sole international accreditor played by the IOAS, could be removed so that accreditation would be undertaken by any accreditor using the agreed Norms, although this would negate one of the advantages of the system mentioned above.

Following the ISTA model, governments could designate members (such as certification bodies) and the accreditation system could remain voluntary. Clear benefits could arise from being accredited, as the accreditation once awarded (as in the ISTA system), would essentially be an authorization ultimately from government through designated authorities; legal authorization through a private-public sector collaboration.

Given the strong influence of governments and international organizations in the ISTA system there appears to be no question of the integrity of the ISTA accreditation. National accreditation is generally favored by the classical standardization organizations; however, in the ISTA model, this requirement appears to be have been dropped in favor of a clear, international, sector-specific accreditation.

Issues for discussion and clarification:

- What oversight, if any, is there over the ISTA accreditation system?
- How exactly does the designation of members, and therefore government participation, operate in the ISTA system?
- What role do the international organizations have in the ISTA?
- How could the current organic situation develop towards such a model?
- What is the willingness of governments to reference such a system in regulations and cede power to an international organization within which they had voting rights?
- How willing is IFOAM to cede power to an international organisation where governments actively participated and where they are likely to yield majority power?

3.3.2 Standards

Harmonization to international standards

The fact that international guidelines already exist for organic agriculture in the form of the Codex and IFOAM standards suggests that harmonization based on such standards has some potential. A major problem is that none of the three major importing blocks have made much reference to such international guidelines (see other papers in this series). The other difficulty with organic standards is that regional variation, based on agroecology, climate and stage of development, will be required so one production standard for the entire world will not be desirable or acceptable. The international standard can only remain as a guideline.

Harmonization by regional or national equivalence

IFOAM, as a private membership organization, approaches this issue by designating its Basic Standards as a standard for standards, expecting individual standards to be further developed, but nevertheless, complying with the Basic Standard as a baseline. As detailed in other papers of this series, IFOAM has launched a mechanism to recognize approved regional standards and the first example was under consideration as of August 2003. Any CAB using such an approved regional variation would be deemed to be in compliance. This process requires an assessment of equivalence, which will of course require updating as both the Basic Standard and the regional variation are amended. The advantage foreseen, however, is that approved regional standards will replace the many private standards that already exist, perhaps resulting in a rationalization to less than ten organic production standards around the world, all linked by a common international standard. Regional standards would, in a structured and formally approved way, permit variations related to agroecology or stage of development of organic agriculture, instead of the rather blunt instrument of a one-size-fits-all standard, perhaps set by the biggest importing nation.

Arguments against such a rationalization include claims that innovation and development of standards will be slowed and the tendency will be towards the lowest common denominator. Some private standards setters regard standards innovation as a core value and also as a way of differentiating themselves (true organic!) from other programs.

So far the IFOAM regional variation process has taken place in isolation from the existing government regulations. Whether IFOAM on its own, as a small sector-specific private organization, can gain the legitimacy to liaise with the main regulatory blocks is in some doubt.

The Codex Commission (the other source of international organic standards), on the other hand, may well have that legitimacy, given that it is an international organization made up of national government representatives, with industry attending as delegation members. The problem here is that, as noted above, for a Codex standard to be effective it must be incorporated into national legislation or accepted in some way by the nation states. No nation has embarked on this pathway despite the WTO, ISO, OECD and many nations committing themselves to adopt international standards.

As noted above, various authorities have concluded that "the importance of governments" role in establishing mandatory regulations is greater where a significant public policy goal is concerned, such as health and safety, and protection against fraud". Whether governments see the organic sector as particularly sensitive for any of these reasons is not clear, but the potential for fraudulent labeling may be the reason governments feel obliged to develop their own rules and maintain sovereignty. If this is a factor, then effort to address this concern are required.

If adoption of Codex-based standards by nations commenced, the end result would be similar to the IFOAM regional approach, in that fewer standards around the world would exist, linked by a common international standard. This would allow for relatively easy judgments of equivalency. The main difference at present between the two is who is driving (or would drive) the process; private or public sector.

One way forward may be to combine the strengths of Codex and IFOAM in some forum that would result in one international standard instead of two. With increased legitimacy[5] on one side and flexibility on the other, the forum could work further either with the regional variation model or the adoption by nation states to provide a group of linked standards. Existing national or supra-national rules could possibly be adapted as the approved regional variation.

That private standard setters will continue to develop and issue their own standards must be expected. This, however, can be accommodated if the CABs with "higher" standards accept products from the regional standard level as equivalent as judged on the basis of the international system so-established.

[5] The legitimacy referred to here is with governments. In fact, the IFOAM Norms and the associated accreditation system has its own legitimacy with the market and with CABs, otherwise it would have ceased to exist. So the legitimacy from both Codex and IFOAM can be combined in such a forum.

This is likely to be easier politically for a CAB on the basis of an authorized variation of an international standard under the administration of a central international forum than the current situation of minimal coordination and some similarities between organic standards. The alternative would be a return to the current burden of recertification by document review.

Lastly, in developing international standards or regional variations, consideration should be given to what is required to be set down in standards, taking a lead from the EU "new approach". Over-detailed standards at international or regional levels may impose inappropriate requirements on operators at local level.

In many of the other regulatory convergence models described in this paper, a number of activities such as international conferences, technical working groups, task forces, joint audits and benchmarking exercises are used to engender trust and understanding between the nations involved. Whatever international forum is chosen to lead such a process in the organic sector, technical working groups could be appointed to review the equivalence of developed standards. Working groups' assessments followed by formal adoption by the international body would designate a standard as equivalent.

Issue for discussion or clarification:

- What forum could most appropriately gain the respect of both governments and private bodies, allowing for the development of such a mechanism? This links closely to the ideas expressed above relating to use of the ISTA model in which ISTA also sets the international standard.

Bi and tri-lateral "harmonization"

Under the current regulatory systems of the three main blocks, many CABs are currently approved and supervised by each of the three authorities for compliance and operate three separate programs with modification of standards for each. Such a system is duplication to a high degree, even though the objective of providing a rigorous consumer guarantee is an honorable one.

Given the dominance in the organic market of the EU, USA and Japan, bi- or tri-lateral negotiations to converge their various rules (including conformity assessment mechanisms) would make the process of equivalence of standards and perhaps mutual recognition of conformity assessment system much simpler and reduce the inevitable cost, which is ultimately paid by the consumer and or tax payer.

The problem remains that the current policy of the three main blocks appears to be maintaining the status quo and seeking equivalence (see below). The alternative of harmonizing standards therefore appears to be too big a political step for those nations with existing regulations. However, as has been reported in other papers of this series, there are numerous nations involved in developing organic rules. Understandably, their priority is to ensure likely recognition by their main markets, so the inevitable tendency is for nations not to look to the Codex or IFOAM international standards (although India recently adopted a national standard based on the IFOAM Norms), but to focus on meeting the EU, US or Japan rules or all three if possible. This reinforces the trend away from international harmonization on an equitable basis because the detailed nature of these standards may force inappropriate requirements upon an exporting country. Once established however, the inertia to reorient the standard to an international model is great.

Part of the problem rests in the fact that on all sides, the major parties have already established their rules with which they are presumably relatively happy. Everybody wants to harmonize, but everyone wants one-way harmonization to their own standards.

Again the starting point may be to find a forum with a declared goal within which all (or at least initially some) parties are willing to participate. The somewhat "neutral" territory of the UNECE or Codex models do offer some scope, although governments would want to be assured that there would be give and take on all sides. As mentioned previously though, how the private sector enters into this scheme, if at all, is not addressed by either model. Both Codex and UNECE models require governments to initiate the process, which again brings back the question of whether there is interest by governments to reconsider this issue and whether they see protection of their consumers in the organic sphere as only their business or whether they are willing to share that burden with other governments and the private sector in some international forum.

Clearly the three main regulatory blocks have a great influence on the direction of the whole organic industry and any start towards harmonization must commence with them.

Issues for discussion and clarification:

- Is there political will within the US, EU and Japan to harmonize towards an international standard or will their focus remain on maintaining their current

regulations and negotiating equivalence?
- What forum, if any, could bring the US, EU and Japan to commit towards harmonization?
- Even if some harmonization took place, there would still be a need for equivalence judgments between nations.

3.3.3 Equivalency

Complete harmonization is not only hard but in the context of organic standards it is undesirable. This does not mean that any attempts to harmonize around an international standard should be abandoned because, as has been made clear in many examples, harmonization of at least core values facilitates the process of judging equivalence. Equivalency will, therefore, certainly be part of the solution sought.

The equivalence sought between the three main regulatory blocks have largely taken place without the involvement of the private sector. However, if governments are to take the private sector seriously, then some integration or equivalency with the IFOAM system must also be explored. Existing equivalence negotiations have yielded some benefits such as the recognition by Japan of the EU Regulation 2092/91 as equivalent to the JAS law and the similar recognition of the NOP rule. However these equivalence judgments or negotiations are far from transparent and, given the frequent changes in all organic regulations, it is not clear whether such judgments are to be updated with time. Also such judgments take considerable time. The NOP rule came into effect in October 2001 and despite considerable discussion between US and EU representatives, no equivalence agreement is forthcoming two years later. Similarly the so-called Third Country list of the EU Regulation on which countries evaluated by the EU are added if deemed equivalent, was initially considered to be the main route for import. Twelve years after publication, eight countries are on the list but most products enter under the importer derogation referred to in other papers of this series, a process that relies on document review by Member State administrations; at a considerable cost.

Issues for discussion and clarification:
- What role do governments see for the private sector in terms of standard setting and approval of CABs?
- Do governments consider that an international "clearing house" forum could reduce some of the regulatory burden on the industry and reduce their own workload and expense on regulating the sector?

3.4 Processes Needed to Build Trust

One of the key lessons learnt from the review of models from different sectors is that harmonisztion, equivalence and mutual recognition efforts happen neither quickly nor easily, and that trust and understanding must be built up to find solutions. Many activities at many levels and between different actors can contribute to this process and the ITF is itself one of these activities. Others could include international conferences, one on one meetings, joint evaluations between CABs and between accreditors (including government approval mechanisms), and sub-contracting of work (private-private and public-private). Some such events are happening already.

The WANO model may offer some ideas for CABs working in organic agriculture. Many CABs are already members of IFOAM but as a world-wide group outside the IFOAM Accredited CABs, they have no forum for interaction of their own. Within the EU, the EOCC is a lobby group on behalf of European CABs and within some countries (e.g. Italy) the CABs have formed groups to better represent themselves. The IFOAM Accredited CAB group has biannual meetings to discuss issues of mutual interest and to consider better ways to facilitate trade between their clients.

In line with WANO, though, some of these activities could be taken a step further involving exchanges of personnel, sharing of databases, harmonization of standard structures and, as used by the IECEE model, common formats for inspection reports.

At the level of accreditation/approval of CABs, the IOAS has, for the last few years, been performing joint audits with national accreditors with a view to better understand each other's working practices and ultimately to reduce work and cost burden on the CABs. Audits have been performed with observers from government authorities and negotiations with national approval schemes are also ongoing.

These activities need to be expanded and developed, particularly between the private and public sectors.

4 Conclusions

The purpose of this paper was to highlight the mechanisms used in other industries to facilitate regulated, free trade, and to highlight those that may be used in the organic agriculture sector. It is too early to say which approaches are appropriate as there remain many issues for clarification, not only about some of the models but also about establishing shared objectives amongst the various participants. Agreement that there is a problem and that there may be a better way would be a first step.

It is likely that governments are unlikely to cede responsibility for protection of their citizens to a small, private sector organization such as IFOAM, or even to each other, without considerable trust building activities and without the right forum for ensuring participation and impartiality. Finding or establishing such a forum and continuing and initiating new trust building activities may be a second step.

The potential solutions described above make clear that some degree of harmonization of rules is desirable, but that equivalency judgments will be needed to maintain the regional or even national appropriateness of organic standards. Placing those equivalence judgments into the hands of an independent, international organization which operates transparently may be a third step. Harmonization and equivalence of conformity assessment procedures should be included here.

Monitoring of the appropriate implementation of those conformity assessment procedures is a fourth challenge. The current options are based either around the national accreditation model with mutual recognition between accreditors based on peer review and/or the international model, as demonstrated by ISTA in the seed testing sector and as already implemented in the organic sector as a private guarantee by the IOAS. The role of government approval systems would also have to be addressed. A combination of all three may be possible as long as common rules are utilized and there is some oversight mechanism in place. The solution to this would be a fourth step.

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Impact of Organic Guarantee Systems on Production and Trade in Organic Products

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Executive summary

The need for standards, with an accompanying certification system, in organic agriculture, causes problems for different players in the organic market. On the one hand, in the present situation extra direct costs (for inspection and certification) and indirect costs (related to production and marketing) can be expected as compared with a situation of increased harmonization. These extra costs can be expected both for producers and other players in the supply chain, such as processors, wholesalers and retailers. On the other hand, some exporters and producers in importing countries may be disadvantaged by a move towards increased harmonization. Consumers, especially in the importing countries, should be expected to gain with increased harmonization, when all effects have worked themselves through the system.

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This study set out to quantify the benefits from harmonization of organic standards and certification. The first part looks at the concepts involved with harmonization in the organic sector. The second part attempts to quantify the issues. As with most changes, gains and losses would not be evenly distributed, so an analysis of the changes due to harmonization includes not only the gains but also identifies the winners and losers. At this stage, only the wheat and coffee sectors have been included in the analysis.

With conservative assumptions, the extra welfare in the organic wheat trade, due to harmonization of organic standards and certification, is estimated at over US$ 0.4 million, or 1.3 per cent of the total organic wheat trade. This estimate increases to around US$ 2 million, or almost 7 per cent of the organic wheat trade, if the indirect costs are assumed to be 10 per cent of the total output, with gains going to both producers and consumers in equal parts. For coffee, the conservative estimate of welfare gain is close to US$ 8 million per year (or over 7 per cent of the traded value of organic coffee), increasing to

over 8 per cent assuming indirect cost of 10 per cent of output, with most gains going to consumers.

Translating these figures into values for the whole of the organic sector, with the assumptions of farm-gate values being one third of retail values and conservative estimates of indirect costs, would lead to a range in annual gains between US$ 8 million (extrapolating from wheat only) or US$ 500 million per year (extrapolating from coffee only). This is a rather large range. It is difficult to know whether, if all commodities were included, the answer would lie somewhere between or outside those values. In addition, the effect on consumers and producers is different between the two – wheat producers capturing a much larger part of the gains made with harmonization than coffee growers.

These costs of harmonization are calculated on the basis of present trade, and would be higher if the trade had been larger – as can be expected if harmonization had been in place. In fact, it may well be that the real costs of non-harmonization are those of totally lost trade through, for example, experienced exporters not wanting to get involved in the complications of trade in organic products. The numbers are, therefore, more indicative than definitive. Care should be taken when drawing implications from these results.

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Abbreviations and Definitions

ABG: C.O. Austria
ACT: Organic Agriculture Certification Thailand (C.O. Thailand)
Afrisco: C.O. South Africa
ARGENCERT: C.O. Argentina
AQIS: Australian Quarantine Inspection Scheme
BCS: C.O. Germany
BDOCA: Bio-Dynamic Agricultural Association of Southern Africa (C.O. South Africa)
BFA: Biological Farmers of Australia (C.O. Australia)
Bioagricert: C.O. Italy
Bio Garantie: Austria Bio Garantie (C.O. Austria)
Bio-Inspecta: C.O. Switzerland
Biokontroll: C.O. Hungary
Bio Latina: C.O. Peru, Colombia
Bio Suisse: Association for Swiss Organic Agriculture Organizations
Certimex: C.O. Mexico
CIMS: Centro de Inteligencia sobre Mercados Sostenibles
C.O.: Certification Organization
COCC: C.O. Canada
ECOCERT: C.O. Germany
Eco-Logica: C.O. Costa Rica
EU: European Union
FAO: Food and Agriculture Organization (UN)
IBD: Instituto Biodynamico (C.O. Brazil)
ICS/FVO: International Certification Services/Farm Verified Organic (C.O. USA)
IFOAM: International Federation of Organic Agriculture Movements
IMO: Institut fur Marktokologie (C.O. Switzerland)
ISO65: Organization for Standardization (ISO) Guide 65
ITF: International Task Force (on Harmonization and Equivalence in Organic Agriculture)
JAS: Japan Agricultural Standard
JONA: Japan Organic and Natural Food Association (C.O. Japan)
KRAV: C.O. Sweden
LETIS: C.O. Argentina
MAFF: Japanese Ministry of Agriculture, Forestry and Fisheries
MLA: Multi Lateral Agreement (IFOAM)

NASAA: National Association for Sustainable Agriculture, Australia (C.O. Australia)
Naturalis: C.O. Slovakia
Naturland: C.O. Germany
NOP: National Organic Program (USA)
OCAC: Accreditation Committee for Organic (Food) Certification (China)
OCI: Organic Crop Institute, Thailand
OCIA: Organic Crop Improvement Association (C.O. USA)
OCPP: C.O. Canada
OFDC: Organic Food Development Center (C.O. China)
OIA: Organizacion Internacional Agropecuaria (C.O. Argentina)
OMEC: C.O. Japan
OPAMC: C.O. Canada
OTA: Organic Trade Association (USA)
Pro-cert: C.O. Canada
QAI: Quality Insurance International (C.O. USA)
QCBO: C.O. Canada
SA: Soil Association (C.O. UK)
SENASA: Servicio Nacional de Sanidad y Calidad Agroalimentaria
SGS: Societe Generale de Surveillance (C.O.)
SKAL: Stichting Keurment Alternative Landbouw (C.O. the Netherlands)
SOCA: Saskatchewan Organic Certification Association
SQS: Schweizerische Vereinigung fuer Qualitaets-und Management Systeme (C.O. Switzerland)
TBT: Technical Barriers to Trade
UKSUP: Central Control and Testing Institute for Agriculture, Slovakia
UNCTAD: UN Conference for Trade and Development
WTO: World Trade Organization

1 Outline

Technical specifications for organic production differ between countries. Thus, it is inevitable that producers in some countries are confronted with additional costs when wanting to export. These additional costs reflect requirements of the importing country, which wants imports produced to the same or similar specifications as domestic products. This similarity can be achieved in a number of ways, such as through modification of standards[1], certification and accreditation in importing or exporting countries or agreement between two countries on harmonization/equivalence of the existing systems[2]. Either way, there will be costs involved to reach a situation acceptable to both parties.

The question is then what is the best way to solve the situation of divergent standards and certification. Is the present situation optimal – where exporters adapt to the requirements of importers – or is a move towards harmonization more efficient, cost-effective and just?

The reason for the multitude of organic standards and certifiers is historical, and does not need discussing here. However, not many espouse one set of standards for organic agriculture all over the world. It is well recognized that regional differences in standards may be warranted on several grounds, such as soil type, climate, topography, resource availability, and cultural differences. Assuming that the existing standards and certification system in the exporting country are acceptable in meeting basic principles of organic agriculture, the extra costs of meeting different standards provide no or few extra benefits for producers or consumers, nor do they necessarily benefit public health, safety and the environment. In other words, in economic terms, these costs are "dead-weight losses".

When good reasons for regional standards and certification procedures exist, it seems logical to look for a way to make the system work best. However, different standards, certification and accreditation requirements can easily be used as technical barriers to trade. Domestic industries have an incentive to impose barriers to imports. When standards and certification are involved,

[1] The word "standards" is used here as an umbrella word that encompasses both governmental regulations and private standards. Legally binding national standards may also be called "regulations".

[2] The notion of harmonization and equivalence has been treated extensively in other papers in this series. For the purpose of this paper the word "harmonization" is used to indicate a move towards convergence of two different systems, encompassing both standards and certification, and the recognition of this by other parties.

making equivalence or compliance difficult may be one way to decrease imports.

International bodies concerned with developing countries, such as FAO and UNCTAD, are interested in harmonization issues in organic agriculture in so far as organic agriculture promotes sustainable development in those countries[3]. If harmonization would bring about an improvement in the situation for developing countries, while not compromising legitimate food safety concerns, then this is a worthwhile area for action. IFOAM, which is by definition interested in the development of organic agriculture worldwide, recognizes that efficient ways of trade positively influence its goals. Non-harmonization of the organic certification requirements leaves the door wide open for inefficient "dead-weight losses". Injustices can easily occur through the use of non-technical barriers to trade by the importing countries, especially if combined with non-transparency of the system. It may lead to increased input costs, or decreased access to markets. Although the cost of non-harmonization is felt by all producers, they are said to affect especially those with low incomes – a group of special interest to many.

This report considers the difference in effects of the certification requirements as they are today (without harmonization) and how it could be tomorrow (with harmonization). Taking a theoretical point of view the report first analyzes – in Section 3 – the different costs that exist without and with changes to the system. Subsequently, the scene is set for the second part of the report, quantification of costs. Section 4, then considers what is to be included – countries and crops and the reasons for their inclusion. Countries with different organic certification systems are examined and an attempt is made to estimate the costs under different regimes (Section 5). Some of the costs are quantified, in particular the certification costs to farmers, but many of the indirect costs are not. In Section 6 a model is introduced that is then used in Sections 7 and 8 for the analysis of some crops. This enables analysis of the direction and relative magnitudes of the effects on world trade if cost cuts were encountered – as would be the case if harmonization would occur. In the last section, the different findings have been summarized and conclusions drawn.

In the second part of the report, the situations before and after harmonization

[3] Also for the TBT (Technical Barriers to Trade Agreement within the WTO) international standards and harmonization are of great importance. Governments of developing countries may see assistance with the development of the organic certification system as a way of being assisted to develop the export market.

are compared[4]. The extra costs of certification, over and above having domestic/regional standards, are estimated for some agricultural products – wheat and coffee – and other non-tangible costs are assumed and added to the input costs. It is shown that harmonization benefits producers and consumers generally, but some are made worse off through rising prices or increased competition. Likely winners and losers are identified.

After explaining what this report sets out to do, it is perhaps prudent to include a few words on what it does not intend to do. As the aim is to focus on differences in costs "before" and "after" harmonization, no attention is paid here to costs to producers – or any people who need to adhere to organic specifications (certification) – that are not related to harmonization worldwide. Therefore, the fact that producers need to go through a learning process to be certified, and the volatility of the exchange rates or the vagaries of demand in the domestic or export market, though relevant to the success of exporting, are seen as not relevant in the context of this study.

2 Background

With products grown in organic and conventional agriculture being indistinguishable from one another for consumers at the retail level, products originating from one of these systems need to be labeled, which implies standards and certification. At present at least, the costs associated with differentiating the products are borne by the organic sector. The question to be tackled in this work is then not so much what the costs of certification are *per se*, but what are the extra costs due to the fact that different importing countries each have their own standards and certification requirements, both public and private.

In many industries, international standardization is sought. Deshpande and Nazemetz (undated) divide the benefits and costs of standards and standardization into tangible and intangible items[5]. As this list is valid for products, not all points are necessarily valid for harmonization of a process, as organic agriculture is.

[4] At this stage, no effort is made to differentiate between different possibilities of harmonization, equivalence and mutual recognition. Nuances to such a system may be incorporated in subsequent versions, when other work on this issue is closer to completion.
[5] See: www.okstate.edu/ind- engr/step/WEBFILES/Papers/Global_Harm_body.htm.

Table 2.1 summarizes the effects of harmonization in the organic industry. The extra costs of non-harmonization can be divided into different categories. One is the administration of certification. With harmonization the cost includes the setting and maintaining of standards, the actual inspections and certification with, for example, development of an inspection manual, training of inspectors, etc. When no system of harmonization exists, this is expanded with information about the details of standards and certification requirements from other systems and making sure that people are certified according to these different requirements.

Another group of extra costs is related to the appropriateness of the foreign standards on the domestic production system. It may be that, because of inappropriate standards in the situation without harmonization, there is extra yield loss. Another example is that, due to different regulatory conditions in the exporting countries, the importing country's standards can not be adhered to, and a potential exporter does not enter into international trade.

The third category is related to marketing. For example, is extra storage needed to differentiate between the products to be sold in the different markets; does the extra paperwork mean delays? This is particularly important in connection with perishable products, which is an important component of current trade in organic goods.

Some of these costs are intangible, but can possibly be captured under the heading "risk". In the course of this work, the size of the risk can be assumed, and sensitivity analyses done to find out how important each factor is. These last two categories – appropriateness of standards and marketing costs – are treated under "indirect costs" in this report.

Through these examples it is clear that it is sometimes difficult to differentiate between the costs of exporting *per se* on the one hand, and exporting to different countries each with their own requirements on the other hand. Only this last group of costs could be diminished through harmonization – the topic of this report. It is, obviously, more likely to encounter an increased number of problems the more different systems there are to which one needs to adhere.

Until now the discussion has only considered those exporters who would gain from harmonization. However, in any situation of change it is very rare that there are only winners, no losers. Those exporters who at present have a competitive advantage (for example, those countries that are on the EU's third-country list as compared with those who are not) may well lose from an easing

Table 2.1: Effect of harmonization of organic agriculture

Without harmonization	With harmonization	Effect of harmonization
Exporting countries		
Administration:		
• Domestic market: set own standards • Export: keeping up with a multitude of standards	Setting and updating national/regional standards	Less costs due to decrease in work, conflicts, and administrative errors
Certify according to a multitude of standards	Certify to one set of standards	Less paper work, travel, required skills
Extra training of inspectors/evaluation officers	Training of certification personnel	Less training of certification personnel
Many layers of accreditation	Some accreditation	Less accreditation needed
Production:		
Use of foreign standards	Use of standards appropriate to local conditions	No loss of production or increased costs due to use of inappropriate standards
Marketing:		
Need for investments and operation of different storage facilities	Need for investments and operation of one storage facility	Need for less storage facilities
Delay in marketing due to paper work needed	Less delay in marketing	Less delay in marketing, as less paperwork is needed.
Chance of dependency on importer (many exporters to EU)	Less dependency on importer	More flexibility in choice of importer
Unequal treatment of exporters (e.g. exporters on the EU 3rd-country list compared with countries that are not on list)	Increased competition	More equal treatment

Table continued overpage

Table 2.1 continued

Without Harmonization	With harmonization	Effect of harmonization
Importing countries		
No need for consensus on practicalities of equivalence	Need for consensus on what is equivalence	More meetings etc.
Increased paperwork on import certificates	Decreased paperwork on import certificates	Less paperwork, lower costs of certification, lower consumer prices for organic products
Some protection of local producers	Less protection of local producers	Increased free trade (WTO consistent)
Consumers: limited choice of products and relatively high price	Increased trade, product diversity and decreased product prices	Consumers: increased trade, product diversity and decreased product prices

of EU import requirements for other exporters. In fact, with an improvement in export conditions for the worse-off group (which is the intent of harmonization), the competitive position of not only the currently better-off exporters deteriorates, but also that of domestic producers who produce primarily for the domestic market. Some countries may use organic import requirements as a means to protect their own producers – a non-tariff barrier.[6] Of importance here is whether it is likely that these barriers occur with different frequencies or severity under the two different export scenarios – with and without harmonization.

