INEF
Report

Institut für Entwicklung und Frieden
der Gerhard-Mercator-Universität Duisburg

Making Sense of Global Standards

Khalid Nadvi / Frank Wältring

Heft 58 / 2002

Gerhard-Mercator-Universität Duisburg

Khalid Nadvi, Dr.; Fellow of the Institute of Development Studies, Sussex/Great Britain.

Frank Wältring, Fellow at the Institute of Development and Peace (INEF), Duisburg/ Germany.

This paper is an output of the research project „The interaction of local and global governance: implications for industrial upgrading“. This project, which is funded by the Volkswagen Foundation, is a joint initiative of the Institute for Development and Peace of the University of Duisburg, Germany, and the Institute of Development Studies at the University of Sussex, Great Britain.

Summary

0. Abstract*

A key feature of globalisation is the increasing economic and political importance of global standards. They have emerged to address a wide range of issues, from quality assurance, food safety, working conditions, to various ethical, environmental and social concerns. Compliance with global standards is a key policy concern, especially in developing countries. More generally, understanding the making, working and implications of these standards is important for policy makers and researchers. But the task is a difficult one. A major problem lies in the proliferation of standards. This paper seeks to reduce the complexity and confusion. It presents a typology of global standards in quality assurance, food safety, environment and social concerns. In doing so, it identifies the networks of actors engaged in the stages of formulation and implementation, and shows how distinguishing between different generations of standards helps to understand the bewildering array of current standards and their evolution over time.

* Financial support from the Volkswagen Stiftung, Germany and the Department for International Development, UK is gratefully acknowledged. The authors thank participants at the workshop "Local Upgrading in Global Chains" , Brighton 13-17th February 2001, for their comments, especially Stephanie Barrientos, Afonso Fleury, Gerhard Halder, Claudio Maggi, Jorg Meyer-Stamer and Judith Tendler. They are particularly grateful to Hubert Schmitz, Dirk Messner and John Humphrey for their suggestions on earlier drafts. The usual disclaimers apply.

1 Introduction

Globalisation has heightened interest in global standards. Such standards address a wide range of issues, including labour conditions, health and safety norms, quality management procedures, and the environmental impact of production. A diverse set of actors take a keen interest in these standards, notably consumers in advanced countries, international NGOs (non-governmental organisations), globally operating buyers and producers, and UN agencies. These actors' interests and motivations for promoting standards differ a great deal. Some are concerned with defending or advancing narrow interests. Others are driven by wider concerns such as protecting the vulnerable (people or environment) or halting the race to the bottom. However, governments and enterprises in developing countries find that while they are expected to comply with global standards, they have little say in the making of these standards.

Not surprisingly, therefore, global standards play a major role in the debate on the future of the world economy. This is most apparent in four inter-related policy debates: the need for common standards in order to promote economic efficiency and international trade; the growing concern with the social and ecological dimensions of international trade; the pressure or opportunity to switch from the low to the high road of competitiveness; and the erosion of regulatory functions of nation states with the emergence of new forms of global governance.

Global standards feature prominently in all these debates, but advance in these debates is hampered by a common problem: the proliferation of standards. The number and type of standards has increased so fast over recent years that it has become difficult to conduct an orderly analysis of these debates. This paper seeks to reduce the confusion and complexity that arises from the proliferation of standards, hence its title 'Making Sense of Global Standards'. The objective is to enable the reader to gain an overview, to categorise standards and actors, and to bring out common trends. It is then up to the readers to use these tools and insights for advancing the debates they are most concerned with.

The remainder of this introduction sets out briefly four policy debates in which global standards play a critical role. Attempts to move these debates forward might benefit from applying the proposed tools and insights, but carrying out this application is not the objective of this paper.

Global standards improve efficiency in the world economy. Standards, by providing a set of common, and widely understood, benchmarks have traditionally been seen as an important factor in smoothing trade relations and promoting efficient markets. By efficiently transmitting information, standards reduce transaction costs. The demand for standards has, however, accelerated sharply with the globalisation of production and trade. The ever-more complex interrelations to be found between producers, suppliers, retailers and consumers across the world has accentuated the need for harmonisation of norms and forms of codification. As Reardon et. al. (2001:6-7) state, standards reassure

"…consumers about credence characteristics such as food safety, worker conditions and location authenticity… [which] cannot be known to consumers through sensory inspection or observation in consumption". In addition to an efficient transmitter of information from business to consumers, standards enhance business to business ties by improving coordination of global production and distribution systems. This is particularly pronounced given the ways in which local producers are integrated into global value chains. Value chains have emerged as a powerful tool in understanding how the distinct functions that turn raw materials into traded end-products are interlinked through complex arrangements between globally diverse actors (Gereffi 1994, 1999; Sturgeon 2000; Humphrey and Schmitz 2001; Kaplinsky 2000). Standards matter for value chains. Common standards, such as technical norms, management standards and product codes, promote compatibility between diverse actors within the chain, and help organise their linkages. In addition to reducing transaction costs associated with chain governance, compliance with global standards also lowers risks for various actors in the chain.

An important area of risk relates to social and environmental issues. *Global standards underline the social and ecological dimensions of international trade.* The concerns that standards now address have gone beyond technical norms to environmental issues, working conditions, human rights and social and ethical values. The focus is not only what is produced, but *how* it is produced and delivered. In some cases, such as organic food standards, the 'what' and the 'how' are closely connected. This poses a fresh set of challenges. It underlines the importance attached to the social and ecological dimension of international trade. This has prompted a vociferous debate, in international fora and on the streets, between those who argue that such standards pose new forms of non-tariff trade protectionism and those who view compliance as one way for developing countries to avoid the pitfalls of globalisation. A particular pitfall being the 'race to the bottom' where Southern firms are locked into a downward spiral of competition based on lowering wages and the flouting of labour and environmental norms. There is an extensive literature on the potential impact of standards on trade.[1] This raises particular challenges for developing countries with weak social and environmental infrastructure and regulatory institutions.

Social and environmental concerns present challenges, but also opportunities. *Global standards can be a new basis for international competitiveness.* Standards provide a basis to differentiate markets and create competitive niches. Compliance to global standards, especially on ethical, social and environmental concerns, can be one important way to add value. Accruing the rents that come with compliance requires, however, new forms of knowledge. Upgrading technology is a well-understood,

[1] See, for example, Stephenson 1997, Sengenberger and Campbell 1994, OECD 1995, 1996, Krueger 1996, Maskus 1997, Mah 1996, Srinivasan 1996, White 1996, Dion et. al 1997, Anderson 1996.

albeit often difficult, process for firms and for governments. New technologies can be purchased, while reverse engineering can help local firms access the know-how required to operate and develop new machinery. Compliance with global process standards demands a different form of upgrading, focussing not on product but on process and management issues. Enhancing management skills and inculcating the values enshrined in the process standards can be a difficult task for developing country firms. Small and medium sized enterprises (SMEs) are especially vulnerable and ill-equipped for this. There are further challenges for local governance. New capabilities are required on the part of local government and local policy networks. These include monitoring global standards, and participating in the making or revision of standards. It also calls for dialogue with global NGOs, and, more generally, building new alliances between local and global actors.

Global standard imply new forms of global governance in world economy. Global process standards create new challenges for private and public governance at both local and global levels. First, they point to the relative erosion of national standards, and thus of the regulatory powers of the nation state. The growing influence of global standards in global markets is likely to weaken national standards. National standards must increasingly comply with international norms, or risk becoming irrelevant. Sovereignty over standard setting moves out of the national domain. Second, whereas national standards were largely defined in the public arena, global process standards are increasingly being formulated by private and public-private initiatives. In addition to the public sector, private business and other actors within civil society – from issue-based NGOs to trade unions and concerned consumers - are engaged in the process of defining and implementing standards. This suggests new institutional arrangements and complex networks of public and private actors. It also indicates potential conflicts between the competing interests of private business and private civil society actors. Mediating such conflicts requires new forms of global governance.

Pushing forward our understanding of the role of standards within these debates is hampered by the increasing number and types of standards. What limited evidence there is tends to focus on individual standards - and then often misses the bigger picture. But showing this bigger picture is increasingly difficult because of the bewildering proliferation of standards. This paper's primary contribution is to reduce the complexity and confusion in this area by providing a comparative overview across the range of global standards. Within the wide spectrum of such standards, we focus on the leading examples dealing with quality assurance, environmental and social concerns – and then compare across these distinct bodies of standards.

To this end we put forward typologies and distinctions that make comparison easier and help to recognise patterns. We thus distinguish between four steps in the policy cycle: standard setting, standard monitoring, assistance in achieving standards, and sanctions for

non-compliance. We then identify the different types of actors, at the local, national and global levels, engaged in these four steps. The networks of actors involved in the formulation and implementation of standards show new forms of interactions between public and private, and local and global, governance. Finally, we distinguish between different generations of standards and show how this helps both in understanding the bewildering array of current standards and distinct trajectories in the the evolution of different groups of standards.

The paper is structured as follows: The following section provides initial definitions and typologies. Section 3 then uses these distinctions in the field of quality assurance and health and safety standards, while section 4 reviews environmental and social standards. Section 5 pulls together core elements of the typology and compares trajectories of standard evolution.

2 Initial Distinctions and Typologies

Standards are agreed criteria, or as Hawkins (1995:1) states "external points of reference", by which a product or a service's performance, its technical and physical characteristics, and/or the process, and conditions, under which it has been produced or delivered, can be assessed. David (1995:22) argues that "…having dependable standards …[make] it simpler for all parties to a deal to recognise what is being dealt in". Compliance shows that a firm, or service provider, formally meets the criteria specified by the standard. Such criteria need to be measurable, with well-defined procedures for auditing compliance. In addition, standards require a degree of authority that ensure that they are legally, or voluntarily, enforced. Thus, whether legally binding or voluntary norms, there have to be sanctions for non-compliance.

Product and process standards

It is now common to distinguish between product and process standards. Traditionally standards focused on the characteristics of a product. This included, for example, size, composition, function, and health and safety impact. Product standards were, therefore, sector-specific and technical in nature. They were generated by private business as well as by government.[2] While originally formulated by national bodies (such as the British Standards Institute-BSI; the American National Standards Institute-ANSI; or Germany's DIN and TÜV), product standards began to be internationalised from the 1950s onward. This involved co-ordination in regional forums (such as the European Union) and in international arenas (such as the International Electrotechnical Commission, the International Telecommunications Union, and most prominently, the International Organisation for Standardisation –ISO). Harmonisation of national prod-

[2] Health and Safety were of particular concern to the state; there are numerous examples of this. In Britain, for instance, the state has been at the forefront in shaping product safety standards for children's toys, minimum pesticide residues in food products, and fire safety codes for various household items. Similarly, public regulation s in Germany, subsequently adopted by the EU, bans the use of azo-dyes in tanned leather.

uct standards facilitated international trade, and reduced potential 'market failures' that could arise from distinct national standards (David 1995).[3]

Since the mid 1980s there has been a gradual shift to process standards. Rather than the technical characteristics of the product, process standards refer to management practices in the production process. In some cases, these include clearly defined and measurable benchmarks, allowing firms to gauge how well they perform in reaching particular targets. (This also implies that, unlike product standards, process standards can be generic, sector or firm specific.) In other cases, however, the defining criteria against which performance is measured is contentious, especially in areas where ethical, social and environmental values are not universally held. Such differences in values cause friction because, as in product standards, the formulation of process standards has moved from the national to the international arena. Moreover, a wide range of actors, both public and private, is involved in the formulation, implementation and monitoring of these standards.

The distinction between product and process standards, while widely used, is becoming hazy. Some standards, such as those for organic foods, reflect both product and process characteristics, and are thus more hybrid in nature. The distinction is likely to become more ill-defined as producers seek to reduce the range of applicable standards by incorporating process concerns (say levels of pesticide residues in food crops) into product features.

Within the universe of standards there are a number of sub-categories. This adds to the confusion, especially where the boundaries between, and within, these sub-categories are unclear. Thus, there is ambiguity on the distinction between standards, codes and labels. We consider labels and codes of conduct to be a distinct sub-category of standards. Labels provide consumers with a simple way to rapidly and easily acquire information about product characteristics (the woolmark label, for example, shows that a garment is made from pure wool, the kite mark label indicates that a product meets the British Standards Institute's relevant safety codes), or about conditions of production (such as the fair trade label). Labels tend to be sector-specific and concentrate on particular themes. In contrast, codes of conduct are usually firm-specific. They stipulate the criteria of accepted practices adopted by a company and transmitted to its employees, its suppliers, and its wider stakeholders, including its clients and shareholders. These practices can range from employment conditions, social and environmental norms, to the firm's role in the community (van Liemt, 1998b:14).

