SUSTAINABILITY IMPACT ASSESSMENT OF PROPOSED WTO NEGOTIATIONS

PRELIMINARY OVERVIEW OF POTENTIAL IMPACTS OF THE DOHA AGENDA

ASSESSMENT OF INDIVIDUAL TRADE MEASURES

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4 June 2003
This report was prepared with financial assistance from the Commission of the European Communities. The views expressed herein are those of the Contractor, and do not represent any official view of the Commission.

This Report has been prepared for the European Commission under Framework Contract No Trade 01/F3-1 (Sustainability Impact Assessment of Proposed WTO Negotiations)

Project Reports and information about the project are available from the project website:

http://idpm.man.ac.uk/sia-trade
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<tr>
<td>ACP</td>
<td>Africa-Caribbean-Pacific</td>
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<td>AD</td>
<td>Anti-Dumping</td>
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<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
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<td>ATC</td>
<td>Agreement on Textiles and Clothing</td>
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<td>CAP</td>
<td>Common Agricultural Policy</td>
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<td>CBD</td>
<td>Convention on Biological Diversity</td>
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<td>CITES</td>
<td>Convention on International Trade in Endangered Species</td>
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<td>CFC</td>
<td>Chloro-Fluoro-Carbon Compound</td>
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<td>CGE</td>
<td>Computable General Equilibrium</td>
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<td>CTG</td>
<td>Council for Trade in Goods</td>
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<td>Dispute Settlement Understanding</td>
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<td>European Commission</td>
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<td>FCCC</td>
<td>Framework Convention on Climate Change</td>
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<td>FDI</td>
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<td>GATS</td>
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<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GI</td>
<td>Geographical Indication</td>
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<td>GPA</td>
<td>Government Procurement Agreement</td>
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<td>GTAP</td>
<td>Global Trade Analysis Project</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IPR</td>
<td>Intellectual Property Rights</td>
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<td>LDC</td>
<td>Least Developed Country</td>
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<td>M&amp;E</td>
<td>Mitigation and Enhancement</td>
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<tr>
<td>MEA</td>
<td>Multilateral Environmental Agreement</td>
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<td>MFN</td>
<td>Most Favoured Nation</td>
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<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
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<td>NFIDC</td>
<td>Net Food Importing Developing Country</td>
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<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>NIC</td>
<td>Newly Industrialised Country</td>
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<td>NTB</td>
<td>Non-Tariff Barrier</td>
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<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>PVP</td>
<td>Plant Variety Protection</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<td>RTA</td>
<td>Regional Trade Agreement</td>
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<td>SCM</td>
<td>Subsidies and Countervailing Measures</td>
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<td>SDT</td>
<td>Special and Differential Treatment</td>
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<td>SIA</td>
<td>Sustainability Impact Assessment</td>
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<td>SME</td>
<td>Small and Medium-sized Enterprise</td>
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<td>Sanitary and Phytosanitary Standards</td>
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<td>SSA</td>
<td>Sub-Saharan Africa</td>
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<td>TBT</td>
<td>Technical Barrier to Trade</td>
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<td>TNC</td>
<td>Transnational Corporation</td>
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<td>TRIM</td>
<td>Trade-Related Investment Measure</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organisation</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organisation</td>
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<td>URAA</td>
<td>Uruguay Round Agreement on Agriculture</td>
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<td>WCED</td>
<td>World Commission on Environment and Development</td>
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<td>WCO</td>
<td>World Customs Organisation</td>
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<td>WIPO</td>
<td>World Intellectual Property Organisation</td>
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<td>WTO</td>
<td>World Trade Organisation</td>
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1. **OVERVIEW**

1.1. **Introduction**

The trade negotiations that are currently taking place between member states of the World Trade Organisation (WTO) are at the centre of the process of economic globalisation, and form a focus for the international debate on globalisation. One side of this debate expresses the view that trade liberalisation and the strengthening of world trade rules contribute to sustained growth in world output and the economic stability necessary for future growth. The other side argues that this growth has been unevenly spread between countries, that it has been associated with widening income disparities within both developed and developing countries, and that it has adversely affected the environment both locally and globally. The further development of world trade is seen on the one hand as being an essential component of sustainable development, and on the other as being detrimental to it. Intermediate positions favour the strengthening of world trade rules, but argue that the potentially positive contribution they can make to sustainable development may not materialise, or may be negative, if the rules that are established are inappropriate.

At the third WTO Ministerial Conference held in Seattle in 1999, the failure to reach agreement on a new round of multilateral trade negotiations occurred largely because developing country representatives considered that the proposals did not take sufficient account of their developmental needs. This position was supported by a wide range of NGOs representing many different interests in both developing and developed countries. The preparations for the subsequent fourth WTO Ministerial Conference in Doha in 2001 took these concerns into account, and agreement was reached on further multilateral negotiations, to be concluded by 1 January 2005. In setting out the terms for these negotiations, the Doha Ministerial Declaration ¹ made a firm commitment to the objective of sustainable development, and placed considerable emphasis on responding to developing countries’ needs.

With the aim of helping to ensure that these goals of the Doha Declaration are put into practice, the European Commission has embarked on a programme of Sustainability Impact Assessments (SIA) of the potential outcomes of the negotiations. The programme

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¹ WTO (2001a)
is intended to provide objective information regarding the effects on sustainable
development of the trade measures being proposed. This work was initiated before the
Seattle conference, with a view to addressing the concerns which had already been
expressed at that stage. The Institute for Development Policy and Management at the
University of Manchester was contracted to develop an SIA methodology (Phase One)
and to undertake a preliminary assessment of the Seattle agenda (Phase Two). During
the subsequent preparations for the Doha meeting the SIA methodology was developed
further, for use in more detailed studies. This extended methodology is currently being
applied to the Doha Agenda (Phase Three of the SIA programme).

The Phase Three SIA studies will continue throughout the negotiation process. They
consist of

- a preliminary global SIA (this study) covering all the proposed trade measures;
- a series of detailed sectoral studies for individual measures; and
- a final global SIA of provisional agreements, which will be carried out as the
  negotiations draw to a close.

The first stage of Phase Three involves, in addition to this preliminary global overview, a
number of detailed sector studies\(^2\) covering food crops (already completed by Stockholm
Environment Institute), market access (pharmaceuticals, non-ferrous metals, textiles),
environmental services (water and waste treatment) and competition policy. This
preliminary global study is intended to give a first indication of the likely impacts on
sustainable development of the Doha agenda as a whole, and to set the scene for further
detailed sectoral studies.

1.2. Sustainable development and trade

Any individual trade measure, such as improved market access for a particular type of
good or service, can have a wide range of economic, social and environmental effects,
differing from country to country. One of the main aims of sustainability impact
assessment is to provide a better understanding of these effects, so that negotiators and
policy makers can take them into account in the negotiations themselves, and in the
design of policies to mitigate any adverse impacts or maximise beneficial ones.

In the ideal case, each trade measure would have a beneficial overall effect in each of the
countries that are party to the agreement, although this positive net outcome may include
some effects that are adverse. An SIA can help to identify the potentially negative
economic, social or environmental effects, such that they may be minimised or avoided,
while still gaining from the overall benefit that is anticipated. However, this ideal need not
apply to every measure that is agreed within a comprehensive round of trade negotiations,
such as those taking place under the Doha agenda. Provided that a country expects to
gain an overall benefit from the full package of agreements, it may be prepared to accept
a net loss from any individual measure. For each measure individually therefore, the
principal purpose of the SIA remains that of identifying the potential economic, social and
environmental effects, such that adverse ones may be minimised and beneficial ones
maximised. It is only when the full set of agreements is considered as a whole that it
becomes possible to assess their overall impact on sustainable development.

The most widely used definition of sustainable development comes from the report of the World Commission on Environment and Development\(^3\), as development which

‘meets the needs of the present without compromising the ability of future generations to meet their own needs’.

*WCED 1987*

The needs referred to in the definition, and the ability to meet them, have economic, social and environmental components. However, the impact of a trade agreement on sustainable development is not merely the sum of impacts on each component of the needs, but its impact on ‘development which meets the needs’, and on the ability to meet future needs.

**Sustainability Impact Assessment of trade measures**
- impact on social, economic and environmental needs
- impact on development to meet those needs

While needs vary between countries and within them, a set of internationally agreed development goals has been identified in the UN General Assembly’s Millennium Declaration and its plan of implementation, as reaffirmed at the Johannesburg 2002 World Summit on Sustainable Development. These agreements cover both present needs and key factors in the ability to meet future ones. Hence the impact on sustainable development of the Doha agenda may be assessed as the contribution which it is likely to make to development as needed to meet the Millennium Goals.

Some of the developmental needs identified in the Millennium Goals may be impacted directly by changes in trade rules. These include those related to health (through for example improved access to medicines), biological diversity (for example through increased forestry trade) and water supply and sanitation (through liberalisation of environmental services).

One of the principal Millennium Goals is the aim to halve, between 1990 and 2015, the proportion of people living in extreme poverty, with incomes less than one dollar a day. Progress during the 1990s was disappointing, leaving the bulk of the target still to be achieved. A secure rules-based world trading regime may make a direct contribution to meeting this need, by providing improved opportunities for international trade. It may also have indirect effects, through the impacts which changed trade rules may have on the development processes that are needed to transform countries’ economies and social structures.

Improved economic performance in developing countries may in turn have a significant impact on many of the other developmental needs identified in the Millennium Goals, such as the provision of education and health services, or the level of greenhouse gas emissions or other environmental pollutants. The direction and magnitude of such effects will depend on policy measures and regulatory frameworks in place in individual countries, changes to them which may occur in response to changing needs, and policies which may be assisted or inhibited by changes in the trade regime.

\(^3\) WCED (1987)
All of these potential effects occur within a developmental context of which international trade is only one part. The transformation of developing countries’ economies and social structures must take place primarily through the efforts of these countries themselves. Similarly, the sustainability of their environmental resources must be achieved mainly through their own efforts. At the level of global decision-making, the main issues to be tackled in making development sustainable are not social or economic but environmental. In this respect the principal international effort that is needed relates to agreements on global impacts such as climate change and biodiversity, which lie outside the WTO’s remit. In all respects therefore, the impact of changing trade rules on sustainable development occurs largely through their effects on other developmental processes, at the national and international level. These indirect effects on the process of sustainable development must be considered alongside the direct effects which trade measures may have on specific economic, social and environmental factors.

1.3. The contribution of sustainability impact assessment to trade agreements

Impact assessment studies of trade agreements have been used by the governments of the United States and Canada, initially for the North American Free Trade Agreement (NAFTA), to provide information mainly on environmental effects in their own countries. The European Commission has adopted a broader approach, to evaluate impacts in all three sustainable development spheres (environmental, social, economic), within Europe itself, and in all other countries involved in the trade agreement.

The North American impact assessment studies have contributed directly to the negotiating process, by providing US and Canadian negotiators with fuller information on the potential impacts in the countries on whose behalf they are negotiating. While this study aims to make a similar contribution, its goals are broader. Its main aim is not just to assist the European Commission’s negotiators in their efforts on behalf of Europe, but to inform the entire international process of forging trade agreements that support globally sustainable development.

In this context, this study cannot influence the negotiations so directly as in the North American examples. It would be unrealistic to expect Europe’s trade negotiators to be as strongly influenced by a study of both European and overseas impacts, whose intention is to be impartial, as they might be by one that focused solely on impacts in Europe. The study aims to provide objective information which will be of value to all countries’ negotiators, and also serves the wider international process of ensuring that the negotiated agreements are supportive of, and not detrimental to, globally sustainable development. While the study is intended to inform discussions within the negotiating chamber, its wider purpose is to support parallel efforts to strengthen the role of the trade regime in promoting sustainable development.

In particular, the SIA studies are intended to inform the design of the European Union’s own development assistance programme, in order to link it more closely to developing countries’ needs, to help strengthen their capacity to adjust to new trade rules, and to

Role of the SIA in trade negotiations and other initiatives

- does not aim only to assist Europe’s trade negotiators in their efforts on behalf of Europe
- aims to inform the international process of forging sustainable trade agreements and related initiatives
- aims to contribute to the design of Europe’s development assistance programmes
make best use of international trade in achieving their developmental goals. Beyond this, the SIA programme aims to inform Europe’s contributions to framing wider international action on trade and sustainable development issues, through the WTO itself, through United Nations initiatives, and in other multilateral arenas. In parallel, the studies contribute to a growing body of literature available to all national, international and non-governmental organisations working to make trade more supportive of sustainable development. Much of this effort will continue on after the negotiation process is complete. To maximise the contribution which the European Commission’s SIA programme can make, the studies are being conducted within the time-frame of the negotiations, to make the results available before agreements are reached.

1.4. Objectives and approach of the sustainability impact assessment

The prime purpose of this preliminary global overview SIA of the Doha agenda is to identify potential impacts which need fuller investigation, to make recommendations on which of the proposed measures should be subject to detailed studies, and to advise on specific requirements for these studies.