The importing countries will also be affected by increased harmonization, such as reduced paperwork. However, it may be more difficult to reach consensus regarding acceptability of different standards and certification methods than previously, as there are more players with whom agreement will be necessary. An inevitable compromise between the players could even result in decreased demand for organic goods[7], although an information

[6] The main components of the WTO TBT Agreement include: non-discrimination; avoidance of unnecessary obstacles to trade; harmonization; equivalence; mutual recognition; and transparency.

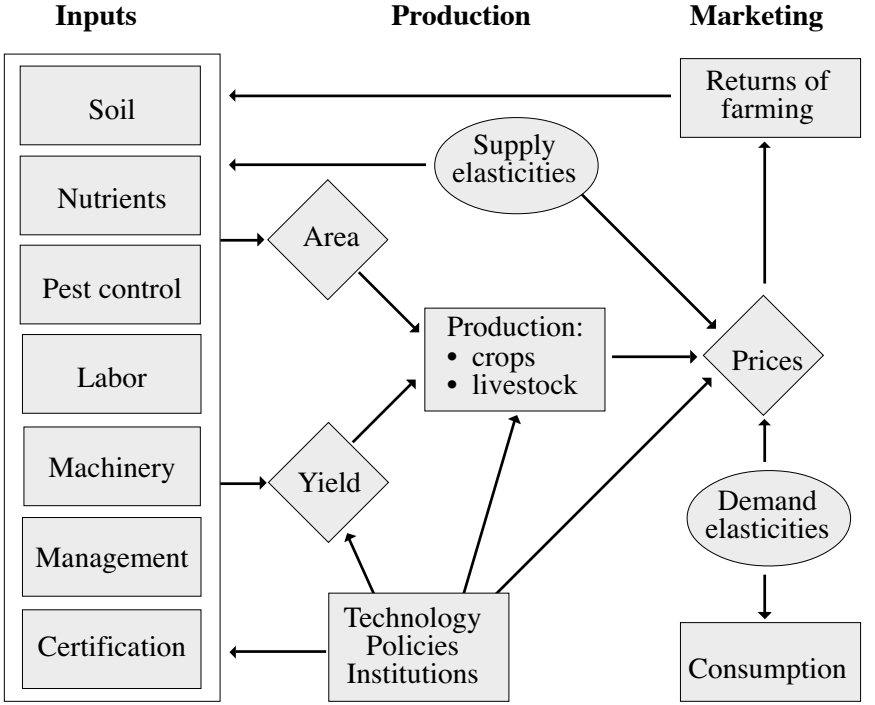
[7] For instance, consumers in the UK, knowing that a ring in pigs' noses is allowed in the Danish organic standards, may perceive that organic pig meat produced in Denmark is not really organic. This would affect buying behavior/demand (B.Thode Jacobsen, Bio Service, Denmark, pers. comm., April 2004).

campaign on the principles of organic farming may solve some of those potential problems.

In order to capture the effect of changing conditions on farm production and export, the extra problems with certification can be translated as an increase in farm production costs, and the benefits as a decrease. This influences the amount of organic produce that can be supplied to the international market at any given price. Lower costs of production means that more consumers buy, and therefore more can be supplied.

The effect down the line is schematically captured in Figure 2.1. In this figure, farm inputs used in the production process (including certification costs) are seen as influencing the area farmed originally. Together with outside factors such as available technology, and domestic policies and institutions, this will affect yield (output per hectare, including both quantity and quality) and so total production. Both the production and the outside factors affect consumer prices, which influence not only expected farm-gate prices for the next year,

Figure 2.1: Interrelationship of supply and demand of a product



but also give a signal to the farmer about what, and how much, to produce next year. Changes at any level – administration, production and marketing – have repercussions for the cost of the product, with effects on demand, product price, production and trade. Government regulation can also influence farm costs and willingness of farmers to take risks[8]. These interactions can be rather complicated.

The use of logos in a number of countries is a major difficulty facing developing countries in exporting organic produce to the EU (Arvius 2003)[9]. Although this is not related to legal requirements for imports of organic products into the EU, it does affect the sales possibilities for foreign produce. In other words, complying with the regulations of the importing country is not the only hurdle exporters of organic products face. Actual buyers may create a further barrier.

Supermarkets are buyers of agricultural produce. They can be very powerful marketing institutions. They can effectively set their own standards or decide to sell organic produce only with a particular logo of a private organization. In many developed countries where organic consumption is making inroads, private standards and certification rules had been developed before legal institutions were put in place to handle issues of standards and certification. In the early days of wider commercialization of organic produce, supermarkets often dealt with these organizations, as consumers knew the logos, such as that of the UK Soil Association, the Bio Suisse logo in Switzerland or the (governmental) AB Logo in France. So, for historical reasons, supermarkets often sell products with only the logo of one or more specified organizations.

This means that exporters must fulfill two requirements. First of all, the produce must be certified such that it can be legally imported into a country. In addition, certification by a particular private certifier may be required to expedite sales. Often, those standards are different and higher. Certification by just the particular domestic certifier may be sufficient to fulfill the regulations of the importing country when the regulator accepts that organization. However, a situation as described here may, and does, lead to the need of exporters to be certified by several different organizations – to be able to export to several

[8] For example, taxing producers for the off-farm effects of some inputs – such as pesticides – influences the cost price of the farm products. Regarding risk-taking, organic farming has been recorded as having fewer extremes in yields. Government intervention to support farmers in exceptional climatic conditions could be interpreted as insurance for conventional farming, which allows the producer to continue to take risks.

[9] Arvius (2003) describes other impediments to developing country exports. These include: determining which methods and substances are not allowed in organic production that may be inappropriate for developing countries; no provision for group certification; and requirement of government involvement in the exporting country.

different countries, even when they are within one customs unit such as the EU. Lack of co-operation between certifiers to expedite exports to different countries seems to be more the rule than the exception.

For example, Hungary is on the EU's third-country list and can therefore export any produce certified as organic by certain designated organizations. One of those organizations, Biokontroll Hungaria KHT, mentioned requirements from supermarkets in different countries within the EU as a reason for having arrangements with different EU certifiers for exports to each of those countries. That is, one certification is not sufficient, but several different sets of requirements (standards and certification) need to be satisfied for the farmer to be able to export to those different countries within the EU.

In summary, the need for standards in organic agriculture, and the need for diversity in these standards worldwide, causes different problems for different players in the organic market. On the one hand, in the present situation extra direct costs (for inspection and certification) and indirect costs (related to production and marketing) can be expected as compared with a situation of increased harmonization. These extra costs can be expected both for producers and other players in the supply chain, such as processors, wholesalers and retailers. On the other hand, some exporters and producers in importing countries may be disadvantaged by a move towards increased harmonization. Consumers, especially in the importing countries, should be expected to gain, when all effects have worked themselves through the system. This is the case especially if the demand for organic produce is for organic produce in general, and does not require specifications of any particular private logos.

3 Setting the Scene: Countries and Crops

3.1 Reasons for Inclusion

Ideally, an assessment of the impact of harmonization in organic agriculture would include all countries in which this management system is practised. However, this would be an enormous task, for which neither time nor money is available at present. Nevertheless, much can be learned from looking at specific examples. It is, therefore, necessary to make a choice of countries and commodities to be included at this stage of the study.

The three main criteria for inclusion of countries are:
- Representation from each continent.
- Availability of general data.
- Availability of data about a particular crop.

Originally, most of the inclusions concerned countries from which representatives were present at the inaugural ITF meeting in Nuremberg in February 2003[10]. It was assumed that there was enough enthusiasm about organic agriculture in those countries for somebody to provide information for this study.

For the choice of crops, several aspects are of importance. It was decided to start with a crop for which least problems were expected. One group of problems that makes analysis tricky is special institutional trading arrangements for a particular crop. This was a major reason for excluding sugar and bananas at this stage. In addition, it was considered an advantage that the researcher was familiar with the particular market, so that problems with the results were most likely to be picked up at an early stage.

For these reasons, wheat was chosen as the first crop to be examined. This crop, apart from fulfilling two of the requirements (comparatively few world market regulatory problems and familiarity of the researcher), allows a review of certification in Argentina, Australia, Canada, Hungary, Slovakia and the USA.

A second crop to be included was coffee. Production takes place in many different countries, mainly in Latin America but some in Africa, Indonesia and Papua New Guinea (PNG). Apart from the inclusion of different continents, many organic coffee growers are small farmers. The inclusion of both wheat and coffee would therefore possibly enable a wider range of implications to be drawn of the effects of harmonization, such as of differences between large and small farmers.

A third crop, relevant for Asian countries, is rice. A fourth group, fruit and vegetables, is relevant for many exporting countries. For this report, no efforts have been made in these last two areas (rice and fruit and vegetables) as yet. The general tables and discussion may include some of the countries involved in growing rice. This information is left in this report, as it provides additional information about how certification and accreditation can work. It is also possible that an analysis of these, and other, markets will be added at a later date.

[10] See www.unctad.org/trade_env/test1/meetings/ifoam2.htm.

A list of most of the included countries is shown in Table 3.1. In each country, a particular organization or trader was contacted. The particular respondent organization's own estimate of its relative importance in the country is provided. As can be seen, all are substantial players in their country.

Table 3.1: Interviewed organization and relative importance in country

	Organization	Importance of organization
Argentina	ARGENCERT	66% of total export quantity
Brazil	IBD	80% of number of certified projects
Costa Rica	Eco-Logica	65% of licences
Mexico	Certimex	70% of organic cultivated area
Peru	Bio Latina	24 % of area under organic farming 29 % of certificates
Colombia	Bio Latina	5 % of area under organic farming
South Africa	Afrisco	The larger of two organizations certifying for domestic market only
Uganda	Traders	
Tanzania	Traders	
China	OFDC	40% of organic certified area
Thailand	Green Net	55% of production.
Australia	NASAA	25-33 % of licences
Switzerland	Bio Suisse	98 % of producer licences
Hungary	Biokontroll Hungaria KHT	99% of all licences
Slovakia	Naturalis	20% of production
USA	OCIA Int.	
Canada	OCIA	

Source: mostly from participating certification offices. For Peru: CONAPO (2002).

3.2 Country Characteristics

To provide some context for the work, Table 3.2 shows the size of the organic industry in terms of farm area, number of farmers, domestic and export market.

Those countries included in the table are mainly exporting countries. In total, more than half of the global area under organic management, and close to half of the number of farmers are included in the table. Some of the marketing figures are missing, as many countries did not have an estimate.

Table 3.2: Size of organic industry

	Domestic market (US$m)	Export market (US$m)	Area under organic management ha	%	No. of organic farmers
Argentina	1.5	30	2,960,000	1.7	1,779
Bolivia			364,100	1.0	6,500
Brazil	30	100	841,769	0.2	19,003
Costa Rica			13,967	3.1	3,987
Guatemala			14,746	0.3	2,830
Honduras			1,769	0.1	3,000
Mexico	10%	140	215,843	0.2	53,577
Nicaragua			10,750	0.1	
Peru			130,246	0.4	23,057
Colombia			33,000	0.2	4,500
South Africa	20%	80 %	45,000	0.1	250
Uganda			122,000	1.4	33,900
Tanzania			55,867	0.1	26,986
China	150	80	301,295	0.1	2,910
Thailand	15.4	1.8	3,993	0.02	1,154
Indonesia			40,000	0.1	45,000
PNG			4,265	0.4	
Australia	12	26	10,000,000	2.2	1,380
Switzerland	750	1-5	107,000	10.0	6,466
Hungary			103,672	1.7	1,116
Slovakia			49,999	2.2	84
USA	12,000		950,000	0.2	6,949
Canada			478,700	1.3	3,510
Total			16,847,981		210,958
Total World			**24,070,010**		**462,475**

Notes:
- Value of domestic and export market: given in US$ unless indicated differently (%).
- Estimates for area and number of farmers: SOEL (2004). Most data are from survey carried out early 2004.
- % under "Area under organic management" denotes % of total figures in each country.
- Market size: mainly estimates by respondent certification offices for 2003; others:
  - Mexico: Damiani (2001).
  - Thailand: estimate by Green Net/Earth Net (personal communications 2003), farm-gate values.
- Australia: Domestic market: Wynen (2003a) total minus export market, discussed in Wynen (2003b).
- USA: ITC estimate for 2003.
- PNG: Papua New Guinea.

4 Certification and Accreditation

4.1 General Situation

The certification system is different in many countries, and costs are often related to the particular situation in a country.

To certify organic produce for the domestic market, many countries have their own standards and certification organizations. Exceptions are usually developing countries. More details about the domestic certification situation can be found in Appendix 1. A summary is shown in Table 4.1, which provides information on the status of national organic regulations in the countries included in this study.

Table 4.1: Kind of certification

	National organic regulation	Remarks
Argentina	Yes	
Brazil	Yes	Not fully implemented
Costa Rica	Yes	
Mexico	Yes	Not fully implemented
Peru	No	Draft
Colombia	No	
South Africa	No	Draft
Uganda	No	
Tanzania	No	
China	No	Draft
Thailand	Yes	
Australia	Yes	Export only
Switzerland	Yes	
Hungary	Yes	
Slovakia	Yes	
USA	Yes	
Canada	No	Draft; only Quebec has implemented regulations

Source: individual certification offices and Commins (2004).

Of the 17 included countries, ten have national legally binding standards and certification, while the rest do not. In two of those ten – Brazil and Mexico – the regulations are not fully implemented. In other South American countries,

two of the four included – Argentina and Costa Rica – have organic regulations, while the other two – Colombia and Peru – do not. However, Peru is in the drafting stage. In Africa, government involvement in national standards is uncommon. Neither in South Africa nor in Uganda or Tanzania are national organic regulations adopted, although South Africa is in the process of doing so. The organic movements both in Uganda and Tanzania are working on private standards. In Asia, Thailand has national standards, while in China none are officially accepted. In the last group of countries in Table 4.1, Australia has a national scheme for export only (that is, the word "organic" is not legally protected within Australia); Switzerland, Hungary, Slovakia and the United States have legally-binding national standards. Canada does not have legally binding standards, except in the province of Quebec.

The domestic situation is directly related to the possibilities of international trade. A simplified representation of the situation is shown in Figure 4.1. Certification by domestic organizations may allow exports to the EU, the United States and/or Japan – the major importers of organic food (situation 1 in Figure 4.1). If the exporting country's standards and certification system is not accepted by the importer as equivalent, foreign organizations may be needed to facilitate exports. These can either accredit a local organization or authorize it to do the inspections (situation 2). In the first case the local organization does the inspections and certifications, in the second case the certifications are done by the foreign certifier, often in the country where the head-office is located. Alternatively, the foreign certifiers can do the inspections themselves (situation 3), that is, the inspectors are then foreigners. Another option is to employ local inspectors without having an arrangement with a local certifier (situation 4). Some countries, such as Argentina, only accredit foreign organizations if they have a local office.

Figure 4.1: Different certification methods

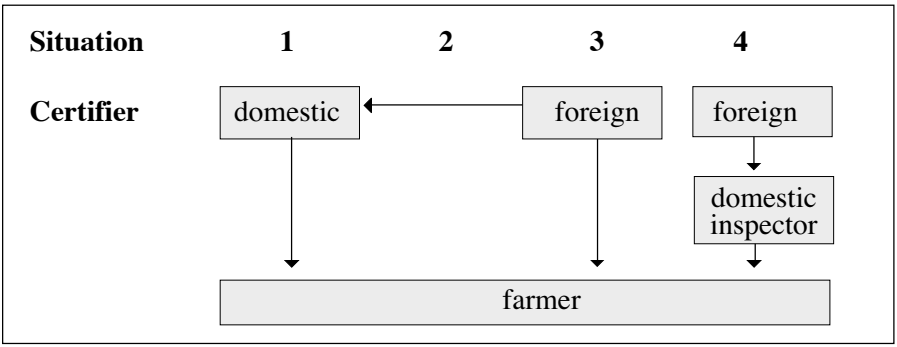


Table 4.2. Accreditation status aiding exports

	EU 3rd country list	ISO65	USA NOP accredited	JAS accredited	IFOAM accredited
Argentina	yes	ARGENCERT	LETIS SA OIA ARGENCERT	no	ARGENCERT OIA
Brazil	no	IBD	IBD	no	IBD
Costa Rica	yes	state accredits	Eco-Logica	no	no
Mexico	no	Certimex	no	no	no
Peru/ Colombia	no	Bio Latina	Bio Latina	no	no
South Africa	no	Afrisco	no	no	no
Uganda	no	no	no	no	no
China: OFDC	no	no	no	no	OFDC
Thailand	no		no	no	ACT
Australia	yes	no	BFA NASAA	yes	BFA NASAA
Hungary	yes	yes	no	no	no
Slovakia	no	no	no	no	no
Switzerland	yes	IMO Bio-Inspecta SQS	IMO	no	no
USA	no	yes	many	yes	many
Canada	no	yes	many	yes	many

Notes:
- USDA-accepted: see www.ams.usda.gov/nop/CertifyingAgents/Accredited.html
- IFOAM-accredited source: IFOAM (2003, pp.72-73). Hungary is in the process of applying

In Table 4.2 the situation is characterized for the different countries *vis-à-vis* the main importers, the EU, United States and Japan. In those countries where certification offices are the respondents in the survey, data in the table pertain to them, unless otherwise specified. For example, the first row indicates that Argentina is on the EU's third-country list, and that at least one domestic certifier has accreditation from ISO65[11], the United States and IFOAM.

In Table 4.3 the different systems of certification for the export market are grouped according to the status of national government legislation. In the

[11] The International Organization for Standardisation Guide 65 *General requirements for bodies operating product certification systems*.

countries where a "d" is shown, at least one domestic organization is accredited to certify for exports to the particular importer indicated (EU, USA, Japan), as indicated in Table 4.2. This is of importance as, even if there is only one domestic organization that can perform that function, foreign involvement becomes less essential.

As can be seen in Table 4.3, most countries without national regulations are dependent on foreign certifiers for exports to the major importing countries. Exceptions are Brazil and Canada where at least one domestic certifier is accepted by the USA. Brazil has also positioned itself better for the export market as it has an IFOAM-accredited certifier (IBD).

For those with national legislation, the picture is a bit more mixed, and accreditation is more dependent on the importance of the market for the country. Although organic regulation is a must in the quest to be accepted by the EU on its third-country list, this is not a sufficient condition to be accepted. Of the included countries, the EU accepts only Argentina, Australia, Costa Rica, Hungary and Switzerland at present, and the others export their produce mainly via importers in the EU countries (Article 11.6). The United States

Table 4.3: Accreditation status aiding exports (by certifying method)

	EU	USA	JAS	IFOAM accredited
Countries with fully implemented national organic regulations				
Argentina	d	d	f	d
Costa Rica	d	d	f	d
Thailand	f	f	f	d
Australia	d	d	d	d
Hungary	d	f	f	no
Slovakia	f	f	f	no
Switzerland	d	d	f	no
USA	d	d	d	d
Countries without fully implemented national organic regulations				
China	d	f	f	d
South Africa	f	f	f	no
Uganda	f	f	f	no
Brazil	f	d	f	d
Peru	d	d	f	no
Mexico	f	f	f	no
Canada	f	d	f	no

Note:
d = at least one domestic certifier that can certify for the indicated market.
f = foreign certifiers need to be involved for exports to the indicated market.
no = no certifier accredited by IFOAM in that country at present.

and the EU are in the process of considering a mutual agreement for equivalency (Bowen 2003).

In the US market, access for foreign traders is – in general – less of a problem than in the EU. The reason is that the accreditation of certifiers, not countries, is common under the National Organic Program (NOP). Presumably, this makes acceptance less complicated. Trade in most countries without US accreditation is, at present, not directed to the USA. This is probably partly due to a mixture of distance to the market (for example in Hungary and Slovakia, as compared with distance to EU) and availability of products at this stage. However, the situation could, of course, well change in the future.

The Japanese market is not accessed directly by any organizations in the included countries, except by Australian, EU and US organizations. It is here that IFOAM accreditation seems especially valuable. For example, as the IFOAM accreditation system embraces the Multi Lateral Acceptance principle, acceptance of inspections of IFOAM-accredited organization by another IFOAM-accredited certifier (as happens in the case of, for example, the IBD being accepted as inspectors by NASAA, who then do their own reviewing and certification) is reasonably straightforward, and could be less costly than if carried out by Japanese certifiers. Another example is that Japan recognizes IFOAM accredited and ISO65 certified organizations – in countries not accepted as equivalent – for re-certification purposes. That is, Japanese domestic certification organizations recognized by the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) are allowed to accept these foreign organizations for inspection purposes. The Japanese certifier will then do the review and certification.

4.2 Direct Costs

Certification costs, including those for inspection, can be seen as input costs to farmers. The higher the costs, the higher the farm-gate prices required for the farmer to be willing to continue growing that product, *ceteris paribus*.

In this section, the costs for the farmers to sell their produce as organic on the domestic market will be considered first. This means that only those countries that have domestic certification will be looked at. The second step is then to look at the additional costs of certification due to extra requirements from importers.

As different importers have different requirements, the extra cost for the farmer over and above the certification for domestic purposes can be caused by extra work to be done by the domestic certifier[12]. In that case the extra costs are indicated in this report under the domestic certifier. Another way in which to measure the cost of certifications for different markets is to consider the cost of foreign certifiers over and above those of the domestic certifiers for those same markets. This is shown in a later section.

4.2.1 Domestic market

In general, certification charges are based on several factors. One is the local situation, such as local labor costs and cost of transport for the inspector. Another factor on which to base domestic charges are the fees charged by different organizations of importance to the certification offices, those that accredit for export to their country, such as the EU, United States and Japan. Although it is interesting to consider the differences between the exporting countries in charges to the domestic certifiers (see Appendix 2), these costs are incorporated in the final charges to the licensee. In addition to these costs, the competitive situation may also be taken into account by an organization when deciding on its charges. For example, when it is the only organization certifying for a particular market, it may be able to charge more than when many competitors are in the market.

The charges for inspection and certification (being allowed to use the logo of the certifying organization) can be calculated in several different ways. For the purpose of being able to estimate the costs before and after harmonization, it is important to have reasonably accurate cost data. In order not to overwhelm the reader, details about methods of charging by domestic certifiers are divided in groups of crops analysed in this report. Estimates are shown in Table 4.4 for those countries that export wheat, in Table 4.5 for coffee exporters, and in Table 4.6 for rice exporters. These data are then used in Sections 7 and 8, where the effects of changes in certification costs are estimated for wheat and coffee. Annual fees shown are those charged after the first certification, that is, excluding charges due to the effort of registering a new licensee.

Wheat exporters

For the wheat exporters, six countries have been included (see Table 4.4).

[12] However, this can be difficult to assess, and possibly not accurately, as the first (domestic) certification may also be bound up with export standards.

Table 4.4: Domestic certification costs to wheat farmers

	Certifier	Type of farm	Annual fee	
			Fixed fee (US$)	Variable fees
Argentina	ARGENCERT	Average Small	400 150	0.7% of organic sales 1% of organic sales
Australia	NASAA	Average Small	282 141	1% of organic sales >US$25,600
Hungary	Biokontroll (H)	Average	7 per ha	1% of organic sales
Slovakia	Naturalis	Average	1.1 per ha	0.5 % of organic sales
USA	OCIA (Int.)	Average	380	1.1% of organic sales
Canada	OCIA	Average	410	$0.31/ha arable land

Exchange rates used: US$ 1 = A$ 1.43 (29 August 2003) = C$ 1.31 (10 December 2003)
Hungary and Slovakia: exchange rate taken as Euro 1 = US$ 1

In Argentina, national regulations were instituted with one of the aims being to qualify for the EU market. ARGENCERT, one of the certification organizations in Argentina, operates two levels of charges, one for average to large farms, and one for small farms. The larger farms have a higher initial charge (US$ 400 per farm as compared with US$ 150 for an average small farmer who is part of a group), but pay a lower percentage of the gross sales (0.7 per cent as compared with 1 per cent).

Also in *Australia*, the first certifications under the national system enabled farmers to sell on the domestic market at the same time as to export to the EU (and some other countries).

NASAA in *Australia* operates two systems. After the conversion period, the fixed annual fee is US$ 282, but there is a charge of 1 per cent on farm sales over and above approximately US$ 25,600. There is a cap on the certification fee of US$ 7,000. For those with sales of less than US$ 6,400 per farm, the "small-farmer" scheme can be used. This can be accessed if there is a group of at least five farmers within a radius of 50 kms. As in Argentina, each farmer is certified separately. Also, as in Argentina, EU requirements were mentioned as being a major reason for the development of that scheme. In both countries, the domestic certification can therefore not be separated from the EU market.

Certification costs in *Hungary* – by Biokontroll Hungaria – fall into two categories. The first is for the inspection and certification process itself. This cost is dependent on several factors, such as the size of the farm, type of land use (for example, arable or plantation) and number of animals. For an arable area the charge is approximately 7 Euros per hectare per year for an established farm, and 10 Euros for an arable farm in conversion. A typical wheat farm can be 100 to 200 hectares.

The second charge is for the use of the logo and is a proportion (1 per cent) of the gross returns from the sale of the product on the organic market. No charges are made on produce sold on the conventional market. Traders pay 1 per cent on the value added, that is, the difference between farm gate price and export price.

Naturalis, in *Slovakia,* charges separately for inspections and other certifications. The charge for an inspection is calculated according to the area of a farm – the charges are different for arable land, permanent grass stands, orchards or vineyards. For arable land it is 1.10 Euros per ha. Certification costs are 0.5 % of the farm-gate price of certified product sold as organic. Naturalis can only certify for products sold within Slovakia. For wheat exports, the Slovakian exporter employs Austria BG for certification (for costs see below).

In the United States OCIA International charges US$ 495 for certification, and US$ 500 for an inspection, with 0.5 per cent of the organic sales, or 0.1 per cent if the sales are over US$ 2 million. However, if a producer is certified via a local chapter, the fixed costs drop to a total of US$ 390 with a variable cost of 0.6 percent. In that case, the local chapter may put on their own variable fee, which could amount to another 0.6 per cent.

In *Canada*, a number of certification schemes are in operation. The data in Table 4.4 are for certification by a chapter of OCIA International. Annual fees are charged for membership (US$ 228) and for an inspection, US$ 140 for an arable farm, plus US$ 42 if livestock is involved. A variable fee is then charged per unit of cash crop, such as wheat. Extra charges are made if certification is needed for exports to Japan.

In *summary*, each certifier treats different sizes of farms in a different way. Argentina and Australia do this by lower initial charges for small farms; Hungary and Slovakia by charging per hectare and differentiating in those

charges between uses of the land (enterprises). In Canada and the USA, no special arrangements are made for small farmers.

In the four exporting countries where fixed charges per farm are charged, the amounts are rather similar for three of them – around US$ 400. Australia shows rather low fixed charges at below US$ 300 per farm.

Coffee exporters
Table 4.5 shows the certification cost for coffee farmers, for either individual farms or groups.