A further point to note is the distinction between global process standards that are universal in nature, and those

[3] There are numerous examples of 'market failures' arising from incompatible national standards, from gauge-widths of railway tracks to the distinct national standards used in colour television technology in the US (NTSC) and Europe (PAL and SECAM). In contrast, adoption of common technical standards was critical to the development of the global information and communications technology industry (David 1995; Steinmuller 1995; Tassey1995).

that, while global, are adjusted to national circumstances. Often company codes of conduct, or certain social and labour standards, incorporate specific ILO conventions or require that a firm complies with national regulations regarding work or safety practices. Clearly legal stipulations on issues like the minimum wage, working hours and social security benefits vary from country to country. In contrast, some global standards even though they may be adopted into specific national codes (for example, various national standards organisations have developed national versions of the ISO 9000 standard on quality assurance – Brazil's ABNT9000, Korea's KS9000, or Pakistan's PS9000) remain the same wherever they are applied.

Irrespective of these differences, all standards provide a codified basis for conveying information. The provisioning of such information can be critical. This is especially so where the individual buyer, whether it is a lead firm in a value chain or an average supermarket consumer, is unable to access such information, at least not without substantial costs. Facilitating transactions is not the only information benefit that standards provide. They can also facilitate co-ordination between inter-dependent agents. This can serve to reduce costs and ensure efficient use of resources within the supply chain. Such co-ordination functions are especially significant where uniformity is of importance, or where complex decisions require detailed information of products and of processes of production. Compliance to accepted norms provides such information easily and promotes the firm's ability to co-ordinate activities. This is especially important in technologically sophisticated production systems. Here, quality assurance (and technical product) standards allow firms to maintain complex supply chains and to engage in joint R&D with diverse and distant suppliers.

Better co-ordination of diverse functions and activities within complex global supply chains as a consequence of standard compliance is only possible if the standard also provide confidence. Standards, therefore, have to have legitimacy. To be of value they have to be bearers of, what Zucker (1986) calls, 'institutional trust'. The users of the standard, be they individual consumers or firms, need to have confidence in the information that the standard conveys. But trust comes from more than the transfer of information regarding whether the product or service complies with the point of reference mentioned earlier. It is tied to the manner in which monitoring and certification takes place, as well as the type of actors engaged in defining the standard. This is especially important for social and environmental standards.

The policy cycle: Four steps

The policy cycle for standards has within it four distinct steps: standard setting, standard monitoring, assistance on achieving standard compliance, and sanctions for non-compliance. Each of these steps involve diverse actors. As mentioned above, the credibility of a standard is in large measure related to the types of actors engaged in setting the

standard, and in monitoring compliance. With compliance, for example, there are three distinct alternatives. First party certification relies solely on self-monitoring. In terms of public legitimacy, this usually results in the least degree of credibility and institutional trust. Second-party certification shifts monitoring to the user of the product or services, or alternatively to trade bodies who monitor on behalf of their members. While this can enhance the credibility of the standard, there can be conflicts of interest. Third-party certification transfers monitoring to neutral and independent auditors. The credibility of the certification is directly linked to the credibility of the auditor. Auditors can include accredited firms who provide market-based certification services, or NGOs and civil society groups who uphold the values associated with the specific standard.

toring. Table 1 below, summarises the main categories of such actors, ranging from private business, NGOs, trade unions, to the public sector. Moreover, such actors can operate at local, national and global levels, and be engaged in the distinct functions of formulating standards and monitoring the implementation of standards. To understand how standards are set and assessed we need to have an understanding of networks.

Networks

The networks required to define complex standards often come about because the resources required to formulate the standard, and to make it credible, are distributed amongst a variety of actors (Messner & Meyer-Stamer 2000: 21). Moreover, there is an element of interdependence amongst such actors within the network (Messner 1997:191). Not only do different actors come together

Table 1: Types of actors engaged in defining and implementing standards

TYPES of ACTORS		LOCAL/NATIONAL	GLOBAL
PRIVATE	Business	Local or National Firms, Trade Associations and Certification Firms	TNCs, Global Trade Associations, Global Certification Firms
	Civil Society	Local or National NGOs, Consumer Groups and Trade Unions	Global NGOs, International Trade Union Federations
PUBLIC		Local and National Government & Standards Organisation	International and Regional Organisations

The range of actors engaged in these four distinct steps can be extensive, especially where complex standards exist, or require complex forms of moni-

because they have specific core competencies, they also need each other in order to make a standard reliable, transparent, efficient, and legitimate. For

example, in defining environmental standards global NGOs can provide a core competence in determining the criteria against which compliance is measured. This can also enhance the standard's legitimacy, as consumers are likely to attach greater credence to the claims of standards formulated in such partnerships, than in standards that evolve from business alone. At the same time, to achieve their objectives, such NGOs need businesses to implement standards. Thus the pressure to work with business in defining a meaningful standard.

Bringing such diverse agents together is a complicated task. The various parties have to agree on common rules. This requires communication and a modicum of trust (Messner 1997: 232). Without the latter, each actor would seek to promote its own objective without regard to collective concerns. Apart from different interests, power structures are involved in different network constellations. An actor's influence and centrality increases in relation to the importance that other actors ascribe to the resources controlled by him or her, and their core competencies. Core competencies could be specific expert knowledge, control of information and communication resources, reliability and legitimacy resources, and control over financial resources (Messner 1997: 211).

As we shall see later, the role, and power, of local and global actors in shaping standards differs. National governments, and national standards organisations, often lack the necessary capacity to define and implement standards, while local firms and trade associations can be weak in formulating commonly agreed norms. This is especially so where local actors are closely tied into global production, through value chains in which power rests with external lead firms. Similarly, while local NGOs may monitor globally-defined standards, their ability to shape such standards, and influence global NGOs, is often limited. Humphrey and Schmitz (2001), for example, set out different combinations of public and private actors involved in the setting and enforcement of standards. Thus, the relative influence of global and local, and private and public, actors in defining and monitoring standards has clear consequences for the nature of governance.

Typology for global standards

The objective of this paper is to reduce the complexity that arises from the recent proliferation of global standards. Making sense of this diversity is essential for researchers and policy makers. The first step is to construct a typology to map the distinct standards. As a first cut, standards can be distinguished according to the following criterion:

- scope- process, product standards
- geographical reach - national, regional, international
- function - social, labour, environmental, quality, safety, ethical
- key drivers – public, private (business, NGOs), public-private
- forms - management standards, company codes, labels,
- coverage – generic, sector specific, firm/value chain specific,

- regulatory implications – legally mandatory, necessary for competition, voluntary

Table 2: Typologies for Global Standards

Field of Application:	Form:	Coverage	Key Drivers	Certification Process	Regulatory Implication
• Quality Assurance • Environmental • Health • Labour • Social • Ethical	• Codes of conduct • Label • Standard	• Firm / Value-chain specific • Sector Specific • Generic	• International business • International NGOs • International Trade Unions • International Organisations	• First-party • Second party • Third party: • Private sector auditors • NGOs • Government	• Legally mandatory • Market Competition Requirement • Voluntary

On the basis of some of these distinctions and our earlier discussion, a framework for reviewing global standards is set out in Table 2.

The typology in Table 2 is insufficient for providing a sense of the trends in standard development. Therefore, we also use the notion of 'generations' of standards to highlight the chronological stages of development of different standards and their changing influence. This should not be viewed as a sequence of superseding 'generations', with the implication that the latest 'generation' provides the present norm. Rather, different 'generations' of standards can, and do, co-exist at the same time. Nevertheless, we argue that the concept of 'generations' helps demonstrate evolving trends, providing a sense of trajectory, with respect to particular set of standards. As shown later, the evolution of standards associated with quality management, and those pertaining to environmental and social concerns have distinct trajectories and have different consequences.

3 Quality Management Standards

Globalisation of production has accelerated demand for greater control over quality assurance in production processes. This is especially significant where suppliers are located at great distance to their customers. Thus, quality assurance standards have become directly linked with supply chain management. They potentially influence production outsourcing and the increasingly complex inter-relations that exist between producers, suppliers, distributors and retailers. Using the typology set out earlier, this section introduces international quality management standards. It outlines the constellation of actors engaged in the formulation of these standards, and details how these standards are implemented. As Table 3 shows, these standards can be distinguished according to distinct 'generations'. These generations capture the nature of coverage of standards, from those that

are generic, to sector-specific, and more recently firm-specific standards. We discuss each of these separately. In addition, this section also briefly reviews leading international health and safety standards especially relating to the food products value chain. While these are not quality assurance standards, they are closely related in terms of their function and their consequences for management practices within the production process.

Table 3: Different generations of global quality management standards

Generation	Examples	Actors involved	Key drivers	Influence in international trade	Certification Process
1st generation GENERIC	ISO 9000:	The International Organisation of Standardisation (ISO) represented through national standardisation bodies and large business actors mainly from Industrialised countries, accredited certification bodies	Industry (trade associations, TNCs, certification bodies)	Voluntary, but increasingly becoming mandatory in some European markets, also gaining influence in the US and Japan	3rd-party, market based auditors
2nd generation	a) AS 9000, QS 9000	a) Large TNCs, sector business associations, accredited certification bodies	a) TNCs, lead firms in the chain	Increasing influence in technically complex sectors where specialised quality assurance codes are required	a) 3rd-party, market-based auditors
SECTOR-SPECIFIC	b) HACCP: Health and Safety standards	b) International public institutions (e.g. WHO, FAO), national control institutions with public duties, governmental representatives	b) National governments, especially in industrialised countries	Increasing influence in international pharmaceutical and food-based trade with growing concerns relating to process management in the international food chain	b) 3rd-party; certification through public-private institutions with public duties
	c) EUREP-GAP: Food Quality, & Crop Management standards	c) Food retailers, importers and suppliers	c) Private Sector Industry	Extremely prominent in European fresh produce value chain, adopted by all leading UK supermarkets & food importers	c) 3rd party; market-based auditors
3rd generation COMPANY BASED	Daimler-Chrysler: Supermarket Codes (Tesco/ Sainsbury)	Powerful TNCs with a dominant position in the world market and a leading role in their supply chain	TNCs, lead firms in the chain	Increasing influence due to technological based complexity in know-how intensive sectors, and also in the food products sector.	1st and 3rd party monitoring

3.1 Generic standards – ISO 9000

The ISO 9000 standard provides assurance that a product, or service, conforms to established and specified requirements and that the firm, or service provider, has in place appropriate quality management procedures. The standard is seen as promoting better, and more assured, control of quality within international supply chains, improving market transparency of suppliers, and reducing transaction costs related with quality management. We view ISO 9000 as the **1st generation** of global quality management standards. The standard is generic, and can be applied to manufacturing, service, and public sectors. It is the most widely held, and commonly known, international standard, adopted by firms and organisations across a wide range of industries. Launched by the International Organisation for Standardisation (ISO) in 1987, over 340,000 ISO 9000 certifi-

cates had been issued world-wide by the end of 1999, with certification levels rising annually by over 26% (ISO 2000b). More than half of these certificates were issued in the European Union, although the most rapid growth in certification was seen in Australia, USA, Japan and China (ibid.).[4]

While a voluntary standard, the popularity of ISO 9000 stems from both public and private pressures. Public regulators have made it a mandatory requirement in many markets. The European Union's directive 93/42/EEC, for example, requires that all medical devices must comply with ISO 9000 standards on quality management in production. The EU has also adopted the standard as part of its 'Global Approach to Testing and Certification', which states guiding principles for EU policy on conformity assessment (Wilson 1999: 73). Within the private sector, many companies use the standard as a filtering mechanism to assess the process competencies of their suppliers. While they do not necessarily rely on the standard, those without ISO 9000 certification are often excluded from the supply chain in various sectors and markets. Thus, the standard is seen by many developing country firms as key to obtaining access, and enhancing competitiveness, in global markets.

The main driver behind ISO 9000 is private business, but its roots lie in the public sector. It is based on the British Standards Institute's quality management standard, BS5750. Developed in 1979, BS5750 emerged from standards designed for the UK defence industry, and was actively supported by the British government. It was primarily adopted by public sector enterprises, and by the early 1980s was being promoted by the UK government as a tool to enhance private sector competitiveness (Seddon 2000).[5] The UK government played an active part in promoting BS 5750 in the ISO.

The standard constituted the first foray by the ISO in the area of process, as opposed to product, standards. Before reviewing the standard itself, it is worth briefly considering the structure of the ISO. The ISO is an international non-profit, and non-governmental, federation of national standards organisations. Constituted in 1947, and based in Geneva, it now has 138 national standards organisations as members. Its aim is to co-ordinate and unify different national industrial product, technical and measurement standards. This objective is seen to facilitate trade, promote the exchange of technology, and eliminate technical trade barriers. The organisation is, however, a somewhat opaque body. Its members, national standards organisations, have the regulatory task of setting

[4] In line with its international popularity, the standard has been adopted by various national standards organisations with national versions – such as ABNT 9000 in Brazil, KS9000 in Korea, or PS9000 in Pakistan. These, however, have been marginalised by the universal and global acceptance of ISO9000.

[5] A 1982 white paper on "Standards, Quality and International Competitiveness", issued by the UK Department of Trade and Industry (DTI), saw BS 5750 as a basis for raising quality, improving economic performance and enhancing the reputation of British industry (see Seddon 2000).

and defining national standards. In some countries, these are purely public-sector bodies. In most industrialised countries, however, such organisations involve participation by the private sector in standard formulation. In many cases, these are private organisations (for example, DIN in Germany) wherein government has a limited role and business and sectoral associations are the main drivers. Thus, the ISO is often referred to as a "*hybrid private-public regime*" (Clapp 1998:295).