It will not be until the second global overview SIA is undertaken, towards the end of the negotiations, that a clear picture will begin to emerge of the cumulative impact on sustainable development of the Doha agenda as a whole. The bulk of this preliminary study is devoted to defining the needs for the more detailed SIAs to be undertaken, before the final global overview draws their results together. It does however include an initial examination of the approach to be taken in the final overview SIA, and the factors which contribute to the overall impact of the negotiations on sustainable development.

Objectives of the preliminary overview SIA

- to define the needs for more detailed SIAs
- to examine factors contributing to the overall impact on sustainable development

It would be far beyond the time and resources available for a study of this nature to undertake a full evaluation of the potential impacts of Doha’s wide-ranging set of trade measures, on a full spectrum of economic, social, environmental and developmental parameters, in every country in the world. Nor would it necessarily be productive, in view of the considerable amount of work that has already been done on evaluating the effects of different types of trade measure in different countries. Instead, the approach is based largely on a review of other studies and their interpretation in relation to the Doha agenda. This is done within a systematic framework which examines the theoretical and empirical justification of these studies’ findings, in order to draw balanced conclusions. The methodology is that developed during the previous phases of the SIA programme, refined and adapted for the particular purposes of this overview study.

A key component of the methodology is consultation and stakeholder participation in the assessment process, to achieve a high degree of transparency. Consultation serves three prime purposes:

- to identify issues of concern, such that they are included in the scope of the study and subjected to informed debate;
- to make use of specialist expertise in the prediction and evaluation of sustainability impacts;
- to expose the quality of the assessment to open scrutiny.
The principal vehicle for consultation has been the publication and dissemination of progress reports at the inception and mid-term stages of the study, followed by public meetings and the receipt of written comments. Further contributions have been obtained through meetings with specific stakeholders on particular aspects of the study, and by seeking comments on work in progress (including drafts of this final report or components of it). Those most active in providing guidance and criticism have included the European Union’s own trade negotiators, representatives of trade associations (primarily European), and NGOs with environmental and social development interests, particularly in relation to the development of developing countries. During this and previous studies, an international network of contributors has been built up and tapped, with strong representation in developing countries.

Details of the consultation process are given in the final report for the preliminary overview SIA\(^4\), which accompanies this more detailed report on the assessment of individual measures.

This report is itself a part of the consultation process contributing to the European Commission’s full SIA programme. Comments, suggestions and criticisms from all quarters are much welcomed, in helping to strengthen the validity and balance of the recommendations, and in contributing to the remainder of the SIA programme.

### Ongoing consultation

- Comments, suggestions and criticisms on this report will help inform the remainder of the EU’s SIA programme
- Feedback through
  - http://idpm.man.ac.uk/sia-trade
  - E-mail: chk@man.ac.uk

It should be noted that in a qualified preliminary study of this nature, empirical evidence and other inputs are necessarily limited. This is the case for all sections of the report, and applies in particular to those relating to trade and environment, rules, implementation, public procurement, trade facilitation and TRIPs. The contents of the report are not conclusive, and it remains to be seen if further work is needed.

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\(^4\) George and Kirkpatrick (2003)
2. THE DOHA AGENDA AND ASSESSMENT SCENARIOS

The Doha agenda

The trade measures covered by the Doha Ministerial Declaration fall into three groups:

- those with a pre-existing negotiation mandate;
- those introduced into the WTO negotiation agenda at the 1996 Ministerial conference in Singapore (the Singapore issues);
- further issues subject to discussion under the Doha agenda.

These are listed in Table 2.1.

Negotiations are already under way for the measures with an existing negotiation mandate. For the Singapore issues, it was agreed in Doha that negotiations will take place after the Fifth Session of the Ministerial Conference in 2003, on the basis of a decision to be taken by explicit consensus at that Session on modalities of negotiations. The other issues are currently subject to discussion only, but could be included in the negotiation mandate after the 2003 Ministerial Conference.

Table 2.1. Trade measures in the Doha agenda

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<td>8. Implementation issues in developing countries</td>
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<tr>
<td>Singapore issues</td>
<td>9. Trade and investment</td>
</tr>
<tr>
<td></td>
<td>10. Competition policy</td>
</tr>
<tr>
<td></td>
<td>11. Trade facilitation</td>
</tr>
<tr>
<td></td>
<td>12. Transparency of government procurement</td>
</tr>
<tr>
<td>Measures subject to discussion</td>
<td>13. Other measures</td>
</tr>
<tr>
<td></td>
<td>Electronic commerce</td>
</tr>
<tr>
<td></td>
<td>Small economies</td>
</tr>
<tr>
<td></td>
<td>Trade, debt and finance</td>
</tr>
<tr>
<td></td>
<td>Technology transfer</td>
</tr>
<tr>
<td></td>
<td>Technical cooperation and capacity building</td>
</tr>
<tr>
<td></td>
<td>Least-developed countries</td>
</tr>
<tr>
<td></td>
<td>Special and differential treatment</td>
</tr>
</tbody>
</table>

This preliminary overview study examines all of these the measures, in order to identify priorities for more detailed SIA studies.

Scenarios

Because the SIA studies are being carried out before the negotiations are concluded, to provide information for negotiators and stakeholders during the negotiation process, the SIA needs to give an indication of the likely impacts of the options available, from a wide variety of possible outcomes to the negotiations. To achieve this, the studies are based primarily on two scenarios:
• a ‘base’ scenario representing the starting point from which the negotiations are taking place, which assumes full implementation of existing agreements; and
• a ‘further liberalisation’ scenario which represents the strongest probable implementation of the negotiations that were agreed to at the Ministerial Conference in Doha.

In relation to the base scenario, one of the measures being negotiated in the Doha agenda (Implementation Issues) concerns developing countries’ difficulties in implementing existing agreements. For this measure therefore, ‘further liberalisation’ is an inappropriate description of the second scenario, but for the sake of consistency the same term is used throughout.

The results that are assessed for the second scenario, in comparison with the base situation, represent an outer bound of the likely impacts. For measures such as tariff changes, the impacts of any other potential outcome to the negotiations may be estimated by interpolation or extrapolation in either direction from the results. In general this is not done within this SIA, but negotiators and stakeholders can in principle estimate the likely impacts of other potential agreements from the results that are given.

While tariffs may be adjusted to any level between identifiable outer bounds, many other negotiating proposals call for discrete policy changes. For this type of measure, interpolation or extrapolation from the reference points of two scenarios is not practicable. For this type of measure the analysis therefore takes a qualitative view of the types of issue being negotiated, and considers discrete options individually where appropriate.

The sections in this report on the assessment of each trade measure describe this interpretation of the two scenarios more fully for that measure.

Country groupings

In the detailed sectoral SIAs, four main country groupings are considered:

- the European Union
- non-EU developed countries
- developing countries
- least developed countries

These groupings are taken into account in this overview study, in order to inform the subsequent sector studies. Where significant differences are identified between EU and non-EU developed countries, they are assessed separately. Otherwise they are grouped together as developed countries. Numerous differences are identified between the impacts in least developed and other developing countries, but where the same impact applies to all, the distinction is not always drawn. Since the prime aim of this overview study is to identify potential impacts which may warrant further investigation, the assessment focuses more strongly on other country characteristics which influence potential impacts, such as whether they are net importers or exporters of a product or service, or the level of industrial development.
3. **THE IMPACT ASSESSMENT METHODOLOGY**

The overall SIA methodology used in this overview study was originally developed during Phases One and Two of the European Union’s SIA programme, prior to the Seattle WTO Ministerial Conference\(^5\). It has subsequently been refined for the negotiations covered by the Doha agreements\(^6\). The overall methodological approach includes the following elements:

- selection of trade measures to be assessed;
- selection of scenarios and country groupings for the assessment;
- assessment of impacts;
- evaluation of alternative mitigation and enhancement measures;
- presentation of results;
- monitoring and *ex post* evaluation

Together with, at key stages of the process,

- consultation and stakeholder participation.

Each of these elements is described in the overall report on the preliminary overview SIA\(^7\). This report covers the third element, the assessment of impacts.

**Conceptual framework and methodology for assessment of impacts**

The overall conceptual framework for the impact assessment element of the SIA process is the same as for the detailed sectoral studies\(^8\). The generic causal linkages which have to be analysed may be described as in Figure 3.1, which shows the sequence of significant cause-effect relationships, starting with the negotiated change in trade policy, or scenario. For example, a change in tariff levels will directly alter the pattern of prices facing producers and consumers, or a change in competition policy will alter the market conditions. The new structure of incentives and market opportunities will induce a change in the economic behaviour of producers, consumers and intermediaries. Changes in behaviour will affect the production system, inducing changes in the scale, composition, and technology of production.

The next stage in the causal chain analysis is to assess the significance of the linkages from the economic effects on production relationships, to sustainability impacts. A change in economic production may give rise to significant changes in employment, investment and/or income. Environmental impacts may arise from the effect of changes in the production system on environmental quality, natural resource stocks and/or biodiversity. Changes in the production system may also be linked to significant social impacts, where, for example, production shifts affect the level and distribution of household income, and may also impact on the gender balance of paid and unpaid labour services. Changes in prices of essential goods and services may also have a significant impact on livelihood and poverty levels.

Figure 3.1 does not convey the full complexity of the linkages between each stage in the causal chain. It is obvious that the changes represented in the figure do not occur instantaneously or simultaneously and the speed of adjustment will vary in different parts and at different stages in the causal chains. There may also be feedback processes.

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5 Kirkpatrick, Lee and Morrissey (1999)
6 Kirkpatrick and Lee (2002)
7 George and Kirkpatrick (2003)
during the intermediate stages of the cause-effect relationships, before the final impacts on sustainable development occur.

**Figure 3.1. Causal Chain Analysis of the impact of a trade measure on sustainable development**

Thus the SIA studies handle the causal chain analysis by making a distinction between short-term and long-term effects. The short-term effects are the immediate economic, social and environmental effects, while the long-term effects can be thought of as the ‘equilibrium’ outcomes. It is often important to identify the adjustment path between the short and long-term, as the significance of the impacts can change during the adjustment period.

For tariff changes and some of the other measures under negotiation, widespread use has been made of computable general equilibrium (CGE) techniques to model the first stages of the causal chain shown in Figure 3.1, from a change in trade measure to changes in the production system, and on to project the equilibrium economic impacts in quantitative terms. The results of such studies, where they are available, are made use of in this part of the impact assessment. In addition, the assessment of economic impacts also takes account of the following factors.

- The extent to which the model fully represents the causal chains associated with the scenario must be considered, together with uncertainties in modelling assumptions and data. Most of the CGE studies that have been used provide sufficient information to indicate the level of uncertainty, and comparison of different studies provides a further indication. In some cases, a separate analysis
of causal chains is used to provide qualitative information on effects which may not have been fully or appropriately modelled.

- The results of CGE studies represent an ‘equilibrium’ economic impact once the economy has adjusted to the change in a trade measure. Other economic impacts will occur during the period of adjustment. These are assessed by CCA, making use of CGE results for the equilibrium impact, where available, for information on the type and magnitude of the adjustment that has to be made.

- As well as changing the equilibrium state of the production system, the change in a trade measure may influence development processes, which in turn affect the rate of growth of different sectors of the economy. The economic impacts of these process effects are assessed by CCA.

Social and environmental impacts may then be assessed as in Figure 3.1, using causal chain analysis to evaluate the relationships between economic, social and environmental effects. For those trade measures which cannot be adequately modelled, the CCA is carried out for the entire set of linkages shown in Figure 3.1.

All the causal linkages are evaluated by logical analysis, together with whatever empirical evidence is available from the literature. In some cases, case study findings give an indication of likely impact magnitudes. Otherwise the assessment is largely qualitative. Where quantitative information is available, either from modelling studies or case study experience, impact significance may be evaluated directly in relation to the appropriate base situation, taking account of the significance factors discussed below. Otherwise, a more qualitative judgement is made of the likely significance of the impact.

Trade data that have been used in the assessment, in addition to the tables in the following section, are given in the final report of the preliminary overview SIA (Annex 3).

**Impact significance**

The SIA methodology defines three levels of significance:

- *non-significant impact* – compared with the base situation
- *lesser significant impact* – marginally significant to the negotiation decision, and if negative, a potential candidate for mitigation
- *greater significant impact* – significant to the negotiation decision, and if negative, merits serious consideration for mitigation.

It also defines the following factors which need to be taken into account in evaluating significance:

- the extent of existing economic, social and environmental stress in affected areas;
- the direction of changes to base-line conditions;
- the nature, order of magnitude, geographic extent, duration and reversibility of changes;
- the regulatory and institutional capacity to implement mitigation and enhancement measures.

In interpreting these definitions, judgements have to be made on the importance of the predicted change in relation to the base situation, i.e. the prevailing circumstances.

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9 George and Kirkpatrick (2003)
10 Kirkpatrick and Lee (2002)
Where impacts cannot be quantified, a judgement must be made of the likelihood that impact magnitude would reach the level at which it would be considered significant.

**Sustainability indicators and impact summaries**

The Phase Three methodology retains the set of nine core indicators that were used for the Phase One and Phase Two studies, plus two process indicators. These are:

- **Economic**: real income; fixed capital formation; employment
- **Social**: poverty; health and education; equity
- **Environmental**: biodiversity; environmental quality; natural resource stocks
- **Process**: sustainable development principles; sustainable development strategies

The methodology also allows for second tier indicators, to permit a lower level of aggregation in the reporting of results. In this preliminary overview SIA, many of the impacts identified are reported at this second level, indicating specific types of impact that may need to be investigated more fully in a detailed SIA. Where the assessment does not reveal this degree of precision, the impacts are reported at the level of the relevant core indicator.