Table 4.5: Domestic certification cost to coffee farmer

	Certifier		**Original cost (US$) (per farm or group)**	**Annual fee**	
				Fixed (US$ or %)	**% of gross farm sales**
Brazil	IBD	Average farm	150+400 +300	< 0.5% of sales	0.5 to 1
		Farm group	100+300 +300	< 0.5% of sales	max. 0.5
Costa Rica	Eco-Logica	Farm or group	500-700	200-250	0.25
Mexico	Certimex	Farm		3-200	
Peru	Bio Latina	Small farm	15-35	40	0
Colombia	Bio Latina	Small farm	20-50	40	0

In *Brazil*, the IBD charges per farm are calculated separately for production and processing. Apart from the registration charges of between US$ 30 and US$ 300, the inspection costs are US$ 200 per day for a large farm, and US$ 100-200 per day for a group of farms. For an "average" farm, one day is counted for the inspection and one day for writing the report each. That is, two days are charged for the production process, and two days if any processing needs to be certified. An average charge for travel was mentioned as US$ 300.

With the report, the original cost to become certified as an organic farmer is around US$ 850 per farm. For a group of small farmers, the cost could be around US$ 700 and the cost per farmer then depends on the number of farmers in the group.

The annual fees are calculated in one of two ways. The first is as a fixed fee, and is calculated as a proportion (not exceeding 0.5 per cent) of past gross returns. The farmer, however, can choose to pay it as a percentage of next year's returns, in which case the percentage payment is larger, at least for average farms, at between 0.5 and 1 per cent of gross returns. For small farms the percentage stays below 0.5. The actual values, both of the original certification and of the annual payments, are based on the prosperity of the farmer, that is, the expected capacity to pay.

In *Costa Rica*, Eco-Logica certifies mainly groups. Individual farmers pay around US$ 200 per year (after an initial certification fee of around US$ 600 in the first year), plus 0.25 per cent of the gross income. The same charges are paid by a group of farmers. Each farmer pays a part of the fee, and the cost per farmer then depends on the size of the group. For example, for a farmer belonging to a group of 50 farmers, the initial costs could then be US$ 10 per farmer, and thereafter US$ 4 or US$ 5 annually plus 0.25 per cent of gross farm sales.

In *Mexico,* Certimex certifies groups of between 10-100 farmers for US$ 2,000 per year. When the numbers increase, the costs per farmer decreases. For example, for between 101 and 1000 farmers, the costs are between US$ 3,000 and US$ 4,000 per year, and for a group of over 1000 farmers, it is US$ 5,000 to US$ 6,000 per year.

Bio Latina charge similar, though not exactly the same, prices in *Peru and Colombia*. In Peru, the original cost is US$ 346 plus travel, and the annual fee is US$ 220 plus travel. These costs are the same whether they are for one farm or a group of farmers. No percentage is charged on the farm returns. In Colombia, the original costs are US$ 396 plus transport, and the annual fee is US$ 180 plus travel. The total figure of US$ 500 in Peru and US$ 700 in Colombia was given as representative for annual charges. For groups of farmers, this means that the total costs have to be divided over the number of farmers. A cost of US$ 40 per farmer is not exceptional.

In *summary*, fees are charged differently in the different coffee-exporting countries. In some, such as Brazil, a percentage of the turnover is charged, with differences between average and small farms. In other countries, like Peru and Colombia, a fixed fee is charged, while in a third category (for example Costa Rica) a combination of the two systems is used, with both a fixed and variable charge. Group certification, which reduces the cost to each individual farmer, is quite common.

Rice exporters
Domestic certification costs for farmers in some rice growing countries are shown in Table 4.6.

Table 4.6: Domestic certification cost to rice farmers (US$)

	Certifier		Original cost per farm or group	Annual fee Fixed
China	OFDC	Average farm Small farm	1000-2000 500-800	800-1600 500
Thailand	ACT	Individual farm	43 + 4.55/ha	19 + 4.55/ha

Exchange rate used: US$ 1 = Bht 41.19 (29 September 2003).

In *Thailand*, the ACT certifies for the domestic market only. The original cost of certification is US$ 43 per farm plus US$ 4.55 per hectare. The annual fee is US$ 19 plus US$ 4.55 per hectare. Extra charges are levied when an inspection includes fields used for parallel production. In other words, the certification fee depends on the land area under organic management, apart from an initial fixed cost. This fixed cost is of a magnitude equivalent to 3 hectares of land under organic agriculture.

China is the only country with a flat fee, which is US$ 1,000 - 2,000 for the original cost, minus 20 per cent (that is, US$ 800 -1600) thereafter. A scheme for small farmers allows the cost to be more than halved, bringing it down to US$ 500-800 for the original costs, and US$ 500 per year once the farmer has been certified.

In summary, Thailand charges by surface area, not by returns, as many countries do. China does not charge any variable fee, which may be the reason for a relatively high fixed fee.

4.2.2 Export market

Domestic certifiers
Many domestic certifiers can certify both for the domestic and export markets. Often, there is a basic fee for the domestic market, as shown above. These certifiers may or may not charge more for the export market. In some cases, such as in Argentina and Australia, national standards were formulated in the early 1990s with an eye on export possibilities to the EU, and domestic

certification costs therefore reflect the costs of certification for export purposes to at least one country.

In *Argentina*, there are several domestic organizations that can certify for the EU and US markets. No extra cost is charged for certification for the EU market. For export to the US market, ARGENCERT charges US$ 550 extra per project, which may include more than one producer or farm. The reason for this extra charge is that specific inspections need to be carried out, extra forms need to be filled out, etc. For the Japanese market, no extra costs are charged by ARGENCERT over and above what is charged for US exports, but re-certification, with extra costs, does occur by a Japanese certifier (see below).

In *Australia*, certifications by state-accredited organic certifiers entitle producers automatically to export to the EU and some other countries. This is also true for export to the Japanese market. However, if a farmer or processor wants to export anything other than bulk (which can carry the certificate "Produced in compliance with JAS standards") with a JAS label, "add-ons" are called for, both in terms of work and to the basic fee. The extra cost is then US$ 150-250 for inspection and US$ 65-130 for review. The same principle is applied to export for the US market, for which organizations (including NASAA and a second certifier, the BFA) are accepted, rather than the Australian national scheme.

According to Hungarian law, no foreign certifiers are allowed to certify in *Hungary*. This means that, if farmers want to export with a specific logo from, for example, a certifier in another European country, Biokontroll Hungary can inspect and send the report to the foreign organization, which then allows the use of its logo if certification is granted. This phenomenon occurs as some consumers are more interested in products certified by specific certifiers. Cooperation exists, amongst others, with KRAV, Bio Suisse, the Soil Association and Naturland. A similar arrangement with BCS serves farmers who wish to export to the USA. Biokontroll Hungaria does not charge more for these certifications, except for ones involving BCS, which are over 100 Euros extra per farm. Exact charges depend on several factors, such as turnover.

In *Slovakia*, Naturalis cannot certify for the export market, and a foreign certifier is contracted directly by the exporters to certify farms for export.

In the *United States*, a farmer certified with OCIA International would need to pay an extra US$ 80 to be able to export to the EU and Switzerland – if

there are no complications. Of this amount, US$ 60 is for export verification, and US$ 20 for an import certificate. For a farmer who wants to export to Japan as JAS certified, a total fee of US$ 1,500 is charged as a fixed cost.

In *Canada*, certification by OCIA guarantees access to the US market. For export to the EU and Japan, similar prices are charged as those charged to farmers in the United States by OCIA International (see above).

In *Brazil*, fees for certification for one extra market are charged as one day's work for each stage (production or processing). For example, if the production process of a product needs to be certified for the EU, US and Japanese market, that will be four days – two for the EU, and one day extra for the United States and Japan each. If the processing is to be certified, that will be another two extra days over and above the certification for the EU. The cost is US$ 200 per day for a large farm, and US$ 100-200 per day for a group of farms.

Since Bio Latina, in *Peru and Colombia*, is accredited by USA NOP, products certified by them can be exported to the United States without extra charges.

In order for domestic certifiers to be able to certify for export markets, governments or the certifier in the exporting country incur costs to fulfill the importers requirements. If governments are charged by the importing country, they may or may not recuperate these costs from certifiers. If not, the taxpayers pay the costs. Charges resulting from involvement in international trade, and incurred by respondent organizations, are shown in Appendix 2. These costs would be incorporated in the cost of the domestic certifier as described above. Included in the Appendix are the costs caused by the requirements of the foreign importers – here the EU, United States and Japan, and also those of IFOAM, as this scheme facilitates international trade of organic products in some way.

In *summary*, five of the six wheat exporters have domestic certifiers that can certify for the export market, at least for some importing countries. Domestic certifiers in Australia and the United States can certify for all markets. Canadian growers can possibly make use of this, as there are several US organizations operating in the country. The Slovakian domestic certifier cannot certify for any export markets, Hungary has less easy access to Japan and the United States, while Argentina has less easy access to just Japan.

For the three coffee exporters discussed here, Peru and Colombia have easy access to the USA, while it is less easy for them to be certified for the Japanese

market. Brazil charges extra for each extra market for which a producer needs to be certified.

Foreign certifiers
Private foreign organizations can conduct certifications of producers and others (processors, input industry, etc.) in several ways. The most used options are to:

- Accredit a local certification office.
- Accept the domestic certification office as inspectors, but carry out the actual certification in the home office.
- Certify organic producers, processors etc. directly. This can be done:
  a) Using local inspectors. The review and certification can then be done in the "home" office.
  b) Using the certifiers own inspectors going to the exporting country, and doing the inspection. The certifiers then have their own inspections, in addition to the inspection review and certification.

Obviously, these different options have different price tags, and affect the cost to the farmer in a different way.

Costs relevant for foreign certifiers may include accreditation costs, labor and transport. For example, an organization resident in the EU may be able to certify on the grounds of acceptance by its own government, for which it may or may not have to pay. Transport cost for foreign organizations may include international travel, depending on the location of the inspector. Also, the labor costs will depend on the country where the labor originates or lives.

In Table 4.7, the main certifiers who certify in developing countries are shown. Table 4.8 shows fees for private foreign certification schemes at time of enquiry (late 2003 – early 2004).

Only those countries for which this information is relevant are included. All major certification schemes were asked for their fees in the different countries, but none of them responded or they responded negatively. Hence, the table is somewhat patchy. Figures included were gleaned from people in the countries.

In *Argentina*, *Australia*, *Costa Rica, Hungary* and *Switzerland* no foreign certification schemes certify for the export market. In *Argentina,* for access to Japan, ARGENCERT and some other organizations are authorized to do inspections for organizations that can certify for the Japanese market, such as JONA, QAI and ICS (Japan). ARGENCERT does not charge extra for

Table 4.7: Foreign certification schemes operating

	ECOCERT	IMO	BCS	SKAL	SGS	OCIA	KRAV	OTHER
Argentina	–	–	–	–	–	–	–	–
Brazil	+	+	+	+	-	+	+	OIA, FVO, KRAV
Costa Rica	–	–	–	–	–	–	–	–
Mexico		+				+		Naturland
Peru	–	+	+	+	+	+	+	
Colombia	+	–	+	–	–	+	–	ICS
South Africa	+	+	+	+	+	–	–	SA
Uganda	–	–	–	–	–	–	+	
China	+	+	+	+		+		QAI
Thailand	+	–	+	–	–	–	–	Bioagricert SA, OMEC Japan
Australia	–	–	–	–	–	–	–	–
Switzerland	–	–	–	–	–	–	–	–
Hungary	–	–	–	–	–	–	–	–
Slovakia	–	–	–	–	–	–	–	Bio Garantie Austria
Canada	+							

plus (+) = yes
minus (–) = no

Brazil: for more complete details, see Fonseca (2003)
Switzerland: IMO is a domestic certifier
South Africa: ECOCERT and SKAL have local offices
Thailand: ECOCERT has a local office

inspections for the Japanese market, but the Japanese certifiers charge approximately US$ 3,000 per certification.

In *Slovakia* only foreign certifiers can certify for the export market. Natural-Alimentaria is the only company that exports organic wheat. ABG (Austria Bio-Garantie) is the certifier, and charges 55 Euros per hour (maximum of 440 Euros per day). On an average farm, the work could be 2 to 3 days for inspection. This does not include other activities, such as report writing, transport etc., which could take another 1.5 days. Total costs, but excluding application costs, transport and export certificate costs, could therefore be

Table 4.8: Costs of foreign certification schemes (US$)

	ECOCERT	IMO	BCS	SKAL	SGS	OCIA	KRAV	OTHER
Brazil	+	+	+	+	–	+	–	OIA, FVO
Mexico		310/day						
Peru	–	+	+	+	+	+	+	
Colombia	+	–	+	–	–	+	–	ICS
South Africa	1220/farm	+	<< Ecocert	<< Ecocert	+	–	–	SA
Uganda	–	–	–	–	–	–	+	
China	350-500/day x 1-4 days		500/day 1-4 days	+		+		QAI
Thailand	+	–	+	–	–	–	–	Bioagricert SA OMEC Japan
Slovakia	–	–	–	–	–	–	–	440/day

plus (+) = yes
minus (–) = no
<< = considerably less than…

1760 Euros. Charges are paid by the exporter, but indirectly by the farmer, as this arrangement would influence farm-gate prices.

In *Brazil,* some foreign certifiers are reported as charging less than the domestic certifiers to clients of those certifiers, but more to others. In *Peru* and *Colombia*, there are a number of foreign certifiers. Although Bio Latina has no direct access to Japan, it has an arrangement with ICS for re-certification, like Argentina.

Most of *Mexico's* exports go to the EU. Certimex inspects for IMO. In such a case, the expenditure for certification increases by 50 to 60 per cent. Charges are US$ 300 to 320 per day, with the initial administrative work and inspection being around 2 days work, which is carried out by Certimex. Other foreign certifiers include OCIA (for the US market) and Naturland.

Charges in *Uganda* can vary considerably, according to certifier and project. For example, one farmers' group of 1,600 cocoa farmers are certified for US$ 12,000 per year (including processing), while 2,000 coffee farmers paid just US$ 8,000 per year. This can still be a high percentage, as farmers may have small fields (0.5 to 1 acre), with possibly 80 kgs per field. Farm gate prices

are about half world market prices. For organic quality, which is a combination of organic product combined with better quality due to improved management and timely delivery, a producer may receive a premium of 20-35 per cent. Many factors play a role in setting the charges, such as distance from centers, complication of cases, and for how many markets is being certified.

In *South Africa*, farmers wanting to export must first find a market. As none of the domestic certifiers can certify for exports, finding a market means finding an importer in the country to which they want to export. In many cases, it is the importer who influences the choice of certifier to be engaged by the farmer. At present, ECOCERT charges farms just over US$ 1,200 per certification, down from almost double the amount they charged some farmers the previous year. The decrease in price is said to be due to heavy competition of other certifiers, such as BCS and SKAL, who are rumored to be trying to get a share of the market.

In *China* some foreign certifiers charge US$ 500 per day, and a typical inspection can take between 1 and 4 days, bringing the charges probably to between US$ 1,000 and 2,000. This is not very different from domestic charges.

Bio Suisse in *Switzerland* is not a certification organization, but a label organization. It has arrangements with domestic certifiers or label organizations in about 50 countries, which gather information about points of difference between the domestic standards and those of Bio Suisse. If the outcome is satisfactory, the product can then use the Bio Suisse logo. Bio Suisse does not charge the foreign certifier, but charges the Swiss importer 0.7 per cent for its service. The local certifier (in the exporting country) may well charge the farmer more for the extra service – which includes checking more points, and filling out more forms.

However, the products can be imported into *Switzerland* without the private approval of Bio Suisse. An import authorization can be obtained from the Federal Office for Agriculture at a cost of 300 Swiss francs (about 200 US$), if no complications arise. Products that have been authorized for marketing in Switzerland can also be re-exported to the EU without extra requirements, because Switzerland and the EU have a mutual recognition agreement that also covers the equivalency of the import authorizations. For this same product to be allowed into the EU directly from its country of origin it would need another certification from an EU-accredited certifier. In Switzerland, organizations that can certify for exports to the EU include Bio-Inspecta, IMO and SQS.

In *summary*, of the wheat exporting countries, Australia and the United States need no foreign certifiers for exports to any of the three major markets. Canada benefits from having US certification organizations operating within its borders. However, the extra costs for exports to Japan from Canada and the United States are rather large (US$ 1,000 per farm). Australia charges US$ 300 extra for handling to both the United States and Japan. A domestic certifier in Argentina charges US$ 550 for extra handling for exports to the United States and Japan, but for exports to Japan, farmers needs extra arrangements (with a Japanese organization) that are rather expensive (US$ 3,000 per farm). In Hungary, the domestic certifier can handle exports to the EU, though EU customers often prefer certification by their own domestic certifiers. Biokontroll Hungaria then does the inspection for those certifiers for no extra costs. In Slovakia, a foreign certifier needs to do the certification for exports to the EU, which can be close to Euro 2000 per farm. Very little of the exports of these two last countries is shipped to countries other than the EU. In other words, certification by foreign offices can be rather expensive, ranging between US$ 2,000 (exports from Slovakia to the EU) and US$ 3,000 per farm (exports from Argentina to Japan). Domestic organizations tend to charge somewhat less (US$ 1,500 in the United States and Canada for exports to Japan).

4.2.3 Summary

Comparing the costs of certification by domestic and foreign certification bodies shows that the differences between domestic organizations in the different countries are not all that large. Initial fixed costs in most countries stay mostly under US$ 500 per wheat farm, and can be considerably less for small farms. Variable costs are often around one per cent for organic sales.

The difference in fixed costs between domestic and foreign certifiers seems somewhat more pronounced, while foreign certifiers do not seem to pay much attention to small farmers and their particular problems. In addition, some may not charge any variable costs.

The biggest cost, however, is possibly not so much the difference between the schemes, but the need to be certified by several certifiers. When these are all bodies with a relatively high charge, the total costs add up. The countries that are best off are those where the domestic organizations can certify for a number of different markets. Certification for a second or third market does cost farmers more than if they were exporting to only one market, but as long as they adhere to the most stringent standards to start off with (and therefore no extra costs are incurred such as for storage), there is an extra charge of perhaps just

US$ 200 to US$ 1,000 per year. This may constitute a small part of the extra returns to the farmer. The problem, however, is larger when the farmer needs to pay a relatively high sum to start off with and, if wanting to get into several markets, needs to get another foreign body for the next certification. This is particularly likely to happen when a buyer stipulates the requirement of certification by a private certification organization.

Competition seems to be a growing factor in the level of charges. In both South Africa and Brazil, comparisons of charges and the desire to be competitive with other organizations, was mentioned as a reason of convergence between charges by foreign and domestic organizations. When foreign certifiers use local inspectors, certification charges can become quite competitive.

4.3 Indirect Costs

Indirect costs can, potentially, be a large part of the costs of non-harmonization. Most of the comments on indirect costs here reflect problems for producers, resulting in higher production costs and therefore higher prices. Issues at state level compound these problems, and results in less favorable conditions for consumers, with consequences for the total demand and expansion of the organic industry. Some issues at farm level will be considered first, followed by issues that appear at state level.

4.3.1 Farm level

Inputs

In the previous section, extra certification costs were included in the discussion. However, indirect costs can influence other farm input costs. Some countries gave examples of inputs that are prohibited by foreign certifiers. Prohibitions are based on the requirements of the standard setting country or certifier, and do not necessarily make sense in the particular exporting country. Some examples are as follows.

Peru mentioned that, although organic farms may want to use manure from non-organic farms, this is not allowed in foreign standards. This is despite the fact that the other farms are managed according to traditional principles, with little or no substances that are prohibited in organic farming.

Several examples were given by a *South African* respondent of problems with differences in input use. One was the use of peat, which was reported as not being allowed by a foreign certifier. However, the situation of availability of

peat in South Africa was considered to be totally different from that in the UK (the home of the certifier), and not seen as an environmental problem. Another problem related to chicken litter. If used as manure, it had to be proven that there were no genetically-modified products included in the animals' diet. However, in South Africa the Department of Agriculture did not have the capacity to check this. The third problem reported concerned the requirement to grow crops from organic seed (in 1999). The opinion of the respondent was that the market in South Africa is ten years behind Europe, and organic seed was barely available. The cost of organic seed, for example of salad products, was estimated at 35 times the cost of the conventional seed. This last reason, especially, was considered important in the decision of the respondent not to export organic products.

In *Australia*, foreign standards do not seem to have restricted the input use of organic farmers. However, there has been a question by some about the use of super phosphate (prohibited in organic agriculture), because of the extraordinary phosphorus-poor soils in Australia.

In *Hungary* the standards of Biokontroll are perceived to be stricter than those in the EU, for example regarding the conversion period. Thus, the EU's standards are not seen to be an impediment to the development of organic agriculture in Hungary. However, the requirement of organic seed was raised as a worrying issue, but it was not seen as more or less inappropriate for Hungary than for the EU. Some problems do arise with requirements in the US standards. The first is the need of a buffer zone between conventional and organic fields, in particular on farms that are not structured in a way that would make a buffer zone is easy to include. Another issue of inconvenience, and increased costs, is the requirement for the composting of manure.

There is a different side in the debate on harmonization and its effect on the competitiveness of producers in different countries than that mentioned previously. Above, examples are given of prohibitions by importing countries, making trade difficult for exporters. However, in the same way, domestic standards may prohibit certain substances that are allowed in other countries from which imports are accepted. For example, the prohibition of the use of copper in agricultural production in *Denmark* is a main reason why the organic fruit production is very limited in that country. However, imports of certified organic products, even though they may have been produced using copper,

are allowed. These show unfair trade conditions, according to the Danish organic fruit producers[13].

Yields

A decrease in yields is, of course, the other side of problems with inputs. The costs of the allowable input can be higher than those of the non-allowable, and as a consequence, these inputs may be used more sparingly, causing yields to suffer.

An example of an inappropriate standard in an importing country affecting yield in an exporting country is that of the EU organic regulation that allows a maximum application of 170 kg of nitrogen per ha per year. It is based on European conditions where pollution with nitrogen is a problem. But in many countries the soils lack nitrogen, and it is impossible to cultivate with such a limitation. Vegetable production in desert land in Egypt, especially if it is greenhouse production, is an example of where problems can occur with this standard.[14] A similar situation exists in Brazil.[15]

Marketing

Several aspects of marketing can be affected by non-harmonization of standards and certification of organic standards, certification and accreditation. One of them is storage, as producers may need to store produce in different places, depending on the market for which it is destined. However, no complaints about storage problems have come to light at present.

A second issue is delays in marketing. For example, produce may be delayed on the wharf in the importing country, when the right papers are not present. This may also occur with harmonization, but confusion over paperwork is more likely without harmonization. This issue is often mentioned in general terms. Some estimates are that, for every day delay in the port, when the importer cannot distribute the produce, the returns to the consignment decreases by one per cent. The few responses that have been received on this issue for this report, such as from *Brazil* (IBD), did not complain about delays in the market. The nature of the trade will be important in this respect, as delays in the sale of vegetables and fruit are likely to have considerably worse consequences than for, say, grains.

[13] Example from B.Thode Jacobsen, Bio Service, Denmark, personal com., April 2004.
[14] Example from B.Thode Jacobsen, Bio Service, Denmark, personal com., April 2004.
[15] M.F. Fonseca, researcher in Brazil, personal communication, April 2004.

A third issue is the costs involved with the additional paperwork. In *South Africa* a respondent described the situation as "over-zealous" and "getting worse". Mention was made of the fact that the EU, and especially the UK, want supervision down the whole marketing chain. The exporter has to provide paperwork and then pay the certifier. Suspicion of possible protection of own domestic producers was mentioned by several respondents.

Canadian and *US* exporters complained about the fact that Bio Suisse has recently started requiring foreign producers to be put on a list of exporters to Switzerland at the time of certification. The complaint was that this is totally impractical for a number of reasons. One is that farmers often do not know where they will market their produce at the time of certification. Another is that, if the harvest of a particular farmer is lower than expected, the exporter cannot replace produce from one grower with that of another.

What are the consequences of those problems? In *South Africa* mention was made that small farmers do not have administrative skills, or money, to pay for export certification. In *Canada* one third of organic farmers in Alberta Province were reported to have stopped being certified organic for administrative reasons ("too complicated to be worthwhile"). One explanation was that those operations that dropped certification were the smaller operations (TOS 2003). Of course, this all leads to less availability and trade in particular products.

Perhaps a high cost in general terms due to problems in marketing is the risk of something going wrong, such as delays in acceptance of imports, cancellations, etc. The fact that the risk is higher than with conventionally-grown products might influence the decisions of exporters to enter the trade (see below), with consequences for producers.

Conversion

The conversion period presents a problem for many, as certification costs are incurred although often no premiums are received during this time. This can be a major barrier to entry in many countries.

It is felt by some that the conversion period instituted in organic standards is rarely, if ever, based on scientific criteria. They are also mainly set for conditions in temperate climate regions. There may well be a case for shorter conversion periods under tropical conditions, where the breakdown of materials can occur faster than under temperate conditions.

In some *African* countries, having to go through a conversion period when the field has clearly not been treated with conventional inputs can be rather difficult to explain to potential organic producers. According to, for example, EU standards, a letter from the Ministry of Agriculture is needed to testify to the state of the field. In Europe, that may be useful, in Uganda that may not be the case.

Another example of problems with the conversion was reported in *Brazil*. This situation was not related to different export markets and the need for different certifiers, but to group certification and the wish to change groups. In a situation where producers want to change from one to another group of certified farmers, they may find it difficult to prove that they have been farming organically for some time – and therefore can skip the conversion period. If the certifier of the first group refuses to release data of the farmer to the next certifier, a farmer may have to start all over again with the conversion period. This situation is not due to a lack of harmonization *per se*. However, it is likely that, with harmonization, less certifiers are needed and hence there would be less need to change certifiers.

4.3.2 National level

Importing countries

Some costs are related to the country level. For importing countries, interests in harmonization stem from the desire to avoid duplication of work. At least two levels can be distinguished here.[16]

One is the original documents/import certificates that accompany or are related to consignments. Between countries where no complete equivalency regime exists, these documents serve to prove the authenticity of the consignment. They can, however, be abolished where there is full equivalency of the inspection system (as for example within the European Economic Area, where no such certificates are needed between Norway and the EU). Switzerland tries to convince the EU that these certificates could also be dropped between it and the EU, as a full coverage equivalency agreement exists.

The second is the import authorization procedures. This is the most burdensome part of the problem. For some imports to Switzerland and EU Member States, for example, several kilograms of inspection reports have to be submitted by the importer, and then verified by the country's authorities.

[16] From: Patrik Aebi, Head of Promotion of Quality and Sales, Swiss Federal Office for Agriculture, personal communications, April 2004.

These extra transaction costs are one issue that causes products to be more expensive to consumers. However, the more complicated the process, as is the case with a requirement for paperwork for each consignment, the more possibilities there are for misinformation by somebody in the marketing chain, leading to higher prices for consumers. This then causes loss of trade.