Standard formulation in the ISO is a long, complex and decentralised process. Detailed negotiations over the exact content of standards are undertaken in 187 technical committees, over 500 sub-committees and some 2,000 working groups. Each of these deal with specific standards or sectors. They are composed of representatives of industry, research centres, government, consumers, and international organisations. In addition, strategic advisory groups, formed to discuss what role the ISO might take in new arenas, are mainly made up of national standards-setting bodies, industrial trade associations, private sector firms, and consulting firms from developed countries (Clapp 1998:300). Standards organisations from industrialised countries are most active in this process. They participate more vigorously in ISO meetings, and convene, and provide secretariats for, the leading technical sub-committees. Many developing country members have rarely, and in some cases never, been part of these deliberations.[6] The ISO itself admits that eight countries provide 80% of all the secretariats of the technical committees, sub-committees and working groups of the organisation (ISO 2001). Haufler (2000:6) also argues that large enterprises from industrialised countries are especially influential, and that despite the public-private nature of the organisation, the ISO is effectively a "corporate private regime".

The ISO 9000 standard contains guidelines for setting up a quality management system within a firm or organisation. It assures that the certified firm has in place a well-documented quality system, including traceability of purchases from suppliers. The supplier does not have to be certified, although in some sectors there is growing pressure on first tier suppliers to also be compliant with the standard. The standard does not address, nor is it guarantee of, product quality per se. Rather, it provides assurance that the quality management procedures of the firm, are independently certified as conforming to accepted norms, and that the firm has in place a mechanism for responding to the needs and quality concerns of its customers. While there is a link, one needs to distinguish between quality management and product quality. It is possible for a certified firm to manufacture products that might be considered of poor quality. Nevertheless, it would be expected that a proper implementation of the standard would result in quality improvements as quality concerns of consumers are fed back to the firm. Seddon (2000), how-

[6] The Pakistan Standards Institute (PSI), for example, has only once attended an ISO meeting since joining the body in the mid 1950s. (Author interview with PSI)

ever, argues that the emphasis placed in the standard on maintaining proper and appropriate documentation, for example to ensure traceability at all stages of production, results in a paper trail that falls far short of a true quality management system.

Despite this criticism, compliance can lead to improvements in quality practices and be a tool in upgrading process management. Among entrepreneurs it is common to hear: "*It is not difficult to get the ISO certificate, but it is difficult to keep it.*".[7] This underscores the on-going nature of monitoring and certification. Once certified the firm has to undergo regular six-monthly audits, and a re-certification every three years. In this time it has to demonstrate an improvement in its quality management practices. Furthermore, the guidelines for the ISO quality assurance standards are redefined every five years, with increasing requirements being specified. Recently, this modernisation was observed by the replacement of ISO 9000 standards framed in 1994 with the ISO 9000:2000 version.[8]

The ISO itself does not monitor compliance or issue certificates. Instead, certification is undertaken by independent auditors who offer market-based services. Leading international certification firms include SGS-ICS, DNV (Det Norske Veritas), Lloyd´s Register, Moodys, and BVQI (Bureau Veritas Quality International) as well as national standards organisations such as the British Standards Institute. All certification organisations have to accredited by national accreditation bodies. Certification costs can be high. In general, costs depend largely on the nature and scope of the certification, and on competition between certification bodies. There is no involvement of civil society actors in the monitoring of such standards.

Lead firms within the value chain increasingly demand compliance from their first tier suppliers. However, such compliance does not necessarily require certification of quality assurance practices adopted by second and third-tier suppliers further down the chain.[9] Certification costs are pushed down the supply chain, as they are the responsibility of the certified supplier and not the lead firm. Criticisms have been made that, due to the costs of certification and the management changes required, ISO 9000 is skewed against small firms (UNIDO 1996).

Assistance on compliance is limited. In some countries, firms have been provided financial subsidies to offset costs of compliance. There is also evidence of lead firms in global supply chains assisting local suppliers incorporate the standard (Nadvi with Kazmi 2001). The ISO itself, while not directly supporting individual firms, is engaged

[7] Author interviews with certified firms in Germany and Pakistan.

[8] The ISO 9000:2000 was introduced in the fourth quarter of 2000. It entails a stronger customer focus and higher requirements in the improvement of the process of production (ISO 2000a:18).

[9] The constant improvement of ISO standards (like ISO 9001:2000) and rising competition in the world market is likely to deepen the influence of ISO 9000 along the value chain and challenge subcontractors to give quality assurance more attention.

in promoting standards in developing countries through DEVCO, a committee on developing countries (ISO 2001). On the whole, technical support for firms seeking to adopt the standard is primarily obtained through specialist service providers and technical consultants.

Sanctions on non-compliance are largely market enforced. Where a certification agent, through a periodic audit, finds a certified firm to be at fault, the certificate can be withdrawn. [10] Usually, however, the firm and the certification body share a common interest to help the firm improve on its compliance. This can lead to complications, especially where potential conflicts of interest arise from close ties between auditors and technical consultants engaged in helping firms implement the standard. Ultimately, it is the reputation of the certification agent that is at stake. Where an end-user finds that a certified firm does not comply in its procedures with the stipulations of the standard, it can raise the matter with the national accreditation body with which the auditor is accredited. This is rare. It points to the potential weakness of the sanctions for non-compliance within the code. It also underlines the earlier observation, that for many supply chains compliance to ISO 9000 is only considered an entry requirement and not a guarantee of a particular level of process competence. In part, it is these considerations that have led to moves to more specialised quality assurance standards.

[10] In 1997, for example, 4233 certificates were withdrawn for not meeting the targets set in the first certification process (ISO 1998:4).

3.2 Sector and firm-specific standards

The **2nd and 3rd generation** of quality assurance standards were developed in part on the basis of ISO 9000. Their distinguishing feature is that they move from generic to sector specific (2nd generation) and firm specific standards (3rd generation). This shift reflects the increasing technical complexity of production, and of supply chain management in particular sectors, and particular firm value chains. This emphasises the need for specific quality assurance measures.

Leading examples of international sector specific quality assurance standards include the **AS 9000** and **QS 9000** standards that apply to the aerospace and automobile industries respectively. These are sector-oriented adaptations of ISO 9000. They contain ISO 9000 in its entirety, but have additional requirements specific to the sector to which they apply. They adopt the same documentation and monitoring principles of the ISO standards. Following the framework of the ISO 9000, AS 9000 and QS 9000 have traceable documentation requirements, codified implementation procedures, and independent monitoring. These sector standards now constitute the generally accepted quality assurance norm within their respective industries. QS 9000, for example, is commonly required of first-tier suppliers in the automobile industry.

Both standards emerged as a result of co-ordinated actions by lead firms within their specific sectors to develop a quality management system that was specific to the needs of their respective

sectors, and increased transparency and quality assurance along their own supply chain. QS 9000 was introduced by the big three automobile producers in the US market: Ford, Chrysler, and General Motors. AS 9000 was officially released in 1997 by the Society of Automotive Engineers (SAE) with General Electric Aircraft Engines playing a leading role.[11]

The dominance of US firms, and their supply chain practices, in the formulation of QS 9000 have resulted in many leading European and Japanese manufacturers requiring their global suppliers to comply with their own, national, standards for quality assurance in the auto sector. Quadros (2001) observes this trend in the case of Brazil, where suppliers to firms like Peugeot, Renault and Toyota were no longer relying solely on QS 9000 standards (Quadros 2001:24). Some lead firms were demanding their suppliers comply to specific national standards, like the VDA from Germany (for VW), the EAQF from France (for Peugeot) or the AVSQ from Italy.

Finally, an emerging trend is the development of firm specific standards. While there is limited evidence on this, it is a trend that is particularly pronounced in technically complex industries, and where lead firms manage extensive and complex international supply chains requiring TNC-specific quality assurance requirements. An example of this is again the automobile sector. For some large international manufacturers with diverse and globally distributed supply chains, such as the newly-merged Daimler-Chrysler corporation, the widely accepted sector specific QS 9000 standards is in itself insufficient for the quality management of its various supply chains. This requires more detailed standards from its suppliers. There are also signs of such firm-specific standards in the food products sector to which we now turn.

3.3 Health and food safety standards

During the 1990s, there has been a rapid concentration of food retailing, and consequently of food production and packaging, in the developed world (Dolan and Humphrey 2000). This has led to the spectacular rise of international supermarket chains and large-scale processors. Such concentration has also resulted in complex contracts between global food producers and retailers and food producers and suppliers in the developing world. Co-ordinating these value chains, and conforming to national and regional requirements on food safety and hygiene, has increasingly involved compliance to various food standards. Food safety standards are one specific form of sector standards (**2nd generation**). To reassure consumers, numerous standards and labels have emerged dealing with food safety and quality, and characteristics such as organic produce, environmental and ethical considerations (animal welfare standards), and the regional authenticity of farm products (such as the British farm standard label or the Kenyan Flower council standards). These various standards and labels have emerged as strategic tools in creating brand identity, facilitating product differentiation and market seg-

[11] See Internet: http://www.us.tuv.com.

mentation (Reardon et.al. 2001:6). Some of these new food standards are promoted by public bodies, or governed by regional regulations.[12] Others are the result of private initiatives, with supermarkets and suppliers in the food sector becoming standard setters. Here, we review a leading public (HACCP) and a private (EUREP-GAP) food standard that have gained wide currency.

Food safety codes has been an important area of intervention by the WTO through the agreement on sanitary and phytosanitary standards (SPS). The SPS agreement covers sanitary (human and animal) and phytosanitary (plant health) measures to protect human or animal health from food-borne risks, plant-carried diseases or pests. These measures can take many forms, such as requiring specific treatment or processing of products, setting maximum levels of pesticide residues, or restricting use of certain additives in food. They apply to domestically produced food, livestock and plants, as well as to imported products. The implementation of the SPS in 1994 was in response to demand for clearer rules on sanitary or phytosanitary restrictions, and to limit protectionist use of such restrictions.[13] A SPS committee of the WTO reviews the agreement. It, for example, gathers information on disease status and makes suggestions for necessary changes.[14] The SPS agreement incorporates obligations on member states for non-discrimination, advance notification of proposed measures, and the creation of information offices. It also encourages the use of international standards. The only acceptable justification for not using such standards for food safety and animal/plant health protection arise from scientific challenges based on assessments of potential health risks.

The leading global initiative within the framework of the SPS agreement is the **Hazard Analysis and Critical Control Point (HACCP).** This is a food safety management standard that concentrates on prevention strategies for known hazards. It also aims to minimise the risks of such hazards occurring at specific (and critical) points in the food chain. It was developed by a network of public actors on the global and local level. The UN's Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) developed the 'Codex Alimentarius' and in 1993 adopted national guidelines for the application of HACCP within the member countries. It is required for food products such as fish, seafood, meat, dairy products, fruit and vegetables. It requires the determination of critical control points, the establishment of a monitoring system for each critical control point, corrective actions, verifi-

[12] For example the BIO Regulation from the EU and the supplementing Regulation on organic production of agricultural and ecological products sets rules for labelling biological produced products.

[13] It is recognised that SPS standards can constitute unjustified barriers to trade (see UNIDO 1999). Since the implementation of SPS, there has been a number of complaints raised with the WTO Dispute Settlement Body.

[14] Thus, in relation to the recent outbreak of bovine spongiform encephatology (or BSE) in European cattle, a number of trade issues were integrated into the agreement to ensure consistency in risk management decisions, and to monitor use of international standards (WTO 1998:13).

cation procedures, documentation and record keeping (FAO 1998: 2). The successful application of HACCP requires the full commitment and involvement of management. Consequently, the application of the HACCP system is compatible with the implementation of quality management systems, such as the ISO 9000 series, and HACCP is the system of choice for the management of food safety (FAO 1998).

In the food sector, HACCP as an international standard has become a mandatory requirement in most industrialised countries in order to ensure hygienic conditions and a consistently high level of product quality. In the US about 38 states have made HACCP mandatory. The EU has also introduced HACCP as a mandatory standard in 1993 (UNIDO 1999: 13) The application of HACCP requires public policies and the definition of the rule of government in the utilisation of the HACCP process and risk analysis. Many governments have integrated the standard into law. This is a reflection of the dominant interest of the public sector to increase transparency and to secure the health of the population. But it is also sometimes mandated by governments to strategically position domestic exporters. Agribusiness firms targeting export markets, or newly deregulated domestic markets, have begun to adopt HACCP for strategic and competitive reasons (Reardon et.al. 2001:8).

In addition to public standards, there are important private initiatives, motivated by both business and NGOs, in food safety standards. A prominent example is **EUREP-GAP**, the European Retailers Representative Group's standards on Good Agricultural Practices. Starting in the late 1990s, EUREP-GAP has very rapidly gained wide circulation in the European fresh produce retail sector. EUREP has over 100 members, including prominent retailers and suppliers, spread across Western Europe as well as countries supplying fresh produce to Western Europe, and “has authorised 20 certification bodies to carry out its audits in over 25 different countries” (FPJ 2001:12). In the UK, for example, the standard has been adopted by the five leading supermarket chains that collectively account for 80% of total UK food retailing. The standard is, in effect, an industry-wide response at formulating a single code that can offset the numerous country and firm specific standards.