The results are summarised in tables of the form shown in Table 3.1.

**Table 3.1. Format of impact summary tables**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▽: negative lesser significant impact
- ▲: positive greater significant impact
- ▼: negative greater significant impact
- △▽: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain

**Column 1** This shows the types of likely significant impact that have been identified, which may be used in the initial scoping of a detailed sector study.

**Column 2** Entries may be used in scoping and the selection of country case studies.
Column 3  Indicates factors to be considered in the CCA of a detailed SIA

Column 4  An entry in this column indicates potential for either a mitigating or an enhancing measure, or a combination of the two

Column 5  May be used in screening and scoping of detailed SIAs.

In these tables, distinctions between greater and lesser significance are based on the importance of an impact for the particular economic, social or environmental factor concerned. They give no indication of relative importance of different impacts.

In many cases, the tables draw a distinction between short and long term effects, as discussed more fully in the text. However, the symbols are intended only to highlight a potential need for further investigation in more detailed SIAs. Since many of the impacts identified are short term adjustment effects, this can result in a larger number of negative impacts than positive ones. A numerical preponderance of potentially negative impacts in a summary table should not be taken to imply that they outweigh the positive impacts.

**Cross-cutting issues and overall impact**

Many of the trade measures under negotiation interact with each other, such that impacts due to one will be dependent on actions taken under another. Interactions of this nature are identified in the analysis of each measure.

In addition to these interactions between measures, they all combine to contribute to a number of cross-cutting effects, such as an increase or decrease in production volumes or international transport. These cross-cutting issues are examined at the end of the assessment, in relation to the impacts on sustainable development of the Doha agenda as a whole.
4. AGRICULTURE

4.1. Background

A detailed SIA for the major food crops sector has already been undertaken as part of the Phase Three SIA programme\textsuperscript{11}. While specific to one particular part of the agriculture sector, the study drew a number of general conclusions that are relevant to the sector as a whole. These are made use of in this overview study. Similarly, an SIA study carried out for the European Commission on the impacts of the EU-Chile Association Agreement\textsuperscript{12} examines aspects of agricultural trade which also apply to the WTO negotiations.

Despite being largely agricultural economies, the developing regions have high levels of imports, particularly in Africa, Asia and the Middle East. North America and Western Europe have high levels of exports and imports, with combined exports amounting to 45% of total world agricultural trade (excluding internal trade within the European Union).

Both the USA and the EU maintain strong support for domestic agriculture, which contributes to their trade balances, and has the effect of distorting world market prices. In part these policies derive from these countries’ experiences of the 1930s depression and the Second World War, which encouraged policies of self-sufficiency. Food security is a key factor in all countries’ agricultural policy, and must be taken into account when considering the potential sustainability impacts of trade liberalisation. International trade can play a positive role in this, by allowing food deficits resulting from local production failures to be offset by imports. However, fluctuations in world prices and disruptions in time of war must also be considered, alongside the effects of market distortions on countries’ economic structure and international competitiveness.

The GATT rules of 1947 left considerable freedom for national agricultural support and protection policies, which remained substantially outside the normal GATT trade procedures and obligations until they were addressed more fully in the Uruguay Round’s Agreement on Agriculture (URAA) of 1994. The URAA included commitments to reduce domestic agricultural support and export subsidies, as well as the conversion of non-tariff barriers to tariffs, and their reduction. The Doha agenda aims to go beyond the Uruguay Round, to achieve a further step in liberalisation and in the reduction of agricultural market distortions.

In addition to the food security and market access concerns of both developed and developing countries, the liberalisation of agricultural trade is affected by a number of other issues:

- Countries generally aim to apply the same standards of food safety to imports as they do to their domestic produce, and may do so under the separate WTO Agreement on Sanitary and Phytosanitary measures.
- They may wish to promote the development of their own agricultural industry or particular social groups, and may do so under WTO rules, using a number of mechanisms which are considered not to distort trade (referred to as “Green Box” measures). Such support is also permitted for direct payments made under production-limiting programs (the “Blue Box”), or where the scale is small compared with the total value of the supported products.

\textsuperscript{11} Maltais et al (2002)
\textsuperscript{12} Planistat (2002)
• In a number of developed countries, particularly the EU and Japan, agriculture is seen to have a wider (multi-functional) role than food production, including environmental conservation and animal welfare. Permissible support mechanisms are sought for these also, generally as part of the Green or Blue Box provisions.

In the European Union, WTO pressure to liberalise agricultural trade is paralleled by pressures arising from the heavy tax burden of the Common Agricultural Policy (CAP), exacerbated by the forthcoming enlargement of the Union to include several of the more heavily agricultural economies of Central Europe. The CAP already accounts for about half the EU budget, for a sector of the economy that provides less than five per cent of total employment and less than 1.5 per cent of total GDP of the current EU 15. There have been periodic reforms of the procedures and financing of the CAP, most importantly the so-called “MacSharry” reforms of 1992 (following which the EC was able to agree a package of reforms which unlocked the conclusion of the Uruguay Round), and the adoption in 1999 of the Agenda 2000 programme of reforms. These latter aim to set new rules for market intervention which reduce price support, especially for cereals. However, following the EU Summit in October 2002, consideration of further CAP reforms has effectively been delayed until 2006.

A further consideration which has to be taken into account in the liberalisation of agriculture is the social and economic development of developing countries, and developed countries’ assistance to them. Provision has to be made for food aid, for developing countries’ particular needs in strengthening their agriculture, and for general and targeted assistance from developed countries (such as European countries’ preferential trade with their former colonies). The special and differential treatment (SDT) provisions of the Agreement on Agriculture, which derive from the more general and long-standing SDT principles of the GATT, provide additional means of achieving these aims, which are considered further within the Doha agenda.

4.2. Negotiation issues

The Doha Ministerial Declaration commits WTO members to comprehensive negotiations building on those already started in early 2000, under Article 20 of the Agreement on Agriculture. Agriculture is now part of the single undertaking, for which negotiations are to be concluded by 1 January 2005. The negotiations are aimed at:

• substantial further improvements in market access beyond those committed under GATT;
• reductions in all forms of export subsidies with a view to phasing them out; and
• substantial reductions in trade-distorting domestic support.

The Declaration’s commitment to these aims is diluted by the caveat, reflecting the intensity and controversy of the arguments which preceded the Declaration, that it does not prejudge the outcome of the negotiations.

The Declaration also agrees to the inclusion in negotiations of

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13 Serger (2001)
14 EC (2000)
15 Guardian (2002)
16 WTO (2001a)
• special and differential treatment for developing countries, to effectively take account of their development needs, with particular mention of food security and rural development;

and that the negotiations will take into account

• non-trade concerns (such as environmental protection, animal welfare, food security and rural development), as provided for in the Agreement on Agriculture.

The modalities of the negotiations were due to be established by 31 March 2003, after which countries’ draft schedules are to be submitted no later than the Fifth Session of the Ministerial Conference, due to take place in September 2003. While the Chair of the WTO Committee on Agriculture had submitted draft proposals for modalities, no consensus on modalities had been reached by 31 March 2003.\textsuperscript{17}

A number of additional agreements relating to agriculture were made at Doha. Two Ministerial Decisions of 14 November 2001 apply to the ACP-EC partnership agreement between the European Communities and Africa-Caribbean-Pacific countries, and autonomous tariff rate quotas on EC imports of bananas. These make limited provision for the European Communities to provide preferential tariff treatment for products from ACP states, and provide a transitional regime for the EU to continue to grant preferences for banana imports from certain sources during the period in which it is required, following two decades of intense dispute in the GATT and the WTO, to adapt its banana import regime to comply fully with WTO requirements.

The Agreement on Agriculture went beyond the original GATT agreement, to address the circumvention of tariff rules by non-tariff measures such as import quotas, subsidies and domestic support. Quotas and other import restrictions were to be converted into tariffs, with a provision for tariff quotas (increased tariff rates for quantities above a quota level), and tariff reductions over the period up to 2000. Commitments were made by developed countries to reduce the value of export subsidies by 36% in the six years from 1995 to 2000, and to cut the quantity of subsidised exports by 20%. Developing countries (but not least developed countries) agreed to cuts of 24% and 13%, by 2004. The agreement required that domestic support be limited to forms which are deemed not to distort trade or whose scale is small compared with the total value of the supported products (‘green box’, ‘blue box’ and ‘de minimis’ measures). Limited measures were agreed for temporary assistance to least developed countries to deal with higher priced imports, and for the provision of food aid.

Implementation of the GATT Agreement on Agriculture is influenced by the separate GATT Agreement on Sanitary and Phytosanitary (SPS) measures, which defines rules under which standards may be set for food imports. An area of concern for developing countries in the current negotiations is the extent to which SPS measures constitute a barrier to their exports, and their need for assistance with meeting international standards.\textsuperscript{18} Under the Doha Declaration, these concerns will be dealt with in the negotiations on Implementation Issues.

The agriculture negotiations cover five main areas: export subsidies, domestic support, market access, non-trade concerns and special and differential treatment for developing countries. The positions adopted by different countries fall into four main groups.\textsuperscript{20}

\textsuperscript{17} EU-LDC Network (2003a, 2003b), WTO (2003)
\textsuperscript{18} Laird (2002a)
\textsuperscript{19} WTO (2002d)
• Net food exporters, which include the ‘Cairns Group’ of agricultural free-trading countries, generally want greater market access, removal of export subsidies and reduced support policies. The USA leans towards this view in its public pronouncements on agricultural policy, although subsidies and domestic support form part of its own policy and have recently been sharply increased by the Farm Act of 2002.
• Net food importing developing countries express concerns about increased import prices.
• Other developing countries wish to protect their own agriculture as part of their food security and development policies, but want to see subsidies removed in OECD countries, with increased access for their exports to OECD markets.
• The EU, Japan and Korea want liberalisation to take into account the ‘multifunctional’ role of agriculture.

Negotiations on export subsidies include the issue of whether other forms of export promotion, such as export credits, should be treated similarly. Non-trade concerns related to the multifunctionality of agriculture cover issues such as food security, environment, rural development and animal welfare. Proposals for a ‘development box’ have been put forward to deal with some of the issues raised by developing countries\(^{21}\).

4.3. Scenarios

Although the Doha Declaration aims to achieve substantial further liberalisation, including the eventual phasing out of export subsidies, the strongest probable implementation is likely to be a compromise reflecting some elements of the many different issues under negotiation.

The base scenario assumes that no new agreement on agriculture is reached, but that the provisions of the Uruguay Round relating to agriculture are fully implemented. These include the conversion of quotas to tariffs, tariff reductions, reduction of export subsidies and limits on domestic support, as defined in the existing agreement and most of which is required to have happened by now.

The Further liberalisation scenario assumes
• further reductions in tariffs, export subsidies and domestic support, by percentages similar to those agreed in the Uruguay Round;
• retention of the blue and green boxes, with some additional support for non-trade issues;
• strengthened provisions for special and differential treatment for developing countries.

4.4. Assessment methodology

Within the general SIA methodology, a number of issues need to be taken into account, which were identified in the SIA for major food crops\(^{22}\). These are discussed below.

Bridging the gap

For detailed SIAs, an assessment approach is envisaged which works down from a generic causal analysis at the country group level, and also works up from case study experience to provide more specific qualitative and quantitative information. To assist with this, the overview study needs to clarify the analytical framework within which the results of case studies used in the detailed SIAs are analysed, in terms of the general

\(^{21}\) Ruffer et. al. (2002a, 2002b)
\(^{22}\) Maltais et al (2002)
cause and effect framework established at the country group level, modifying it if necessary in the light of practical experience. The assessment can then identify lessons which apply, with variations, in a wide range of country situations.

The overview impact assessment examines the generic causal linkages at the country group level, in order to identify the key issues through which the bottom-up evaluation of country case studies can be used in detailed SIAs, to inform the broader analysis.

*Site-specific issues*

Similarly, the overview study needs to clarify the generic issues within which site-specific effects may need to be studied in detailed SIAs. The study aims to identify site-specific factors where they become apparent from the general analysis.

*Indicators*

As discussed in Section 2 above, the Phase Three studies have introduced indicators to describe process effects as well as sustainability outcomes, and make use of second tier indicators to identify potential impacts which may need fuller investigation in subsequent studies. The indicators recommended in the major food crops study will also be of value in steering these more detailed studies, and in drawing up monitoring proposals in the later stages of the SIA programme.

*Short term and long term effects*

This issue, identified in the food crops study, is catered for by the methodological refinements discussed in Section 2 above.

*Food security*

Food security was highlighted as a key issue in the food crops study, and is discussed more fully in the assessment carried out below.

4.5. **Assessment of impacts**

*Modelling studies*

The most common approach to assessing the potential global impact of market access in multilateral trade liberalisation is the use of global computable general equilibrium (CGE) models. Most studies indicate significant gains for most countries, and that the largest gainers are the Cairns group of agricultural exporters and the EU\(^23\), while some studies also estimate large gains in sub-Saharan Africa\(^24\).