Exporters

There are several problems facing exporters at a national level. One is the general state in the development of the industry. A second is the (in)compatibility of requirements from different importers.

State of development of the organic industry

Organic standards and certification is a process that has become more and more complicated over time. Although those organizations that started in the early days of developments in organic certification may be able to keep pace, certification organization that are at an early stage of development may not. They are more likely to find the complications of the requirements of all the different rules and regulations all too difficult to master, and thus may not survive long. This means that, in countries that are presently in the beginning stages of developing organic agriculture – as many developing countries are – domestic certification offices are less likely to develop than they did in countries that started, say, ten years ago. These countries are then automatically more dependent on foreign certification, with financial consequences for local producers, and therefore competitiveness in the international market.

A second issue related to the stage of development is the ability to cope with the requirements of standards. Organic regulations have become tighter over time, and the organic industry has had time to adjust to it. For example, in some countries the requirement to use 100 per cent organic feed in the livestock sector has gradually been phased in over the last ten years. In other words, farmers have had time to arrange their farm production system such that they could cope with it – both by adjusting their rotation system, and through creating a demand for feed to be supplied by other farmers. An industry in the early stages of development may well have problems adhering to such strict rules. The same is the case for seed requirements. Since recent times, many standards of developed countries specify that seed has to be used that originates from organically grown plants. This creates problems even in those markets that have been able to prepare for this for a number of years. The requirements of buying in only livestock of organic origin is another such problem for producers in many developing countries, where such animals may be too difficult to source.

Incompatibility of requirements
If a country has standards and certification equivalent to those of one importer, it may be almost impossible to be equivalent with those of another. For example, in the United States, parallel production is allowed, while it is treated very tightly in the EU. This is not, strictly speaking, incompatibility, as the problem could be solved by keeping to the standards with the most severe requirement in every case. However, if a producer adheres to that policy, production costs may be higher than they need to be.

It is possible that existing legal requirements in one country cause problems if standards made in a different country are applied. As domestic standards are often adjusted to domestic regulations, using organic standards from one country (the importer) in a foreign country (the exporter) may well lead to insurmountable problems for the exporter. This is the case especially when the importer has no incentive to help solve the problem. For example, in *South Africa*, the requirement by a foreign certifier not to use chlorinated water in the packing house was in direct contravention to the domestic legal requirements. Regulations in South Africa stipulate that chlorinated water has to be used in such an environment. The potential exporter reported that, with this requirement from the certification office, exports of fresh fruit and vegetables were virtually out of the question.

Although no other examples have come to light during the research for this report, it is not difficult to imagine that similar events can occur at other places. It is also likely that, with an international effort to harmonize standards, it would be easier to find solutions to such problems (between a private certifier and one farmer).

4.3.3 Summary
Indirect costs are the additional production, processing and marketing costs incurred in meeting the requirements of certification to second or third markets. These can cause final consumer prices to be relatively high, either by increased production costs or, if costs are prohibitively high or production methods are illegal, by reduced supply.

These costs are difficult to quantify. The indirect costs may be zero if the first certifier is the most stringent in every respect, and the standards are appropriate for the particular country. But this is unlikely to be the case. The costs discussed here affect both producers and consumers and include:

- Requirements that make inputs more expensive to farmers, and which are often established by importing countries for their specific conditions of climate, soil, agricultural practices and legal conditions.
- Absence of technology or knowledge to carry out organic practices as required by importing countries.

4.4 Cumulative Effects

As certain effects are cumulative, not only do higher prices (due to higher costs for the producer) inhibit buyers to purchase the product to some degree – depending on the price elasticity of demand – it also affects the dynamics in the market.

One can imagine the situation where established exporters may not be willing to get into marketing organic products at all, which means that producers have no buyers. From the point of view of Ugandan exporters of conventional products, for example, the organic market may be too finicky for them to be willing to get engaged in this area and to take the risks. Such an exporter would see that, for example, Bio Suisse in Switzerland does not allow air transport; France is very intent on ISO65 accreditation; and the UK is particular about the conversion period. The trader may then decide that trading in this commodity is too risky, and refrain from entering this market.

Exporters are needed for producers to take the step to organic production. Without established exporters willing to take the risk there may be no export. Alternatively, there may be export with increased risk, as only inexperienced exporters are willing to take on the market. This would increase the risk of something going wrong, and hence increase the cost of export. This could be treated as an increase in input costs.

With harmonization the dynamics of the organic international market are likely to change considerably as, for example, with low risk of non-availability supermarkets are willing to stock their shelves with products, processors are willing to have a special run for organic products, and consumers can be more assured of availability and quality of the product, etc.

4.5 Summary and Conclusions

Quantification of all costs surrounding certification of organic farming has proven to be difficult. The direct costs were complicated enough, as each

country or organization charges in a different way. However, the indirect costs have proven to be rather more difficult to show in figures. Apart from the difficulties of quantification of the effects, there is this nebulous notion of cumulative effects.

Increased complexity of the requirements for different markets (as is the case with non-harmonization) means decreased interest from importers and exporters, who are needed by producers to market their produce. The climate of possible problems with every consignment means that everybody along the marketing chain is less eager to engage in this trade, and it then becomes considerably more difficult to gain momentum.

Because of these practical problems with quantifying the effects, the model has had to resort to a range of assumptions regarding the costs, instead of using actual data for indirect costs.

5 A quantitative Analysis of Harmonization Status[17]

5.1 Introduction

The purpose of this report is to estimate the likely effects of a greater harmonization of organic certification/accreditation. The effects on production and trade are rather difficult to estimate, as already alluded to in Figure 2.1. As so many factors have an influence on one another and – ultimately – on production and trade, it is advisable to employ a model, in which some of these interdependencies are captured. In this case it was decided to use GSIM, a static, single commodity bilateral trade model that distinguishes between imports from different sources (the so-called Armington assumption).[18]

Ideally, all organic trade in all countries should be included. However, in order to do this, detailed data on each agricultural industry in each country is needed, something that far outstrips our capacity. It was therefore decided to start with wheat and coffee, and possibly add rice and fruit and vegetables at

[17] The author thanks David Vanzetti for his assistance with this section.

[18] GSIM was developed by Joseph Francois of the Tinbergen Institute and CEPR and H. Keith Hall of the U.S. International Trade Commission. The model is documented in a memo by these authors entitled 'Global Simulation Analysis of Industry-Level Trade Policy', October 2002. See also Francois, J.F. and H.K. Hall, "Partial Equilibrium Modeling," in J.F. Francois and K. Reinert, eds., *Applied Methods for Trade Policy Analysis*: A Handbook, Cambridge University Press: Cambridge, 1997.

a later stage. An effort was made to include as many data as possible for these crops. Nonetheless, data quality is an issue, and limits the conclusions that can be drawn from the analysis.

5.2 Theory

GSIM is used to analyze the impact of changes in certification costs on production and trade in organic products. The elements of interest in the organic trade – in this report – are the extra cost of certification due to non-recognition of third country's standards and certification system as equivalent. GSIM provides a means of assessing the impacts of changes in certification costs on prices and trade.

An assumption within GSIM is that imports from different sources are not the same but merely somewhat interchangeable. This means, for example, that Argentinean wheat exported to the European Union is not perceived to be the same as Canadian wheat. The essential data required for the model are bilateral trade flows between the countries of interest, that is, quantities traded and values of those goods, and the alternative costs of certification under differing arrangements.[19] Other inputs include the responsiveness of production and consumption to changes in prices (elasticities, see Figure 2.1), but as these are unavailable for organic products they are borrowed from conventional markets. In this report, these parameters are subject to sensitivity analysis to identify the robustness of these results to the assumed values.

Output from the model includes changes in trade flows, prices, benefits to exporters, gains to consumers and impact on taxpayers in each country.[20]

GSIM is a single commodity model (for example, wheat) and hence potential linkages between other goods in consumption (for example, oats) or production (livestock) are ignored. It compares two situations at a point in time and does not attempt to show the transition from one state to another or to assess the costs of adjustment. The model is essentially a set of simultaneous equations in which export prices are varied to satisfy the requirement that global imports

[19] Including direct certification costs, and indirect costs of the implementation of inappropriate standards, such as inappropriate input use, decrease in yields, marketing costs and cumulative effects.

[20] In this case it ignores the effect on taxpayers, who are usually included in this measure, for example through tariff revenues. They would be expected to rise as imports increase, and there may be implications for export subsidies and domestic support. They have been ignored here.

equals exports. There are no changes in stocks. The model is typically used to analyze the effect of reduction in tariffs, export subsidies and production subsidies or transport costs. In this case, it is used to analyze the effect of a change in certification costs, which can be treated as transport costs or tariffs. Changes that lower these costs encourage greater trade, a trade-creation effect. An increased trade flow as a result of reduced costs of certification has a diversion effect. Trade initially going to one source is partially diverted to another. All countries are affected by changes in one market through trade linkages. Given limitations in the data and the abstract nature of such models, the user should interpret the results with caution.

To illustrate this, imagine a hypothetical situation shown in the bilateral trade matrix in Table 5.1 with EU and US importing wheat from Argentina, Australia and each other. Importers are shown in columns, exporters in rows.

Table 5.1: Hypothetical trade flows: wheat

Exporters	**Importers**			
	Argentina kt	Australia kt	EU kt	USA kt
Argentina	0	0	200	300
Australia	0	0	300	200
EU	0	0	0	100
USA	0	0	500	0

Now imagine that a certification agreement between Argentina and the EU lowers the cost of Argentina supplying the EU by 5 per cent, but does not affect the price for which Australian producers can deliver wheat. The resulting percentage changes in trade flows may be as appears in Table 5.2.

Table 5.2: Simulated trade impacts

	Argentina %	Australia %	EU %	USA %
Argentina	0	0	13	-5
Australia	0	0	-3	4
EU	0	0	0	1
USA	0	0	-1	0

The simulated results suggest that trade from Argentina to the EU increases by 13 per cent but there is a fall in exports to the USA, as Argentina has less wheat available for that market. Australia, who is displaced from the EU market, finds new opportunities in the USA. The major beneficiaries from these changes are Argentine producers and EU consumers. Producers are worse off in Australia (as they are forced out of the EU – its preferred – market) and both producers and consumers are worse off in the USA. American producers lose a market, while prices increase and consumers consume less.

Now imagine that implementing the exacting EU standard nationwide raised the cost of production in Argentina by 2 per cent. The resulting increase in trade flows to the EU would be reduced to 11 rather than 13 per cent. The net benefits to both countries would be reduced accordingly. These hypothetical results illustrate that the interactions are complex but intuitive.

5.3 Some Underlying Assumptions

In a study like this, where so many of the data are uncertain, it is important to know what kind of an effect changes in those data would have.

One of the major unknowns in the area of cost without harmonization is the *indirect costs* such as decreased yields due to inappropriate standards; increased need for storage space, etc.

Another source of uncertainty is the *responsiveness* of consumers and producers to changes in prices. Such changes can happen for a number of reasons, including a change in volume.

Finally, products from one country are assumed to be different from that of another, but it is not clear just how substitutable they are.

5.3.1 Responsiveness to changes in prices

Because of the scarcity of data, values in this model have been taken from models used in conventional agriculture. It is, of course, likely that consumers of organic products respond differently to price changes than buyers of conventional products. One reason is that, in the conventional market, there can be many substitutes for a particular product, much more so than in the organic market. Thus, organic buyers may find it difficult to find suitable substitutes, and may not be responsive to price rises. On the other hand, organic products are usually somewhat more expensive than the conventional ones,

and at a higher level of price for the same product, the responsiveness by buyers may well be greater. A third factor is the loyalty of consumers to the organic product. Some will not change product out of principle or for health reasons. But more and more, buyers of organic products are not likely to be in one of those categories, and may be frightened away by a price rise more easily then before. For this reason the sensitivity of the *elasticity of demand* is tested at higher levels than those used in conventional products.

A difference in responsiveness by conventional and organic farmers to changes in farm-gate prices (*elasticity of supply*) could be explained by the ease with which organic farmers can move to conventional production if organic prices fall too drastically. Similarly, conventional farmers may be attracted to organic management with increasing prices for organic produce, but becoming an established organic farmer is more difficult than the other way round. Although it maybe more difficult, it basically only means that there is a longer gap between the decision made and the availability of extra organic products. For these reasons the *elasticity of supply* is also tested for values higher than those used for conventional products.

The *elasticity of substitution* measures the similarity of products from different countries. For example, if the price of imports of Canadian wheat into the EU falls as compared with Argentinean wheat (due to more savings in certification costs in Canada with harmonization), would the buyers substitute wheat from Argentina with Canadian wheat? Some kinds of wheat are suitable for bread making, others for pasta or biscuits. If the quality of the wheat is similar, there is a much higher chance that substitution happens than if it has a completely different quality. It is assumed here that all wheat is grain used for bread making. The data have been tested on different values of sensitivity to similarity between countries.

In conclusion, it is important to know what kind of effect a number of factors have on the stability of the results. Generally, it is reasonably safe drawing conclusions from the analysis if the results do not differ greatly between low or high responsiveness among consumers and producers to changes in product prices. However, if a change in the assumption about the level of response indicates a large change in result, the conclusions to be drawn can be less definitive.

5.3.2 Parameter values

The changes in *direct costs* of certification are reasonably straightforward, and can be estimated quite accurately. As *indirect costs* are rather difficult to

estimate, different values, described in the next section have been included.

For the *responsiveness of demand and supply* to changes in product prices, the values used as default are shown in the next section. To test sensitivity to these values, the default values have then been doubled, and then doubled again.

The default *elasticity of substitution* is 5, common in this type of analysis. It has been doubled to 10 as a reasonable alternative. In addition, a third value of 20 is estimated, indicating great flexibility. In other words, with a small change in price, under this scenario buyers would switch from one to another country. This implies almost complete substitutability, a characteristic of raw commodities.

5.4 Output

The tables in section 6 and 7 show results for two measures, welfare and trade flows.

Welfare is made up of several factors. A change in the situation of harmonization affects not only farmers through changing input prices, but also the consumers to whom these input decreases may trickle down in the shape of lower retail prices. In this model no attention has been given to changes in revenue to governments (for example, due to tariff revenue or subsidies) due to changes in quantities traded.

In addition to the countries' welfare, a measure of change in trade is shown, both in financial and percentage terms. Although this measure is reported upon, it is not discussed, as the welfare figures seem more relevant

6 Wheat

6.1 Input

Bilateral trade flows are presented in Tables 6.1 (quantities) and 6.2 (values) by country of destination for 2002.

Six main exporting countries are represented. Actual data for quantities exported (next last column in Table 6.1) were obtained from different sources. For Eastern Europe they came from the certification offices and local traders.

For the other exporters, figures originated from public agencies (Argentina, Australia and Canada) together with estimates by traders from those three countries and the United States and EU. The bilateral trade matrix balances to meet the requirement that total imports equals total exports.

There are five main importers plus all other importers, who are combined into the "rest of world" group (RoW). A feature of the organic wheat industry is that the trade is dominated by imports into the European Union (66 per cent of quantity).

The total organic wheat exports in 2002 amounted to an estimated 117,236 tonnes, which had an export value of just under US$ 31 million (see Table 6.2). This figure was obtained by multiplying the quantity (Table 6.1) with price estimates of local traders. Canada, the United States and Hungary each exported more than one quarter of the total, although a big part of the Canadian harvest went to the USA. That is, the net trade was closer to 100,000 tonnes, and the net export earnings closer to US$ 28 million.

A reduction in input costs (as both direct and indirect certification costs are) occurs with a switch towards harmonization. In order to analyze the effects of such a change, it is important to know the cost of the input relative to the total costs, here taken as the import cost including transport.

Table 6.1: Export of organic wheat (tonnes)

Exporter	**Destination**							
	USA	EU	Switz.	Norway	Japan	RoW	Total	%
Argentina	-	4,346	1,535	73	-	75	6,029	5.1
Australia	-	4,241	1,629	425	1,905	966	9,166	7.8
Canada	13,500	13,500	-	-	1,500	1,500	30,000	25.6
Hungary	-	27,590	3,951	-	-	-	31,541	26.9
Slovakia	-	7,500	-	-	-	-	7,500	6.4
USA	-	20,000	10,000	-	3,000	-	33,000	28.1
Total	13,500	77,177	17,115	498	6,405	2,541	117,236	-
%	11.5	65.8	14.6	0.4	5.5	2.2		

Sources: Argentina: SENASA
Australia: AQIS
Hungary: Biokontrol Hungaria
CEE: Dutch trader (estimate)
Canada: Canada Wheat Board
USA: several traders
Slovakia: wheat exporter
Hungary:www.biokontroll.hu/english/index.html ('certifying 2002')

Table 6.2: Exports of organic wheat (US$)

Exporter	Destination							
	USA	EU	Switz.	Norway	Japan	RoW	Total	%
Argentina	-	1,043,016	368,376	17,520	-	18,000	1,446,912	5
Australia	-	1,335,947	513,022	133,825	599,983	304,291	2,887,068	9
Canada	3,240,000	4,252,500	-	-	472,500	472,500	8,437,500	27
Hungary	-	5,931,770	849,547	-	-	-	6,781,317	22
Slovakia	-	1,350,000	-	-	-	-	1,350,000	4
USA	-	6,100,000	3,050,000	-	915,000	-	10,065,000	33
Total	**3,240,000**	**20,013,233**	**4,780,945**	**151,345**	**1,987,483**	**794,791**	**30,967,797**	
%	10	65	15	0	6	3		

Source: from Table 6.1 and author's own calculations

As shown in Section 5, certification costs are calculated differently in different countries, and are usually some combination of a flat fee plus an input-related (land) or output-related fee. To estimate costs it is necessary to have some estimate of farm size and income. For the purpose of this study, it has been assumed that all wheat is exported from farms that produce 250 tonnes of wheat for export. The certification costs are based on the area needed for growing wheat, or returns obtained from the production (see Table 6.3). Assuming a total production of 250 tonnes per farm, and with information on a "typical" yield and rotation system, the actual certification costs can then be calculated for such a farm. The fixed costs (those costs charged irrespective

Table 6.3: Some assumptions for wheat production on a hypothetical "typical farm"

Exporter	Production (tonnes)	Yield (t/ha)	Wheat (ha)	Wheat (%)	Farm Size (ha)	Price per tonne (US$)	Total returns (US$)
Argentina	250	1.8	140	30	465	160	40,000
Australia	250	2.4	104	19	559	179	44,800
Canada	250	2.0	124	31	404	238	59,542
Hungary	250	4.0	63	50	125	179	44,792
Slovakia	250	3.0	83	38	223	153	38,160
USA	250	1.9	135	25	540	257	64,300

Note: "Price" = farm-gate price
Source: own calculations

of the size or production of the farm) are apportioned to the share of land taken up with wheat. The variable costs in Argentina, Australia and the United States are the main certification costs – in the form of a percentage of gross income. In Canada and Hungary, the variable costs are charges per hectare in wheat. In Slovakia, the farm certification costs are dependent on the time it takes to certify the farm.

The figures in Table 6.4, under "direct costs" for the major importers, were obtained by using data in Tables 4.4 and 6.3 and information provided in Section 4. For example, with a yield of 1.8 tonnes per hectare and a rotation where 30 per cent of the total farm area is under wheat (see Table 6.3), an Argentinean farm that produces 250 tonnes of wheat for the EU market charges 30 per cent of US$ 400 in fixed costs, plus 0.7 per cent of the total organic wheat sales. The total of those apportioned fixed and variable costs is equivalent to US$ 400. In Canada, where a third of the farm is assumed under wheat, a typical fee would be US$ 137 for the fixed fee (for the wheat area) and US$ 340 for the variable fee (of US$ 0.34 per hectare under wheat + 0.5 per cent of the farm returns to wheat). The total would then be US$ 477 for 250 tonnes of wheat exported to the US market.

Figures for certification for the other markets have been estimated in a similar way. For Argentina, Australia and Hungary, the certification costs for the EU is the cost of domestic certification, as this enables domestic producers to export to the EU. There are extra costs – as mentioned in Section 4 – for exports to other markets, such as the United States and Japan. For Argentina, they are US$ 550 and US$ 3,000 for exporting to the United States and Japan, respectively. They have been included as an extra US$ 300 for Australia. As Hungary and Slovakia did not export wheat to the United States and Japan,

Table 6.4: Certification costs without harmonization (US$/farm)

Exporter	EU		USA		Japan		Switzerland	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Argentina	400	-	950	950	3,400	3,400	400	400
Australia	245	-	545	545	545	545	245	245
Canada	557	557	477	-	1,840	1,840	557	557
Hungary	885	-	1,310	1,310	1,735	1,735	885	885
Slovakia	660	660	1,085	1,085	1,510	1,510	660	660
USA	882	882	802	-	2,207	2,207	882	882

Source: Author's own calculations

the extra costs charged for exports to the United States are based on the average extra charges in Argentina and Australia. Charges assumed for exports to Japan are the average charges for all four other exporters, including Canada and the USA.

The effect of costs other than those of certification *per se* (the "direct" costs) has been included as "indirect" costs (also in Table 6.4). Quantification of these is extremely difficult. Several interviewees have been asked for their estimation of reduction in costs if all standards and certification were to be considered equivalent over the world. Estimates ranged from "very little" (USA) to US$ 500 per farmer to US$ 10 per tonne (Canada) to 10 per cent of total product value. It is likely that costs differ between the different exporters and also according to the destination. As this is a crucial variable, different scenarios have been set up to show the range of possibilities. In Table 6.4 they are shown under the assumption that indirect effects are the same as the direct effects. The total of direct and indirect costs can then easily be expressed as a percentage of the total import costs (see Table 6.5). For example, certification costs in Argentina for exports to the EU amount to 0.6 per cent of the import value of the wheat.

Table 6.5: Certification cost without harmonization (% of import cost)

Exporter	EU	USA	Japan	Switz.	RoW
Argentina	0.6	2.7	9.7	1.1	3.5
Australia	0.3	1.3	1.3	0.6	0.9
Canada	1.3	0.6	4.3	1.3	1.9
Hungary	1.4	4.0	5.3	2.7	3.4
Slovakia	2.3	3.9	5.4	2.3	3.5
USA	2.0	0.9	4.9	2.0	2.4

Source: Author's own calculations

The next step is to estimate the costs after harmonization. Table 6.6 shows the same values as Table 6.4, except that they are adjusted to the expected costs when harmonization is implemented. The extra costs for certification for extra markets (such as the United States and Japan) have been eliminated, and the indirect costs are reduced to zero. Table 6.7 then shows the certification costs as a percentage of total value of imports. The ranges have now been reduced from a maximum of 9.7 per cent (from Argentina to Japan, see Table 6.5) to a maximum of 1.4 per cent (for Hungarian exports, see Table 6.7).

Elasticities of demand and supply employed in this report as default values are shown in Table 6.8. Sensitivity analysis is reported later to indicate how the benefits of harmonization vary with these elasticities.

Table 6.6: Certification costs with harmonization (US$/farm)

Exporter	EU		USA		Japan		Switzerland	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Argentina	400	-	400	-	400	-	400	-
Australia	245	-	245	-	245	-	245	-
Canada	477	-	477	-	477	-	477	-
Hungary	885	-	885	-	885	-	885	-
Slovakia	660	-	660	-	660	-	660	-
USA	802	-	802	-	802	-	802	-

Source: Author's own calculations

Table 6.7: Certification costs with harmonization (% of import cost)

Exporter	EU	USA	Japan	Switzerland	RoW
Argentina	0.6	0.6	0.6	0.6	0.6
Australia	0.3	0.3	0.3	0.3	0.3
Canada	0.6	0.6	0.6	0.6	0.6
Hungary	1.4	1.4	1.4	1.4	1.4
Slovakia	1.2	1.2	1.2	1.2	1.2
USA	0.9	0.9	0.9	0.9	0.9

Source: Author's own calculations

Table 6.8: Elasticities

	EU	US	Japan
Wheat:			
demand	-0.60	-0.09	-0.25
supply	0.61	0.50	0.38

Source: ATPSM database, www.unctad.org/tab

6.2 Results

For results on welfare and trade, a number of different scenarios have been analyzed, ranging from those assuming minimal costs of certification to those with considerably higher costs.

For the first scenario, the only direct costs included are those charged to the farmer, and no indirect costs are included. This is a totally unrealistic scenario, but it gives an impression of the minimal impacts of the change in harmonization.

The next step is then to include some estimate of direct costs for other operators in the marketing chain, such as transport, cleaning, handling at the ports, etc. This is composed of fixed costs plus a percentage of the value added between farm gate price and import price. Many certification schemes charge some percentage of the product value, although the exact figure is debatable.

The third step then is to include indirect costs. As it has been totally impossible to put a reliable value on the indirect costs of certification, the third step involves four scenarios of indirect costs. The last part of the sensitivity analysis addresses the assumed responsiveness of producers and consumers to changes in prices.

6.2.1 Direct costs

Producer-only costs

Under this scenario, direct certification costs are incurred only by producers, while no indirect costs are counted. The effects of the changes in these certification costs are shown in Table 6.9.

Table 6.9: Changes in welfare and trade with minimal direct costs (producers only)

Exporter	Welfare		Trade			
	Producer surplus	Consumer surplus	Total	Total	Total	Total
	US$	US$	US$	%	US$	%
Argentina	-162		-162	0.0	-261	0.0
Australia	-4,510		-4,510	-0.2	-7,259	-0.3
Canada	7,971		7,971	0.1	12,835	0.2
Hungary	-631		-631	0.0	-1,016	0.0
Slovakia	-123		-123	0.0	-198	0.0
USA	9,715	-3,077	6,638	0.1	15,643	0.2
EU		2,342	2,342			
Switzerland		667	667			
Japan		23,615	23,615			
RoW		687	687			
Total	**12,260**	**24,234**	**36,494**	**0.1**	**19,744**	**0.1**

Source: Author's own calculations

As expected, reducing costs leads to a net gain to producers and consumers, in this case of around US$ 36,500 or 0.1 per cent of the total trade value of US$ 31 million. This estimate is called "total welfare", which includes gains and losses to producers and consumers. Although, in total, there are net gains in welfare at this level of trading, those gains are by no means evenly distributed. With this scenario, producers in Canada and the United States receive US$ 18,000 while producers in Australia are worse off by a total of US$ 4,500. This is because Canada and the United States face extra certification costs as compared with other countries, and reductions in these costs led to Australia, with the lowest costs, being pushed out of the market at the margin. Wheat diverted onto the export market in the United States pushes up domestic prices slightly, making US consumers worse off. Consumers in importing-only countries are unambiguously better off from lower prices as a result of a cost reduction measure. Total consumer gain is US$ 24,000, most of which is gained in Japan, caused by a drop in consumer prices. The results are driven primarily by the high level of initial certification costs in Switzerland and Japan.

Supply chain costs

In the previous scenario, only the certification costs of the farmers are reduced with the "after-harmonization" scenario. However, all other operations, including transport, exporter, importer and packaging, also need to be certified. Calculations of those costs are rather complicated, and depend on a number of variables. An example of costs in Argentina can be found in Appendix 3.