EUREP-GAP covers a range of issues, with a particular focus on integrated crop and pest management. This includes proper documentation of quality and plant health from the seed treatment and nursery stages of commercial farming, through to the use of fertilisers and pesticides and finally to harvesting and packaging stages in production. In each of these areas, there is an emphasis on due record keeping, through the maintenance of a detailed crop diary. This allows for a product’s journey to be traced from specific fields, and seeds, to the end consumer. An important element of the standard is the need to meet the specific requirements of principal customers. Certification is undertaken by independent auditors accredited with EUREP. Many of these being organisations already engaged in ISO 9000 certification (such as AFAQ, Bureau Veritas,

and SGS). Thus, the EUREP-GAP protocol, while specific to the farm produce sector, is in many ways procedurally similar to the ISO9000 standard. What is specific is that the standard places greatest emphasis on issues that directly impact on food hygiene, food quality and human welfare. This is particularly pronounced in the use of chemicals, pesticides and fertilisers. The standard also goes beyond 'traditional' quality assurance codes in that explicitly recognises environmental and social considerations. It requires the adoption of cultivation techniques that minimise soil erosion, that fertiliser and pesticide usage does not cause adverse environmental impacts, and that commercial farming practices do not impact negatively on local bio-diversity. It assesses worker safety and welfare, including the need for habitable living conditions for on-site workers, as well as adherence to national regulations regarding, wages, working hours, age, and working conditions (EUREP 2001).

To conclude, quality management standards are the most popular of global process standards. They emphasise issues of traceability, documentation and stage-wise quality assurance. The key drivers behind such standards are private business. These standards have gained wide popularity with their reliance on independent auditing, and due to the need to reduce transaction costs associated with organising complex global value chains. In technically complex sectors, as well as industries where customer credence is critical, we observe a move away from generic to sector specific standards. Thus, for example, the growing importance of a range of food quality and safety standards. It is also in the area of food safety standards that we see significant intervention by public bodies. Many food safety standards have been defined by public interests or through public-private partnerships (Reardon et. al. 2001). It is also apparent that the growing popularity of the generic ISO 9000 quality assurance standard is, in part, a reflection of it taking on a public regulatory dimension. These factors point to public-private network forms of global governance in standard formulation, with business as the key player. In terms of certification and monitoring, quality management standards have well developed independent auditing procedures, indicating arms-length governance. Sanctions for non-compliance are either enforced by the market, or applied by national and regional regulatory bodies. Although, it is unclear as to how effective such sanctions, especially through regulatory bodies, are. Finally, the evolution of quality assurance standards indicate a distinct move from generic to sector, and firm-specific standards. Civil society actors are by and large absent. It is only in some of the specific food quality standards, such as EUREP-GAP, that we observe the inclusion of wider social and environmental concerns. This, however, may be an important trend. To explore this further, the next section reviews social and environmental standards. Here, we observe quite different trends, and networks, in standard formulation and implementation.

4 Environmental and Social Standards

Social and environmental concerns lie at the heart of the new 'rules' on international trade. This has resulted in a rapid proliferation of global standards in these areas. Many of these standards have been influenced by multilateral initiatives and leading international institutions. The 1992 UN Earth Summit (UNCED) provided a new dynamic to promoting environmentally sustainable development.[15] It resulted in the "Framework Convention on Climate Change" and the "Convention on Biological Diversity" (Messner and Nuscheler 1996). Although weakly enforced, UNCED influenced private initiatives on environmental standards. Concerns on social costs also spurred recent intergovernmental debate on the need for core social standards (Fues 2000).[16] The 1995 UN Social Summit was at the forefront of this. This was soon followed by the ILO "Declaration on Fundamental Principles and Rights at Work", and its follow-up in June 1998 which provided the consensus meaning to the phrase "core labour standards", and sought to promote the ratification of the ILO conventions by member states.

Under the ILO declaration, governments are obliged to report where they are in relation to the core labour standards, and to set their own baselines

Table 4: ILO core labour conventions and ratification

Area	No./ Year	Name of Convention	Number of States Ratified (or in process of ratification) 1995	2001	% of ILO members in 2001
Freedom of Association and Collective Bargaining	87 1948	1) Freedom of Association and Protection of the Right to Organise (No.87/1948)	114	128 (+14)	73
	98/ 1949	2) Application of the Principles of the Right to Organise	128	146 (+18)	83
Forced Labour	29/ 1930	3) Forced or Compulsory Labour	139	152 (+13)	86%
	105/ 1957	4) Abolition of Forced Labour	115	146 (+31)	83
Non-Discrimination	100/ 1951	5) Equal Remuneration for Men and Women Workers for Work of Equal Value	127	144 (+17)	82
	111/ 1958	6) Discrimination in Respect of Employment and Occupation	122	142 (+20)	81
Minimum Age	138/ 1973	7) Minimum Age for Admission to Employment (not less than 15 years)	48	85 (+37)	48
Worst Forms of Child Labour	182/ 1999	8) The Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour	Introduced in November 2000		
All 7 conventions		From 1-7		59	32

[15] Seventeen environmental agreements emerged from this process, including fourteen concerning animal and plant protection.

[16] These concerns are not new. The ILO's principles date back to 1919, while the UN's "Declaration for Universal Human Rights" and the "International Covenant on Economic, Social, and Cultural Rights" were framed over a half century ago (Sautter 1998:45).

against which to measure future progress in achieving the standards. Since 1995, ratification of individual conventions has steadily increased - 150 additional conventions had been signed by March 2000, and to date 59 countries have ratified all seven conventions (Table 4 above). In recent years, discussion has arisen on how to make labour standards more effective, and to integrate social issues into international trade. In 1994, the USA and France suggested that a 'social clause' be incorporated into the WTO's rule framework. This marked the origin of a continuing debate between industrialised and developing countries, incorporating NGOs and unions from the North and the South. Whereas advocates see the social clause as providing a basis for promoting basic international social rights, opponents fear it as a protectionist instrument.

It is also in the area of environment and social values that business has become increasingly vulnerable to vocal, and material, pressure from concerned consumers and organised NGO campaigns. Exposure to such pressures, and the fear of the commercial costs associated with failure to meet such norms, has fuelled initiatives by private business to collaborate with private NGOs in formulating effective, and legitimate, environmental and social standards. This has resulted in an increasing number of voluntary codes, labels and standards in the private sector.[17] Such developments can be observed in environmental resource-intensive and labour-intensive sectors, particularly those marked by highly globalised production. These include the petro-chemicals, mining, agriculture, forestry, chemicals, textiles, carpets, clothing and footwear industries. Furthermore, such standards increasingly matter for value chains in sectors where consumer perceptions on ethical, social and environmental norms are a core element of competition.

These factors, at the level of global institutions and individual firms, point to similarities in the evolution and trajectory of environmental and social standards. In sharp contrast to most quality assurance standards, environmental and social standards are increasingly formulated in networks that include public and private actors (Diller 1999). While such standards clearly differ in scope and focus, these similarities underline the need to consider social and environmental standards together.

In distinguishing between various social and environmental codes, labels and standards we again use the notion of 'generations'. However, these generations 'move' quite differently to the trajectory observed with quality assurance standards. We observe five distinct generations (Table5). These include: company-specific codes of conduct; sector-specific codes and labels defined by business; generic standards defined by business; sector-specific codes and labels defined by business-NGO partnerships; and finally, generic standards defined by business-NGO-government partnerships. In these five generations of standards there are three distinct trends in how standards have been defined: by business alone (the 1st, 2nd and 3rd gen-

[17] See van Liemt (1998a, 1998b), Murray (1997), Caldwell (1998), Robins and Roberts (2000).

eration standards); by business and civil society together (4th generation); and through tri-partite arrangements that link business, civil society and the state (5th generation).

needs of specific sectors. This underlines the difficulties of defining a common framework for minimum global environmental standards. This section is structured around the three trends men-

Table 5: Different Generations of Global Social and Environmental Standards

Generation	Examples / Contents	Actors involved	Key drivers	Influence in international trade	Certification
1st generation Company codes of conduct	e.g. Nike, Reebok, Karstadt, etc.: Self-obligations of TNCs on the firm and supplier level, internal formulation and implementation	TNCs and their suppliers	TNCs as lead firms of supply chains	Existence of a large number of firm codes, focused on some brand name companies in consumer near sectors and in buyer-driven chains	1st party-self monitoring; setting process easy, legitimacy weak
2nd generation Business-defined sector codes and labels	ICC, Eco-tex, AVE: Sector specific Codes and labels formulated and implemented by enterprise associations	Enterprise associations, Chambers, suppliers	Enterprise associations	Sporadic, but with more comprehensive influence according to the sector approach	2nd party monitoring through associated sector association: setting quiet easy, still weak legitimacy
3rd generation Business-defined international standards	ISO 14000: Environmental management standards (using the model of ISO 9000)	ISO, national standardisation bodies, business mainly from industrialised countries	Business	Not necessary, but gets increasing influence especially in natural resource intensive sector	3rd party monitoring thorugh market based certification bodies, setting more difficult. Legitimacy high
4th generation Business & NGO defined sector-specific codes and labels	Transfair, FSC, Rugmark, etc.: NGO fostered sector specific codes and labels, formulated and implemented mainly through NGO and business partnership with independent monitoring procedures and civil society participation	NGOs, religious associations, solidarity groups, minority groups, unions, large retailers,	NGOs	Gain increasing importance according to new strategies of NGOs and retailers	3rd party monitoring through certification bodies or NGOs (setting difficult, keeping legitimacy requires constant negotiation
5th generation Tripartite defined generic social standards	SA 8000, FLA, ETI: Tripartite social minimum standards to harmonise the diverse numbers of codes and to increase legitimacy, transparency and traceability (existence of divergent approaches)	social NGOs, unions, TNCs (buyers and producers), certification bodies, governments	Public Sector NGOs	Increasing influence despite disagreements between special actors involved in the formulation of the standards	3rd party monitoring through certification bodies

The distinct trajectories of social and environmental standards demonstrate similarities and differences. This is especially obvious when considering trends in the last five years. In social standards we observe a process of convergence, through generic standards that involve joint action by industry, NGOs, and the public sector. In contrast, environmental standards are becoming more divergent, responding to the distinct

tioned above. We first review standards defined by business. We then move to standards that emerged from business and NGO networks. Finally, we review initiatives that bring together the state with business and civil society interests.

4.1 Business defined standards

The **first generation** of social and environmental standards were company codes of conduct. Often seen as part of a

public relations strategy, such codes and labels have boomed in the last decade. In a recent study, the OECD listed 233 existing company codes of conduct (Diller 1999). The use of codes of conduct is most widespread in the US. In 1990, 85% of the largest 100 US corporations had a a company code. In the UK this figure was 42% while in the Netherlands only 22% (van Liemt 1998a: 19). Traditionally, company codes of conduct focused on a firm's relationship with its employees. More recently, especially in sectors where production is marked by an extensive international division of labour and where consumers are ethically aware, firms have been forced to pay closer attention to social conditions in their supply chains. These factors entered into the definition of company codes. Thus, some of the more prominent company codes of conduct are found in buyer-driven sectors, such as garments, food, toys and sports goods, amongst well-known brand-name retailers, such as Nike, Reebok, Levi-Strauss, C&A, Mattel, and supermarket chains like the German Karstadt or UK's Sainsbury (FEER 2000:2ff).

In most cases, the code's guidelines are set by the lead firms, and usually internally monitored. Although firms do not have to collaborate with other actors in setting company codes, this can be a difficult process. There are also high transaction costs incurred in monitoring the code. Moreover, the absence of independent verification raise doubts on the legitimacy of many company codes. In some cases, weaknesses in self-monitored codes became apparent after particular firms were attacked by NGOs and the media for code infringements by them or their subcontractors (van Liemt 1998a:32). The "first mover advantage" can be significant. However, the growing number of company codes suggest that such advantages have declined. Instead, the plethora of codes can be a disadvantage, causing greater uncertainty and confusion, for both suppliers and consumers, regarding the content of codes, their reliability and their legitimacy.

These concerns have motivated the **2nd generation** of social and environmental standards, namely sector-specific codes and labels. Various industry-wide organisations have begun, or been specifically set up, to promote voluntary codes of conducts. The leading examples include the ICC, Responsible Care, AVE, and the Eco-Tex label (Reichert 2000; Robins & Roberts 1998; Chahoud 1998). The Paris-based International Chamber of Commerce (ICC) launched a Business Charter for Sustainable Development in 1991 to help businesses around the world improve their environmental management and performance. One of the best known sector-specific organisations is the chemical industry's Responsible Care programme, launched after the Bhopal disaster in the mid 1980s by US and Canadian chemical producers to promote high standards of pollution prevention, product stewardship, and community awareness.