The Hertel study\(^25\), which was used in the SIA for the major food crops sector, takes 1995 as the starting point, the first year of implementation of the Uruguay Round, and makes projections to its full implementation in 2005. The results are shown in Table 4.5. These indicate that the only countries likely to suffer a welfare loss are those in the Middle East and North Africa, where declining terms of trade more than counteract gains in economic efficiency. The Egyptian case study in the SIA of major food crops\(^26\) suggests that this

\(^{23}\) Cernat et al (2002)
\(^{24}\) Ianchovichina et al (2001)
\(^{25}\) Hertel et al (2000)
\(^{26}\) Maltais et al (2002)
economic welfare loss may be compounded by negative food security impacts. In all other regions the Hertel study indicates an overall long-run gain in economic welfare.

Table 4.5: Welfare Gains due to 40% Liberalization in Agriculture, billion dollars

<table>
<thead>
<tr>
<th>Region</th>
<th>Welfare gain</th>
<th>GNP 2000</th>
<th>Welfare gain/GNP %</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>3.40</td>
<td>10251</td>
<td>0.03</td>
</tr>
<tr>
<td>Western Europe</td>
<td>36.96</td>
<td>7404</td>
<td>0.50</td>
</tr>
<tr>
<td>Australia/New Zealand</td>
<td>1.79</td>
<td>438</td>
<td>0.41</td>
</tr>
<tr>
<td>Japan</td>
<td>12.55</td>
<td>4519</td>
<td>0.28</td>
</tr>
<tr>
<td>China</td>
<td>.17</td>
<td>1063</td>
<td>0.02</td>
</tr>
<tr>
<td>Taiwan</td>
<td>.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other NICs</td>
<td>2.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>.01</td>
<td>120</td>
<td>0.01</td>
</tr>
<tr>
<td>Other South East Asia</td>
<td>1.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>1.06</td>
<td>455</td>
<td>0.23</td>
</tr>
<tr>
<td>Other South Asia</td>
<td>1.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>1.99</td>
<td>610</td>
<td>0.33</td>
</tr>
<tr>
<td>Other Latin America</td>
<td>3.06</td>
<td>1285</td>
<td>0.24</td>
</tr>
<tr>
<td>Turkey</td>
<td>.34</td>
<td>202</td>
<td>0.17</td>
</tr>
<tr>
<td>Other Middle East N Africa</td>
<td>-1.51</td>
<td>416</td>
<td>-0.36</td>
</tr>
<tr>
<td>Transitional countries</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>.13</td>
<td>129</td>
<td>0.10</td>
</tr>
<tr>
<td>Other SSA</td>
<td>.44</td>
<td>181</td>
<td>0.24</td>
</tr>
<tr>
<td>Rest of the world</td>
<td>2.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>69.32</td>
<td>31315</td>
<td>0.22</td>
</tr>
</tbody>
</table>


The third column of Table 4.5 shows the estimated welfare gain as a percentage of GDP. The biggest gainer in these terms is the European Union, where welfare rises by 0.5 percent of GDP. The significance of this one-off gain from agricultural trade liberalisation should be seen in the context of general economic growth. In Western Europe this averaged just over 2 percent per annum in the 1990s.²⁷

In developing countries the gains are smaller, and the economic growth that is needed is higher. The Millennium Goals established in the UN Millennium Declaration, and adopted at the Johannesburg Earth Summit,²⁸ require the proportion of people living in absolute poverty to be halved by 2015. Between 1990 and 1998 the proportion fell from 29 percent to 24 percent,²⁹ with almost all of the reduction occurring in East Asia. During this period GDP in developing countries grew on average by 3.3 percent per annum.³⁰ Statistical analyses have suggested a one-to-one correlation between poverty and GDP,³¹ such that the incomes of the poor can be expected to rise at the same rate as GDP. On this basis, it is questionable whether even the 7.4% growth rate achieved in East Asian developing countries over the past decade, replicated worldwide, will be enough to achieve the Millennium Goal. The one-off welfare gains predicted for developing countries from agricultural trade liberalisation can contribute no more than a small proportion of this.

²⁷ World Bank (2000)
²⁸ WSSD (2002)
²⁹ World Bank (2000a)
³⁰ World Bank (2000)
³¹ Dollar and Kraay (2000)
Agriculture is a major component of developing countries’ economies, and can be expected to play an important role in their future growth. The development mechanisms through which that growth is achieved need to extend well beyond the market efficiencies attainable through agricultural trade liberalisation. However, those mechanisms may themselves be influenced by liberalisation, positively or negatively. The SIA therefore needs to look beyond the results of the modelling studies, in respect of long term as well as short-term impacts.

**Causal Chain Analysis**

The SIA of major food crops\(^{32}\) examined generic causal linkages for three groups of developing countries, and two groups of developed countries. The case studies used in the study identified marked differences of findings between the country groups, but strong similarities within each group. The economic and social causal linkages can be expected to be fairly similar in other agriculture sectors, as discussed below for the main country groups.

**Impacts in the EU**

*Economic impact*

Within the European Union, a significant overall economic gain is anticipated. However, proposed reductions in support for domestic agriculture generate significant concern from the agricultural sector itself. This is set against more widespread concern over the tax burden of the Common Agricultural Policy (CAP). These various concerns relate primarily to short and medium term adjustment impacts. As shown by the CGE studies discussed above, developed countries can expect to achieve significant welfare gains once a new economic equilibrium is established.

The impacts of trade liberalisation are closely related to reform of the CAP, which has been extensively studied\(^{33}\). An economic impact assessment of the Agenda 2000 CAP reform decisions\(^{34}\) shows differing adjustment impacts for each of the main agricultural sub-sectors of interest:

- lower domestic prices for cereals, meat, and dairy products
- market price reductions for cereals and beef, which are less than the reductions in support prices
- increased production and exports of wheat, with a potential for unsubsidised exports
- reduced EU oilseed production, but only small effects on world oilseed markets
- reduced EU production and stocks of beef
- small dairy sector effects until support prices are reduced in 2005
- pressure on the pork and poultry sectors from lower beef prices, combined with a benefit from lower cereal prices. The overall effect is small, but lower prices may generate opportunities to increase unsubsidised exports, notably for poultry meat.

The Agenda 2000 reforms are viewed as a step towards further liberalisation under the Doha agenda. The impacts of the further liberalisation scenario may therefore be expected to follow a similar range and direction, with somewhat greater magnitude.

\(^{32}\) Maltais et al (2002)


\(^{34}\) EC (2000)
A study conducted by the Food and Agricultural Policy Research Institute (FAPRI) considers two scenarios: the removal of all agricultural trade distortions, including domestic farm programmes and border measures, and the elimination of border measures only (including export subsidies). It uses a multimarket, world agricultural model, with extensive geographic and commodity coverage. Its findings are similar to those noted above, with the addition that exports of EU dairy products fall significantly after the removal of support.

Environmental and social impacts

In cases where farmers are able to move to those products whose production is expected to increase, potential social impacts will be small, and short term only. However, the reduction in subsidies and support is likely to lead to a long term fall in production, and hence in agricultural employment. The overall employment effect will be short term only, but with a potential long term shift from rural to urban activities.

Permissible support mechanisms may alleviate this trend to a degree, but there is a limit to the extent to which they may be considered non-trade-distorting. Payments made to farmers for social or environmental reasons do not distort trade if any agricultural ‘by-products’ are disposed of as waste, but that would be economically inefficient. It may be argued that if the products are sold, even at full market prices, they will have a distorting effect on the market, with adverse effects on producers in those countries whose governments cannot afford to invest in related non-commercial activities. Against this, the WTO definition of green box support is based on widespread acceptance that it is at most minimally trade distorting, with the effects varying between different types of support. The liberalisation scenario presumes that only limited support will be considered non-trade-distorting, and that there will be consequent changes to rural environments and social structures. Whether these changes are adverse or beneficial will depend on people’s perceptions. A change from agricultural use to semi-natural habitat may have visual effects that may be considered adverse, but a positive effect on biodiversity. These and the other effects that have been discussed above will depend on the detailed policy measures that are adopted in EU countries.

Animal welfare

The principal concern relating to animal welfare is that while a government can legitimately set standards for production in its own territory, any standards set which relate to methods of production rather than to the characteristics of the product, and which have the effect of discriminating against imports, will not be permissible according to the normal requirements of GATT. Liberalisation may therefore lead to increased competition in domestic markets from countries with low standards. It has been suggested that domestic producers may become uncompetitive, through the higher costs of producing to high standards, or governments may relax animal welfare legislation for their own countries. In either case, animal welfare standards for the food that is eaten would fall. The EU has therefore proposed in its submissions to the WTO that compensation should be permissible for the additional costs of meeting legal standards.

In the absence of an appropriate international agreement on animal welfare standards, such compensation may be considered trade-distorting. There is a parallel with sanitary and phytosanitary standards (SPS), where governments can impose the same standards

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35 FAPRI (2002)
36 van Horne and Bondt (2003)
38 CEC (2003)
of food safety on imports as on domestic production, but these apply to the physical characteristics of the consumed product, and not to its means of production. In the case of animal welfare standards, the production methods used may be entirely legal in the exporting country, so that the issue may be regarded as one of consumer choice. On this basis it is assumed that the liberalisation scenario will adopt only limited provisions for animal welfare. This is not expected to affect welfare in exporting countries, but may have an adverse effect in the EU, if European standards are relaxed in order to avoid an adverse economic effect.

Impacts in non-EU developed countries

The FAPRI study noted above projects the potential economic effects of agricultural liberalisation for a wide range of sub-sectors and countries. The US is identified as a major winner in meat exports, with significant changes in other sectors. As for the EU, potentially adverse social adjustment impacts may be anticipated in those sub-sectors where production decreases. There may be beneficial effects on environmental factors such as water supply and water pollution, but potentially adverse effects on the amenity value of agriculture. Where production increases, the opposite effects are expected.

For Canada, potential environmental impacts have been evaluated for the Canadian government in a preliminary impact assessment, giving similar results.

Some exporting developed countries, such as Australia, may experience significant production increases, with economic and social gains but potential negative environmental effects. If unchecked, these could in turn result in longer-term adverse economic and social impacts.

In the shorter term, the containment of potentially adverse social and environmental effects will depend on carefully designed policy responses. In Japan the multi-functional nature of agriculture generates significant concern in relation to the rural environment and rural communities, similar to that expressed in the EU.

Impacts in developing countries

Among developing and least developed countries, it has been suggested that there are at least 5 country groupings that will be affected differently:

- major agricultural exporters (e.g. Brazil, Argentina, Thailand)
- low income countries close to self-sufficiency (e.g. India)
- medium to large net importing countries (e.g. Egypt, Kenya, Pakistan)
- small island state net importers
- net importing least developed countries

The SIA of major food crops examined examples of net food importing developing countries (Egypt and Senegal), and net food exporters (India, Indonesia and Argentina).

The principal driving effects are the same for all these sub-groups: a rise in world market prices due to reductions in agricultural support, particularly in the EU and the US; and increased market access for exports, to other developing countries’ markets as well as developed ones. These changes have a number of knock-on effects, as discussed below.

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39 FAPRI (2002)
40 DFAIT (2002)
41 Matthews (2002)
Consumer prices

The rise in world market price feeds through to a rise in consumer prices, which is felt particularly in net food importing developing countries (NFIDCs). This effect was a concern during the Uruguay Round, and led to the WTO Marrakesh Decision of 1994. This committed assistance to both NFIDCs and least developed countries, and required developed countries to:

- establish a sufficient level of food aid during the agricultural reform process;
- give consideration to requests for technical assistance to improve agricultural productivity and infrastructure in LDCs and NFIDCs;
- give special treatment to LDCs and NFIDCs in agreements on export credits; and
- support the international financial institutions in giving special consideration to financial difficulties faced by LDCs and NFIDCs in financing food imports.

The Marrakesh Decision was reaffirmed by the WTO Singapore Ministerial Conference in 1996, and its implementation remains part of the Doha agenda, to be considered in the negotiations on implementation issues.

The CGE studies discussed above suggest that the adverse social effects of higher consumer prices will subsequently be more than offset by the welfare gains of increased economic efficiency. As part of this, the increased competitiveness of domestic agriculture might be expected to lead to greater self-sufficiency, less dependence on world price fluctuations, and higher food security. The food security issue is discussed more fully below. To accelerate the expected increase in competitiveness and reduce the adverse adjustment impacts, the FAO has suggested that the assistance provided under the Marrakesh Decision should focus primarily on strengthening domestic production capacity.

The liberalisation scenario assumes that progress will be made in more fully implementing all aspects the Marrakesh Decision, but that the higher world prices resulting from the scenario will nonetheless feed through to consumers. Although this adverse adjustment effect will be felt more widely in LDCs and NFIDCs, higher prices may have an adverse short term effect on low income non-farming communities in any country, notably the urban poor.