It is possible to make some very rough estimates of those costs, based on limited information and assumptions. Those made for the purposes of this study are based on the assumption that three more operations need to be certified before the produce arrives in the importing country. Many certification schemes charge a certain percentage of the value of the product. It is assumed here that this is 1 per cent of the difference in value between the farm-gate price and the price in the importing country – a figure charged both in Argentina and Hungary. The fixed costs are likely to be similar to that of a farmer, as that cost is often related to how much time is needed by the certifier in travel, inspection, report writing and reviewing. However, one exporter serves a number of farmers, so the cost here is assumed to be 10 per cent of the farmers' costs. That is, one certifier serves ten producers. Another assumption made is that, with harmonization, the certification costs for the supply chain will, on average, be halved (see Tables 6.5 and 6.7 for comparable figures for producers). The results of this scenario are shown in Table 6.10.

Table 6.10: Changes in welfare and trade with minimal direct costs (producers and chain)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Argentina	2,059		2,059	0.1	3,316	0.2
Australia	-453		-453	0.0	-729	0.0
Canada	15,055		15,055	0.2	24,241	0.3
Hungary	12,960		12,960	0.2	20,868	0.3
Slovakia	3,904		3,904	0.3	6,287	0.5
USA	16,668	1,580	18,248	0.2	26,841	0.3
EU		31,596	31,596			
Switzerland		7,410	7,410			
Japan		26,419	26,419			
RoW		2,055	2,055			
Total	**50,193**	**69,061**	**119,254**	**0.4**	**80,824**	**0.3**

Source: Author's own calculations

In the case as described above, the total welfare would increase from US$ 36,500 (with farmers costs only included) to US$ 119,000 (including the supply chain certification costs) or 0.4 per cent of the total value of trade. Trade would increase by 0.3 per cent. These figures demonstrate the importance of the supply chain certification costs in comparison with the direct certification for farmers only. There are gains to all producers and consumers with the exception of Australian produces, who experience a small drop in total returns. This is due to the fact that they, already having relatively low certification costs, have the smallest drop in price with harmonization, and therefore become less competitive under the new circumstances.

6.2.2 Indirect costs

Despite efforts to try to quantify the indirect effects of the plethora of certification organizations, no satisfactory quantification has been found. We have therefore needed to resort to showing the effects under certain assumptions.

When making these assumptions, it is important to take into consideration the particular conditions of exporters. For example, several of the wheat exporters, Argentina, Australia and Hungary are on the EU third-country list, which should greatly facilitate exports to the EU. Indirect costs of wheat grown in Canada are possibly considerably lower for wheat exports to the US market

than those from other markets. It also seems likely that indirect costs are somewhat related to the direct costs. On the other hand, when looking at the broader picture, farmers and other operations between farm-gate and consumers may have a number of problems due to non-harmonization. Examples are farmers not being able to find a market, or find a trader to do the marketing for them; and importers having less demand as supermarkets may be hesitant to get into the market for fear of unavailability of the product, etc. This would affect the indirect costs in general, and would be very difficult to apportion to specific countries.

The first scenario in this section is therefore a minimal approach, trying to apportion minimal indirect cost somewhat to specific countries. The others are more generalized approaches. With each of these scenarios, for the direct costs, only those to farmers are included, that is, not the rest of the supply chain. Comments are made in the text on the situation where the rest of the supply chain is included.

Minimal scenario

In this first scenario the indirect costs from most countries for their exports to the EU are set at 0, except for Slovakia, the United States and Canada, where they are set equal to the direct costs. Indirect costs of imports into other countries are all set to their direct costs, except in the USA, where those from the United

Table 6.11: Changes in welfare and trade with minimal indirect costs

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Argentina	-2,124		-2,124	-0.1	-3,419	-0.2
Australia	-13,345		-13,345	-0.5	-21,472	-0.7
Canada	39,516		39,516	0.5	63,642	0.8
Hungary	-5,920		-5,920	-0.1	-9,531	-0.1
Slovakia	11,240		11,240	0.8	18,108	1.3
USA	70,193	-15,241	54,952	0.7	113,112	1.1
EU		51,766	51,766			
Switzerland		30,067	30,067			
Japan		54,809	54,809			
RoW		3,407	3,407			
Total	**99,560**	**124,808**	**224,368**	**0.7**	**160,439**	**0.5**

Source: Author's own calculations

States and Canada are set to 0. These specifications are somewhat arbitrary, but encompass the notion that it is possible that there are few indirect costs incurred when special agreements exists, such as between the EU and the countries on their third-country list. It also assumes that, the higher the costs are to certify for a particular country, the higher the likelihood is that there are other barriers to imports. Table 6.11 depicts the results in this kind of situation.

In such a situation, the total gains to producers and consumers have risen to US$ 224,400 or to 0.7 per cent of total trade value. Producers in several countries lose, such as in Argentina, Australia and Hungary, all of which are on the EU's third-country list. In fact, the reason why they lose is that they will gain less from harmonization than the other countries, so that they become less competitive. Their exports are then displaced by other exporters. Consumers in the United States also lose. If changes in costs to the whole of the supply chain are included, total welfare due to a change in harmonization conditions would be over US$ 300,000, or 1 per cent of total trade value (not in the table).

When a general indirect cost equal to direct costs is assumed for all producers (including for all countries that are exporting to Europe, and Canadian exports to the USA), the welfare gains are over US$ 334,000, which is 1.1 per cent of

Table 6.12: Welfare and trade results with indirect costs including whole supply chain

Exporter	**Welfare**		**Trade**			
	Producer surplus US$	**Consumer surplus** US$	**Total** US$	**Total** %	**Total** US$	**Total** %
Argentina	3,990		3,990	0.3	6,425	0.4
Australia	-7,535		-7,535	-0.3	-12,127	-0.4
Canada	34,162		34,162	0.4	55,018	0.7
Hungary	68,656		68,656	1.0	110,619	1.6
Slovakia	12,768		12,768	0.9	20,571	1.5
USA	68,902	12,377	81,279	0.7	111,030	1.1
EU		127,821	127,821			
Switzerland		30,240	30,240			
Japan		58,710	58,710			
RoW		6,583	6,583			
Total	**180,943**	**235,731**	**416,674**	**1.3**	**291,536**	**0.9**

Source: Author's own calculations

the total international trade in organic wheat (not in the table). If the whole supply chain is included, this rises to over US$ 416,000 per year, or 1.3 per cent of the trade (see Table 6.12).

Cost per farm

When discussing the indirect costs of non-harmonization, one trader suggested a minimum cost of US$ 500 per farm as a very rough estimate. In Table 6.13, the results are shown of a change in harmonization conditions where it is assumed that this is a realistic estimate.

Table 6.13: Changes in welfare and trade with fixed indirect costs per farm

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Argentina	5,109		5,109	0.4	8,228	0.6
Australia	2,812		2,812	0.1	4,528	0.2
Canada	28,132		28,132	0.3	45,304	0.5
Hungary	27,097		27,097	0.4	43,639	0.6
Slovakia	6,824		6,824	0.5	10,990	0.8
USA	32,190	8,207	40,397	0.3	51,846	0.5
EU		71,510	71,510			
Switzerland		16,770	16,770			
Japan		30,309	30,309			
RoW		3,922	3,922			
Total	**102,164**	**130,718**	**232,882**	**0.8**	**164,535**	**0.5**

Source: Author's own calculations

Gains from eliminating these costs amount to US$ 233,000. The assumption changes the distribution of costs and hence the distribution of gains as compared with the situation where indirect costs were related to direct costs. Producers in those countries that have relatively high direct costs (and consequently indirect costs that are high relatively to other exporters) now have a cost of US$ 500 allocated per farm. With harmonization, when the indirect cost is set to 0, the reductions will be smaller for those countries. US consumers gain at the expense of the Japanese, and producers in Australia, Argentina and Hungary now gain rather than lose (compare with Table 6.12).

Cost per tonne

A second estimate of indirect costs came from another trader who suggested

Table 6.14: Changes in welfare and trade assuming indirect costs (US$10/tonne)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$%	Total US$	Total %	Total
Argentina	25,942		25,942	1.8	41,822	2.9
Australia	31,706		31,706	1.1	51,118	1.8
Canada	107,630		107,630	1.3	173,446	2.1
Hungary	136,707		136,707	2.0	220,422	3.3
Slovakia	34,300		34,300	2.5	55,325	4.1
USA	120,902	53,932	174,834	1.2	194,952	1.9
EU		353,946	353,946			
Switzerland		82,363	82,363			
Japan		57,453	57,453			
RoW		17,093	17,093			
Total	**457,187**	**564,787**	**1,021,974**	**3.3**	**737,085**	**2.4**

Source: Authors' own calculations

that that cost may be around US$ 10 per tonne. An estimation of the impacts of removing such costs through harmonization can be seen in Table 6.14.

The total gain of harmonization under those conditions are estimated at over US$ 1 million per year, which is 3.3 per cent of total organic wheat trade. The gains are reasonably equally divided between producers and consumers but, once again, unevenly distributed within these groups. All players gain.

Cost per total product value

The changes in welfare and trade, under the assumption of the indirect cost being 10 per cent of the total value (as suggested by one interviewee) are shown in Table 6.15. In such a situation, the result of harmonization in total welfare gains are over US$ 2 million, 7 per cent of the value of trade. The gains are distributed in proportion to trade and go mainly to the United States, Canada and Hungary. This would seem to be the upper bound of the possible benefits.

If an indirect costs of non-harmonization of one per cent instead of 10 per cent of the import value of wheat is assumed, this would reduce the total gains to harmonization to close to US$ 250,000, or 0.8 per cent of total wheat trade value.

Private logos

Although the discussion in most of this report has centered on certification in general, an example of the magnitude of costs of an additional certification for a private logo is included.

Exports to Switzerland generally provoke specific comments from traders. Although certification requirements *per se* are similar to those of the EU, if the produce is to be sold with a Bio Suisse logo on it the extra costs to be paid by the exporter is 0.7 per cent of the total value. As Bio Suisse accounts for approximately half of Swiss organic imports, the direct certification costs of produce to be exported to Switzerland have been augmented with half of the 0.7 a percent of the import values of the market. For the indirect costs, a cost to the market of 1 per cent is assumed, which represents the requirement that farmers need to be put on the "eligible for Bio Suisse" list at the time of certification. This is bound to lead to losses, as demand cannot be satisfied if some farmers, who are originally contracted, have yield losses due to unforeseen circumstances such as adverse weather conditions.

Gains calculated under these assumptions are calculated for the situation that seems most suitable, one where not only farmers bear indirect costs in a situation, but also the rest of the supply chain. It has also been assumed that

Table 6.15: Changes in welfare and trade assuming indirect costs (10% of production value)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Argentina	31,106		31,106	2.1	50,160	3.5
Australia	46,530		46,530	1.6	75,067	2.6
Canada	267,353		267,353	3.2	431,427	5.1
Hungary	212,517		212,517	3.1	342,929	5.1
Slovakia	41,162		41,162	3.0	66,417	4.9
USA	348,428	124,900	473,328	3.5	563,429	5.6
EU		763,928	763,928			
Switzerland		180,510	180,510			
Japan		98,370	98,370			
RoW		36,312	36,312			
Total	**947,096**	**1,204,020**	**2,151,116**	**6.9**	**1,529,429**	**4.9**

Source: Author's own calculations

Table 6.16: Changes in welfare and trade assuming indirect costs for private logos

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Argentina	5,909		5,909	0.4	9,517	0.7
Australia	-3,439		-3,439	-0.1	-5,536	-0.2
Canada	41,140		41,140	0.5	66,259	0.8
Hungary	75,661		75,661	1.1	121,914	1.8
Slovakia	13,965		13,965	1.0	22,501	1.7
USA	82,806	9,683	92,489	0.8	133,458	1.3
EU		105,020	105,020			
Switzerland		93,653	93,653			
Japan		56,170	56,170			
RoW		5,513	5,513			
Total	**216,042**	**270,039**	**486,081**	**1.6**	**348,113**	**1.1**

Source: Author's own calculations

indirect costs are related to the direct cost, the situation shown in Table 6.12. The results of such a scenario are shown in Table 6.16.

Under this scenario the total welfare gains from harmonization increase to close to US$ 500,000 per year. All producers, except in Australia, gain. Also all consumers gain, as compared with no harmonization. The logo itself raises gains for Swiss consumers of US$ 93,000 compared with US$ 30,000 if no special arrangements for the logo were made. This situation should be compared with the last situation discussed under "minimal scenario" where the gain with harmonization is estimated at US$ 416,700. That is, the extra requirements (for one importing country) as assumed under this scenario costs the players US$ 70,000 per year. Half of that is a loss to producers, and half to consumers.

This example only includes Switzerland at present. However, private organizations in other countries (especially Soil Association in the UK) have been mentioned as being rather demanding. This can be translated into costs, and should be added to get the full picture.

6.2.3 Sensitivity analysis

The sensitivity of the results to the reactions of consumers and producers to changes in product prices, and of the substitution effect between products, is also tested. That is, the importance of elasticities of demand, supply and the cross-product elasticities on producer and consumers is assessed. After all, these values may differ between organic and conventional values (the only ones available at present), so it is worthwhile checking whether changing them from the present values would change the results a great deal. The most likely scenario is tested, that is, where both producers and other parts of the supply chain are involved, and with minimal indirect costs. Scenarios with higher values of elasticity of demand, supply and cross-product are then tested. First, the values are double, and subsequently they are doubled again. The results can be seen in Table 6.17.

Table 6.17: Results sensitivity analysis elasticities

		Default Conventional	High x 2	Extreme x 4
Composite Demand				
Welfare	US$	416,675	416,288	416,097
	%	1.3	1.3	1.3
Global trade	US$	291,536	400,866	493,018
	%	0.9	1.3	1.6
Industry Supply		**Conventional**	**x 2**	**x4**
Welfare	US$	416,675	417,707	418,543
	%	1.3	1.3	1.4
Global trade	US$	291,536	261,189	238,130
	%	0.9	0.8	0.8
Substitution		**5**	**10**	**20**
Welfare	US$	416,675	416,678	416,691
	%	1.3	1.3	1.3
Global trade	US$	291,536	290,143	287,763
	%	0.9	0.9	0.9

Source: Author's own calculations

The first point to note is that none of the actual elasticities are very important from the point of view of global welfare, although that is not necessarily the case for actual trade. For example, increasing the *elasticity of demand* fourfold (that is, the demand will increase considerably with a small drop in price) means that producers can produce more without being penalized for that extra supply by a decrease in price. In such a case global trade almost doubles, even though total welfare (gains to both producers and consumers) barely

changes. However, this disguises significant changes in producer and consumer effects, and between countries. For example, global consumer gains are US$ 110,000 instead of US$ 235,000, whereas producers are better off by US$ 125,000 compared with the standard assumption. That is, if the elasticity of demand for organic products were considerably higher than assumed, then more of the gains go to producers. In other words, as the elasticity of demand is likely to be higher for consumers of organic products than for those of conventionally-grown products, the benefits of harmonization to organic wheat producers are likely to be somewhat higher than estimated in this section. Those for consumers will then be lower.

With a higher *elasticity of supply*, the movement is in the opposite direction. With lower costs and prices, consumption increases, but the producers gain less from this. Producer gains are US$ 69,000 compared with US$ 181,000 in the standard scenario. This means that the trade also does not change a lot with harmonization if elasticities were higher than for conventional produce.

Changing the *substitution* between imports from different countries has a minimal impact. The result is that, when a combination is taken of all the most extreme values, the effect is a more than doubling of global trade, but little change in global welfare.

In summary, sensitivity analysis suggests that global welfare effects are not sensitive to elasticities (including those for demand, supply and substitution), although the trade effects can be sensitive to these parameters. In addition, welfare effects are in proportion to the direct and indirect costs. The greater the cost reductions, the greater the welfare gains. In other words, for a realistic picture to emerge from this report, it is important that the indirect effects are quantified as closely to the real values as possible.

However, given the difficulties of quantifying the indirect effects, it is interesting to note that, even with conservative estimates of indirect costs, the effects of harmonization on exports are still in the hundreds of thousands of dollars. This effect can only increase with growth in trade over years.

The analysis is undertaken on the trade conditions that existed before January 2003, when a new regime of quotas in the European Union was introduced. This new regulation is such that it makes imports of small quantities almost prohibitive. This analysis therefore cannot be strictly applied to the future, but it is does give an indication of the kind of changes that may occur when

there is a movement towards harmonization of organic standards and certification.

6.3 Summary

Several steps have been taken in order to assess the cost of non-harmonization of organic agriculture. The first step has been to consider the actual costs – including direct and indirect costs related to the certification process – to the wheat industry.

Finding values of the direct costs of certification is difficult, as every organization has its own way of charging. Many combinations of fixed and variable costs are possible and costs differ according to farm size or output. To be able to compare the costs in each exporting country, an output of 250 tonnes of wheat was assumed per farm. Taking into account yields and rotation schedules common in each country, and actual farm-gate prices in 2002, this led to likely estimates of certification costs for the wheat enterprise on the farm.

Indirect costs were considerably more difficult to establish. They can include costs from loss of production, and marketing problems – difficult enough in themselves to determine. In addition, they would also include nebulous factors like lack of confidence by exporters of conventional products to diversify into organic products, and therefore no market for potential producer to sell the product. Given these difficulties, assumptions about the likely costs had to be made. This led to rather large differences in the estimates of annual welfare and trade gains.

The results of the estimates are summarized in Table 6.18 for the most important options, as described in the sector, and displayed in the first 9 columns. For example, column 2 shows that direct costs for producers are assumed in all scenarios. However, only option 1 (that is, the first row) has that as its only assumption, resulting in net welfare gains of US$ 36,500 for the wheat market as it was in 2002. A more likely scenario, although more assumptions were needed, is when the rest of the market chain also gains from harmonization (option 2). In such a case, the total welfare gains are multiplied three-fold, bringing them close to US$ 119,000 or 0.4 per cent of the total value of the international organic wheat market. The rest of the columns in the table are related to assumptions on indirect costs (options 3 to 11).

Table 6.18: Summary of gains through harmonization under different scenarios

	Direct	Indirect									
	Producers	Minimal			$500		0.1	Private logos			%
		Supply chain		+Europe		$10		Private restrictions		Total welfare US$	
Option											
1	1	0	0	0	0	0	0	0	0	36,494	0.1
2	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**119,254**	**0.4**
3	1	0	1	0	0	0	0	0	0	224,369	0.7
4	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**334,060**	**1.1**
5	1	1	1	0	0	0	0	0	0	307,056	1.0
6	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**416,675**	**1.3**
7	1	0	0	0	500	0	0	0	0	232,882	0.8
8	**1**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**1,021,974**	**3.3**
9	1	0	0	0	0	0	0.1	0	0	2,151,115	6.9
10	**1**	**0**	**0**	**0**	**0**	**0**	**0.01**	**0**	**0**	**246,259**	**0.8**
11	1	1	1	1	0	0	0	0.01	0.0035	486,080	1.6

Note: 0 = not included in analysis,
1 or any other value = included in analysis
Source: Author's own calculations

Including minimal indirect costs without counting the cost to the rest of the supply chain (option 3) almost doubles the welfare gain, as compared with option 2. An assumption of more generalized indirect costs across all exporters for all markets (option 4) augments this to 1.1 per cent or US$ 334,000 per year. The same options, but now including the costs to the rest of the supply chain (options 5 and 6) change the gains from harmonization to 1 and 1.3 per cent of trade value, respectively.

Returning to the assumption that only producers have reductions in costs with harmonization, and now also assuming a set figure for indirect costs per farm of US$ 500 (option 7), the gains are not that far from those under option 3. This is not surprising as this is a less refined variant of option 3, with indirect costs being independent of direct costs. The estimates of indirect costs of US$ 10 per tonne of wheat or 10 per cent of total farm gate value (options 8 and 9, respectively) mean considerably higher gains from harmonization, leading to gains of US$ 1-2 million, or between 3.3 and close to 7 per cent of the total value of trade. Option 10 then probes the returns to harmonization under the conditions that they reach only 1 per cent of costs of total value of farm output. The returns to harmonization then are less than 1 per cent.

An extra assumption was included to gauge the effect of private logos on exporters. Option 11 should be compared with option 6. Under the assumptions made in this work, the total loss of welfare due to the requirements from this one extra labeling scheme is close to US$ 70,000 per year in wheat only.

Welfare gains are net gains, which hide much larger positive and negative effects in different countries and groups within countries. Thus, apart from the overall results, the effects on the different countries are also of interest, at least to the countries involved. As could be expected, the greatest gains of harmonization go to those countries that have a combination of high trade flows and high initial total certification cost. This means that, under many of the options of indirect costs, it is especially Canadian and US producers, and the Japanese and Swiss consumers, who gain. Hungary is a major exporter but trades essentially with one market (the European Union) and stands to gain little from measures that facilitate trade with second and third countries.

As no estimates of elasticity exist for organic produce, estimates for conventional products were used. As there may well be good reasons to assume that the responsiveness of consumers and producers to price changes are different for organic consumers and producers, a sensitivity test was carried out to assess the importance of these parameters. The result is that global welfare was found to be not sensitive to reasonable values of these parameters, although trade flows do vary somewhat. A higher elasticity of demand for organic food than for conventional would also lead to more of the gains going to producers, instead of consumers. In addition, although the magnitudes of trade may change, the direction does not and the implications of the results are quite robust.

In summary, the lowest value of welfare gains due to a change to total harmonization of organic agriculture is US$ 36,500 for the amount of trade existing in 2002 (option 1). A more realistic estimate, however, includes losses in the supply chain and indirect costs. Whether it is realistic to estimate this last category as being equal to the direct costs is debatable. If they were, the gains of harmonization would be close to US$ 400,000 per year at present trade levels. However, it is generally considered in the industry that the indirect costs are considerably higher than the direct costs. Assuming them to be twice as high would increase the gain from harmonization to US$ 715,000 (not included in the tables). A threefold increase would lead to gains of over US$ 1 million. It is likely that the actual value is somewhere in between.

7 Coffee

7.1 Input

Bilateral trade flows for coffee in 2002 are presented in Tables 7.1 (quantities) and 7.2 (values) by country of destination.

Table 7.1: Exports of organic coffee by weight (tonnes) in 2002

	Destination					
	EU	**USA**	**Japan**	**RoW**	**Total**	**% of total**
Exporter:						
Mexico	9,715	10,771	646	409	21,541	38.0
Peru	6,758	5,172	268	-	12,198	21.5
Brazil	874	1,063	2,213	55	4,205	7.4
Guatemala	1,566	1,843	492	67	3,968	7.0
Colombia	514	936	1,679	3	3,132	5.5
Nicaragua	984	1,788	-	80	2,852	5.0
Bolivia	1,731	197	21	-	1,949	3.4
Honduras	1,028	193	-	288	1,509	2.7
Costa Rica	107	928	-	-	1,035	1.8
Indonesia	1,000	361	-	-	1,361	2.4
PNG	408	-	-	-	408	0.7
Tanzania	106	26	-	-	132	0.2
Uganda	956	239	-	-	1,195	2.1
RoW	585	403	286	-	1,274	2.2
Total	**26,332**	**23,920**	**5,605**	**902**	**56,759**	**100.0**

Source: Central and South America: CIMS (2004), rest: traders

Thirteen main exporters are represented, most of them in Central and South America. Figures from those countries are obtained from CIMS[21], and are likely to be reasonably accurate. Figures for other countries (in Africa, Indonesia and PNG) are from local traders and may be less reliable. The bilateral trade matrix balances to meet the requirement that total imports equals total exports.

A feature of the organic coffee industry is that the trade is dominated by exports from Central and South America from which 95 per cent of total export quantity originates. The total organic coffee exports in 2002 amounted to an estimated

[21] Centro de Inteligencia sobre Mercados Sostenibles, Costa Rica.

57,000 tonnes. Almost two thirds was exported from Mexico and Peru. Indonesia and PNG, and especially Tanzania and Uganda are rather small exporters at present.

There are three main importers. All other importers are combined into the "Rest of World" group (RoW). Almost half of the imports go to the EU, and the rest is imported mainly by the USA with approximately 10 per cent of the total going to Japan.

Some farm-gate prices were available, for example for Peru, Colombia, Costa Rica and El Salvador (CIMS 2004). Export prices (FOB (free on board)) were available for all Latin American countries from the same source. Values for farm gate prices are available for Mexico and Guatemala from a different source (Damiani 2001 and 2002). However, these values are for 2000, and prices have changed considerably over the last few years. Consequently, for those Latin American countries for which no farm-gate prices were available for 2002, the values were derived by taking the average percentage difference

.

Table 7.2: Exports of organic coffee by value (US$ '000) in 2002

	Destination					
	EU	**USA**	**Japan**	**RoW**	**Total**	**% of total**
Exporter:						
Mexico	17,565	19,473	1,168	740	38,946	36
Peru	11,475	8,782	456	-	20,713	19
Brazil	1,752	2,132	4,440	110	8,434	8
Guatemala	3,590	4,227	1,127	155	9,099	8
Colombia	1,246	2,271	4,071	8	7,596	7
Nicaragua	2,038	3,704	-	165	5,907	5
Bolivia	2,747	312	34	-	3,093	3
Honduras	1,904	358	-	534	2,796	3
Costa Rica	263	2,292	-	-	2,555	2
Indonesia	2,934	1,215	-	-	4,149	4
PNG	1,372	-	-	-	1,372	1
Tanzania	142	36	-	-	178	0
Uganda	945	236	-	-	1,181	1
RoW	1,189	818	581	-	2,588	2
Total	**49,162**	**45,856**	**11,877**	**1,712**	**108,607**	**100**

Sources: Farm-gate prices: Peru, Colombia, Costa Rica : CIMS (2004)
PNG, Indonesia, Tanzania, Uganda: traders
Rest: extrapolated from other countries.

between farm gate and export prices of the four above-mentioned countries. Estimates for the non Latin American countries were obtained from traders.

Export prices for the Latin American countries were obtained from CIMS (2004) and, for the other countries, from traders. Import values are obtained by adding an assumed set value, different for each destination (EU, USA and Japan), to the export price. Under these assumptions, the total value of the organic coffee market is estimated at close to US$ 109 million (see Table 7.2).

Table 7.3 provides a picture of a coffee farm in the different exporting countries. Most organic coffee is grown on rather small acreages, mostly under 3 ha, with almost double that area in Indonesia and PNG. There is one rather significant exception, Brazil, where organic coffee is grown on estates averaging over 30 ha. In many countries, yields are up to 0.5 tonnes per ha. Brazil, Honduras and Costa Rica show close to double this figure. Given the returns per tonne, this means that returns from organic coffee per farm vary from as little as less than US$ 100 (in Tanzania) to US$ 36,600 (in Brazil). These are gross returns, from which no inputs have been deducted except those that are paid by the exporter.