Existing enterprise associations in industrialised countries have started to develop harmonised codes as a preventive strategy to face consumer and NGO pressure. For example, the foreign trade association of the German retail sector (Aussenhandelsvereinigung des

deutschen Einzelhandels - AVE) developed a unified code of conduct for its members and suppliers in 2000. Another example of an environmental label developed by industry is the Eco-tex label. Founded in 1991 by an association of 130 textile entrepreneurs, Eco-tex certifies sustainable products. It focuses on the production process as well as on the end product. Formulated by the sector organisations itself, it has an audit system that monitors levels of formaldehyde and pesticides in the production process (Chahoud 1998: 22). The EUREP-GAP standards in the food products sector, as discussed earlier, also fall within this framework. As with AVE or Eco-Tex, most sector-specific codes and labels are formulated by a network of relatively homogeneous actors. This makes it relatively easy to come to an agreement on the criteria for standard setting. Such sector-orientated codes harmonise different firm-specific approaches, increase legitimacy and reliability and reduce transaction costs.

Business-defined sector-specific codes are often monitored through 2nd party certification. In firm-specific codes, the lead firm determines the implementation principles to which suppliers must conform. Large vertically integrated buyers or business associations employ different forms of monitoring. In some cases, buyers or trade associations directly monitor the production processes of suppliers. Sometimes monitors are integrated into the supplier's firm. In other cases, the buyer or association contracts a service agency or accredits their own certification bodies, to audit compliance to the codes using guidelines developed by the buyer or trade association (FEER 2000:2ff). Very rarely, there are codes of conduct involving third party certification. These sometimes involve the participation of NGOs or local civil society groups. High profile, brand-name, companies such as Nike and Reebok delegate monitoring to local NGOs, or neutral service agencies, to increase the reliability and transparency of the code, and raise public confidence in the brand.

The **3rd generation** of environmental standards are developed in large part by business but, unlike the 1st and 2nd generation environmental and social standards, are generic as opposed to firm or sector-specific. The most prominent example is the ISO 14000 environmental management standard. Its growing importance can be seen by the rapid increase in its adoption. The number of new ISO 14000 certificates issued world-wide in 1999 was 14,106, an increase of 78.9% since 1998. Moreover, some countries are beginning to adopt the standard into national regulatory systems (Haufler 2000: 21). In contrast to ISO 9000, whose introduction is based on the needs of business for quality assured supply chain management, ISO 14000 has evolved under different pressures. It was formulated in 1996, but is based on the earlier British standard BS 7750. However, its emergence has to be seen as a response by industry to the growing environmental consciousness of the 1980s and 1990s, and the demands of NGOs and multilateral bodies for environmentally sustainable practices in production.

The scope of coverage of ISO 14000 is somewhat different from ISO 9000. It does not apply to the whole supply chain. Instead, it is concerned with environmental management practices of the certified unit alone. Therefore, it does not necessarily provide greater transparency in the search for suppliers with good environmental management systems. The influence of ISO 14000 along the value chain is weak. Consequently, many producers favour ISO 14000 as a defensive measure against possible pressure to meet more regulated environmental standards. It, nevertheless, demonstrates that the enterprise has adopted management practices that demonstrate environmental responsibility and that reduce environmental costs within the firm. As with ISO 9000 and overall product quality, ISO 14000 compliance does not suggest that a product or service is environmentally sound. ISO 14000 is concerned with environmental *management*. This means documenting and monitoring procedures adopted by firms to eliminate harmful effects on the environment as well as to increase resource efficiency. Certification is through internal monitoring and independent third-party audits, using procedures and service providers similar to those adopted in ISO 9000.

4.2 NGO-business defined standards

From standards defined by business, we turn to standards and labels that emerge through networks that bring together business and NGO interests. These address environmental, social, and increasingly ethical, concerns (Blowfield 1999). These are the **4th generation** of social and environmental standards, and are sector-specific in coverage. Such standards are often supported by governments and international institutions keen to encourage independent codes and labels that involve civil society actors. Prominent examples of such sector-specific codes and labels include: Transfair (or Fairtrade), Rugmark, Forestry Stewardship Council (FSC) or Marine Stewardship Council (MSC)[18], and the Clean Clothes Campaign (CCC). While their objectives often differ, they have in common the involvement of a wide range of social and economic actors, with NGOs as the main drivers.

- The Transfair (or Fairtrade) label started through initiatives of solidarity groups in different industrial countries. Various labels emerged from different fair trade initiatives concerned with the dependence of farmers of many developing countries on the volatile export trade and the lack of access to fair and reasonable loans. During the 1990s, products carrying the Fairtrade mark, like coffee or cocoa, became a common sight in European supermarkets. But their market share is minimal, and has, of late, declined (Robins and Roberts 2000:16).
- The RUGMARK Foundation concentrates on child labour in the carpet industry. Supported by UNICEF and ILO, it recruits carpet producers and importers to make or sell carpets that are free of child labour. By

[18] The Marine Stewardship Council (MSC) label focuses on sustainable fishery production. It follows the same structure as FSC but has had less influence in international trade.

agreeing to adhere to strict performance guidelines for carpet production, and by permitting random RUGMARK inspections of carpet looms, producers receive the right to put the RUGMARK label on their carpets. At present RUGMARK's efforts are mainly focused on India, Nepal and Pakistan. The label accounts for a significant share of the European and US market, with over 30% of carpet sales in Germany (Reichert 2000:26).

- FSC is a non-profit association founded in 1993. Set up in Canada it has an international agenda to promote sustainable forest management. The main driver of this initiative have been environmental NGOs, particularly the Worldwide Fund for Nature (WWF), that campaigned against the international tropical timber trade (Kiekens 2000:1). Since its foundation, FSC has gained increasing influence in the international timber-products trade. It is especially important in the European market. The volume of FSC-certified timber has grown from 1 million hectare in 1995 to almost 17 million hectares at the end of 1999.[19] Three-quarters of this comes from three industrialised countries: Sweden, Poland and the United States (Kiekens 1999:2). More recently, leading retailers, especially in the Western European home furnishing products (D-I-Y) sector, are using the FSC label as an advertising tool, promoting environmentally and socially conscious timber demand. In 1995, WWF set up buyers groups. The first of these was in the United Kingdom. By 1999, there were 15 buyers groups throughout the world, chiefly in Europe and North America. The participation of DIY retailers is important, because they often entail a large share of the market. In the UK, for example, DIY stores account for almost 25% of the timber trade (FSC 1999). Although NGOs were the main driver of FSC, the standard itself was formulated through a network of NGOs and business. The standard adopts a sustainability approach. Formulation procedures within the advisory board involve social, economic and ecological interest groups with equal voting rights. This implies that while it is an environmental forest management standard, it also incorporates social principles. Ten social and environmental principles form the global framework of the label. National groups are set up within countries where forest-owners want to implement the FSC label. These national groups are organised along similar tripartite membership and voting right system as seen at the global level. National groups adjust the global principles to local circumstances and formulate country-specific requirements.
- The Clean Clothes Campaign, like FSC, also pays special attention to the participation of local civil society. In contrast to FSC it focuses on social issues. It is organised through an international NGO network that tries to build linkages with retailers and companies. The goal is to improve working conditions in the global garment industry. The network comprises the widest variety of

[19] Although this increase is impressive, it constitutes only 0.5% of the world's forests.

organisations in the standard debate, including trade unions, consumer organisations, researchers, solidarity groups, women's organisations, church and youth groups. Their guiding codes draw on ILO conventions, including those on child labour, minimum wage, the right to collective bargaining and freedom of organisation. Although not a label, CCC issues 'stickers' that retailers can use in marketing. In several countries, including Sweden, France, the UK and the Netherlands, projects have been set up involving companies and participating organisations to develop independent monitoring systems.

The FSC and the Clean Clothes Campaign are of special interest for different reasons. First, they are both a mix of label and code. Second, they emphasise a role for local civil society in implementation. Third, FSC incorporates environmental and social concerns with professional, and independent, certification procedures. Fourth, FSC operates a comprehensive scheme of certification along the *whole* value chain. In accord with its emphasis on sustainability at local and international levels, local civil society is involved in the implementation and monitoring process, although accredited certification bodies from the FSC are responsible for third party certification. In the FSC standard, there are two distinct certification processes. First, auditing of the environmental management practices used in forests and timber plantations. Second, monitoring of the 'chain-of-custody' of the timber as it flows from the sustainable-managed forest to the saw-mill, the furniture (or timber-product) producer and on to the retailer. Thus the FSC system differentiates between two certification and monitoring schemes: one for the forest, and the other for the value added companies engaged in the chain of custody of FSC-certified timber. Both require third party certification. But the environmentally sustainable principles of the FSC focus only on forest management. They do not apply to the subsequent value-added processes or the manner in which products are made from FSC certified timber (Kiekens 1999, 2000). Enterprises in the value chain only have to comply with documentation, transport and storage requirements to insure that FSC-labelled products are indeed from FSC-certified forests. With this system, every FSC certified product can be traced back to the forest. This procedure demonstrates that the real costs of implementing the standard rests on the downstream supplier, the forest or plantation owner, while the reputation benefits of FSC accrue, at little cost, to the retailer.

Such initiatives, involving the collaboration of NGOs and business in defining standards, demonstrate more complex network arrangements than firm and association codes. They are a relatively new phenomenon, and have to be analysed with the evolving strategies of NGOs and business during the last decade. Large retailers and producers in certain sectors recognise that compliance with independently monitored standards, developed in partnership with NGOs, can enhance legitimacy and reduce vulnerability to consumer campaigns. Moreover, they are aware of the advan-

tages such labels provide as part of marketing strategies, and in differentiating product niches. NGOs, for their part, have learnt that co-operation can be more effective for reaching environmental and social goals. This has enabled many NGOs to expand their activities and enter new arenas.

Despite this change of attitude by different interest groups, the management of such networks remains a difficult task. There are often network failures as actors with different aims and powers try to collectively set standards. As Messner (1997) notes, there are four core problems in network governance. First, the greater the number of actors, the higher the risk of veto positions. Second, the search for a consensus between different interest groups often leads to agreement only on the smallest common denominator. Third, networks often prioritise short-term interests over long-term objectives. Fourth, networks tend to externalise costs at the expense of the network environment due to intended or unintended effects (Messner 1997: 221). To prevent such failures, co-ordination between *public* and private actors is important.

Attempts at developing generic global standards often fail because of network problems. These are more likely in the environmental than in the social arena. Social standards usually have a framework of reference. In most cases they refer either to a single ILO convention, the eight ILO core standards, or the Declaration of Universal Human Rights. Such reference points do not, as yet, exist in the environmental field. Instead, there are a variety of environmental labels and codes, with sector- and process-specific environmental criteria. These include energy, ecological and biological standards, standards for recycling, forestry, cars, etc. Forming a consensus on a generic agreement is difficult. It is compounded by the large number of actors involved in negotiating a generic standard. Standards like FSC, therefore, demonstrate a new trend that combines social and environmental issues to shape a sustainable approach, albeit at the sector level.

4.3 Generic public-private social minimum standards

During the last five years new forms of generic social standards, formulated through various public-private networks, have emerged on the international arena. We view them as the **5th generation** of social standards. They seek to harmonise the diverse firm- and sector-specific codes and develop a global social minimum standard, and are based on NGO-business partnerships, either with public support or directly initiated by government. Examples include, the social management standard Social Accountability 8000 (SA 8000), the Fair Labour Association (FLA) (both based in the US), and the Ethical Trading Initiative (ETI) in the UK. A common feature amongst these initiatives is their reference to the core standards of the ILO.

- Since 1999, the New York based 'Council on Economic Priorities Accreditation Agency' (CEPAA – recently renamed as Social Accountability International, SAI) developed a global minimum standard with the objective of harmonising the diverse social standards in international

trade. SA 8000 tries to transfer the experiences of established quality assurance standards like ISO 9000 to social management. Certification bodies, unions, companies and NGOs have participated in formulating the standard. The standard itself is firmly based on established multilateral standards, including the ILO Conventions and the Universal Declaration on Human Rights. But it also includes provisions that go beyond the ILO core labour standards on issues like a 'living wage', hours of work and freedom of association. Similar to the ISO approach, SA 8000 is based on a model of factory certification by independent auditors, such as SGS International Certification Services (SGS-ICS) and Det Norske Veritas (DNV). Such auditors are hired by companies to monitor their own and/or their suppliers' practices. Officially local NGOs can be accredited as SA 8000 auditors and contracted by companies seeking SA 8000 certification. In reality, no local NGOs has as yet undertaken such a task. Instead, professional certification firms are more likely to play the primary role in SA 8000 audits. SA 8000 has, therefore, been criticised for effectively excluding local NGOs from an active role in code certification (Jeffcott and Yanz 2000:1). The certification procedure faces further criticisms. First, lead firms would most likely shift certification costs to suppliers. Second, professional auditing services are thought to be less experienced in the detection of workplace violations and less independent due to pre-existing contractual relationships with enterprise management (Diller 1999:118). Third, the approach is mainly based on the factory, where workers are treated as objects, rather than subjects with an active role to play in monitoring factory conditions. To assuage these concerns, the standards allow for interested third parties (including workers, unions or local NGOs) to make appeals to the certification body, or to CEPAA, challenging factory certifications or calling for the revocation of the accreditation of a certification firm.