Agricultural competitiveness

With the exceptions noted above (Middle East and North Africa) most developing countries are expected to experience a net economic gain in the long term, which will occur also in the short term in net food exporting countries. However, many case studies cast doubt on whether this will benefit the rural poor, and indeed suggest that the effect may be adverse.

A review by UNDP notes that many of the rural poor in developing countries depend on subsistence agriculture and traditional production of locally consumed cash crops, with small scale, low productivity, and limited access to distant markets. This traditional activity often coexists with commercial agriculture that is more highly mechanised, using higher intensity inputs, often owned by city based companies or foreign corporations, producing internationally marketable crops with relatively small amounts of labour. In areas that have already converted to commercial agriculture, employment can be

42 ActionAid (2000)
43 ActionAid (2000)
44 UNDP (2003)
expected to rise, with beneficial economic and social effects. Elsewhere however, the opportunities created by trade liberalisation may be tapped more readily by commercial agriculture, with consequent incentives for commercial operations to expand their land use, reducing that available for traditional farming. This may result in an overall fall in rural employment, increasing poverty, and migration to the cities in search of alternative livelihoods. Competition for resources in rural and peri-urban areas may at the same time create conflict between different social groups, with indigenous people among the most vulnerable.

The changes in production patterns can also have significant gender impacts. In some areas women are mainly involved in traditional food production, while new jobs for commercial farm workers go mainly to men. Other areas such as floriculture may employ large numbers of women, but in conditions that may be less healthy and provide a poorer standard of living than traditional agriculture.

The EU’s SIA of the EU-Chile trade agreement identified similar effects to those reported in the UNDP review, as have studies of the impacts in Mexico of the North American Free Trade Agreement (NAFTA).

While distributional impacts of this nature may be exaggerated or accelerated by trade liberalisation, they are more fundamentally part of a wider process of agricultural commercialisation. This is itself part of the development process as it is commonly understood. If developing countries are to achieve the same standards of living as developed ones, agricultural commercialisation must play a key role, but must be effectively managed to minimise its potential adverse effects. The policies that are necessary to achieve this relate primarily to countries’ own development strategies, including those which influence the creation of non-agricultural employment. To the extent that trade rules influence those strategies, they can have major effects.

These issues suggest a potentially significant cross-cutting link between the negotiations on agricultural and non-agricultural market access, and with other aspects of the Doha agenda.

Food security

Much of the current concern for food security in developing countries arises from dependence on food imports combined with fluctuations in world market prices.

The further liberalisation scenario is expected to increase agricultural production in developing countries, but this may not automatically lead to greater food security in all these countries. Economic considerations suggest that greater liberalisation will lead to greater specialisation, and greater international trade flows in agricultural products. All countries, both developing and developed, will in consequence become increasingly dependent on food imports to maintain a necessary balance in consumption. All countries will be affected by fluctuations in world market prices, with the largest effects being experienced in those countries where food is the greatest proportion of average household income. Potentially therefore, future upwards changes in basic food prices can have an adverse effect on supply in developing countries, without significantly affecting developed ones. Meanwhile, a downwards change in world prices for products oriented towards developed country markets can have an adverse effect on developing countries’ export earnings, and hence on their ability to import other foodstuffs on which they have

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45 Maltais et al (2002), (Mbiba 2002)
47 Pingali (2001)
become dependent. Changes in the opposite direction will have the opposite effects, but the net impact may be increased vulnerability to price changes.

For these reasons, it has been argued\textsuperscript{48} that the improvement in economic welfare attainable in both developed and developing countries from the removal of agricultural subsidies needs to be accompanied by policies which subordinate the efficiency of the world market to non-trade concerns, in both developed countries (multifunctionality) and developing ones (food security). The WTO Committee on Agriculture has established an inter-agency panel to examine the effects, with a view to improving access to multilateral financing for LDCs and NFIDCs to meet their import needs. It has however been argued that these proposals and others under discussion in the Agriculture Committee may be inadequate, and that they do not cover all countries at risk\textsuperscript{49}. In view of this uncertainty, the further liberalisation scenario would suggest potentially significant adverse effects on food security in some developing countries, particularly the least developed.

\textit{Environmental impacts}

A series of case studies carried out by UNEP\textsuperscript{50} reveals a wide range of potential beneficial and adverse effects, influenced by levels and patterns of production and consumption. A number of common themes have been identified in a review of the empirical and analytical evidence\textsuperscript{51}:

\begin{itemize}
  \item \textit{Deforestation and degradation of marginal land.} In principle, increasing crop yields due to commercialisation may reduce pressure for land conversion. In practice, deforestation and other conversion have continued despite past increases in yields. This suggests that population growth and other demographic factors may be the more important effect, and that increasing yields may do little to slow the changes.
  \item \textit{Toxic chemicals and pollutants.} Increased commercialisation has led to higher intensity inputs, and higher levels of agricultural pollution. In addition, increased exports to developed country markets have required a response to consumer demand for unblemished produce, and hence further increase in the use of insecticides and fungicides. Against this, consumer pressure and product labelling have reduced the use of some toxic and polluting chemicals. A variety of policy approaches to minimising adverse effects and maximising beneficial ones have been proposed\textsuperscript{52}.
  \item \textit{Water consumption and salinisation.} The trend towards higher value crops tends to be less water intensive, leading to decreased pressure on groundwater and less salination. Similarly beneficial effects can be expected from the removal of subsidised water use in some developing countries\textsuperscript{53}.
  \item \textit{Livestock and nutrients.} An increase in commercial livestock production for export markets may cause nutrient overloading from animal wastes. Against this, commercial agriculture offers greater possibilities for the management of wastes and their controlled use as fertilisers.
  \item \textit{Transgenic crops.} The complex and potentially major effects of the adoption of transgenic crops are discussed below under Trade and Environment.
\end{itemize}

\textsuperscript{48} UNDP (2003)
\textsuperscript{49} UNDP (2003)
\textsuperscript{50} UNEP (1999), Abaza and Jha (2002)
\textsuperscript{51} Barrett et al (2001)
\textsuperscript{52} Pingali (2001)
\textsuperscript{53} George (2003)
• *Air and water pollution from food processing.* Unless effectively regulated, increased processing in developing countries may have significant pollution impacts.

• *Transport.* While increased international trade in foodstuffs can be expected to increase the environmental impacts of transport, an increase in local processing may mitigate this effect. The net impact will depend on changes in the quantities transported at different levels of processing. The environmental effects of international transport are discussed more fully in Section 17, in relation to the overall sustainability impact of the Doha measures.

An OECD study of the potential environmental impacts of trade liberalisation identifies similar effects, and notes a potential further effect on biodiversity, through the creation of new pathways for the introduction of exotic species\(^\text{54}\).

In respect of short-run impacts, UNEP has proposed a checklist for evaluating whether countries’ policy and regulatory frameworks are adequate for avoiding significant adverse effects and maximising the potential benefits\(^\text{55}\).

\(^{54}\) OECD (2000)  
\(^{55}\) UNEP (2001)
4.6. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario discussed above are summarised in Table 4.6.

Table 4.6. Agriculture - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developed countries</strong></td>
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<tr>
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<tr>
<td>income</td>
<td>all</td>
<td></td>
<td>economic efficiency adjustment</td>
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<tr>
<td>employment</td>
<td>EU, US, other subsidisers</td>
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<td></td>
<td>▼</td>
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<tr>
<td>Social</td>
<td></td>
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<tr>
<td>equity</td>
<td>subsidisers</td>
<td>adjustment</td>
<td>domestic policy</td>
<td>▼</td>
</tr>
<tr>
<td>animal welfare</td>
<td>all</td>
<td>relaxed welfare standards</td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
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<tr>
<td>pollution</td>
<td>subsidisers</td>
<td>reduced production</td>
<td>regulation</td>
<td>△</td>
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<tr>
<td></td>
<td>non-subsidising exporters</td>
<td>increased production</td>
<td></td>
<td>▲</td>
</tr>
<tr>
<td>biodiversity</td>
<td>subsidisers</td>
<td>declining agricultural land use</td>
<td>land use decisions</td>
<td>△</td>
</tr>
<tr>
<td>landscape and amenity value</td>
<td>subsidisers</td>
<td>changed land use</td>
<td>public perceptions</td>
<td>?</td>
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<tr>
<td><strong>Developing countries</strong></td>
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<tr>
<td>Economic</td>
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<tr>
<td>income</td>
<td>most</td>
<td>higher exports</td>
<td>regulation</td>
<td>△</td>
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<tr>
<td></td>
<td>Middle East, North Africa</td>
<td>terms of trade</td>
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<td>▲</td>
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<tr>
<td>employment</td>
<td>all</td>
<td>adjustment</td>
<td>domestic policy</td>
<td>△ ▼</td>
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<tr>
<td>Social</td>
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<tr>
<td>poverty</td>
<td>all</td>
<td>economic growth</td>
<td>development strategy</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>LDCs, net food importers and urban poor</td>
<td>higher consumer prices</td>
<td>implementation of Marrakesh decision</td>
<td>▲ ▼</td>
</tr>
<tr>
<td></td>
<td>all</td>
<td>traditional to commercial agriculture</td>
<td>development strategy and policy</td>
<td>▼</td>
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<tr>
<td></td>
<td>all</td>
<td>increased competitiveness</td>
<td>existing extent of commercial agriculture</td>
<td>△</td>
</tr>
<tr>
<td>equity, gender</td>
<td>all</td>
<td>traditional to commercial</td>
<td>development strategy and policy</td>
<td>▼</td>
</tr>
<tr>
<td>Impact</td>
<td>Type of country affected</td>
<td>Causal factors</td>
<td>Factors affecting significance</td>
<td>Potential significance</td>
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<td>food security</td>
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<td>import dependence</td>
<td>international financing and support mechanisms</td>
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<td>health</td>
<td>all</td>
<td>increased use of chemicals</td>
<td>regulation, consumer pressure</td>
<td>▼</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>all</td>
<td>commercialisation</td>
<td>regulation, consumer pressure</td>
<td>▼</td>
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<td>agricultural pollution</td>
<td>all</td>
<td>increased processing</td>
<td>regulation</td>
<td>▼</td>
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<tr>
<td>industrial pollution</td>
<td>all</td>
<td>increased yield</td>
<td>demographic effects</td>
<td>?</td>
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<td>deforestation, degradation</td>
<td>all</td>
<td>trend to less water intensive crops,</td>
<td>competitiveness of different crops</td>
<td>△</td>
</tr>
<tr>
<td>of marginal land</td>
<td></td>
<td>removal of subsidies</td>
<td></td>
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<tr>
<td>water consumption</td>
<td>all</td>
<td>trend to less water intensive crops,</td>
<td>irrigation techniques</td>
<td>△</td>
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<tr>
<td></td>
<td></td>
<td>removal of subsidies</td>
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<tr>
<td>salination</td>
<td>all</td>
<td>more efficient water use</td>
<td>management techniques</td>
<td>△△</td>
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<tr>
<td>nutrient runoff</td>
<td>all</td>
<td>increased livestock production,</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>commercialisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td>all</td>
<td>commercialisation of agriculture</td>
<td>pace of liberalisation, industrialisation</td>
<td>?</td>
</tr>
<tr>
<td>development strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symbols used to show impact significance

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▼: negative lesser significant impact
- ▲: positive greater significant impact
- ▼▼: negative greater significant impact
- △▼: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain
5. MARKET ACCESS FOR NON-AGRICULTURAL PRODUCTS

5.1. Background

A detailed SIA for non-agricultural products has been carried out in a parallel study, with particular emphasis on pharmaceuticals, non-ferrous metals and textiles. This overview study draws on that work.

During the 1990s international trade in non-agricultural products grew at over six percent per annum, even after the dip due to the world financial crisis of 1997. The growth rate reached double figures in 1994 and 1995. Much of this can be ascribed to the removal of barriers achieved through the Uruguay Round. The Doha Agenda negotiations are intended to promote further opening of markets beyond the commitments already made. Clearly, these market access negotiations have widespread ramifications for almost all countries.

5.2. Negotiation issues

At the Fourth Session of the WTO Ministerial Conference, held at Doha in November 2001, Ministers agreed a detailed Agenda for new WTO negotiations to be concluded not later than 1 January 2005. WTO members acknowledged the importance of enhanced market access for industrial products, and agreed to negotiations which would aim, by modalities to be agreed, to reduce or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries. The Trade Negotiations Committee agreed a structure on 1 February 2002 whereby negotiations for non-agricultural products will take place in a new Negotiating Group on Market Access. While some developing countries questioned the desirability to negotiate in the market access sector before the WTO ministerial, all WTO members did sign up to further negotiations on market access.

The Negotiating Group has two main tasks. First, it needs to negotiate on modalities. Second, once modalities have been decided, the Group should negotiate on the extent of reductions in or elimination of tariff and non-tariff barriers. Modalities lay out the framework for how negotiations will proceed, and can include numerical targets, formulas, sector-by-sector and request/offer approaches. They structure how and which tariffs will be targeted for reductions, which may have significant consequences for the outcome of negotiations.

While negotiations on the actual tariff reductions can only begin after an agreement on modalities, it is possible to review the main issues that are likely to be at the heart of the negotiations. It is expected that tariff reductions will be negotiated using a formula approach. However, there are various alternatives with important differences regarding the treatment of relatively high tariffs and whether countries reduce proportionally and in stages. Tariff peaks (ad valorem duties above 15%) are often concentrated in products of export interest to the developing countries.