On the basis of the production figures in Table 7.3 and with the information from Table 4.5 on domestic certification cost to coffee producers, certification costs per tonne are calculated. For example, in Mexico, with a "typical" farm of 3.1 ha and a yield of 0.3 tonnes per ha, the total production per farm is 0.9 tonnes. Assuming a certification cost of close to US$ 30 per tonne of coffee (Damiani 2001), this brings the total certification cost to US$ 26 per farm. This is well within the ranges given by Certimex (see Table 4.5). A similar calculation for Guatemala (with a certification cost of almost US$ 43 per tonne) brings the certification cost to US$ 24 per farm. For Brazil, a cost of 1 per cent of gross returns is estimated for total certification costs (see Table 4.5). In Costa Rica, the fixed cost per farm is assumed to be US$ 5, with farmers paying 0.25 per cent of their gross income (see Table 4.5). This calculation makes the certification costs in Costa Rica considerably lower than in the other exporters of organic coffee. As Bio-Latina (with headquarters in Peru) is active in Nicaragua, Bolivia, Honduras, El Salvador and Ecuador[22], similar charges are as likely in those countries as in Peru. Countries included in the "RoW" category are El Salvador, Ecuador and the Dominican Republic. They have been given similar charges. For Indonesia and PNG, the foreign

[22] Agro-Eco, the Netherlands, personal communication, March 2004.

Table 7.3: Some assumptions for coffee production

Exporter	Area coffee (ha)	Yield (t/ha)	Prod./farm (tonnes)	Returns/tonne (US$)	Returns (US$)
Mexico	3.1	0.3	0.9	1,100	996
Peru	2.9	0.4	1.1	1,048	1,134
Brazil	31.6	1.0	30.0	1,221	36,619
Guatemala	1.0	0.6	0.6	1,395	797
Colombia	0.8	0.4	0.4	1,413	498
Nicaragua	1.5	0.6	0.9	1,261	1,124
Bolivia	2.1	0.5	1.1	966	1,097
Honduras	3.0	0.9	2.6	1,127	2,916
Costa Rica	1.0	0.9	0.8	1,804	1,488
Indonesia	5.0	0.4	1.9	2,038	3,771
PNG	5.0	0.4	1.9	2,038	3,771
Tanzania	1.1	0.2	0.2	494	92
Uganda	1.6	0.4	0.6	587	342
RoW	**2.7**	**0.2**	**0.2**	**1,269**	**4,203**

Note: farm returns are at farm gate prices
Source: Area under coffee and yield in Latin America: CIMS (2004);
Other countries: traders

certifier provided rough estimates of certification costs. For the African countries those data came from traders.

For exports to the USA, most Latin American countries have organizations that are NOP-accredited. All these countries, therefore, can export to the USA while using a Latin American certifier. Certimex, in Mexico, is not USDA-NOP accredited, but inspects for a foreign certification agency. This means an increase in cost over and above the domestic prices of approximately 50 per cent, bringing the total amount to US$ 39 per farm – very close to the figure of certification in other countries. CIMS's general estimates for the total certification costs per farm in Latin American countries was around US $ 40 – in line with the above estimates. One exception is Brazil, where conditions are obviously different for coffee exporters. Charges have been included as calculated above. Costa Rica had reported considerably lower costs per farmer (see Table 4.5). For actual values included for certification cost for exports to the USA for farms in Latin America, see Table 7.4 under the column indicating USA imports.

For exports to Europe, only Costa Rica has the third-country status among the coffee-exporting countries. For exports from Mexico to the EU,

Table 7.4: Certification costs to different destinations without harmonization (US$/farm)

Exporter	EU		USA		Japan	
	Direct	Indirect	Direct	Indirect	Direct	Indirect
Mexico	39	39	39	39	275	275
Peru	60	60	40	40	280	280
Brazil	500	500	500	500	3500	3500
Guatemala	55	55	37	37	256	256
Colombia	60	60	40	40	280	280
Nicaragua	60	60	40	40	280	280
Bolivia	60	60	40	40	280	280
Honduras	60	60	40	40	280	280
Costa Rica	9	9	9	9	61	61
Indonesia	57	57	38	38	266	266
PNG	65	65	43	43	301	301
Tanzania	7	7	7	7	51	51
Uganda	3	3	3	3	24	24
RoW	**60**	**60**	**40**	**40**	**280**	**280**

Source: Mexico and Guatemala: Damiani (2001; 2002)
Uganda and Tanzania: traders. Indonesia and PNG: NASAA
Rest: see Table 5.5 or assumed values as for Peru

approximately 50 per cent extra is charged over and above the charges for the domestic market, as Certimex inspects for an EU recognized organization. These then are similar to the charges for exports to the USA. As foreign certifiers seem to be rather competitive in Brazil at present, charges reported by the BDI are used for exports to the EU. For the other South American countries, exports to the EU have been increased by 50 per cent, as was the reported increase in price in Mexico where foreign certifiers were needed. Costs in African countries, and in Indonesia and PNG are assumed not to change with changes of destination of exports, as certifiers are foreign anyway.

Regarding the situation with Japan, most of the Latin American organizations are not accredited by JAS. In order to export to Japan, goods need to be re-certified. In Argentina, this cost was US$ 3,000 per farm, and this is assumed to be the same in all coffee-exporting countries that are not accredited. In those countries where groups are certified, this cost is assumed to be shared by the group, so that each member has considerably less costs than the US$ 3,000. The costs are totally dependent on the size of the group, and inclusion of any amount is therefore arbitrary. In this particular case, the costs to each

farmer of exporting have been multiplied by 4.5, the same percentage by which the costs for a Brazilian farmer increases with exports to Japan.[23]

The effect of costs other than those of certification *per se* (the "direct" costs) has been included as "indirect" costs (also in Table 7.4). As with wheat, it has not been possible to establish actual costs with any degree of certainty, so different scenarios have been set up to show the range of possible effects. In Table 7.4 the certification costs are shown under the assumption that indirect effects are the same as the direct effects. The total of direct and indirect costs are then expressed as a percentage of the total import costs in Table 7.5. For example, certification costs in Mexico for exports to the EU amount to 4.5 per cent of the import value of the coffee.

Table 7.5: Certification costs without harmonization (% of import costs)

Exporter	EU	USA	Japan	RoW
Mexico	4.5	4.5	30.9	13.3
Peru	6.1	4.1	27.9	12.7
Brazil	1.6	1.6	10.8	4.6
Guatemala	8.0	5.3	36.6	16.6
Colombia	13.4	9.0	61.6	28.0
Nicaragua	6.1	4.1	28.2	12.8
Bolivia	6.2	4.2	28.3	12.9
Honduras	2.3	1.6	10.8	4.9
Costa Rica	0.8	0.8	5.6	2.4
Indonesia	2.3	1.5	10.5	4.8
PNG	2.6	1.7	11.9	5.4
Tanzania	10.5	10.7	70.5	30.6
Uganda	1.2	1.3	8.4	3.6
RoW	**5.0**	**3.9**	**26.3**	**11.7**

Source: Author's own calculations

The next step is to estimate the costs after harmonization. Table 7.6 shows the same values as Table 7.4, except that they are adjusted to the expected costs when harmonization is implemented. The extra costs for certification for extra markets (such as Japan) have been eliminated, and the indirect costs are reduced to zero. For Mexico, the costs have been reduced to the domestic level, as it is

[23] CIMS does not report any extra costs for the Japanese market over and above those incurred for being certified for a second market (which, in their estimation, is approximately 30 per cent).

assumed that the local organization could now certify for exports to any destination. Similar percentages have been deducted in those countries where a 50 per cent mark-up was assumed for the EU market (most other countries except for Costa Rica, with its third-country status, and Brazil – for which extra costs were calculated as described above). For the other countries (in Africa, and Indonesia and PNG), it has been assumed that when certification can be undertaken by domestic offices certification costs would be cut in half.

Table 7.6: Certification cost to different destinations with harmonization (US$/farm)

Exporter	EU		USA		Japan	
	Direct	Indirect	Direct	Indirect	Direct	Indirect
Mexico	26	0	26	0	26	0
Peru	40	0	40	0	40	0
Brazil	366	0	366	0	366	0
Guatemala	37	0	37	0	37	0
Colombia	40	0	40	0	40	0
Nicaragua	40	0	40	0	40	0
Bolivia	40	0	40	0	40	0
Honduras	40	0	40	0	40	0
Costa Rica	9	0	9	0	9	0
Indonesia	19	0	19	0	19	0
PNG	22	0	22	0	22	0
Tanzania	4	0	4	0	4	0
Uganda	2	0	2	0	2	0
RoW	**40**	**0**	**40**	**0**	**40**	**0**

Source: Author's own calculations

Table 7.7 then shows the revised certification costs as a percentage of total value of imports. For example for Mexico, the percentage costs have now been reduced from 4.5 to 1.5 per cent of import costs.

Elasticities of demand and supply employed in this report as default values are shown in Table 7.8.[24]

Most notable is the relatively high supply elasticity for Costa Rica and for Brazil, where lowland robusta coffee can be substituted for other crops. The

[24] These elasticities, taken from ATPSM, are derived from unpublished FAO data relating to conventional coffee. The FAO estimates were modified to reflect the medium term time horizon implied in these simulations.

Table 7.7: Certification costs with harmonization (% of import costs)

Exporter	EU	USA	Japan
Mexico	1.5	1.5	1.5
Peru	2.0	2.1	2.0
Brazil	0.6	0.6	0.6
Guatemala	2.7	2.7	2.6
Colombia	4.5	4.5	4.4
Nicaragua	2.0	2.1	2.0
Bolivia	2.1	2.1	2.0
Honduras	0.8	0.8	0.8
Costa Rica	0.4	0.4	0.4
Indonesia	0.4	0.4	0.4
PNG	0.4	0.4	0.4
Tanzania	2.6	2.7	2.5
Uganda	0.3	0.3	0.3
RoW	**1.6**	**1.6**	**1.5**

Source: Author's own calculations

Table 7.8: Elasticities for coffee

Exporter	Demand	Supply
Mexico	-0.20	0.65
Peru	-0.17	0.42
Brazil	-0.20	0.70
Guatemala	-0.10	0.40
Colombia	-0.06	0.23
Nicaragua	-0.17	0.42
Bolivia	-0.17	0.42
Honduras	-0.17	0.42
Costa Rica	-0.37	0.75
Indonesia	-0.32	0.12
PNG	0.00	0.39
Tanzania	-0.25	0.34
Uganda	-0.07	0.29
EU	-0.14	0.00
USA	-0.07	0.00
Japan	-0.05	0.00
RoW	**-0.17**	**0.42**

Source: ATPSM database, www.unctad.org/tab

demand elasticities in the major consuming countries are relatively low, implying that consumers are not very responsive to changes in prices, that is, decreasing prices do not entice consumers to buy more. Hence, it will be consumers rather than producers who will capture most of the benefits of cuts in the costs of production – as harmonization is. One can easily imagine that consumers of organic coffee are more responsive to price changes than the elasticities imply. Reasons for this include that organic coffee prices are higher than those of conventionally-grown coffee, and may be at a range where people react differently to price changes than at lower ranges. In addition, there is a close (though conventionally grown) substitute available that is cheaper. If this were the case (that is, if consumers of organic coffee are more responsive to changes in prices that the values employed in this model), the balance of benefits would be more weighted in favor of producers with harmonization than shown in the results below. Sensitivity analysis is reported later to indicate how the impacts of harmonization vary with these elasticities.

7.2 Results

A number of different scenarios have been analyzed to assess the effects of harmonization on welfare and trade.

For the first scenario, the effect of harmonization has been estimated while only direct costs are included that are charged to the farmer and not to the supply chain. No indirect costs are included here. The next scenarios then include estimates of direct costs for other operators in the marketing chain (including transport, cleaning and handling at the ports). The third step is to include indirect costs, and the last part the analysis of the sensitivity to the assumed responsiveness of producers and consumers to changes in prices.

7.2.1 Direct costs

Producer only costs

The effects of harmonization of changes in the direct certification costs incurred by producers are shown in Table 7.9.

The most striking characteristic of this scenario is that, with harmonization, trade decreases – marginally – although the total welfare increases by US$ 2.4 million. This welfare increase is totally due to welfare gains for consumers, who, with lower prices, pay less for their coffee. A low elasticity of demand assures that little changes in trade.

Table 7.9: Changes in welfare and trade with minimal direct costs (producers)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Mexico	54,537		54,537	0.1	89,995	0.2
Peru	-21,277		-21,277	-0.1	-35,100	-0.2
Brazil	-328,234		-328,234	-3.9	-540,634	-6.4
Guatemala	10,843		10,843	0.1	17,895	0.2
Colombia	317,031		317,031	4.2	529,134	7.0
Nicaragua	-7,630		-7,630	-0.1	-12,586	-0.2
Bolivia	1,396		1,396	0.0	2,303	0.1
Honduras	-20,124		-20,124	-0.7	-33,161	-1.2
Costa Rica	-8,142		-8,142	-0.3	-13,434	-0.5
Indonesia	-2,588		-2,588	-0.1	-4,269	-0.1
PNG	-421		-421	0.0	-695	-0.1
Tanzania	2,800		2,800	1.6	4,637	2.6
Uganda	-4,790		-4,790	-0.4	-7,896	-0.7
EU		459,305	459,305			
USA		142,622	142,622			
Japan		1,760,590	1,760,590			
RoW	-10,649	72,889	62,240	2.4	-17,558	-0.7
Total	**-17,248**	**2,435,406**	**2,418,158**	**2.2**	**-21,369**	**0.0**

Source: Author's own calculations

The net gains in welfare are by no means evenly distributed. Most of the gains go to consumers in Japan. The reason for this is that the largest changes in certification costs with harmonization are those that currently limit exports to Japan.

In many countries producers lose. The gains in Colombia are because farm incomes from organic coffee are rather low (see Table 7.3). This means that certification costs without harmonization is a relatively large share of the farm returns. A change in costs will then cause a relatively large percentage change – a drop from 13.4 to 4.5 per cent with harmonization (see Tables 7.5 and 7.7). This is the case even though those costs are – in absolute terms – similar to those in other countries. The same is the case for Tanzania. The effect of harmonization on Uganda is negative, however, despite the low farm income. This is due to the reduction of the cost relative to the total returns from organic coffee. Brazil in particular suffers with harmonization under the

assumptions as mentioned above, as its reduction in certification costs dropped only from 1.6 to 0.6 per cent (see Tables 7.5 and 7.7), which is a small amount on the large returns from coffee per individual farm. Under the conditions assumed in the model, Brazilian organic coffee would therefore be replaced by that of other countries, as farmers from those countries have a larger cost reduction. The model does not take into account restrictions to expansion in production.

Supply chain costs

The assumptions relating to the coffee supply chain are:

- Post farm processing and distribution operations need to be certified before the produce arrives in the importing country.
- The variable cost of certifying these operations is 1 per cent of the difference in value between the farm-gate price and the price in the importing country.
- The fixed costs of certifying a supply chain operator are likely to be similar to that of a farmer.
- One exporter serves 10 farmers, so the fixed cost is assumed to be 10 per cent of the farmers' costs.

The results on welfare and trade of reducing these costs through harmonization are shown in Table 7.10.

Under this scenario, reducing costs in organic coffee (through harmonization) leads to an increased net gain to around US$ 3.5 million. This welfare increase is almost totally due to welfare gains for consumers, who, with lower prices, pay less for their coffee and consume (somewhat) more.

For producers in the main exporting countries, where the elasticity of supply is around 0.5, these decreases in prices mean a reduction in production, and therefore trade and returns. Colombia, the one country where reduced certification costs already had a large impact due to a large relative reduction in farm costs, also has a relatively low elasticity of supply. This has the effect that, with decreasing consumer prices, producers in this country decrease their production considerably less than in most other countries. In fact, apart from Colombia, only four other countries (Mexico, Guatemala, Bolivia and Tanzania) increase their production, of which Colombia does so by the largest margin, almost 8 per cent of its original trade value. This means that trade from other exporting countries is substituted.

Table 7.10: Changes in welfare and trade with minimal direct costs (producers and chain)

Exporter	Welfare			Trade		
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Mexico	77,537		77,537	0.2	127,953	0.3
Peru	-2,807		-2,807	0.0	-4,632	0.0
Brazil	-361,174		-361,174	-4.3	-594,780	-7.1
Guatemala	26,822		26,822	0.3	44,282	0.5
Colombia	357,143		357,143	4.7	596,932	7.9
Nicaragua	-2,738		-2,738	0.0	-4,518	-0.1
Bolivia	5,288		5,288	0.2	8,727	0.3
Honduras	-23,642		-23,642	-0.8	-38,948	-1.4
Costa Rica	-14,642		-14,642	-0.6	-24,156	- 0.9
Indonesia	-13,345		-13,345	-0.3	-21,996	-0.5
PNG	-3,732		-3,732	-0.3	-6,155	-0.4
Tanzania	3,413		3,413	1.9	5,656	3.2
Uganda	-7,169		-7,169	-0.6	-11,811	-1.0
EU		831,065	831,065			
USA		452,076	452,076			
Japan		2,103,741	2,103,741			
RoW	-10,954	94,068	83,114	3.2	-18,060	-0.7
Total	**30,000**	**3,480,950**	**3,510,950**	**3.2**	**58,496**	**0.1**

Source: Author's own calculations

For most producing countries the negative effect is not large, with the exception of Brazil. One reason for Brazil's decreasing production is that, once again, the reduction of costs as a percentage of total farm returns is relatively small. In addition, Brazil shows a high propensity to respond with changing prices, which occurs due to increased competitiveness of coffee from other exporters.

7.2.2 Indirect costs

The first scenario in this section is a minimal approach, trying to apportion minimal indirect costs to specific countries. The others are more generalized approaches. With each of these scenarios, the direct certification cost to only the farmers are included, that is, not the rest of the supply chain. Comments are made in the text on the situation where the rest of the supply chain was included.

Minimal scenario

In this first scenario the indirect costs are assumed to be similar to the direct costs. Only for Costa Rica for its exports to the EU are these assumed to be 0, as this is the only country with third-country status for its imports into the EU. Table 7.11 depicts the results in this kind of situation, where the supply chain is not included.

Table 7.11: Changes in welfare and trade with minimal indirect costs

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Mexico	47,598		47,598	0.1	78,543	0.2
Peru	21,465		21,465	0.1	35,423	0.2
Brazil	-632,271		-632,271	-7.5	-1,039,618	-12.3
Guatemala	86,979		86,979	1.0	143,780	1.6
Colombia	651,866		651,866	8.6	1,100,833	14.5
Nicaragua	2,371		2,371	0.0	3,912	0.1
Bolivia	13,426		13,426	0.4	22,171	0.7
Honduras	-57,833		-57,833	-2.1	-95,057	-3.4
Costa Rica	-44,121		-44,121	-1.7	-72,776	-2.8
Indonesia	-49,719		-49,719	-1.2	-81,708	-2.0
PNG	-14,612		-14,612	-1.1	-24,058	-1.8
Tanzania	6,891		6,891	3.9	11,468	6.5
Uganda	-22,613		-22,613	-1.9	-37,133	-3.1
EU		1,748,960	1,748,960			
USA		1,095,973	1,095,973			
Japan		3,776,748	3,776,748			
RoW	-20,119	172,993	152,874	5.9	-33,149	-1.3
Total	**-10,692**	**6,794,673**	**6,783,981**	**6.2**	**12,632**	**0.0**

Source: Author's own calculations

Under this scenario the total welfare gains are almost US$ 6.8 million, all of which go to the consumer. Producers in some more exporting countries than under the previous scenario gain, but they gain less in total. Brazil is an even larger loser. When the supply chain is included in the assumptions, the welfare gain increases to US$ 7.9 million (not in the tables), almost all of it in consumer gains.

Cost per output

Rather than assume that indirect certification costs are related to the direct costs, for this scenario it is assumed that the indirect cost is 10 per cent of the total farm-gate value. In the next scenario we assume it is 1 per cent.

In the first case, an indirect cost equivalent to 10 per cent of total exports, makes the gains from harmonization close to US$ 9 million (see Table 7.12), and in the second case – 1 per cent of output value – just over US$ 3 million (see Table 7.13).

Table 7.12: Changes in welfare and trade assuming indirect cost (10% of production value)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Mexico	297,681		297,681	0.8	491,432	1.3
Peru	116,248		116,248	0.6	192,007	0.9
Brazi	-258,164		-258,164	-3.1	-425,385	-5.0
Guatemala	67,989		67,989	0.7	112,344	1.2
Colombia	332,097		332,097	4.4	554,576	7.3
Nicaragua	30,331		30,331	0.5	50,093	0.8
Bolivia	19,539		19,539	0.6	32,276	1.0
Honduras	520		520	0.0	858	0.0
Costa Rica	36,034		36,034	1.4	59,472	2.3
Indonesia	90,123		90,123	2.2	149,779	3.6
PNG	30,478		30,478	2.2	50,508	3.7
Tanzania	5,088		5,088	2.9	8,448	4.8
Uganda	9,953		9,953	0.8	16,456	1.4
EU		2,976,876	2,976,876			
USA		2,508,694	2,508,694			
Japan		2,360,171	2,360,171			
RoW	16,265	159,630	175,894	6.8	26,868	1.0
Total	**794,181**	**8,005,371**	**8,799,551**	**8.1**	**1,319,733**	**1.2**

Source: Author's own calculations

In this particular example, in the first case most countries gain. For the consumer welfare, the emphasis now shifts away from Japanese consumers, as the high indirect costs – which apply to all three importers – means that those in Japan now are relatively close to those of the other two importers. Hence, with harmonization, Japanese consumers gain less.

Table 7.13: Changes in welfare and trade assuming indirect cost (1% of production value)

Exporter	Welfare		Trade			
	Producer surplus US$	Consumer surplus US$	Total US$	Total %	Total US$	Total %
Mexico	79,922		79,922	0.2	131,890	0.3
Peru	-6,913		-6,913	0.0	-11,406	-0.1
Brazil	-320,932		-320,932	-3.8	-528,629	-6.3
Guatemala	16,816		16,816	0.2	27,756	0.3
Colombia	318,630		318,630	4.2	531,834	7.0
Nicaragua	-3,662		-3,662	-0.1	-6,042	-0.1
Bolivia	3,287		3,287	0.1	5,425	0.2
Honduras	-17,972		-17,972	-0.6	-29,619	-1.1
Costa Rica	-3,528		-3,528	-0.1	-5,821	-0.2
Indonesia	7,136		7,136	0.2	11,781	0.3
PNG	2,809		2,809	0.2	4,636	0.3
Tanzania	3,040		3,040	1.7	5,035	2.8
Uganda	-3,248		-3,248	-0.3	-5,356	-0.5
EU		708,455	708,455			
USA		377,278	377,278			
Japan		1,820,171	1,820,171			
RoW	-7,836	81,482	73,646	2.8	-12,922	-0.5
Total	**67,548**	**2,987,387**	**3,054,934**	**2.8**	**118,562**	**0.1**

Source: Author's own calculations

Producers gain almost US$ 0.8 million in welfare, while trade is increased by US$ 1.3 million. Brazil is the only loser. Once again, this is due to relative, rather than absolute values.

When the same exercise is repeated with more moderate figures, such as with an assumed indirect cost of 1 per cent of the farm-gate returns, the result is more moderate, as can be expected (see Table 7.13).

Now, the total welfare gains are just over US$ 3 million, or 2.8 per cent of the total trade, with most of the gains going to consumers, especially the Japanese.

7.2.3 Sensitivity analysis

Elasticities for coffee have been estimated but these relate to conventional coffee. Organic coffee elasticities may differ. To assess the importance of this the impacts of harmonization under alternative elasticity values have been

examined. In Table 7.14, the most likely – but conservative – scenario is tested, that is, where both producers and other parts of the supply chain are involved, and with minimal indirect costs, that is, indirect cost equivalent to direct costs. The default elasticities are multiplied by two and four to assess the sensitivity of the results to these values.

Global welfare is not sensitive to either the demand, supply or substitution elasticities, although the distribution of welfare depends on these values. Furthermore, the value of trade is sensitive to assumed elasticities, although that is not necessarily the case for actual trade. For example, increasing the *elasticity of demand* fourfold (that is, the demand will increase considerably with a small drop in price) means that producers can produce more without being penalized for that extra supply by a decrease in price. In such a case global trade increases more than thirty-fold (from 0.1 to 2.5 per cent of trade value), even though total welfare (gains to both producers and consumers) barely changes. In effect, all but five producer countries gain with an increasing elasticity of demand, but even in this situation, of the US$7.9 million gain in welfare from harmonization, only US$ 1.6 million is captured by producers and US$ 6.3 million by consumers – as opposed to US$ 33,000 and US$ 7.8, respectively, in the standard scenario (not shown in the table).

Table 7.14: Sensitivity analysis elasticities

		Default conventional	High x2	Extreme x4
Composite Demand:				
Welfare	$	7,874,068	7,882,483	7,902,973
	%	7.3	7.3	7.3
Global trade	$	86,291	1,155,432	2,716,022
	%	0.1	1.1	2.5
Industry Supply:				
Welfare	$	7,874,068	7,897,322	7,920,020
	%	7.3	7.3	7.3
Global trade	$	86,291	-20,229	-125,915
	%	0.1	0.0	-0.1
Substitution:				
Welfare	$	7,874,068	7,895,996	7,943,439
	%	7.3	7.3	7.3
Global trade	$	86,291	-851,410	-2,677,290
	%	0.1	-0.8	-2.5

Source: Author's own calculations

With a higher *elasticity of supply*, the movement is in the opposite direction, at least for the effect on trade. With lower costs and prices, consumption increases, but the producers gain less from this. Producers lose marginally with harmonization (US$ 22,000) compared with gaining US$ 33,000 in the standard scenario. There is also a marginal decrease in total trade after harmonization (US$ 126,000) with an increasing supply elasticity.

Changing the *substitution* between imports from different countries has a minimal impact on welfare. However, this disguises the fact that it would cause all countries to decrease their trade considerably with the exception of Colombia. The overall effect on trade would be a considerable decrease of trade after harmonization (by over US$2.7 million).

In summary, sensitivity analysis suggests that global welfare effects are not sensitive to elasticities (including those for demand, supply and substitution). However, both the elasticity of demand and of substitution affects producers. With higher elasticities of demand, as is a reasonable thought, producers would gain, though a four-fold increase with which they would gain US$ 1.6 million would probably prove too high. An increase in the possibility to substitute coffees from different countries would generally lead to losses for producers. However, it is not clear why these values would be different between buyers of organic and conventionally grown coffee.

7.3 Summary

For coffee, finding values of the direct costs of certification was difficult and in some cases it has been necessary to resort to assuming that some countries had similar costs to others for which data were available. To be able to compare the costs in each exporting country, a picture of a typical farm was obtained, for which certification costs then were found, mainly from local certification organizations.

Indirect costs were assumed, very much along the lines explained in the previous section on wheat. The results are summarized in Table 7.15 for the various options according to the assumption about different scenarios.