In reaction to the criticism that CEPAA has faced in recent years, it has increased social audit training for certification bodies, and more widely integrated local NGOs and unions in gathering information (SAI 2000). Criticisms from the business perspective, question the strength and attractiveness of the SA standard. Nevertheless, international organisations and business participate in the SA 8000 Advisory Board.[20] They support SA 8000 because its independent market-based certification procedure adds credibility, and is similar to now well-known procedures adopted for quality assurance certification. This facilitates effective monitoring across geographically dispersed supply chains, while the engagement of unions and NGOs adds to the legitimacy of the standard.

---

[20] These are for example representatives of the International Textile, Garment and Leather Workers Federation (ITGLWF), the US National Child Commitee, Amnesty International, and firms like Avon, Toys "R" Us, Body Shop, Sainsbury (UK), Otto-Versand (Germany), Grupo M (Dominican Republic), Eileen Fisher (US), as well as the Abrinq Foundation for Children's Rights (Brazil).

Despite the participation of several TNCs and international associations, use of SA 8000 has not, as yet, become widespread. While the CEPAA is based in the US, the largest companies committed to SA 8000 are in Europe. Many lead firms, especially in the US, prefer to focus on their own firm or sector-specific codes. Nevertheless, SA 8000 is currently leading the agenda for harmonisation of the diverse codes of conducts, and the development of an international social minimum standard.

- In the US market, the SA 8000 competes with the Fair Labour Association (FLA). In 1998, the FLA grew out of the Apparel Industry Partnership (AIP) which was initiated by the US government in August 1996 to work towards eliminating sweatshops. The AIP brought together apparel and footwear companies, human rights groups, labour unions, religious organisations, consumer advocates, and universities to work on an industry-wide international code of conduct.[21] The FLA's workplace code includes the ILO core standard but does not include a living wage. FLA members are moving towards implementing a monitoring and certification system which, unlike the SA 8000 factory certification model, will certify Northern brands based on a sample monitoring of 30 percent of the company's suppliers. As with SA 8000, companies hire external monitors from a list of auditing firms including FLA-accredited NGOs. While the FLA also provides a mechanism for third parties to register complaints, it is not yet clear how much information on steps taken to eliminate abuses will be made publicly available. The FLA has been attacked by various critics, including unions, NGOs and student movements for being “a public relations cover”. However, it seems that the FLA (in some pilot projects) is putting more emphasis on involving local NGOs in the monitoring process than other code initiatives (Jeffcott and Yanz 2000:4).
- A leading publicly supported national initiative in the UK is the Ethical Trading Initiative (Barrientos 2000). This is a co-operative programme of NGOs, unions, universities and TNCs aimed at improving the working conditions between TNCs and their suppliers. It is governed by a board of directors, which includes the Department for International Development from the British government. Unlike SA 8000 and FLA it is not a factory or brand certification program. Instead, the ETI members aim to "identify and promote good practice in the implementation of codes of labour practices, including the monitoring and independent verification of the observance of code provisions" (Mabott 2001:16).

  According to the ETI, members are generally sceptical about factory certification as a short-term solution

[21] Current members of the FLA include some of the major US branded apparel and sports shoe companies, such as Nike, Reebok, Levi Strauss, Liz Claiborne, and Phillips-Van Heusen, as well as 131 universities whose licensed apparel is produced by US manufacturers. NGO members include the International Labour Rights Fund, Lawyers Committee for Human Rights, National Consumers League, Business for Social Responsibility and the Robert Kennedy Memorial Centre for Human Rights (see FLA homepage).

(Fuchs 2000). Instead, they follow the principle of "learning by doing" in the sense that member companies commit themselves to bringing their own codes into conformance with the ETI Base Code. The latter is based on the ILO core standards and on the living wage issue. The learning-approach is evident in ETI's focus on pilot projects, in which companies, NGO's and unions are experimenting with different models of code monitoring and verification. The companies have to map and assess labour practices in their supply chains and identify major problems of their suppliers. They then develop an internal monitoring program and plans for independent certification along the supply chain. The independent certification bodies can either be professional audit companies, as in SA 8000, or local NGOs and unions.[22] Thus, ETI does not develop a single form of certification and monitoring procedure. The initiative encourages multi-stakeholder approaches to develop understanding on how best to put codes into practice. To reach this aim it tries to implement 3rd-party certification through professional auditing firms, while certification rules are defined in a tripartite fashion with the involvement of local actors. The objective is to demonstrate a joint implementation structure (professional services in the market and local inspectors) that is recognised as operating independently of management control and enlisting local participation.[23] At present, the ETI has not only the widest range of actors engaged in any 5th generation social standards, it is also the most far-reaching of such standards and the one that has attracted most attention from leading retailers (Reichert 2000; van Liemt 1998a:21; Barrientos 2000).[24]

In all the three approaches above, local suppliers bear the costs of certification and implementation. While SA 8000, FLA and ETI try to give ILO conventions more policy impact on the firm and supply chain level, they differ widely in how they seek to reach this aim. SA 8000 aims to raise transparency and credibility for large companies in their search for suppliers, thereby reducing risks. The market based certification approach reduces transaction costs for the lead firm, pushing them down the supply chain. In contrast, FLA is mainly based on informing consumers about the social responsibility of Northern brand firms and their suppliers. ETI with its Basic Code has to be seen as an institution, which wants to encourage the search for better implementation procedures with reference to local circumstances and the participation of local workers and NGOs. Referring to the

[22] By mid-2000 ETI had initiated four pilot monitoring projects in four different sectors and countries: clothes in China; horticulture in Zimbabwe; wine in South Africa, and bananas in Costa Rica.

[23] Evaluation along the supply chain and compliance to the Code is still weak. From 4556 suppliers of the ETI member companies in the year 2000, only 32 percent were evaluated and only 20 percent of the total complied to the company code or the ETI base code. (Mabott 2001:18)

[24] Members of the ETI include: Sainsbury, Levi Strauss, Littlewoods, Marks & Spencer, Safeway, The Body Shop, as well as a numbers of British NGOs and three national and international unions (Mabott 2001:17).

negotiation costs and the danger of network failures, the ETI approach involves a continuing process of negotiation with the different local stakeholders in the standard setting procedure. The ETI was initiated by national government which pressured British TNCs and NGOs to develop code guidelines. Therefore, the government can be seen as the lead actor, although the process of standard setting is based on a participatory approach. In contrast, SA 8000 works along clearly defined rules and guidelines, although suppliers' difficulties in standard compliance gets no attention. SA 8000 may gain importance as a global minimum standard because of its market-based, and relatively easy, implementation process. But, given its voluntary character it is not clear whether it would be widely accepted in the private sector. This is in contrast to attempts to introduce global social criteria into multilateral trade rules which would pressure business to comply. Despite debates in global public forums, private social and environmental standards lack a hierarchical institution that can enforce such standards. This raises doubts on their future influence.

5 Comparing Typologies and Trajectories of Standards

Sections 3 and 4 gave an overview of the leading global standards relating to quality management, food safety, environment and social issues. As we can see, the evolution of standards in each of these areas has followed distinct paths. In this section we summarise this discussion by considering first the typology of standards, and then turning to a comparison of the distinct trajectories. We end by considering the nature of links between public and private agendas that influence the ways in which standards have evolved.

5.1 Typologies of standards

Earlier we set out a typology for global standards. This sought to capture the key elements of each standard, including coverage, major drivers, certification process and regulatory implications. It also speculated on the nature of governance in terms of how the standards were set and monitored. This framework is used in Table 6 below to summarise the evidence from the previous sections.

What is apparent is the degree of similarity across diverse standards. These include, for example, the ways in which standards, codes and labels sit side by side. Take the case of ISO 9000. While not a label, firms compliant with the standard often use it as a marketing tool. The ISO 9000 logo suggests, often inaccurately, to consumers and the wider public, that the firm meets accepted international norms on quality assurance, and by association quality management. Similarly, while the forestry stewardship council has a clearly defined standard, it is also a powerful, and in many markets a clearly recognisable, label suggesting sustainable forestry management. Consumers are rarely aware of the specific requirements and procedures entailed in these standards. Nevertheless, these labels reassure consumers that they have made a more informed, and 'better', choice. This points to a gap in public understanding of what standards and labels are, while recognising that they

can radically influence consumer behaviour.

well as in environmental and social concerns. In many cases, standards are

Table 6: Overview of Key Standards

Field of Application	Form:	Coverage	Key Drivers	Auditing Process	Regulatory Implication
Quality Assurance and Food Safety Standards					
ISO9000	Standard (& label)	Generic	International business	3rd party-private auditors	Voluntary. Market requirement and legally mandatory in some markets
QS9000/ AS9000 EUREP-GAP	Standard	Sector Specific	International Business	3rd party – private auditors	Voluntary and sector requirement
HACCP	Standard	Sector specific	International Organisation & government	3rd party – public and public-private bodies	Increasingly legally mandatory
Firm QA codes	Codes	Firm-specific	International Business	1st and 3rd party	Voluntary
Social and Environmental Standards					
SA 8000, ETI, FLA	Standard & Code	Generic	State, Business & NGOs	3rd party – private auditors and NGOs	Voluntary
ISO 14000	Standard (& label)	Generic	Business	3rd party – private auditors	Voluntary
FairTrade, FSC, Rugmark	Standard Codes & Labels	Sector Specific	NGOs, Unions, & Business	3rd party – NGOs	Voluntary
Eco-Tex, AVE	Codes & Labels	Sector	Business Associations	1st&2nd party Business Associations	Voluntary
Company codes	Codes	Firm-specific	Business	1st&3rd party Firm and NGOs	Mandatory for all suppliers

Another area of similarity brought out by the comparison of the range of standards is the growing importance attached to independent third party monitoring. This adds credibility to the standard, while lowering monitoring costs to firms. There is now an extensive market for auditing of management practices in areas of quality assurance as certified through specialist service providers. In some, this involves direct monitoring by civil society actors.

5.2 Trajectories of public and private standards

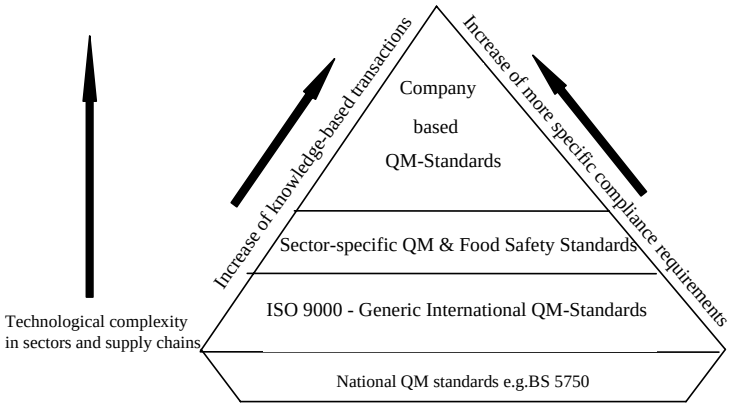
The explosive growth of global standards during the 1990s has been driven

by globalisation. There is a greater need for regulation of quality, safety as well as social and environmental issues to prevent a 'race to the bottom' and to improve co-ordination of complex global value chains. This has involved global public effort. WTO rules have raised the importance of national standards in relation to safety and quality issues. Although the Uruguay Round tried to decrease loopholes for the misuse of these standards, global trade has increased the need for more specified regulation of products and processes. The ILO's Declaration on core labour standards has led to a new dynamic within the organisation, and increased the number of ratification to ILO conventions. More importantly , despite the often weak enforcement of the core labour standards, they have become a model for private social standards. Finally, different UN summits have sensitised governments on sustainable and ethical development. In recent years, these multilateral initiatives, despite their weaknesses, have influenced, and been influenced by, the development of private standards. They have collectively brought the interdependent relations of trade rules, social order and sustainable development at least rhetorically onto the agenda.

Despite these developments, publicly defined standards are limited. In contrast, private standards have gained influence in trade relations. Different trajectories are observable. In the case of quality management standards, as figure 1 shows, we see a move from first generation generic standards (ISO 9000) to second-generation sector-specific quality assurance standards (such as QS 9000 and AS 9000). Most recently, there are indications that a third generation of quality assurance standards are evolving, based on company-specific norms.