Tariff escalation is another issue expected to feature prominently in future negotiations. The term tariff escalation refers to the practice whereby importing countries apply progressively higher levels of protective tariffs according to the level of processing – e.g.

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56 Morrissey and te Velde (2003)
57 Rege (2001)
59 Finger and Schuknecht (1999), Laird (2002a)
markedly different levels of tariffs may be applied to raw materials, semi-processed and processed products, discouraging further processing in the producer countries. A study by the WTO\textsuperscript{60} finds that tariffs for industrial products as a group in the EU and Japan appear to de-escalate, while those in other developed countries (US, Canada and Australia) escalate (although different studies using alternative classifications may come to different conclusions).

Negotiations on non-tariff barriers (NTBs) may take place elsewhere in the WTO system as well as under market access\textsuperscript{61}, for example in relation to technical barriers to trade (TBT), sanitary and phytosanitary measures (SPS), anti-dumping and subsidies, customs valuation, preshipment Inspection (PSI), import licensing, and safeguards, which involve major issues of trade practice and policy and can at times constitute NTBs. A distinction is often made between core NTBs, considered to have clearly protective effects, and other NTBs\textsuperscript{62}. The textiles and clothing sectors are most affected by core NTBs in developed countries. This is partially reflecting the quota system, which is being dismantled under the Agreement on Textiles and Clothing. Fuels and mineral products, rubber products, machinery, and precious stones and metals are most affected in developing countries, particularly through non-automatic licensing\textsuperscript{63}. The ‘other’ NTBs include non-automatic licensing linked to the maintenance of sanitary and phytosanitary standards, technical standards or protection for the environment\textsuperscript{64}.

5.3. Scenarios

The Base scenario represents the situation that will prevail when existing commitments have been fully implemented, using 2005 as the time horizon date. The Further liberalisation scenario assumes

- the most probable extent of liberalisation of market access that can be achieved during the WTO negotiations, varying between sub-sectors;
- a target of full liberalisation (zero tariffs) for non-sensitive sectors such as pharmaceuticals;
- less complete liberalisation for more sensitive sectors such as textiles and clothing;
- commitments are made by 2005, and implemented by 2010 (later for developing countries).

5.4. Assessment methodology

Application of the SIA methodology to market access for non-agricultural products is as described in Section 2.5. This approach has been applied to non-agricultural products in a parallel detailed SIA for the sector, with particular emphasis on pharmaceuticals, non-ferrous metals and textiles\textsuperscript{65}. As discussed above, the approach uses causal chain analysis to identify the likely effect of changes in trade measures on economic activities, and from there to analyse economic, social and environmental effects.

In the detailed SIAs use is made of country case studies, to provide information on causal effects in different country situations. For this overview study, the examination of causal chains remains largely at a qualitative level, supported by case study information where appropriate.

\textsuperscript{60} WTO (2001)
\textsuperscript{61} Rege (2001)
\textsuperscript{62} WTO (2001)
\textsuperscript{63} WTO (2001e)
\textsuperscript{64} See Bouet et al (2001) for the potential importance of environmental barriers to trade
\textsuperscript{65} Morrissey and te Velde (2003)
5.5. Assessment of impacts

Modelling studies

Although there are differences in results from different CGE analyses, there are a number of common findings\textsuperscript{66}. First, studies show significant global gains from liberalisation of trade in manufactures. Second, whereas most studies of agriculture find that liberalisation by a country itself provides a greater share of gains than liberalisation by partner countries, this is not generally the case for manufactures. Third, most studies find that gains are fairly evenly distributed between developed and developing countries. Within developing countries the greatest gains accrue to Asian countries. Gains for Latin American countries are more limited, and there are no gains to the least developed countries. In the case of sub-Saharan Africa (SSA), liberalisation of trade in manufactures is associated with net losses, although these are generally small. For a 50% reduction in trade barriers the expected global welfare gain is of the order of $100 billion\textsuperscript{67}.

Causal Chain Analysis

The effects of market access liberalisation will vary between countries, and will be different for different product groups. In general, developed economies are more likely to be exporters of manufactures and are better able to adjust to increased competition from imports in those sectors where it occurs. Developing countries are more likely to have import barriers to protect domestic industry, and are less able to adjust to increased competition from imports. Meanwhile, raw materials may be exported by developing countries and imported by developed countries. The precise impact will depend on the importance of the sector to the country, with the largest gains accruing to exporting countries.

The likely impacts in different countries will depend on tariff changes and the volume of imports and exports in each product group. The volumes of imports and exports by product group and region are shown Table 3.5 of the main report. For mining products (including oil and other fuels), North America, Western Europe and Asia (including Japan) are net importers. The developing or transitional regions of Latin America, Central and Eastern Europe, Africa and the Middle East are net exporters. For manufactures, Western Europe and Asia are net exporters, while North America has become a net importer for manufactures overall. The developing and transitional regions are net importers.

The principal effect on these trade flows resulting from the market access negotiations occurs through tariff reduction. The average post-Uruguay Round tariff rates for different product groups are shown in Table 5.3, separately for developed and developing countries. On average the tariffs that are actually applied are about 70% of the bound rates in developed countries, while in developing countries applied rates are still slightly above bound rates. Developing countries’ tariffs are significantly higher than those in developed countries for all product groups.

\textsuperscript{66} Anderson \textit{et al} (2001), Bora \textit{et al} (2001), World Bank (2002a)  
\textsuperscript{67} Francois (2001)
<table>
<thead>
<tr>
<th>Product Group</th>
<th>Industrial economies</th>
<th>Developing economies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Applied</td>
<td>Bound</td>
</tr>
<tr>
<td>Petroleum</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Wood, pulp, paper, and furniture</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Textiles and clothing</td>
<td>8.4</td>
<td>11</td>
</tr>
<tr>
<td>Leather, rubber, and footwear</td>
<td>5.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Metals</td>
<td>0.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Chemical and photographic supplies</td>
<td>2.2</td>
<td>3.6</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>4.2</td>
<td>5.6</td>
</tr>
<tr>
<td>Nonelectrical machinery</td>
<td>1.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>2.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Mineral products; precious stones and metals</td>
<td>0.7</td>
<td>1</td>
</tr>
<tr>
<td>Manufactures, not elsewhere specified</td>
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<td>2</td>
</tr>
<tr>
<td>All merchandise trade</td>
<td>2.6</td>
<td>3.7</td>
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</table>


On the basis of these figures, in developed countries there are two broad areas which over the years have shown strong resistance to market liberalisation and which consequently offer the greatest scope for further tariff reductions: textiles, clothing, leather goods and footwear; and transport equipment, which includes automobiles and automotive products. In developing countries, all product groups offer scope for tariff reduction. Tariffs on transport equipment tend to be particularly high in transition countries, and also in the newly industrialising Asian countries.

The average tariff rates shown in Table 5.3 hide two other aspects of tariffs that play a role in the negotiations: tariff peaks (high tariffs which protect individual product lines), and tariff escalation (tariffs which increase according to the degree of processing applied to the product). Tariff peaks in developed countries tend to follow the same pattern as average tariffs, with the largest share of peaks in textiles, clothing, leather and, to a lesser extent, transport equipment. In both developed and developing countries escalation typically ranges (with exceptions) from zero rates for raw materials, to low to moderate for intermediate products, and higher rates for finished goods.

In many countries the same product groups that are the principal focus of potential tariff reductions are also subject to significant non-tariff barriers (NTBs), and negotiations for liberalisation of market access in the form of tariff reductions therefore overlap and interact with negotiations concerning other forms of market barriers. These barriers include voluntary export restraints, which were to be eliminated under the WTO Agreement on Safeguards, in return for flexibility in safeguards use. Similar measures remain however, for example in the automotive and non-ferrous metals sectors. Certain NTBs in textiles and clothing, notably the remaining substantial quotas enforced under the Multifibre Arrangement, are due to be eliminated under the WTO Agreement on Textiles and Clothing (ATC). Similar interlinkages occur between market access negotiations and the separate negotiations on antidumping, countervailing measures, technical barriers to

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68 WTO (2001e)  
69 WTO (2001e)  
70 Laird (2002b)
trade, local content requirements, subsidies, import licensing, state trading and rules of origin.

In broad terms the market access negotiations and the rules negotiations may be expected to reinforce each other in reducing barriers to trade. For access to developed country markets this will apply primarily to those product groups where barriers remain relatively high, while for developing countries all product groups may be affected.

**Impacts in developed countries**

*Trade between developed countries*

All of the developed countries are broadly on a par with each other in terms of their economic systems, their level of development, their social and political structures, and their mechanisms for environmental protection and resource conservation. The market efficiencies available from reduced barriers to trade between these countries can be expected to lead to an increase in economic welfare in all the countries, similar to those predicted from CGE models.

Little if any adverse environmental effects should result from movements in production from one country to another, since protection mechanisms are similar in all. To the extent that environmental costs are internalised, economic decisions may be expected to result in environmental improvements. Increased production may have an adverse scale effect on pollution and resource depletion, but this will be associated more with economic growth than with trade liberalisation as such.

The short-run social effects in textiles and associated sectors are likely to be small, as discussed in the parallel sectoral study. In the transport equipment sector, trade is already highly internationalised and subject to competitively driven movements of production between these countries. The short-run social effects of any additional movement is likely to be small in comparison to the continuing effects of existing competition. No major social effects are anticipated for any of the other product groups.

*Exports to developing countries*

The economic and social impacts can be expected to be beneficial in both the short run and the long run. The environmental scale effect of increased production should be optimised as discussed above, via these countries' existing environmental management mechanisms.

*Imports from developing countries*

For textiles and associated sectors significant short-run social effects may occur in some areas, as discussed in the parallel sectoral study. There is likely to be a negative short-run economic impact associated with this, arising from unemployment in those areas where production decreases. This can be expected to turn to a long-run positive impact, as employment shifts to higher added-value activities. The potentially beneficial environmental scale effect from reduced production should be small, since any change in the economic-environmental balance will again be optimised through existing environmental management mechanisms.

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71 Laird (2002b)
72 Morrissey and te Velde (2003)
In the short term, the economic, social and environmental effects for automotive products and other high skill manufactures can be expected to be similar to those for textiles. In the long term however, the causal chain may be less straightforward. A reduction in tariff escalation and in non-tariff barriers may result in a transfer of high value-added production to exporters whose labour costs are lower, particularly in developing countries. If the economy adjusts in such a way as to replace employment in the sector by activities of equal or higher value-added, there will be a long-run economic welfare gain in importing developed countries, as indicated by modelling studies. Whether or not this is achieved will depend on the success of these countries’ development strategies, for promoting new technologies and associated service activities whose added value is as high as, or higher than, those in which production decreases.

Impacts in developing countries

Most studies suggest that the poorest countries (least developed countries, especially SSA and small island economies) are likely to be net losers from full liberalisation of trade in manufactures, while the more industrialised developing countries should gain. This is because the poorer countries have no evident capacity to benefit from increased market access for industrial goods. In least developed countries, manufacturing exports are few. If they liberalise access to their own markets, the most likely impact is adverse, as domestic producers succumb to competition from imports. While there are gains to consumers, and potential efficiency gains to the economy, the adjustment costs will be high. Given constraints on government budgets and the difficulties of quick policy reform, there is little likelihood of net economic and/or social benefits to least developed countries, and a likelihood of net losses. As discussed above for developed countries, the impacts will vary according whether the trade is with other developing countries or developed ones.

Exports to developed countries

Exporting developing countries can be expected to achieve both a short-run and a long-run economic gain from increased access to developed country markets. Associated with this, employment in manufacturing rises, absorbing job losses in other sectors. In those countries producing high value-added products (e.g. in the automotive sector, electronics, and certain parts of textiles and clothing), higher wages translate into a social gain. In those producing low value added products, such as textiles and clothing with high labour content and low wages, the social gain of manufacturing employment will not necessarily offset the social loss from falling livelihood opportunities in traditional agriculture. The overall social effect will depend strongly on interactions between the two sectors.

Social effects may include impacts on gender and child welfare, related to the distribution of employment. The actual impacts will depend on economic and social policies in these countries.

It has been argued that a reduction in tariff escalation will have environmental benefits for developing countries, by shifting production away from production of highly polluting raw materials to higher levels of processing. A review of the evidence has shown the effect to be negligible.\(^\text{73}\)

The environmental effect of increased production, on water and air pollution\(^\text{74}\) or land usage and degradation, may be negative in those countries with weak environmental regulation, which are generally the less developed ones. Little evidence exists of high

\[^{73}\text{Hecht (1997)}\]
\[^{74}\text{Cole et al (1998)}\]
technology multinational corporations seeking ‘pollution havens’, and indeed they can have a beneficial effect through introducing environmentally efficient manufacturing techniques and management systems\textsuperscript{75}. However, where production takes place in small scale operations its environmental impacts are strongly dependent on national regulation. The extent to which environmental controls are strengthened in response to the effects of increased production will depend on the level of importance that is attached to the impacts which occur.