The first option indicates the bare minimum gains from harmonization, when no certification costs are counted for any other operation than the production process, and no indirect costs are present – both assumptions being rather unrealistic. Even in this case, the welfare gains are around 2 per cent of total

Table 7.15: Summary of gains through harmonization under different scenarios

	Direct costs		Indirect costs					
	Producers		Minimal		% value		Total welfare (US$ '000)	
		Supply chain		+Europe		Private restrictions		%
Option:								
1	1	0	0	0	0	0	2,418	2.2
2	1	1	0	0	0	0	3,511	3.2
3	1	0	1	0	0	0	6,784	6.2
4	1	1	1	0	0	0	7,873	7.2
5	1	0	0	0	0.1	0	8,800	8.1
6	1	0	0	0	0.01	0	3,055	2.8

Note: 0 = not included in analysis; 1 or any other value = included in analysis
Source: Author's own calculations

trade. When the supply chain is included the welfare gains increase to US$ 3.5 million (option 2), or over 3 per cent. When indirect costs are included as equivalent to the direct costs, the gains from harmonization increase again – to over US$ 6.5 million without supply chain certification costs (option 3), and almost US$ 8 million with costs to the supply (option 4). The last two options in the table show the effect of harmonization when the indirect costs are related to returns from farming, assuming an indirect cost of 10 per cent of farm returns in option 5, and 1 per cent in option 6. The results vary between US$8.8 million, or over 8 per cent of total trade, and US$ 3 million, or close to 3 per cent. In this analysis the effects of private logos have not been specified as yet.

One of the major findings in this work is that the major gains from harmonization would go to consumers, not to producers. However, elasticities have been used that apply to conventional agriculture. If the elasticity of demand for organic product is indeed higher than that for conventionally-grown products, more of the benefits would flow to producers. However, even with an assumption of a four-fold increase in elasticity (which is not a likely scenario) producers would still only increase their welfare with US$ 1.6 million after harmonization. A higher elasticity of substitution than used in this model, would prove detrimental to producers. However, there is no reason to assume that this would actually be the case in the organic coffee market.

In summary, the lowest value of welfare gains due to a change to total harmonization of organic agriculture on the coffee market is around 2 per cent of the coffee value. A more realistic estimate includes losses in the supply chain and indirect cost. Whether it is realistic to estimate this last category as being equal to the direct costs is debatable. If it is, the gains of harmonization would be close to US$ 7 million per year, or over 7 per cent. At the assumption of indirect cost of 1 per cent, the gains from harmonization would be close to 3 per cent.

8 Implications and Conclusions

This study was undertaken to estimate the potential change for the organic industry if organic standards and certification/accreditation were harmonized. The expectation was that, with harmonization, organic agriculture would expand worldwide due to lower costs and less risk for producers and traders. As with most changes, gains and losses would not be evenly distributed, so an analysis of the changes would include not only the gains but would also identify the winners and losers.

In order to do such an assessment, several steps needed to be taken. First of all the actual costs were established. These costs encompassed both the direct cost related to the certification process, and also the indirect cost, here defined as all those that are not related to certification *per se*, including problems in production and marketing, lack of confidence of exporters, and other links throughout the distribution system.

Although the study is about gains in trade through harmonization (that is, quantities of product or value of total trade), a more interesting figure is that of welfare – which is included in this study. The reason this is a more interesting figure is that it includes the gains and losses not only to producers (exporters), but also to consumers through price fluctuations.

The direct costs were difficult enough to compile, but they were easy compared with the indirect costs. A lot of effort was made to estimate some indirect costs, but in the end it was necessary to resort to assumptions about what the costs could be, per farm, per output or per farm returns.

With assumptions on indirect costs being as diverse as they are in this study, a rather large range of values of welfare gains per year can be expected. For wheat, net annual gains of between US$ 36,500 and US$ 2 million are

calculated, but the most likely range at present trade levels is considered to be from US$ 400,000 upwards, or over 1 per cent of the value of the total organic wheat trade, per year. Gains of over US$ 400,000 are calculated for a possible, but conservative, scenario: direct costs for both the producers and the rest of the supply chain, and indirect costs equal to the direct costs (option 6). However, if the indirect costs were higher than the direct costs, as many in the industry suggest, the gain of harmonization would be over US$ 700,000 if they were double, or over US$ 1 million (over 3 per cent) annually if they were three times as high. With a cost of 10 per cent of the output value, a saving of over US$ 2 million (or almost 7 per cent) is calculated with harmonization. Those possibilities should not be discounted, as different scenarios show those, and higher, gains. These estimates do not reflect the costs of obtaining a private logo. Inclusion of just one scheme in one country suggested a cost in the wheat industry of US$ 70,000 extra, where less than 15 per cent of world trade is imported into the country.

For coffee, the conservative scenario (direct costs for both the producers and the rest of the supply chain, and indirect costs equal to the direct costs) would result in a gain of almost US$ 8 million, or over 7 per cent of the traded value (option 4). Indirect costs being double or triple those of direct costs would lead to figures of gain in total welfare of over US$ 12 million and US$ 16 million, respectively. An indirect cost of 10 per cent of output would result in a gain of almost US$9 million, or over 8 per cent.

The total gain of harmonization is not the only issue in the debate about the advisability of such action. It is important to realize that a large part of the changes is in distributional gains. As shown in Sections 7 and 8, some countries or groups will gain more from harmonization than others. Gains can be expected particularly in those exporting countries with high trade volumes and high original costs associated with non-harmonization. It would also be most relevant for those that have been on the outside of the special treatments before harmonization (such as countries without third-country status in the EU). Conversely, the losers would be those exporters who have suffered least from non-harmonization in the past. This may be of specific interest to developing countries, which generally have most difficulties with certification for the export market.

In the organic wheat industry, exporting countries with most gains are mainly the USA and Canada. As far as consumers are concerned, those in Japan and Switzerland particularly would reap the most benefit from harmonization. In

the coffee industry, with present assumptions of price elasticities of demand and supply, the big winners of harmonization are consumers. Depending on the exact assumptions of indirect costs and elasticity of demand, gains made by producers are rather small. Also in this commodity, producers in some exporting countries gain more than others, such as Colombia, Mexico, Bolivia and Tanzania. Brazil loses under every scenario considered in this paper. Of the consumers, gains go especially to the Japanese under most scenarios.

Effects not quantified in this study are those suffered by domestic producers in the importing countries, and consumers in the exporting countries, who may face lower farm-gate prices and higher domestic prices, respectively. This first group (producers in importing countries) may especially be of great importance in the debate on harmonization, as private certification organizations (with private logos) in importing countries may well prove to be large obstacles in the future debate on harmonization. Protection of domestic producers is often mentioned by exporters of organic produce as an important reason of the existence of private logos in importing countries.

These estimates, however, do not answer the question posed in this study – whether harmonization of standards and certification/accreditation is worth pursuing. In order to answer that question, one needs some indication of the gains for the total organic market, not only of the wheat and coffee market, and of the costs of reaching harmonization. The last issue is outside the remit of this study. But is it possible to provide some estimate of the first issue – the cost of non-harmonization to the total organic market? At this stage we can only perceive of a very rough estimate, in great need of refinement.

Figures needed to answer the question include those for the value of the total organic market in farm-gate prices, and the percentage of organic wheat and coffee in this market.

Once again, no directly relevant data are available. But some data can be derived. The total organic market, for example, could be derived from the estimate of the total retail value of all organic products (ITC 2003) – a forecast of US$ 24 billion in 2003.[25] This is the retail value – not the product as it is

[25] The estimated range of US$ 23-25 billion was a forecast. For this figure, the Euro was assumed to be equal to the US$. Changes in the exchange rate alone would mean that the higher figure is more likely than the lower end of the range.

[26] For some products the actual value could be lower, such as for those with little processing (for example for milk, meat, raw vegetables and fruit); for others this value would be higher.

sold at the farm-gate. Assuming an average increase in value of 300 per cent[26] would mean a farm-gate value of the total organic retail market of around US$ 8 billion. This figure is used here, although it is realized that it is rather arbitrary.

To arrive at the percentage of organic wheat and coffee in this total organic market, it is necessary to know the percentage of international organic wheat and coffee trade (figures that are available from this study) in the total organic wheat and coffee market.

For the EU wheat market Hamm *et al.* (2004) found, with a production in 2001 of 1,834,000 tonnes, net imports (imports minus exports; these include intra-EU trade) to be 233,000 tonnes. This is 13 per cent of the total organic wheat market in the EU (including both human and animal consumption). As two thirds of organic wheat imports are into the EU (see Table 6.1) this figure is bound to be higher in the EU than in other countries. An estimate of between 5 and 10 per cent seems therefore reasonable. With the value being 5 per cent, the value of the total organic wheat market would be US$ 620 million, and with 10 per cent this values would be US$ 310 million. Assuming the international trade of organic wheat to be 7.5 per cent of the total organic wheat market would lead to a total organic wheat market value of US$ 413 million. This is just over 5 per cent of the total organic market of US$ 8 billion.

For coffee, the percentage is rather easier to assess. CIMS (2004) estimates that over 90 per cent of the organic coffee production in Latin America in 2002 was exported. If the same figure is assumed for the whole world, it would make the value of the total organic coffee market around US$ 115 million or almost 1.5 per cent of the total organic market.

Taking then the last step in the path of estimating the cost of non-harmonization, we turn to the organic wheat and coffee markets. In wheat, under option 6 (with the whole of the supply chain included, and indirect costs equal to direct costs, see Table 6.18) the gains from harmonization were over US$ 400,000 per year – around 0.1 per cent of the total organic wheat market (including domestically consumed and internationally traded wheat). Assuming similar conditions in the rest of the organic industry, this would lead to a total gain of around US$ 8 million per year. At this stage, this is seen as a possible, though conservative, estimate. With indirect costs of 10 per cent of the output (option 9) and a gain of US$ 2.2 million per year in organic wheat trade (which is around 0.5 per cent of the organic wheat market), this would represent over US$ 41 million per year.

For coffee, with the same assumptions of producer and chain involvement, the figures are completely different. Here, option 4 in Table 7.15 (similar to option 6 under wheat, with the whole of the supply chain included, and indirect costs equal to direct costs) the gains of harmonization were over US$ 7.8 million per year, which is around 7 per cent of the total organic coffee market. Translating this to the total organic market, this would result in a gain of almost US$ 550 million, mostly going to consumers. Indirect costs of 10 per cent of the farm revenue would increase this figure to over US$ 600 million annually.

In short, with conservative assumptions, the extra welfare in the organic wheat trade, due to harmonization of organic standards and certification, is estimated at over US$ 0.4 million, or 1.5 per cent of the total organic wheat trade. This estimate increases to around US$ 2 million, or 7 per cent, if the indirect costs are assumed to be 10 per cent of the returns from wheat growing, with gains going to both producers and consumers in similar ways. For coffee, the conservative estimate of welfare gain is close to US$ 8 million per year, with most gains going to consumers. Translating this into values for the whole of the organic sector, with the assumptions of farm gate values being one third of retail values and conservative estimates of indirect costs, would lead to a range in annual costs between US$ 8 million (extrapolating from wheat only) or US$ 500 million per year (extrapolating from coffee only). This is a rather large range. It is difficult to know whether, if all commodities were included, the answer would lie somewhere within or outside those values. In addition, the effects on consumers and producers is also rather different between the two commodities – where wheat producers capture a much larger part of the gains made with harmonization than coffee producers.

In summary, the first part of this study looks at the concepts involved with non-harmonization in the organic sector. The second part attempts to quantify the issues. Most of the data on actual trade and costs of certification was not readily available, much of it does not exist. Indirect costs were not available at all and, in the end, had to be assumed. This makes the results rather tentative. However, what can be concluded is that there are significant costs to non-harmonization, although not always – or not only – to producers.

Because so much of the second part of this report is based on assumptions and is therefore fraught with uncertainty, the question could be asked whether it would be better not to publish that part. However, it was considered that much of the data in this report could also be of interest in other work and that,

with examples used in this report, the task of assessing areas in which data are needed (another issue high on the list of priorities in organic agriculture), is made easier.

These costs of harmonization are calculated on the basis of present trade, and would be higher if the trade had been larger – as is expected to be the case if harmonization was in place. In fact, it may well be that the real costs to non-harmonization are those of totally lost trade through, for example, experienced exporters not wanting to get involved in the complications of trade in organic products. The numbers are therefore more indicative than definitive. Care should be taken when drawing implications from these results.

Appendix 1: Organic standards and certification in selected countries

Argentina has state laws that require all organic produce sold as such to be certified. Relevant legislation is SAGyP No. 423/92 (for plant production), National Law No. 25.127 (plant and animal production), and SENASA No. 1286/93 (animal production). All certification bodies working in Argentian (13 in 2002) are registered by the Ministry of Agriculture (SENASA), but most only to certify on the domestic market. Only three organizations (ARGENCERT, OIA and LETIS) can certify for the export market. These certification bodies are also USA NOP accepted, and two (ARGENCERT and OIA) are IFOAM accredited. Exports into Japan are organized via alternative arrangements. For example, ARGENCERT is accredited by three Japanese certifiers (JONA, ICS Japan, QAI) to inspect farms in Argentina, though the certification occurs by the Japanese certifier.

ARGENCERT certifies 60 per cent of exports to the EU, 77 of those to the United States and 95 per cent of exports to other countries. This implies that it certifies two thirds of the total export market of plant products. OIA certifies most of the rest of production to be exported to Europe, though Letis is accredited to certify for exports to Europe. Foreign certifiers wishing to operate in Argentina must register as certification agencies in Argentina, for which they need a permanent office in the country. Up to now, this has not occurred, which means that all certification in Argentina is carried out through Argentine organizations, accredited by SENASA. All certifications are individual certifications, no group certification are acceptable in Argentina (Serrano 2002). This is different from many, if not all, Latin American countries.

Brazil does have "Norms" for organic agriculture, though they are not implemented. Brazil is not on the EU third-country list. Its exports to Europe, therefore, are organized through certification by foreign companies. IBD, the main co-operator for this report, is the largest domestic certifier in Brazil. It has approximately 650 projects (including 3,800 producers and traders). Some of these are co-operatives. There is a total number of approximately 3,000 small farmers involved. IBD is USA-NOP and IFOAM accredited. IFOAM accreditation was obtained at the time when ISO65 was not relevance to imports into the EU, while countries such as Denmark and Sweden would accept products certified by IFOAM-accredited organizations. Some importers find the IFOAM accreditation still important. At present, it is of special

importance for Brazilian growers as, with the Multi Lateral Agreement (MLA) between IFOAM accredited organizations, exports to Japan can be facilitated (re-certified) by IFOAM accredited members who are approved by JAS, such as NASAA (see below).

The *Costa Rican* government has adopted national standards (which are ISO65 compliant). Certification according to the national standards of organic produce on the domestic market is also mandatory. Costa Rica has been on the EU third-country list since early 2003. For EU-export purposes it has accredited two certifying organizations, Eco-Logical and BCS. Eco-Logica, the main domestic certifier, which estimates it does 65 per cent of the certifications in Costa Rica, is accredited by the USDA.

Eco-Logica certifies mainly groups. These are based on an Internal Control System, where Eco-Logica may check 20 to 100 per cent of the farmers in the group. This rather resembles the situation where E-L accredits the group to do certification.

Although a norm for organic agriculture was approved in *Mexico* in 1997 (NOM-037-FITO-1995), it is not a legal requirement for the marketing of organic produce in the country. It is also not sufficient for exports to the EU, so foreign certifiers have had to be employed to certify (Damiani 2001). At present, inspectors of domestic certifiers, in particular Certimex, are used in the process.

In 1997 an organization was established that combined one certifier from each of four Latin American countries, including *Peru and Colombia* (*The Organic Standard*, Sept. 2003).[27] The organization, Bio-Latina, works according to the Basic Rules of IFOAM for Organic Agriculture, the EC Regulation 2092/91 "Organic Agriculture" and the US Regulation "Organic Foods Production Act" (www.biolatina.com).

Bio-Latina is ISO65 accredited, and also has a USA NOP accreditation for crops and handling. At present, it is not yet IFOAM accredited. Exports to Japan are via re-certification with the International Certification Services (ICF) in the USA.

[27] Those included are Biopacha (Bolivia), Bio Muisca (Columbia), Cenipae (Nicaragua) and Inka Cert (Peru).

In *El Salvador*, organic coffee production has been taking place since 1993. Organic Crop Improvement Association (OCIA), from the United States, certified the initial organic exports (Damiani 2002). Although domestic certification organizations use locally developed standards, no national standards protect the word "organic".

The certification process in *Guatemala* follows the same pattern as in many other developing countries. The first exports of organic produce were certified by foreign certifiers, but in 1993 a local certifier (Mayacert) was established. Mayacert now does domestic certifications, and also carries out the inspections for foreign certifiers (Damiani 2002). These foreign organizations are still needed to expedite imports.

In *South Africa*, the two certifiers, Afrisco and the BDOCA, certify for the domestic market. They both certify according to the draft standards (drafted in the late 1990s). There is, therefore, no legal requirement for produce sold as organic in South Africa to be certified. However, as the two supermarkets that sell organic produce, Woolworth and Pick and Pay, only accept certified produce, in practice most – if not all – produce labeled as organic is likely to be organic. All certification needed for export is carried out by foreign certification organizations, some of which, e.g. Ecocert and SKAL, have a South African office.

Afrisco is in the process of getting ISO65 accreditation, which is being done with GTZ assistance, and expected to be acknowledged in August 2003. If so, Afrisco will then amalgamate with ECOCERT International, and run as an ECOCERT branch office in South Africa. In that way, they will have access to all expertise in all markets, though 51 per cent of it will be owned by ECOCERT International (head-office in Germany). IFOAM accreditation was not sought, as it would be far too expensive (estimate of US$ 7-9,000).

Uganda has no national certification scheme. Its exports are certified by foreign certification organizations only, although there are several domestic inspectors.

In the *P.R. of China*, the Technical Norm on Organic Food came into effect in 2001. These Norms are the minimal standards according to which the certification offices need to certify to be able to get national accreditation. The Accreditation Committee for Organic (Food) Certification (ACOC) was installed under the State Environmental Protection Administration in 2002.

Its task is to accredit organizations that want to certify organic producers, processors and traders, either for the domestic or for the export market. At present, there are five national certifiers accredited by ACOC. The OFDC is a main certifier, with 40 per cent of certifications.

The P.R. of China is not on the EU list of third-country for the purpose of export to the EU, and the OFDC is not ISO65 certified. All exports to the EU, United States and Japan are certified by foreign bodies, the main ones of which are: Ecocert, OCIA (USA), IMO, BCS, KRAV, QAI (USA) and JONA (Japan). All have local offices with local inspectors, but they may also use foreign inspectors in some cases. Evaluations of the inspection reports are usually carried out in the foreign countries.

In *Thailand*, a National Organic Regulation is in place. The Thai Ministry of Agriculture has started an organic certification scheme (Organic Crop Institute – OCI) but these certifications are only applicable to the domestic market. In summary, there are basically two systems for export certification:

- ACT certifies producers and traders. The product is then re-certified by EU certifiers for each country. This is the model Green Net (one of the main exporters) use.
- Foreign certifier certifies producers and traders where they export, e.g. Bioagricert certifies rice export to Italy. If the product is sold to other EU countries, it will be re- certified.

The *Australian* Quarantine Inspection Service (AQIS), as part of the Department of Agriculture, has administered national standards since 1992. Any organic exports from Australia need to be certified by one of the AQIS[28] accredited organizations. These national standards came into existence in response to the realization that exports to the EU would soon need to be certified according to standards acceptable to the EU. Prior to this, standards had been available from, and certifications were carried out by, mainly three organizations, since the mid 1980s. The national standards were set up with extensive input from, and in agreement with, those organizations. The domestic situation is a bit like that in South Africa, however, where the word "organic" is not protected legally. Although it is not legally punishable to sell any product under the organic label, most if not all traders will only accept certified produce as organic.

[28] There are seven national certification organizations. Accreditation is given according to destination. i.e. not all are accredited for export to each importing country.

Australia was one of the first countries to be accepted on the EU's third-country list, and was also accepted by JAS as being equivalent.[29] However, this still means that anything sold in Japan in any packaging other than in which it is imported (such as in small bags of wheat instead of as a container-load) will need certification from a Japanese certification organization. Several Australian organizations have USA NOP accreditation.

In *Switzerland*, most of the producers (98 per cent) are certified by Bio-Inspecta according to Bio Suisse standards. Other certification schemes are active in Switzerland. As well as producers, IMO also certifies processors and trade. SQS certifies only processing and trade.

In *Hungary,* regulation on organic agriculture was adopted in 1999 (Government Decree 140/1999), with additional regulations from the Ministry of Agriculture and Rural Affairs and the Ministry of Environmental Protection (2/2000). Until recently, Biokontroll Hungaria KHT was the only certifier accredited by the Hungarian authorities to certify in Hungary. Though a second certifier has started up recently, Biokontroll still certifies over 99 per cent of the licensees.

Earlier, in 1995, Hungary was accepted on the EU third-country list by way of accrediting Biokontroll Hungaria KHT, which is still the only organization in this position. Biokontroll Hungaria has been accredited for EN45011 (ISO65), but not yet by the United States in the NOP (though the application is in progress), or for the JAS. Accreditation by IFOAM is also in progress. The reason for this last application is that Biokontroll Hungaria expects to find cooperation with the other certifiers easier when accredited by IFOAM. The provision of multilateral mutual recognition between accredited organizations is a major consideration.

Approximately 85 per cent of all organically produced goods are exported. Very few products are exported to countries other than the EU and Switzerland. Those that are – mainly herbs for the USA – are certified by BCS.

Slovakia has national legislation on organic agriculture. Naturalis is the only certifier accredited by the inspection institute UKSUP (Central Control and Testing Institute for Agriculture) to certify in Slovakia for the domestic market.

[29] Australian standards were accepted with the exception of a few inputs. Producers will need to sign that they have not used them if they want to receive approval of export to Japan.

UKSUP is the official certification authority in Slovakia, and administers the law that spells out requirements of evidence, registration, inspection, and certification for the purpose of the certification of organic farms, producers, and of import and exports. Naturalis is not accredited for ISO65, or by USDAP, JAS or IFOAM. Foreign certifiers, including BioGaranti (Austria) and Ecocert certify all exports.

The USDA's Organic Food Production Act was implemented in October 2002. It details provisions for the production and handling of organic products in the *USA*. Under this legislation, products that are labeled "organic" need to have been certified by a USDA National Organic Programme (NOP) accredited organization. At present, for exports to the EU, most of products are exported under EU Provision 11.6. The EU and United States are in the process of working towards equivalency (Bowen 2003). Japan accepts USA NOP as equivalent to JAS. This implies that US certifiers accredited by NOP can export to Japan.[30]

The *Canadian* General Standards Board has published a national organic standard, but this is only voluntary. There are as yet no legal requirements but Agriculture and Agri-food Canada is currently in consultation with the organic sector concerning this issue. Only the province of Quebec has mandatory regulations.

Canada is not on the EU third-country list, and exports to EU under Provision 11.6. This means that farmers have to fill in an affidavit to state that they comply with the extra requirements for the EU market. This then needs to be signed by their certifying agency, and kept on the files of the produce buyer, for auditing purposes.

Quebec's organic certification scheme has been accredited by the USA, as have several private organizations, such as:
- COCC
- OCPP/Pro-cert Canada (Saskatchewan)
- OPAMC (Manitoba)
- QCB Organic Inc (Alberta)
- Saskatchewan Organic Cert. Ass.
- OCIA International, local chapters.
- OCIA International and QAI operate in Canada and have JAS recognition.

[30] See: www.ams.usda.gov/nop/NOP/TradeIssues/Japan.html, and Bowen (2004).

Appendix 2: Charges for export possibilities

Costs passed on to respondent organizations in exporting countries by public bodies in importing countries are shown in Table A.1.

Cost due to EU compliance is passed on in totally different ways in countries on the third-country list. In Argentina and Costa Rica, there is a nominal charge to the respondent organizations. In Australia the total cost is recuperated by the government, resulting in considerable costs to each accredited organization. It should be noted that the figure quoted for NASAA of approximately US$ 10,000 covers all costs of government involvement in organic issues – not just for EU purposes, although that was the original focus.[31]

Charges to certify for ISO65 vary between US$ 3,800 (Hungary) and US$ 6,000 (South Africa). Responses to the question on USA NOP were somewhat confusing, and it was not clear whether some people were actually charged US$ 2000, or expected to have to pay that amount of money in the future. For organizations accredited by IFOAM, charges varied between US$ 6,000 and US$ 8,000. Australia did not indicate a figure, but was estimated to pay over US$ 11,000.

Although separate charges for services by different importing countries are noted in the table, it maybe best to look at the total, and estimate the cost per licensee. Argentina and Australia (assuming an IFOAM charge similar to that of Argentina) seem to have the highest values, but they also have a number of licensees such that the cost per licensee may not be much higher than US$ 30 per licensee. This seems a small amount when seen as a percentage of the total farm costs, at least for average or large farms. It should be noted that, as the costs are not borne just by producers but also by others certified, such as processors, input enterprises and exporters, these costs thus calculated are an over-estimation. The total number of licensees, growers and non-growers, are shown in the second last column in Table A.1.

[31] Although no charges have been made yet to the private certification bodies for getting Australia accepted as JAS-equivalent, there has been heavy involvement from public institutions, such as Austrade – an institution with the specific task to promote Australian exports – to accomplish this. Some expect that this may well lead to increased charges to the private certification schemes in the future.

Table A.1: Charges by public bodies in importing countries that facilitate exports (US$ per organization per year)

	EU 3rd country	ISO65	USA NOP accredited	IFOAM accredited	Total cost	Total number	
						licences	farmers
Argentina	1,500	5,500	2,000	8,000	17,000	600	300
Brazil	na	5,000	1,000	7,600	13,600	650	3,800
Costa Rica	500	0	2,000	na	2,500		
Mexico	na	0	na	na	0		34,862
Peru/ Colombia	na	4,000	800	na	4,800		
El Salvador							
South Africa	na	6,000	na	na	6,000		
Uganda	na	na	na	na	0		
Tanzania					0		
China	na	na	na	6,000	6,000		
India							
Thailand	na	na	na	7,500	7,500		
Australia	10,800	na		11,250	23,250	870	600
Switzerland	0	na	na	na	0		6,000
Hungary	0	3,800	na	na	3,800	1,516	995
Slovakia	na	na	na	na	0	97	80

Note: charges as reported by responding bodies (see Table 4.4)
na = not applicable

Australia: EU: estimated as A$ 7,500 + A$ 43,000* 0.25 (= percentage of producer certifications). IFOAM: estimated as for Argentina, adjusted for number of licences. Exchange rate as at 29 August, 2003.

Japan: Re-registrations of exports to Japan are not shown here.

South Africa: ISO65 is 6,000 Euros. Exchange rate has been taken as US$ 1 = 1 Euro.

Switzerland: (Bio Suisse) expected accreditation by IFOAM soon. Expected joining fees are 10,000-20,000 Euros. Annual fees thereafter 2,000-5,000 Euros.

USDA NOP charges: No charge at present. Figures under this heading indicate expected payments in the future.