It is apparent that compliance to international quality management standards is increasingly necessary in many sectors. In some it is now mandatory. In this context, the ISO 9000 standard can be regarded as a minimum requirement and a base line. It provides a set of codified rules that enjoy a high degree of legitimacy. This legitimacy is a function of independent certification, and the

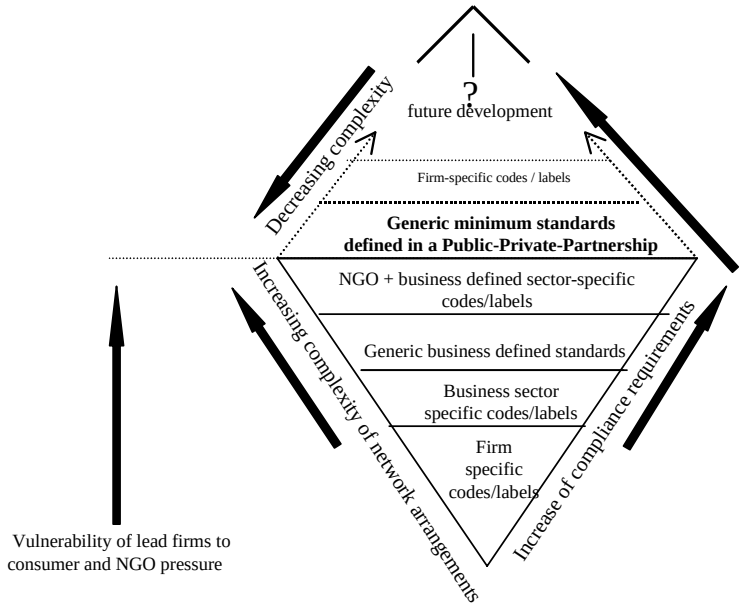
Figure 1: The dynamic of international quality management standards: from generic approaches to further diversification



active role of business in the formulation of the standards. Its effect is to raise transparency in the market, allowing lead firms to select suppliers with greater confidence on their production capabilities and quality assurance procedures.

Company based quality assurance standards, which are also emerging, reflect various pressures. For example, mergers of large firms, each with distinct supply chains and with their own codes, rules and 'languages' of supply chain management, call for greater harmonisation of quality management systems. In addition, as one moves along the trajectory from simple production, and supply chain systems, towards technically complex production systems, demands for company-based quality assurance standards within the chain are likely to increase. Compliance with the generic ISO 9000 standards, or even sector-specific standards, are insufficient. Such complexity may be related to the technological frontiers of the particular value chain, or the importance attached to particular needs of lead firms. For example, the importance of quality assurance in food hygiene drives Nestle's own quality assurance code to which its suppliers must comply (Reardon et. al.

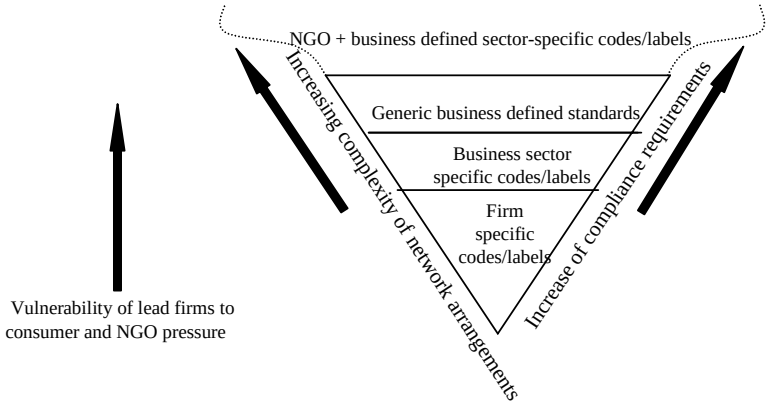
Figure 2: The dynamic of international social standards: from diverse to generic approaches



Support for compliance to ISO 9000 is uneven, and there are concerns on how sanctions on non-compliance are enforced. It is also apparent that with more complex sectors and value chains, complex in terms of product technology, logistics or chain co-ordination, more sophisticated quality assurance procedures are required. In such cases, the base ISO 9000 standard may be insufficient in providing the required level of quality assurance to the lead firm. Thus, we observe the emergence of more specialised, sector-specific, quality management standards, such as EUREP-GAP, AS 9000 and QS 9000.

2001). In such situations, it is possible that company based quality management standards will be of greatest importance. Thus we observe the 'pyramid trend' shown above. Here the influence of the future, although the creation of global codes of conduct in the form of a social minimum standard seeks to decrease the heterogeneous approaches. With rising consumer consciousness,

Figure 3: The dynamic of environmental standards and its growing diversity



quality management standards is increasing, while the requirements of these quality management standards is associated with the nature of technological complexity of the sector, and the need for more specialised, knowledge-based, codification.

In contrast to the pattern seen above, our discussion of the various types of social and environmental standards indicates a very different trajectory of standard evolution. Here the trend is from firm and sector-specific standards to the evolution of generic standards. This is shown in Figure 2 below. The impact of social and environmental standards on value chains will differ according to sectors. Such standards are likely to gain importance in particular types of value chains with a wide international division of labour based on labour cost and resource-based international competition. The diversity of the existing standards will still continue in lead firms are being pressured to take on greater social and environmental responsibility for their supply chains. To reduce their vulnerability to such pressures, such firms rely more heavily on standards, especially those with a high level of public legitimacy. Hence, key actors and procedures, like independent monitoring, that raise legitimacy have to be integrated into the negotiation of the standard. This makes the networks more complex.

The different 'generations' of social and environmental standards demonstrate a much more conflictive constellation than quality management standards. In order to gain legitimacy, these standards have to involve a larger number of actors in the network. At the same time social and environmental standards are much more difficult to codify than quality management standards. They need a more complex process of negotiation and the participation of different actors with

different core competencies and legitimacy resources. The different standard approaches, according to their legitimacy requirements, depend on the integration of different interest groups and independent monitoring procedures.

Thus we observe the 'inverse-pyramid trend' shown above and below. Here, the influence of social and environmental standards is increasing in the context of growing consumer consciousness. At the same time, the demands that this places, and the need to give the standard legitimacy, requires the integration of a rising number of actors. Social standards tend to generic approaches along the guideline of the ILO core labour standards (see figure 2). Once these global minimum standards are framed, further specialised standards like firm or sector-specific codes could follow. Already some of the SA 8000 certified firms, like the German retailer OTTO, see it as a minimum requirement surpassed by their own firm-specific social standards (Merck 1998).

Figure 3 demonstrates that the trajectory in environmental standards differ. Here a tendency to generic standards is not observed. Although NGO-Business codes and labels are increasingly significant, they are also becoming more diverse - differentiated by sectors, areas and countries. This results in a complex array of environmental codes. Hence, without a 'least common denominator', there is no trend towards defining minimum global environmental standards.

6 Conclusion

Despite liberalisation, the global economy continues to be governed by 'rules'. But the rules are changing, and international standards point to one such set of changes. Concerns about, quality assurance, health and safety, as well as ethical, social and environmental aspects of production are now central to the global agenda on trade. In some markets, compliance with particular standards constitute entry criteria. In others, it is a basis for defining market niches and creating competitive advantages. As a result, developing country firms have come to realise that their capacity to compete internationally is often linked to their ability to comply with global standards. While these standards represent new challenges, there remain fears that standards are the new barriers to trade: fears that developing countries lack adequate technical infrastructure to engage in standard formulation, or promote compliance; fears that small firms, short of the technical and financial resources needed for compliance, are the most disadvantaged in meeting global standards. These fears reflect anxieties that standards far from averting the 'race to the bottom', may effectively marginalise particular producers.

These preoccupations underline the importance of making sense of standards, both for policy makers and academic researchers. The proliferation of standards makes this an especially difficult task. This is a particular concern for firms forced to implement a plethora of diverse standards, and for consumers confronted with a confusing array of labels and standards with which to make informed choices. Faced by this diverse assortment, few studies have gone beyond

individual standards. Our view is that there is a value added to be had from a typology and from a comparative perspective. Thus, as the first step in reducing the complexity, we set out to make sense of the leading global standards. We have shown how such standards have evolved, identified the main drivers behind their development, and outlined their monitoring and certification procedures. We have paid particular attention to the trajectory of standards, and shown through a comparative typology how trajectories of some standards while others follow a similar path. This categorisation of standards is thought to be useful for most of the development debates in which global standards play a critical role, be they concerned with issues of efficiency, equity or management of the new global economy. However, as pointed out in the introduction, the application of these categories to these debates was not the objective of this paper.In summary, this paper underlines the benefits that a comparative perspective provides to our understanding of global standards. The typology, proposed in this review, shows the similarities and differences across standards. Similarly, the discussion on the evolution of standards, according to their distinct generations, shows how trends differ between quality assurance standards on the one hand and social and environmental standards on the other hand, as well as how social and environmental standards are being pulled along different paths. It remains unclear what shape these bodies of standards are going to take in the future. Clearly, there are benefits to be had from the harmonisation of standards, and the concomitant reduction of the multitude of competing standards. In some areas this has happened. In others, the technical nature of the standard and the specific needs of each sector may require diverse approaches that limit the possibilities, and the desirability, of such harmonisation.

7 Bibliography

Anderson, K., 1996, 'Environmental standards and international trade', Proceedings of the World Bank Annual Conference on Development Economics, pp.317-338

Barker, D., 2000, 'U.S. National Organic Standards – The Battle is Not Yet Over', in: http://www.ifg.org/organic.html.

Barrientos S., 2000, 'Globalisation and ethical trade: assessing the implications for development', Journal of International Development, vol 12.

Barrientos S., Dolan C., and Tallontire A., 2001, 'Gender and Ethical Trade: A mapping of the issues in African Horticulture', working paper, NRET, Natural Resources Institute, Univ. of Greenwich.

Blowfield M., 1999, 'Ethical Trade: a review of developments and issues', Third World Quarterly, vol. 20, no.4.

Bobrowsky D., 1999, 'Corporate Governance Games and the Setting of Standards in the Global Economy', Meeting Paper.

Caldwell D.J., 1998, 'Ecolabeling and Regulatory Framework – A Survey of Domestic and International Fora', in: http://www.consumerscouncil.org.

Chahoud T., 1998, Handel und Umwelt: Förderung umweltfreundlicher Prozeß- und Produktionsverfahren

in Entwicklungsländern, DIE, Berlin.

Clapp J., 1998, 'The Privatisation of Global Environmental Governance: ISO 14000 and the Developing World', Global Governance, Vol. 4, No.3, pp.295-316.

CDG (Carl-Duisberg-Gesellschaft), 2000, Conference on Global Social Standards in Practices: Monitoring of Codes of Conduct, Hannover, 13th-15th October.

David P., 1995, 'Standardisation policies for network technologies: the flux between freedom and order revisited', in Hawkins et al (eds), 1995.

Dolan, C., and Humphrey, J., 2000, 'Governance and trade in fresh vegetables: the impact of UK supermarkets on the African horticulture industry', Journal of Development Studies, vol. 37, no.2.

Diller J., 1999, 'A global conscience in the global marketplace, Labour Dimensions of codes of conduct, social labelling and investor initiatives', International Labour Review, Vol.136, No.2.

Dion, C., Lanoie, P., Laplante, B., 1997, 'Monitoring environmental standards: Do local conditions matter?', World Bank Development Research Group Policy Research Working Paper No. 1701, January.

Egger M., 1998, ISO 21000? Internationale private Normen für die soziale Verantwortung von Unternehmen', Ein Diskussionsanstoss, Brot für Alle (BFA).

EUREP., 2001, Eurep-Gap Protocol 2000, http://www.eurep.org

FAO, 1998, 'Food Quality and Standards', Service Food and Nutrition Division, Food and Agricultural Organisation of the United Nations, Rome 1998.

FEER (Far Eastern Economic Review), 2000, 'The Inspector Calls, Working conditions in Asian factories: Mattel has a proactive approach', Far Eastern Economic Review, July 2000, and Internet: http://www.feer.com .

Ferguson C., 1998, 'A review of UK company codes of conduct', Social Development Division, DFID, London.

Finger M., and Tamiotti L., 1999, 'New global regulatory mechanisms and the environment: The emerging linkage between the WTO and the ISO', IDS Bulletin, Vol.30, No.3, July.

The Fresh Produce Journal (FPJ), 5th October 2001

Fuchs P., 2000, 'Codes of Conduct – neue Handlungsoption zur Reregulierung transnationaler Konzerne 'von unten'?', in Ch. Dörrenbächer, Dieter Plehwe (Hg.), Grenzenlose Kontrolle? Organisatorischer Wandel und politische Macht multinationaler Unternehmen, Berlin.

Fues T., 2000, 'Auf dem Weg zur Weltsozialordnung? Beiträge zur Debatte über globale Armutsstrategien', INEF-Report, Heft 44, Duisburg, http://www.inef.de .

Gereffi G., 1999, 'International trade and industrial upgrading in the apparel commodity chain', Journal of International Economics, vol. 48, no.1, June.

Gereffi G., 2000, 'Beyond the producer-driven/buyer-driven dichotomy: An expanded typology of global value chains with specific reference to the internet', paper presented at the Bellagio conference on value chains, Bellagio Italy, September 2000.

Glaser N., 1999, 'GTZ unterstützt Entwicklung von Soziallabels', Entwicklungspolitik, No. 23/24, pp.11-13.

GRI (Global Reporting Initiative), 2000, 'Sustainability Reporting Guidelines on Economic, Environmental, and Social Performance', June, Internet: http://www.globalreporting.org.

Grote U., Basu, A.K., and Chau, N.H., 1999, 'The International Debate and Economic Consequences of Eco-Labeling', Discussion paper No.18, Center for Development Research (ZEF), Bonn.

Hansen E., 1998, 'Certified Forest Products Market Place', Forest Products Annual Market Review, 1997-1998.

Haueisen G., 1999, ,Social Accountability 8000: Einige Problembereiche globaler Sozialstandards für Produktionsstätten', Forum Wirtschaftsethik, No.3, in http://www.kirchen.de/akademie/rs/referate/wsethik .