*Imports from developed countries*

A beneficial economic effect can be expected from access to more competitively priced products, set against a loss of tariff revenues. This may reduce government expenditure, with adverse social impacts in which women may be most affected\textsuperscript{76}. There may be adverse short-run economic and social effects from loss of employment. This may lead to adverse environmental effects if the alternative livelihood strategies that are available are more environmentally damaging than those which are lost. The long-run economic equilibrium effect should in general be positive, through greater efficiency of the economy. The overall long term effect may be positive or negative, depending on the influence the changes have on the country’s own capabilities for producing high value-added products. This in turn will depend on the countries’ industrial development policies, and the effects which changes in trade rules have on them. This introduces cross-cutting links to other areas of negotiation, as discussed below.

*Trade between developing countries*

Developing countries exhibit a wide spectrum of their levels of development, their economic, social and political structures, and their mechanisms for environmental protection. Increased trade between them can therefore be expected to have a range of effects similar to those described above for trade between developed and developing countries. The effects in newly industrialising developing countries, trading with less developed countries, will be similar to those which occur in developed countries trading with developing ones. The effects in less developed and least developed countries will be similar to those discussed above for trade with developed countries.

*Relationships to policy frameworks and development strategies*

In both developed and developing countries, many of the potential impacts on sustainable development depend on the policy frameworks which countries have in place, the characteristics of their development strategies and their likely success, and the influences of trade reforms on these frameworks and strategies.

For short run impacts, UNEP has proposed a similar checklist to that developed for the agriculture sector, for evaluating whether relevant policy frameworks are adequate for avoiding significant adverse effects\textsuperscript{77}. For longer term development, developing countries (and developed ones) have in the past used a wide range of policy interventions to protect and promote particular industries. Measures that have been used in the newly industrialising economies of East Asia, in India, Bangladesh, and previously in Japan, are summarised in Table 5.4\textsuperscript{78}.

\textsuperscript{76} Aprodev (2002)
\textsuperscript{77} UNEP (2001)
\textsuperscript{78} Pangestu (2002)
Table 5.4: Policies and measures used for promoting exports in Asia

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<tr>
<th>Type of measure</th>
<th>India</th>
<th>Malaysia</th>
<th>Bangladesh</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Korea</th>
<th>Singapore</th>
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<th>Hong Kong (China)</th>
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<td>-----------</td>
<td>-----------</td>
<td>------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Minimum export prices</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>On two MFA, others</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Export quotas</td>
<td>Yes</td>
<td>No</td>
<td>MFA, others</td>
<td>MFA, others</td>
<td>MFA, others</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Voluntary restraints</td>
<td>MFA</td>
<td>MFA, others</td>
<td>MFA, others</td>
<td>MFA, others</td>
<td>MFA, others</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>MFA</td>
<td>Yes</td>
</tr>
</tbody>
</table>

— : Not available, MFA : Multifibre Arrangement.

As discussed more fully in relation to Trade and Investment in Section 12, UNIDO has argued that the East Asian success benefited considerably from the judicious use of policy instruments such as those shown in the table. Many of the measures listed in Table 5.4 are constrained by WTO rules. The main relevant WTO provisions are those which cover:

- Tariffs, Antidumping, and Safeguards
- Export Subsidies
- Agreement on Trade-Related Investment Measures
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)
- General Agreement on Trade in Services
- Infant Industry Protection
- Special and Differential Treatment

The impacts on sustainable development of increased market access in the non-agricultural sector depend on cross-cutting links to the negotiations in these areas. It has been observed that ‘multilateral rules are developing in line with the shift toward the use of more generic policies for promoting industrial development’, and that a ‘WTO-consistent industrial policy for developing countries in the 21st century must be comprehensive, rather than target specific sectors’. The negotiations in some of these areas, notably on Special and Differential Treatment, offer scope for arrangements which will allow developing countries to pursue industrial policies similar to those which contributed to the development of East Asia. However, SDT becomes less influential as developed countries reduce their tariffs. It has been suggested that, except for least developed countries, reliance should be placed instead on generic policy measures to create an economic environment conducive to investment, innovation and competition: ‘the appropriate response to fears of anticompetitive behavior by foreign companies is not to impose performance requirements and restrictions but to put in place an effective national competition law to ensure fair competition’. The difficulties faced by developing countries in achieving this, and the likely impacts, are discussed in Section 13 and in the parallel sectoral SIA on competition policy.

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79 UNIDO (2002)
80 Pangestu (2002)
81 Pangestu (2002)
82 Michalopoulos (2000)
83 Pangestu (2002)
84 Kirkpatrick and George (2003)
5.6. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario discussed above are summarised in Table 5.5.

**Table 5.5. Market Access for Non-Agricultural Products - potential impacts of further liberalisation scenario**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic income</td>
<td>developed</td>
<td>economic efficiency</td>
<td></td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>Asian countries</td>
<td></td>
<td></td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>Latin America</td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>sub-Saharan Africa and small island states</td>
<td></td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>employment</td>
<td>developing</td>
<td>loss of tariff revenues short term adjustment, e.g. textiles and clothing</td>
<td>competiveness, domestic policy</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>developed and some developing</td>
<td></td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>Social equity</td>
<td>developed and some developing</td>
<td>short term employment</td>
<td>domestic policy</td>
<td>▼</td>
</tr>
<tr>
<td>equity, poverty, gender, child welfare</td>
<td>developing</td>
<td>short and long term employment</td>
<td>domestic policy, labour value added</td>
<td>▼</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>developing</td>
<td>increased production</td>
<td>effectiveness of regulation</td>
<td>▼</td>
</tr>
<tr>
<td>Process</td>
<td>developed</td>
<td>long term value added of employment</td>
<td>development of new technology and high value services</td>
<td>▼</td>
</tr>
<tr>
<td>development strategy</td>
<td>East Asia</td>
<td>accelerated industrialisation</td>
<td></td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>other developing</td>
<td>limits on development strategy</td>
<td>flanking measures on development policy</td>
<td>▼</td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- blank impact has been evaluated as non-significant compared with the base situation
- △ positive lesser significant impact
- ▼ negative lesser significant impact
- ▲ positive greater significant impact
- ▼ negative greater significant impact
- △▼ positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ? effects are uncertain
6. SERVICES

6.1. Background

Services consist of a wide range of intangible activities that cannot be traded separately from their production. They include tourism, travel, recreation, health services and education, which are provided to final consumers, and services provided to commercial and other organisations such as business services. Other services like communications, transport, distribution, construction, sanitation, waste disposal and financial services may be provided to both intermediate and final consumers.

In its contribution to GDP, the services sector is the fastest growing sector of the world economy. It has become the major component of all economic activity, representing well over 60% of global GDP by 1998. This domination applies primarily to high income economies, where the proportion of GDP had risen to over 65%, compared with an average in low income countries of 38%.

The increase can be explained in part by increasing standards of living in high income countries, resulting in greater demand for recreational and other services, and also by increasing capital-intensiveness of these economies, which has in particular contributed to the growth of the financial services sector. However, some of the expansion of services also derives from increased sub-contracting by manufacturing organisations of activities which were previously part of their own operations. These ‘producer services’ include research, design, advertising and distribution of goods, undertaken by specialist service organisations rather than by the manufacturers themselves. The privatisation of government activities has similarly contributed to growth of the service sector.

While services represent two thirds of the world economy, their share of world trade is much smaller, estimated to comprise less than one fifth of cross-border trade, although the services share in the exports of developed countries is higher. This shortfall offers considerable potential for the expansion of services trade (although the shortfall may be smaller than the figures suggest, as statistics for trade in services are much less well documented than for goods).

International trade in services is covered by the General Agreement on Trade in Services (GATS). In principle, GATS covers all commercial tradable services, with the exception of some aspects of air transport such as traffic rights, and services supplied under government authority. The WTO Secretariat has drawn up a list of twelve groups of service sectors, which is used in the negotiation of commitments by most WTO member countries. These are:

- business (including professional and computer) services
- communication services
- construction and related engineering services
- distribution services
- educational services
- environmental services

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85 UN et al (2002)
86 WTO (2001f)
87 WTO (2001e)
88 Daniels (1999)
89 WTO (2001e)
90 Maurer and Chauvet (2002)
91 WTO (1999)
- financial (insurance and banking) services
- health-related and social services
- tourism and travel-related services
- recreational, cultural and sporting services
- transport services
- other services not included elsewhere.

An important sector not specifically included in this list is:

- energy services.

The further subdivision of types of service into numerous subsections\(^{92}\) is subject to ongoing discussions, and various proposals have been made.

GATS has two main components: the framework agreement covering general rules and principles, and national schedules listing (a) specific commitments made by individual countries on access to their domestic markets by foreign suppliers and (b) sectors where countries notify that they are withholding MFN treatment from foreign services suppliers in their markets (“MFN exemptions”). The Agreement defines four ways in which a service can be traded, known as modes of supply. Each country’s national schedule defines its market access commitments by sector and by mode. The four modes are:

1. **Cross-border trade** - transactions across borders, such as transport and financial trading
2. **Consumption abroad** - movement of the consumer to a foreign country, e.g. for tourism or education
3. **Commercial presence** - direct investment in a foreign country, e.g. for delivering services such as telecommunications or electricity
4. **Presence of natural persons** - temporary entry of people as providers of services such as consultancy, or to act as temporary local managers for their employers.

A hypothetical example of a country schedule\(^{93}\) is shown in Table 6.2.

### Table 6.2. Format and Example of a Schedule of GATS Commitments

<table>
<thead>
<tr>
<th>Commitment type and mode of supply</th>
<th>Conditions and limitations on market access</th>
<th>Conditions and qualifications on national treatment</th>
<th>Additional commitments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Horizontal commitments (across all sectors)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cross-border</td>
<td>None.</td>
<td>None.</td>
<td></td>
</tr>
<tr>
<td>2. Consumption abroad</td>
<td>Unbound.</td>
<td>Unbound.</td>
<td></td>
</tr>
<tr>
<td>3. Commercial presence (foreign direct investment)</td>
<td>Maximum foreign equity stake is 49 percent.</td>
<td>Unbound for subsidies. Approval required for equity stakes over 25 percent.</td>
<td></td>
</tr>
<tr>
<td>4. Temporary entry of natural persons</td>
<td>Unbound except for intracorporate transfers of senior managers.</td>
<td>Unbound except for categories listed in the market access column.</td>
<td></td>
</tr>
<tr>
<td><strong>Specific commitments (for a particular sector)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{92}\) UN et al (2002)

\(^{93}\) Adlung et al (2002)
2. Consumption abroad

None.

3. Commercial presence (foreign direct investment)

25 percent of management to be nationals.

Establishment of an independent regulator.

4. Temporary entry of natural persons

Unbound, except as indicated under horizontal commitments.

Unbound, except as indicated under horizontal commitments.

“None” implies that no restrictions are listed in the context of GATS articles 16 and 17.

Source: Adlung et al 2002

The commitments made by WTO members are determined by the negotiation process. Every country must have a schedule, but it need cover no more than one sector, and the agreement does not specify any threshold for the commitments that are made. Liberalisation is achieved through negotiating rounds or the accession commitments of new WTO members, in which individual countries or groups of countries offer to make certain commitments, and request particular commitments from others. Subject to the Agreement’s permissible exemptions, offers when tabled apply to the full WTO membership. Offers may be withdrawn if countries consider that those made by other countries are inadequate. At the end of the round, the set of offers that have been accumulated are converted to commitments.

Relatively little liberalisation was achieved in the Uruguay Round. Most commitments went no further than to bind existing market access, and in many cases the level of access guaranteed by the commitments was lower than that already provided. Additional negotiations have taken place for financial services, maritime transport, movement of natural persons and basic telecommunications. In the financial services and telecommunications sectors significant commitments were achieved at the conclusion of these negotiations in 1997. The negotiations on maritime transport achieved little progress and were suspended, with a commitment to resume them in the new round. This is the only service sector for which a specific prior obligation to negotiate in the current round exists.

Mode 4, covering the movement of people (‘natural persons’) is a contentious area, since labour market regulation and wider national immigration controls place inevitable constraints on this form of liberalisation. The GATS agreement makes clear that it does not apply to ‘natural persons seeking access to the employment market’, and that commitments need apply only to temporary stay. Most of the scheduled commitments made by developed countries apply only to ‘intra-corporate transferees’ or highly qualified personnel and business visitors, who are the types of people for whom they themselves seek access into other countries. Some progress has been made on contractual services suppliers. Developing countries have argued for access to providers of low-skilled and labour intensive services.

Another area that is indirectly related to liberalisation of international services trade is the privatisation and regulation of essential services such as water and electricity. In countries where these services are operated as state monopolies, the potential gains from increased market access cannot be realised without introducing effective competition or regulation. However, these types of industry are often natural monopolies, since it would be highly inefficient to provide consumers with alternative choices of sewers, water mains and cables. Sophisticated regulatory structures are therefore needed to prevent a state monopoly being replaced by a private monopoly. If the publicly owned industry is

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94 WTO (2001e)
95 WTO (2001e)
96 WTO (2001e)
97 WTO (2001e)
98 CUTS (2002)
currently operated as a public service, providing low cost or free access to particular sections of society, regulation is needed if the same level of social equity is to be maintained in a liberalised market.