Appendix 3: Cost of certification of supply chain – an example from Argentina [32]

Usually, the operations involved in a supply chain – other than the farmer – are transport, storing/cleaning, transport, export (with a stay in the exporting port), ocean freight and importer (with a stay in the importing port).

If the producer is also the exporter, the supply chain is relatively simple: the intermediate operations are subcontracted, there is no change in title (or ownership) of the product, and there will only be an inspection in the storage/cleaning unit. Usually grain is exported in containers that are reported at the time of requesting the final certificate (there is no need for certificates of the intermediate steps). Thus, the cost of the certification includes:

- The annual fee: US$ 150.

- Two or three inspections (two at the farm and one of the store/cleaning operation) at US$ 150 per inspection, plus traveling expenses of the inspector, say an average of US$ 40 per inspection, depending of where the facilities are located.

- One transactional certificate fee: up to 1 per cent of the amount invoiced by the exporter to the importer. Since the exporter is also the producer, there is no change of title of the product, and only one certificate – the export certificate – is needed.

However, if the producer sells the product to a middle-man (say, a storage and cleaning facility) who sells it to the exporter, then there are three changes of title, and three certificates are needed. The number of inspections may not vary (two for the farm, one for the storage/cleaning operation); or at most include only one extra inspection at the export port. In this case there is a fixed administrative cost per certificate of US$ 7 (seven), and the one per cent is charged only to the last operator of the chain (the exporter); no charges for the producer or the middle-man, except the US$ 7 per certificate.

Where there is a need for more than one certification to export to different markets, the situation becomes more complicated. If the market of destination is within the EU no further certifications are needed, since ARGENCERT

[32] By Laura Montenegro, ARGENCERT

certificates are accepted by any member of the EU. But if the EU importer wants to have the merchandise covered by a specific seal of a specific local certification agency (say the Soil Association in the UK, or KRAV in Sweden), if that certification agency is IFOAM accredited, ARGENCERT's certificates are (in principle) accepted by the certification agency of the importer. It is "in principle" only, because almost always there are additional requirements that must be met by the producer/exporter. For example, one of the IFOAM accredited certification bodies has some 15 pages of additional requirements that must be met, and ARGENCERT must certify that those requirements have been met. This may mean that the producer must know before the produce is grown that he/she wants to sell under the seal of that particular organization, and ARGENCERT must verify that those additional requirements were met (which means that additional inspections may be needed, which, in turn, implies more cost).

In case of Switzerland, ARGENCERT has an agreement with Bio Suisse, the most widely recognized labeling organization in Switzerland. ARGENCERT's inspections, which come under the Bio Suisse standards, are accepted through documentary review, resulting in the importer being able to have its products covered under the Bio Suisse seal. Special inspection forms are needed to cover Bio Suisse standards requirements, but ARGENCERT does not charge extra for this service.

The situation is very similar in Japan. Through an agreement with one of the certifiers accredited by the Japanese Ministry of Agriculture (MAFF) Japan accepts ARGENCERT's inspections under the Japanese standards, and they grant the use of the JAS (Japan Agriculture System) seal. ARGENCERT does not charge extra for this service; however, the producer/exporter/importer pays the Japanese certification agency their certification fee (which is usually higher than ARGENCERT's certification fees).

To export into the USA the NOP (National Organic Program) requires a completely different certification system. ARGENCERT is NOP accredited and is able to issue NOP certificates directly. In this case the operator pays a flat fee of US$ 400 for the annual NOP certificate (inspection cost and certificate fees included). Nevertheless, if the operator also wants the Argentine transactional certificate (which they usually do because of Argentine tax advantages), they must be also be certified under the Argentine System (equivalent to the EU system) and, therefore, must also pay the normal costs of an Argentine-EU certification.

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Summary Record

First Meeting of the International Task Force on Harmonization and Equivalence in Organic Agriculture

18 February 2003

Nuremberg, Germany

The first meeting of the International Task Force on Harmonization and Equivalence in Organic Agriculture was held on 18 February 2003, in Nuremberg, Germany. It was jointly convened by the Food and Agriculture Organisation of the United Nations (FAO), the International Federation of Organic Agriculture Movements (IFOAM) and the United Nations Conference on Trade and Development (UNCTAD). These three organizations act as the Secretariat of the International Task Force (ITF). The establishment of the ITF was the concrete follow-up to the main recommendation of the IFOAM/ FAO/UNCTAD International Conference on International Harmonization and Equivalence in Organic Agriculture, held in February 2002, in Nuremberg, Germany, and the recommendations made by two UNCTAD Expert Meetings, as endorsed by the 7th session of UNCTAD's Commission on International Trade in Goods and Services, and Commodities, held in Geneva, Switzerland, on 3-6 February 2003.

1. The first ITF meeting was attended by experts from two United Nations agencies, two inter-governmental organizations, five governments and 14 international and national civil society organizations (representing the production, certification, accreditation, trade and consumer sectors). Other experts from different sectors, e.g. consumers' groups, and governments were invited but were unable to attend the first meeting. The Secretariat will inform these people of the outcome of the meeting and their future participation will be encouraged. A full list of attendees is given at the end or the report.

2. The meeting confirmed its status as an open ended expert group at which participants, although members of a stakeholder institution, took part in their personal capacity. It was agreed that new members of key institutions will be encouraged to join the ITF, but continuity of participation was preferred in order to ensure progress and delivery of defined outputs.

3. The draft terms of reference prepared by the Secretariat for the ITF were discussed and finalized. A copy of the finalized version of the Terms of Reference is on page 228.

4. To commence implementation of section 1 of the Terms of Reference, the ITF agreed on key reviews to be prepared and a work plan leading up to the next ITF meeting, in Geneva, was developed.

5. The ITF agreed that the purpose of the documents to be prepared is primarily as a working base for the ITF on which to develop future proposals. However, it was agreed that they will be made freely available to interested parties, once finalized and agreed upon by members of the ITF.

6. An individual was designated as coordinator of each output. The coordinator may or may not be responsible for the actual preparation, but were asked to consider the cost of preparing their respective documents and provide feedback to the Secretariat (dianebowenxx@aol.com).

7. Coordinators will prepare an annotated outline of their respective documents, for comments from the ITF. Members of the ITF may indicate their active involvement in one or more documents. The preparation of each document would, therefore, be the responsibility of its coordinator and a small working group, composed of a few ITF members. The annotated outline and semi-final document are, however, subject to clearance from the whole ITF.

8. Outputs are expected by the end of October 2003 in order to be available for the next meeting of the ITF. They are, however, subject to the availability of funding to the Secretariat, and may need to be prioritised in the event of not securing sufficient funds. It was accepted that the consumer sensitivity review would not be completed by November 2003.

9. The ownership of the different documents will be that of the three convener organizations, i.e., FAO, IFOAM and UNCTAD, with due recognition to the inputs of the authors and responsible coordinators and contributors.

10. UNCTAD's International Trade Division agreed to set up an electronic forum for discussion and the posting of documents and information, including password access for members to documents that are in development.

11. UNCTAD will host the second ITF meeting, in Geneva, tentatively scheduled for 24-25 November. The third meeting will be held at FAO in Rome in 2004.

12. Between ITF meetings, members are encouraged to liaise with their partners at home in order to gather information about different needs and perspectives of importance to the issues examined by the ITF. As such, each ITF member is considered a resource person for a broader consensus on harmonization and equivalence in organic agriculture, both vertically (throughout the production to consumption chain) and horizontally (within and between countries).

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Summary Record

Second Meeting of the International Task Force on Harmonization and Equivalence in Organic Agriculture

20-21October 2003

Geneva, Switzerland

The International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) held its second meeting in Geneva, Switzerland on 20-21 October, 2003. There were 35 participants in attendance, including ten from intergovernmental organizations, 15 from national governments, and ten from the private sector.

The primary focus of this meeting was to:
1. Give input into the finalization of four papers commissioned by the ITF.
2. Identify the way forward.
3. Identify the next tasks necessary to proceed forward.

Opening Statement

Mrs. Lakshmi Puri, Director, Division on International Trade in Goods and Services, and Commodities UNCTAD, gave the opening statement, emphasizing that the International Task Force is a good example of a pro-active and hands-on partnership between UN organizations and civil society. She felt that the work of this Task Force will make an important contribution to dismantling the barriers that slow the flow of exports of organic products, notably from developing countries. This goal represents a win-win-win proposition, i.e. a win for trade, a win for development and a win for the environment.

ITF Progress

The ITF conveners (UNCTAD/FAO/IFOAM) reported that the first meeting of the ITF was held last February and at that meeting the work plan was developed. They stated that there was more private sector representation at the first meeting, and that the current meeting was characterized by more participation from government representatives. The government of Sweden funded the work of the task force in 2003 and was thanked for that. Progress and deviations to the work plan were reported. Of the six papers identified for

development in the work plan, four were commissioned and drafted. Funding restrictions limited the development in 2003 of the other two planned papers, which were on the topics of the WTO/TBT and consumer perceptions. However, a paper by the Swedish Board of Trade, which is related to EU market access of organic agricultural products from developing countries, was made available as a reference paper for this meeting; and a brief presentation at this meeting on the relevance of WTO/TBT to the ITF objectives was arranged.

The Papers and Related References

The following "draft" papers were presented for discussion:

Overview of Current Status of Standards and Conformity Assessment Systems, presented by Ken Commins, IOAS

Current Mechanisms that Enable International Trade of Organic Products, presented by Diane Bowen, IFOAM

Existing and Potential Models and Mechanisms for Harmonization, Equivalency and Mutual Recognition, presented by Sasha Courville, Regulatory Institutions Network, (co-authored by David Crucefix, IOAS)

Impact of Organic Guarantee Systems on Production and Trade in Organic Products[1], presented by Els Wynen, UNCTAD

In addition, participants considered the following presentation:
Organic Guarantee Systems and WTO, presented by Christer Arvius, National Board of Trade, Sweden

Participants' Responses to the Papers

"Overview" and "Extent of Mechanisms" papers:

- Achieving "equivalence determinations" has been lengthy and complicated for developing countries. An approach to create a "family of standards", as in the IFOAM Organic Guarantee System, may be more expedient for developing countries than to work out equivalence determinations with each of the major importing authorities.

[1] This paper was commissioned separately by UNCTAD, who will direct its future revision with input from the ITF.

The "Models" paper:

- The United Nations Economic Commission for Europe (UNECE) approach could lead to creating a "family of standards" under a cover of common regulatory objectives. A body of proofs for "common regulatory objectives" would be required.

- Regulatory flexibility is demonstrated in a model involving maritime standards. In this example, government standards were revised to harmonize around an international standard. The ITF speculated how feasible this would be in the case of national organic regulations.

The WTO presentation

- The presentation outlined a hierarchy of steps for harmonization, which demonstrated that the WTO/TBT guidelines offer only general principles at the base of the hierarchy. Therefore, the ITF questioned whether its harmonization work, as charted within this presentation, is outside of the scope of the WTO/TBT.

The "Trade" paper

- This paper was in two parts. The first was a typology aimed at understanding the direct and indirect costs "with" and "without" harmonization. The second part presented data to put into the model. If the ITF can provide data, this will assist the completion of the second part of the paper.

- There are two possible outcomes for the completion of this paper:
  - To publish the paper only as a typology (model) of the costs.
  - To publish the paper as a typology (model) along with quantitative data to demonstrate the model in case examples.

- Participants gave input on how to obtain the data and several (from Russia, Thailand, Brazil, Argentina) agreed to consult on the completion of the data for the paper.

- A key achievement would be the typology. If the data gathering still remains "wanting" within a month or two, then the quantitative study should be limited to just one or two commodities (wheat and secondarily, coffee perhaps) along with a little anecdotal evidence in the other commodities. UNCTAD, which commissioned this paper, will decide on the final structure.

General Responses to the Papers

- Participants cautioned against organizing around too many standards. A better option is to organize around one standard and encourage everyone to rally around it. The other option is to negotiate a limited number of key equivalency agreements and to assess how it affects the balance of global interests.

- There are unaddressed consumer issues (in addition to those mentioned in the proposed paper on Consumer Perceptions), which are:
  - It could be useful to understand what is behind certain logos and what consumers understand by them, as well as understanding about consumer label preferences.
  - Fair competition is an even more important foundation for the standards and certification, and the ITF should address this in its work.

Potential Solutions

Several participants were asked to reflect on the situation and comment on possible ways forward. Their input was followed by contributions from other ITF members. The comments are summarized as follows:

- The solution might be just two tactics: a strong international production standard and a single strong mechanism for conformity assessment. Already there are tools in place that this approach could work with. There are two international standards, Codex Alimentarius and IFOAM Basic Standards. Codex is recognized by governments everywhere and embedded in an international organization. IFOAM helped to shape Codex. Because they are so similar, the common ground seems promising. A widely accepted conformity assessment process may be needed. One option for framing it is ISO 65 with additional elements. The other option is to start with the organic requirements and add ISO 65 considerations.

- Use of Codex Guidelines for organic standards harmonization is strongly supported. However, additional transaction costs exist that would not be solved by the government harmonization process through Codex. Specifically, these include requirements of private labelers, backed by market demand for certain labels. Therefore, this task force should continue to focus on both government and private sector systems and on solutions involving both. An international accreditation body could be useful to diminish these other transaction costs.

- When considering both government and private sector solutions, it is important to understand the sovereignty rights within both of these systems.

- Defining common objectives is important, and the process should be grounded in the distinction between "organic" and "conventional", not the differences between "organic" and "organic".

- At present, the regulations of the three major importing authorities are still the major focus. In general, net exporting countries are not actively developing import regulations. However, it was observed that governments in net importing countries could avoid a lot of work by accepting an internationally harmonized scheme.

- At present and in general, bilateral equivalency agreements are not very useful to developing countries.

Long Term Vision and Short Term Steps

- The ITF members acknowledged that there is a real problem requiring a long-term vision. The models paper provided some seeds for long-term vision, but achieving such a vision will require more work.

- Continuation of a "models" approach received support, and future exploration of models should continue with reference to the hierarchical diagram on harmonization presented to this meeting by the Swedish Board of Trade. There is a need to consider models that apply to developing countries.

- In the meantime, some practical, short term steps forward should be defined, and these should be periodically checked and evaluated against the future work on the long term vision.

Next Steps: Approaches and Recommendations

The ITF discussed potential next steps and decided to propose them according to the following topical categories:

Government regulations: Focus on equivalence

Standards: Include both production/processing standards and criteria/ norms for conducting certification

Accreditation: Focus is on the oversight/control of certification quality, including procedures and resulting accreditation decisions.

Certification: Includes inspection reports, certification decisions, and labeling.

Each proposal in the above categories should be analyzed according to the following typology, which includes three categories of national authorities, and within each of these categories, the "actors" in organic trade.

Country	**Actors**
• The three main importing authorities (US, EU, Japan) • Exporting countries with regulations • Exporting countries without regulations	• Governments (agriculture and trade) • Certification bodies • Producers • Consumers • Retailers • Traders • NGOs

In addition, the next steps concerning the two international systems should be proposed and analyzed.

International Systems
Codex Alimentarius
IFOAM Organic Guarantee System

Following the agreement on this typology, the ITF held a "brainstorming session" on both long term and short term perspectives, resulting in a list of ideas that should be further developed into concrete proposals. The results are summarized in Annex 1 of this record.

ITF Papers
The ITF discussed future activity on the development of ITF papers, and agreed the following:

Current papers
- Overview and Mechanisms Papers: Complete after a period of four weeks for additional comment.
- Models Paper: Develop some simple conclusions from the models (summary of lessons learned, pros and cons of models, etc.), but do not take this particular paper further (leaving open the possibility of a future second generation paper). Allow a 4-week additional comment period.
- Trade Paper: Have a call for more data to be provided that can be incorporated into the paper. Focus on finalizing the typology of the paper, and on one quantitative model on wheat and maybe also on coffee. The main interest

from the task force is on the typology, but the final decision is UNCTAD's. A work group was identified to assist the author of this paper on the data (Brazil, Russia, Switzerland, Thailand).

New papers

- WTO/TBT paper
  The ITF decided to complete a short paper on the WTO/TBT and its relationship to the ITF topic, which will include a section on definitions. The paper is to be based on the hierarchical chart on harmonization as presented by Christer Arvius from the Swedish Board of Trade. ITF members were requested to direct references concerning this paper to the Secretariat Coordinator's email.

- Consumer Perceptions paper
  The ITF expressed support to develop the paper on consumer perceptions as funding allows. Consumers International remains the primary coordinator for this paper, with possible support from OECD.

- New discussion paper: "Next Steps Toward Solutions"
  This discussion paper should propose a pathway and actions aimed at short term steps toward convergence/harmonization, based on results from the ITF "brainstorming" session.

- New discussion paper: "Vision of Future Models"[2]
  This paper will be a further development of the models paper

Possible future papers

- Standards and Competitive Advantage
  This key point was raised in the meeting and will be further considered as a potential paper.

- Organic Accreditation/Approval Requirements
  This paper would analyze those accreditation/approval requirements in the major regulations and the IFOAM Accreditation Criteria that supersede ISO 65 requirements, and also provide a comparison of these additional requirements.

[2] Subsequently, the ITF Steering Committee decided to combine this paper and the "Next Steps Toward Solutions" paper into one.

Other suggestions from the ITF

ITF members offered the following additional suggestions for the future scheduling and work of the ITF:

- Actively invite more people from WTO/Codex and other key organizations.
- Hold the meeting at a time and venue that make it easier to attend i.e. the BioFach fair.
- Continue work on the cost of compliance.
- Consider critical points of timing in the work plan (i.e. the schedule for the revision of the EU regulation (the expiration of Article 11.6).

Reactions to Steering Committee proposals

Two proposals were made by the Steering Committee. The ITF response was as follows:

- To Appoint a "Chair" of the Task Force who has a strong external influence and ability to move this forward
  Response: The ITF did not feel enthusiastic about this idea at this time.
- Proposal for next meeting: November 2004, in Rome.
  Response: The group favored a meeting in May/June of 2004, which if possible, is connected to another major event. The May/June meeting could be a workshop followed by a full meeting in November. Tying the meeting to BioFach in the longer time frame is desirable. The timeline should also consider concrete regulatory changes, i.e. the expected finalization of the EU import regulation revision by end of 2004.

Annex 1: Notes from Brainstorming Session on Next Steps Toward Solutions

Note: These notes are reported as presented, recognizing that there may be contradictions and different views expressed.

Long term vision

General direction for long term

- Try to move toward international standards and international conformity assessment.
- Focus on Codex standards to harmonize standards. Other instruments such as TBT/WTO could be useful.
- Codex does not offer guidelines for conformity assessment.
- There is international conformity assessment in the private sector but no government participation.
- We could have Codex and a modified IOAS.
- There is a fundamental difference between the private and public side. The private side is bound by regulations of the public side. There still should be an interest in finding a private/public solution. The private side will not find all its solutions in Codex.
- A fully harmonized standard cannot be something at the producer/certification level. This is not recognized on the Codex level. If this is not recognized, a solution will not be found.
- Transparency is a key means to understanding the available options.
- The solution could be the following three items:
  - Codex international standards.
  - A modified IOAS for Conformity Assessment.
  - Some agreed mechanism to deal with regional certification-level standards, such as the IFOAM Policy on Approval of other Standards.

Model

- Build public-private model using Codex-IFOAM, including conformity assessment.
- Differentiate the different levels:
  - Where can ITF best contribute?
  - Everything should not be put on the table at once.
- Keep in mind development prospects: how will the model affect developing countries?
- Agree that Codex is the international reference. Alliance must start from Codex.
- Harmonize Codex and national regulations.

- Reduce transaction costs via mutual recognition and equivalence.
- Conformity Assessment bodies (CABs), DC, recognize assessments of foreign certification bodies.
- Need to discuss with our stakeholders.
- Publish all standards. *See items with asterisk (*) below.*
- How to put developing country issues into these models?
- Sensitize the Big 3 Blocks.

Shorter term steps

Regulations/government equivalence

- Engage the private sector.
- How should contradiction between US, EU, regulations be handled? Is it possible to fulfill both? Document this*.
- The most likely equivalence (priority) is between EU-USA-Japan (bilateral or tri-lateral?):
  - EU-USA agreement should be WTO consistent.
  - It should be possible to have one certification that is good for all three markets.
- Refer to Codex, IFOAM and ISO 65.
- Transparency is important in order to have clear criteria for equivalence.
- Cementing regulations entails risk (regulations should be flexible to enable harmonization).
- Use the best benchmark, but which one?

Standards (production and conformity assessment)

- Use Codex as reference.
- Do we need an international or regional production standard (which is certifiable?)?
- Certification bodies could perhaps agree to use government standards or regional standards.

BUT

- Higher standards are used (in the private sector) as marketing tools. Markets and producers will naturally want to claim that they are better (competitive advantage).
- Transparency and stakeholder involvement are important.
- A balance is needed between continuous improvement and enabling trade (by not changing the standards too often or making them too strict).
- Allow more flexibility in standards.
- Both government and private (regional) standards could be assessed under IFOAM's Approval of Standards process.
- The stages of development in other countries should be recognized by

importing countries (for example, the percentage of organic feed for livestock, which has changed over time as EU has been able to improve the organic system).
- Good to have international standards against which equivalency decisions could be taken.
- Common regulatory objectives need to be established.

Conformity assessment standards
- ISO 65 provides some common ground.

BUT
- Additional criteria/standards are necessary, as currently recognized in the importing countries and IFOAM (EU Annex 3, USDA regulation, IFOAM Accreditation Criteria, Japan MAFF regulation) An example of the need for additional criteria is parallel production.
- International requirements should be realistic and suit the situation in developing countries.
- ISO 65:
  - All of ISO 65 was used in the IFOAM Criteria except for three sentences.
  - NOP chose not to use some or most of ISO 65.
  - EU started with just Annex 3 but then included a requirement for ISO 65 conformity.
- Does not take into account the situation of new certification bodies (very high threshold).
- No organic people participated in the development of ISO 65 or in the EU decision to require it.
- Use IFOAM Criteria for developing a common ground *.
- It could be internationally agreed to refer to ISO 65 without requiring accreditation to it.
- Is there any relevance in having both EN 4544 (for inspection) and EN 45011 (for certification)? EN 45011 is probably more appropriate than EN 4544.
- Smallholder group certification is an important consideration. IFOAM is conducting a series of workshops to address this.

Accreditation
- Types of accreditation.
- Detailed government accreditation rules (USDA).
- Detailed private rules (IFOAM Criteria).
- Approvals/registrations by government (Japan).
  - Reference to another norm/ISO 65 but not mandatory accreditation to it (EU).

- Similarities exist between IFOAM Criteria and governments (i.e. 5 year cycle in both IFOAM and USDA).
- Equivalence is established at government level and compliance is established at the certification level.
- Can any accrediting body accredit according to an international accreditation standard i.e. IFOAM Criteria?
- Potential for harmonization may be greatest in the area of evaluations
  Example: IOAS offer to make assessment against various accreditation norms or reports against its own criteria, e.g. current IOAS reports on CBs to the EU Member States.

• Governments should recognize IFOAM Accreditation.
• Should have only one accreditation system*:
  - IFOAM and ISO 65 should recognize each other (IOAS and IAF).
• Use joint audits (one assessment) for several different requirements (accreditation or governmental approval)*.
• The above possibilities could be elaborated in an ITF paper*.
• Governments do not have to set up accreditation programs. It makes little sense for countries, especially developing countries, to start such programs.
• Could have a regional accreditation service, provided by IOAS in developing countries (and others?).

BUT

• IOAS must be recognized (by an international organization such as IAF). Contradiction: IOAS is not accepted by IAF because IAF is only national body, not international.

Certification (inspection, decision, labels)

• Government regulations should acknowledge that domestic certification bodies can accept inspection/decision of foreign certification bodies:
• Explicit in Japan but unclear in the US and EU.
• Certification bodies offer direct certification to multiple standards.

BUT

• The "above" should not be the only avenue.

Other

• Government standards should be at a level that differentiates between organic and conventional production, they should not include higher standards.
• "Organic" should be included in customs coding, thus making trade statistics available. Can this be achieved?

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Terms of Reference

of the
International Task Force on Harmonization and Equivalence in Organic Agriculture

The International Task Force on Harmonization and Equivalence in Organic Agriculture, convened by FAO, IFOAM and UNCTAD, will serve as an open-ended platform for dialogue between private and public institutions (intergovernmental, governmental and civil society) involved in trade and regulatory activities in the organic agriculture sector. The objective is to facilitate international trade and access of developing countries to international markets.

More specifically, the International Task Force will:

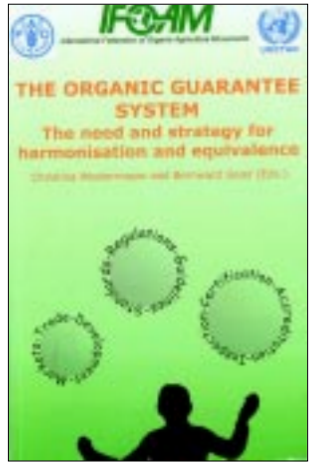
1. *Review the existing organic agriculture standards, regulations and conformity assessment systems including:*
   - Their impact on international trade in organic agriculture products.
   - Models and mechanisms of equivalency and mutual recognition.
   - Extent of international harmonization.

2. *Build on the recommendations of the IFOAM/FAO/UNCTAD Conference on International Harmonization and Equivalence in Organic Agriculture (2002), and on the reviews mentioned above, to formulate proposals for the consideration of governments, Codex Alimentarius Commission, relevant bodies of FAO, UNCTAD and IFOAM and other appropriate organizations on:*
   - Opportunities for harmonization of standards, regulations and conformity assessment systems.
   - Mechanisms for the establishment of equivalence of standards, regulations and conformity assessment systems.
   - Mechanisms for achieving mutual recognition among and between public and private systems.
   - Measures to facilitate access to organic markets, in particular by developing countries and smallholders.

These proposals will take into account their impact on production systems, their relevance to consumers and the need for transparency.

3. *Advise stakeholders and provide information on developments following discussions of the above proposals.*

February 2003



The Organic Guarantee System is a comprehensive publication for all stakeholders in the various fields connected with organic guarantee systems. Based on the Conference on International Harmonisation and Equivalence in Organic Agriculture held in 2002 by IFOAM, UNCTAD, and FAO, it includes contributions from the original Conference Reader as well as a considerable amount of new material from presentations made at the conference. The publication covers and reflects developments in the fields of Standards, Regulations and Guidelines; Inspection, Certification and Accreditation; and Markets, Trade and Development. The Organic Guarantee System can be ordered at the IFOAM website at: www.ifoam.org

Harmonization and Equivalence in Organic Agriculture, Vol.1, presents the first results of the International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture. Organized by UNCTAD, FAO and IFOAM , the ITF is seeking solutions to international trade challenges that have arisen as a result of the numerous public and private standards and regulations for organic products that now prevail worldwide.

This volume features four background papers that describe the current situation in organic regulation and trade, and offer some models that could apply to potential solutions. A Terms of Reference of the ITF and reports of the first two task force meetings are also included.

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