Haufler V., 1993, 'Crossing the Boundary Between Public and Private: International Regimes and Non-state Actors', in V. Rittberger (ed.), Regime Theory and International Relations, Oxford, pp. 94-111.

Haufler V., 2000, 'Negotiating international standards for environmental management systems : The ISO 14000 standards', Case study for the UN Vision Project on Global Public Policy networks, in: http://www.globalpublicpolicy.net .

Hawkins, R, 1995, 'Introduction: addressing the problematique of standards and standardisation', in: Hawkins et. al., (eds.,), 1995.

Hawkins, R., Mansell, R., and Skea, J., (eds.), 1995, Standards, Innovation and Competitiveness: The politics and economics of standards in natural and technical environments, Edward Elgar, Aldershot.

Hilowitz, J., 1997, 'Social labelling to combat child labour: Some considerations', International Labour Review, Vol.136, No.2, pp.215-232.

Humphrey, J. and Schmitz, H., 2001, 'Governance in Global Value Chains', IDS Bulletin, Vol. 32, No. 3, Institute of Development Studies, Brighton, pp. 19-29.

IDS, 1999, 'Globalisation and Governance of the Environment', IDS Bulletin, Vol. 30, Institute of Development Studies, Brighton.

ILO, 1998, 'ILO Declaration on Fundamental Principles and Rights at

Work', International Labour Review , Vol 137, no.2, pp.253-257.

ILO, 2000, 'Review of annual reports under the follow-up to the Declaration on Fundamental Principles and Rights at Work', International Labour Organisation, Geneva, April 2000, in: http://www.ilo.org.

ISO, 1994, ISO 9000, International standards for quality management, Geneva: International Organisation on Standards.

ISO, 1998, 'Standards and world trade', International Standards Organisation, Geneva in: www.iso.ch/wtotbt/.

ISO, 2000a, 'Transition Planning Guidance for ISO/DIS 9001:2000', Document: ISO/TC 176/SC 2/N 474, International Standards Organisation, Geneva in http://www.iso.ch/9000e/revisionstoc.htm .

ISO, 2000b, 'The ISO Survey of ISO 9000 and ISO 14000 Certificates, Eight Cycle – 1999', International Standards Organisation, Geneva, in: http://www.iso.ch/9000e/9k14ke.htm

ISO/UNCTAD/GATT, 1993, ISO 9000 quality management systems, guidelines for enterprises in developing countries, Geneva.

Jeffcott, B., and Yanz, L., 2000, 'Visions of Ethical Sourcing', Financial Times, May 2000, London, and Internet: http://www.maquilasolidarity.org/resources/codes/fintimes00.htm

Kaplinsky, R., 2000, 'Spreading the gains from globalisation: what can be learned from value chain analysis?', IDS Working Paper 110, Institute of Development Studies, Brighton, May.

Kaplinsky, R., and Morris, M., 2001, 'A manual for value chain research', Institute of Development Studies, Brighton, http://www.ids.ac.uk/global .

Kiekens, J.-P., 1999, 'Forest Certification, Part I: Origins, Background and Recent Trends', Engineered Wood Journal, Fall.

Kiekens, J.-P., 2000, 'Forest Certification, Part II: Impacts on Forestry, Trade and Consumer Information', in: http://www.apawood.org/news/journal/spring2000.html .

Krueger, A.B., 1996, 'International labor standards and trade', Proceedings of the World Bank Annual Conference on Development Economics, pp.281-315.

Lee, E., 1997, 'Globalisation and labour standards: A review of issues', International Labour Review, Vol.136, No.2.

Mabott, F., 2000, 'Global Social Standards, Social Protectionism and Best Practices Principles: The Ethical Trading Initiative', paper presented at CDG Conference in: Global Social Standards in Practices: Monitoring of Codes of Conduct, Hannover, 13th-15th October.

Mah, J.S., 1997, 'Core labour standards and export performance in developing countries', The World Economy, Vol.20, No.6, September.

Maskus, K.E., 1997, 'Should core labor standards be imposed through international trade policy?', World Bank Development Research Group Policy Research Working Paper No. 1817, August

Merck, J., 1998, 'Sozialverantwortung im Handel: Der SA 8000 als Element des Otto Versand', in Forum Wirtschaftsethik, No.4, in http://www.kirchen.de/akademie/rs/referate/wsethik

Messner, D., 1997, The Network Society, Economic Development and International Competitiveness as Problems of Social Governance, Frank Cass, London.

Messner, D., 2000, 'Some categories for understanding standardisation procedures', draft paper for a workshop of the IDS/INEF project "The Interaction of Global and Local Governance", January.

Messner, D. and Meyer-Stamer, J., 2000, 'Governance Theories and Network Concepts. Tools to Study the Dynamics of Clusters and Global Value Chains, Draft for a workshop of the IDS/INEF project "The Interaction of Global and Local Governance", January.

Messner D. and Nuscheler, F. (Ed.), 1996, Weltkonferenzen und Weltberichte, Ein Wegweiser durch die internationale Diskussion, Bonn.

Miles, M. P., Munilla, L. S., and Russell, G.R., 1997, 'Marketing and Environmental Registration & Certification, What Industrial Marketers should understand about ISO 14000', Industrial Marketing Management, No. 26, pp.363-370.

Murray, J., 1997, 'Corporate Codes of Conduct and Fair Labour Standards', paper presented at International Workshop on Global Production Systems and Labour Markets, International Institute for Labour Studies, Geneva, 22-23 May.

Musiolek, B., 1999, ‚Verhaltenskodizes: ein Modell zur Durchsetzung von Arbeitsrechten? Eine kritische Bilanz', in: Musiolek, B (ed.): Gezähmte Modemultis, Frankfurt a.M..

Nadvi, K., 1999, 'Collective efficiency and collective failure: the response of the Sialkot surgical instrument cluster to global quality pressures', World Development, nol 27, no 9, September.

Nadel, S., 1997, 'The future of standards', Energy and Building, vol. 26, pp.119-128.

OECD, 1995, Trade and labour standards: A review of the issues, Paris: OECD.

OECD, 1996, Trade, Employment and Labour Standards: A study of core workers' rights and international trade, Paris: OECD.

Paulus, J., 2000, 'Gute Zeichen, schlechte Zeichen', Öko-Haus, vol. 1.

Quadros, R., 2001, 'The limits of global standards in fostering upgrading and promoting governance: The experience of Brazilian auto-component producers with quality standards, Draft paper presented at IDS/INEF workshop on "Governance and Upgrading", February.

Reardon, T., Codron, J-M, Busch L., Bingen J., and Harris C., 2001, 'Global change in agrifood grades and standards: Agribusiness strategic responses in developing countries', International Food and Agribusiness Management Review, Vol 2, number 3.

Reichert, T, 2000, ‚Vom Beschluß zur Umsetzung – Sozialstandards in der Weltwirtschaft', Basispapier erstellt für die GTZ, Eschborn.

Reinecke, W. H., and Witte, J. M., 1999, 'Interdependence, Globalisation, and Sovereignty: The Role of Non-Binding International Legal Accords', in: http://www.globalpublicpolicy.net, July.

Reuss, M., 1999, Menschenrechte durch Handelssanktionen, Die Durchsetzung sozialer Standards im Rahmen der WTO, Hamburg.

Robins, N. and Roberts, S., 2000: 'The Workbook, Part 1-3: A new deal for trade, environment and development?, The Business of Trade, Partnerships for the Future, in: http://www.iied.org.

Roht-Arriaza, N., 1995, 'Shifting the Point of regulation: The International Organisation for Standardisation and Global Lawmaking on Trade and the Environment', Ecology Law Quarterly, Vol.22, pp.479-539.

SAI, 2000, 'Measuring the Social Accountability of Business in Central and Eastern Europe: A Consultative Workshop on SA 8000', March 4-6, Budapest, Hungary, in www.cepaa.org .

Sajhau, J.-P., 1999, 'Business ethics in the textile, clothing and footwear industries, Part 2', International Labour Organisation, Working Paper, SAP 2.60/WP.110, in: http://www.ilo.org/public,1999.

Sautter, H., 1998, 'Institutionen als Objekt und als Rahmnbedingung des globalen Wettbewerbs – zur Problematik von Umwelt- und Sozialstandards', in R. Eschenburg & M. Dabrowski (Hrsg.), 1998, Konsequenzen der Globalisierung, Ökonomische Perspektiven für Lateinamerika und Europa, Münster.

Scharpf, F.W., 1993, 'Co-ordination in Hierarchies and Networks', in Fritz W and Scharpf (eds.), 1993, Games in Hierarchies and Networks, pp. 125-166, Frankfurt a.M.

Scholz, I., 1996, 'Trade, Environment and Development Co-Operation', Study for the OECD Co-operation Directorate, German Development Institute (GDI), Berlin.

Schuurman, H., 1998, 'Quality Management, ISO 9000 and Government Programmes', Desarrollo Productivo 24, Santiago: Economic Commission for Latin

America and the Caribbean (CEPAL), United Nations, Santiago.

Seddon, J., 2000, The Case against ISO 9000, Oak Tree Press, Dublin.

Sengenberger, W., & D. Campbell, eds., 1994, International Labour Standards and Economic Interdependence, Geneva: International Institute for Labour Studies, ILO.

Simonis, U.E., 1998, 'Institutionen der künftigen Weltumweltpolitik', in D. Messner (Ed.) 1998, Die Zukunft des Staates und der Politik, Möglichkeiten und Grenzen politischer Steuerung in der Weltgesellschaft, Bonn, pp. 300-322.

Skea, J., 1995, 'Changing procedures for environmental standard setting in the European Community (EC)', in Hawkins et. al. (eds.), 1995.

Srinivasan, T.N., 1996, 'Trade and human rights', Economic Growth Center Discussion Paper, No. 765, Yale University, December.

Steinmuller, W.E., 1995, 'The political economy of data communication standards', in Hawkins et. al. (eds.), 1995.

Stephenson, S.M., 1997, 'Standards and conformity assessment as non-tariff barriers to trade', World Bank Development Research Group Policy Research Working Paper No. 1826, September.

Sturgeon, T.J., 2000, 'How do we define value chains and production networks?', Background paper for Bellagio Value Chains Workshop, Bellagio, 25 September - 1 October, 2000.

Tassey, G., 1995, 'The roles of standards as technology infrastructure', in Hawkins et. al. (eds.), 1995.

Umweltbundesamt: Das Europäische Umweltzeichen, Wege zum produktbezogenen Umweltschutz in Europa, Texte 62, Berlin 1996.

UNIDO, 1996, 'Trade implications of International Standards for Quality and Environmental Management Systems, Survey results', UNIDO, Expert Group Meeting, Vienna, October, unedited version, ISED.9 (SPEC.).

UNIDO, 1999, 'Trade Implications of Standards and Conformity Assessment Procedures', UNIDO, Vienna, July.

van Liemt, G., 1998a, 'Codes of Conduct and International Subcontracting: a "private" road towards ensuring minimum labour standards in export industries', draft version, ILO, Geneva, http://www.ilo.org.

van Liemt., G, 1998b, 'The social policy implications of codes of conduct, with particular reference to the relations between companies adopting such codes and their suppliers and subcontractors', paper presented at International workshop on Global Production and Local Jobs: New Perspectives on Enterprise Networks, Employment and Local Development Policy, International Institute of Labour Studies, Geneva, 9-10 March.

von Moltke, K., and Kuik, O., 1998, 'Global Product Chains: Northern Consumers, Southern Producers and Sustainability, Part 1', Global Product Chains and the Environment, Institute for Environmental Studies Amsterdam.

Waddell, S., 1999, 'The Evolving Strategic Benefits for Business in Collaborations with Nonprofits in Civil Society: A Strategic Resources, Capabilities and Competencies Perspective', in: http://globalpublicpolicy.net .

Williamson, O., 1979, 'Transaction-cost economics: the governance of contractual relations', Journal of Law and Economics, vol. 22, 233-261.

Werle, R., 1995, 'Staat und Standards', in Renate Mayntz and Fritz Scharpf (eds.) Gesellschaftliche Selbstregelung und politische Steuerung, pp. 266-298, Frankfurt a.M..

Werle, R., 1999, 'Conflict or Peaceful Co-existence? Standards Organisations on a Global Scope', 2nd Interdisciplinary Workshop on Standardisation Research, Department of Standardisation, Hamburg May.

White, B., 1996, 'Globalisation and the Child Labour Problem', Journal of International Development, Vol.8, No.6.

Wilson, S.R., 1999, 'The Impact of Standards on Industrial Development and Trade', Quality Progress, July, pp.71-75.

WTO, 1998, 'Understanding the WTO agreement on Sanitary and Phytosanitary Measures', World Trade Organisation, Geneva, May, in www.wto.org .

Zadek, S., 1998, 'Consumption, civil action and sustainable development', Development, Vol. 41, No.1.

Zadek, S., and P Tiffen, 1996, ' "Fair Trade": Business or campaign?', Development, No.3.

Zucker, L.G., 1986, 'Production of Trust: Institutional sources of economic structure', Research in Organisational Behaviour, vol. 8, 53-111.