GATS expressly confirms the right of member states to regulate the provision of services, provided that such regulation is non-discriminatory, and the Agreement is fully consistent with regulatory policies to support consumer protection and social goals. It has been suggested, however, that ‘continued monopolization for the sake of universal service, when alternative regulatory means of fulfilling these social objectives are available, would clearly fall foul of attempts to give market access to foreign firms’, and that ‘pro-competitive regulatory reform would have to precede liberalization of services’\(^{99}\). A further concern that has been expressed in this context is that once a commitment has been made, without an adequate understanding of what regulation might be needed or the capacity to implement it, the process of renegotiation under GATS Article 21 has not yet been fully tested for services\(^{100}\). The renegotiation process may be costly in terms of the concessions required elsewhere.

Liberalisation of mode 3 (commercial presence) also creates controversy, through its treatment of foreign direct investment (FDI). Although many of the commitments made in GATS schedules have been for mode 3, as part of countries’ desire to attract FDI, full liberalisation would prohibit many of the restrictions which have traditionally been used to protect and promote countries’ own industries\(^{101}\). In response, GATS permits developing countries to impose conditions for developmental purposes on their commitments in all modes, including FDI in Mode 3 (Article 19).

6.2. Negotiation issues

The new round of GATS negotiations was launched in February 2000 according to an existing provision in GATS Article XIX (Progressive Liberalisation). Negotiating Guidelines and Procedures were adopted in March 2001, relating to market access in certain sectors. Subsequently the ongoing negotiations under GATS have been incorporated into the wider Doha agenda.

Negotiations are mandated on GATS rules under Articles X, XIII and XV of GATS, covering emergency safeguards, government procurement and subsidies\(^{102}\). Negotiations are also mandated on most-favoured-nation exemptions under GATS Article II (with a view to reducing the number of such exemptions), and on domestic regulation, qualification requirements and procedures, technical standards and licensing procedures, under Article VI. A provisional set of disciplines has already been agreed for accountancy rules, and will come into force at the end of the negotiations.

For negotiations on national schedules the Doha Ministerial Declaration set dates for the submission of requests (30 June 2002) and offers (March 2003). The deadline for completion of negotiations is 1 January 2005, when agreed new GATS commitments will form part of the single undertaking. The sectoral coverage of current commitments on national treatment and market access is limited for many countries. Including the post-Uruguay Round agreements on basic telecommunications and financial services, developed countries have committed to removing all restrictions on market access or national treatment for only 25 per cent of all service activities. Developing countries have made even fewer commitments. In the case of major developing countries, on average,

\(^{99}\) Hodge (2002)  
\(^{100}\) Hilary (2002b)  
\(^{101}\) Hodge (2002)  
\(^{102}\) WTO (2001a)
free access commitments have been made for only 15 per cent of the service sector.\textsuperscript{103} The emphasis in the current set of negotiations, therefore, is on widening and deepening commitments on market access and national treatment, with some extensions in mode 4. Increased attention to mode 1 (cross-border supply) is also expected, because of the increasing importance of electronic commerce.\textsuperscript{104}

6.3. Scenarios

The scenarios to be analysed are interpreted for the services sector as follows.

The \textit{Base scenario} assumes that no new commitments are made, but that the provisions of existing commitments are fully met.

The \textit{Further liberalisation scenario} represents the strongest probable implementation of the negotiations agreed to at the 4\textsuperscript{th} Ministerial Conference in Doha:

\begin{itemize}
  \item restrictions are presumed to remain primarily for difficult areas such as air transport and movement of natural persons;
  \item with these exceptions it is assumed that a majority of countries bind according to a notional schedule across the four modes of
    \begin{itemize}
      \item Mode 1 (cross-border trade) – minimal restrictions other than for consumer protection
      \item Mode 2 (consumption abroad) - no restrictions
      \item Mode 3 (commercial presence) – removal of the market access restrictions listed in Article XVI of GATS and of all scheduled restrictions on national treatment (Article XVII)
      \item Mode 4 (presence of natural persons) – further commitments on temporary movement of intra-corporate transferees and contractual service suppliers.
    \end{itemize}
\end{itemize}

The GATS restrictions referred to for mode 3 are reproduced in Boxes 6.1 and 6.2.

\textbf{Box 6.1. GATS Article XVI, Market Access}

1. With respect to market access through the modes of supply identified in Article I, each Member shall accord services and service suppliers of any other Member treatment no less favourable than that provided for under the terms, limitations and conditions agreed and specified in its Schedule.

2. In sectors where market-access commitments are undertaken, the measures which a Member shall not maintain or adopt either on the basis of a regional subdivision or on the basis of its entire territory, unless otherwise specified in its Schedule, are defined as:

   (a) limitations on the number of service suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test;
   (b) limitations on the total value of service transactions or assets in the form of numerical quotas or the requirement of an economic needs test;
   (c) limitations on the total number of service operations or on the total quantity of service output expressed in terms of designated numerical units in the form of quotas or the requirement of an economic needs test;
   (d) limitations on the total number of natural persons that may be employed in a particular service sector or that a service supplier may employ and who are necessary for, and directly related to, the supply of a specific service in the form of numerical quotas or the requirement of an economic needs test;
   (e) measures which restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service; and
   (f) limitations on the participation of foreign capital in terms of maximum percentage limit on foreign shareholding or the total value of individual or aggregate foreign investment.

\textsuperscript{103} Hoekman (1996), Hertel et al (2002)
\textsuperscript{104} WTO (2001e)
Box 6.2. GATS Article XVII, National Treatment

1. In the sectors inscribed in its Schedule, and subject to any conditions and qualifications set out therein, each Member shall accord to services and service suppliers of any other Member, in respect of all measures affecting the supply of services, treatment no less favourable than that it accords to its own like services and service suppliers.

2. A Member may meet the requirement of paragraph 1 by according to services and service suppliers of any other Member, either formally identical treatment or formally different treatment to that it accords to its own like services and service suppliers.

3. Formally identical or formally different treatment shall be considered to be less favourable if it modifies the conditions of competition in favour of services or service suppliers of the Member compared to like services or service suppliers of any other Member.

6.4. Assessment methodology

Barriers to trade in services are mainly non-tariff in nature or ‘behind the border’. These are applied through regulations that impose limitations on factors such as entry of people, their qualifications, ownership of companies, or restrictions on activities. Barriers which are prohibited unless specified in national schedules are defined in GATS Article XVI.

For movement of natural persons in particular, common barriers include:

- Quotas or economic needs tests, which may for example allow authorities to restrict non-nationals based on the state of the labour market.

Four other types of commonly used barrier have been identified:

- Quantitative-restriction type policies such as reciprocal bilateral agreements regulating international air transport services and ocean-cargo-sharing arrangements, or prohibitions of foreign provision of domestic transport, basic telecommunications, education, and professional services.
- Price-based instruments such as entry or exit taxes, port taxes, government price controls or subsidies, or tariffs on associated goods (e.g. computers).
- Licensing or certification requirements related to providers’ qualifications or environmental and other standards.
- Discriminatory access to distribution and communications systems in such sectors as telecommunications, air transport, advertising, insurance, and dealer networks.

The immediate effect of changing such barriers will generally be a change in market price, or a change in the availability of a service or its quality. The market response can be modelled in much the same way as for products, making assumptions about the demand for services that were not available before, or whose quality is different from that of locally produced equivalents. In CGE models originally developed for trade in goods, these factors may be allowed for by estimating their tariff equivalents. One of the principal difficulties is lack of data, necessitating further assumptions and approximations. Three alternative modelling approaches have been identified. The first makes use of tariff equivalents to derive direct estimates of the market response to changes in trade barriers, while the other two are based on numerical analysis of observed patterns of investor behaviour. One of these approaches makes estimates of the flows of FDI in response to changes in potential rates of return, while the other simulates the investment decisions of international companies, again in response to available rates of financial return.

105 Stern (2002)
106 Stern (2002)
The OECD Trade Directorate\textsuperscript{107} have reviewed over a dozen significant CGE studies of world trade in services. They conclude that quantitative modelling techniques of this nature are valuable in providing an order of magnitude estimate of the effects, but that ‘quantification of services barriers is unlikely ever to be sufficiently accurate to be used directly in the actual conduct of GATS negotiations’, and that the results ‘should be taken only as indicative’.

The results of these studies are used in that light, alongside more explicit evaluations of causal linkages and their significant effects, based on qualitative and empirical evidence identified in the literature.

6.5. Assessment of impacts

Modelling studies

The global CGE studies reported by OECD\textsuperscript{108} are summarised in Table 6.3. These studies use a variety of different methods and assumptions for simulating liberalisation in GATS modes 1, 2 and 3, but exclude mode 4 (movement of natural persons). Typical results suggest a global gain in economic welfare of around US$ 250 billion per annum for a fifty percent cut in service trade barriers, occurring over a five to ten year period. In most of the studies the gain is distributed approximately equally across all countries, developed and developing, in proportion to their GDP.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Scenario</th>
<th>Global welfare gain</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown et al. (1996).</td>
<td>25 percent reduction in services barriers</td>
<td>US$ 93 billion</td>
<td>developed countries and NICs only</td>
</tr>
<tr>
<td>Chadha (2000).</td>
<td>25 percent reduction in tariff equivalents for services</td>
<td>US$ 266 billion</td>
<td>developing countries gain more than the developed countries in percentage terms</td>
</tr>
<tr>
<td>Chadha, Brown, Deardorff and Stern (2000)</td>
<td>one third reduction of the tariff equivalents of services barriers</td>
<td>US$ 688 billion</td>
<td>US$ 551 billion in developed countries</td>
</tr>
<tr>
<td>Hertel et al. (1999)</td>
<td>40 percent reduction in tariff equivalents</td>
<td>US$ 354 billion</td>
<td></td>
</tr>
<tr>
<td>Benjamin and Diao (1998, 2000)</td>
<td>switch to single pricing and 10 percent reduction in fixed costs</td>
<td>US$ 260 billion</td>
<td></td>
</tr>
<tr>
<td>Australian Department for Foreign Affairs and Trade (1999)</td>
<td>halving goods and services barriers</td>
<td>US$ 250 billion</td>
<td>all participant countries stand to gain, with gains evenly spread in proportion to GDP</td>
</tr>
<tr>
<td>Robinson et al. (1999)</td>
<td>50 percent cut in services protection</td>
<td>US$ 260 billion</td>
<td>gains for all participating countries</td>
</tr>
<tr>
<td>Petri (1997)</td>
<td>50 percent reduction in barriers to trade in services</td>
<td>US$ 60 billion</td>
<td>FDI only NIEs, ASEAN 4 and China- gain proportionately most</td>
</tr>
<tr>
<td>Dee and Hanslow (2000)</td>
<td>total liberalisation of trade in services</td>
<td>US$ 266 billion</td>
<td></td>
</tr>
<tr>
<td>Venkios and Zhang (2000)</td>
<td>complete multilateral liberalisation</td>
<td>US$ 13 billion</td>
<td>communication services only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US$ 3.5 billion</td>
<td>finance, insurance and business services only</td>
</tr>
</tbody>
</table>

Derived from Dihel (2002)
Some studies\textsuperscript{109} calculate that the EU and the US both suffer a negative effect on welfare from multilateral liberalisation of services, with the gains accruing mainly to developing countries such as China. This somewhat surprising result arises from the different treatment of FDI in the FTAP model used in these studies, compared with the GTAP model used in most of the other analyses. The predicted welfare reduction for the EU and the US is associated with a reduction in these countries’ own capital stock as they increase their foreign investments. The authors acknowledge that uncertainty in the modelling data and assumptions are such that the results should be heavily qualified\textsuperscript{110}.

As discussed in Section 4 for agriculture, all of the modelling results can be viewed in the context of the economic growth needed in developing countries in order to achieve the millennium goals for poverty reduction. A country-specific CGE study for Tunisia gives a welfare gain of 7\% of GDP, with the biggest benefits coming from liberalisation of investment in financial services, communications and transportation\textsuperscript{111}. In the other studies discussed above, the average welfare gain that is predicted represents less than one percent of GDP. These variations reflect the modelling uncertainties reported by OECD. Meanwhile, the dynamic effects of trade liberalisation have the potential to increase annual growth rates by similar percentages, and hence to provide a considerably greater long term benefit.

**Causal Chain Analysis**

All developed countries are expected to experience an economic gain, broadly in line with the CGE studies (the anomalous results for the EU may need further investigation, but at this stage are discounted). This is expected to have a beneficial social effect through employment. Since these countries’ service industries are at a similar level of development, the main effect of increased trade between them is an increase in economic efficiency. No significant adverse social or environmental effects are anticipated.

Since service industries in developing countries are less highly developed (particularly in LDCs), greater access for foreign industries is likely to have a wider range of effects. The different types of service subject to negotiation differ considerably in their nature. Some impacts can be expected to have a number of features in common, related to the influence of the service on economic growth, FDI and employment structures. Other effects depend strongly on the nature of the service, as discussed below.

**Business services (including professional and computer)**

In respect of trade, the principal distinction between professional and other business services is that professional services tend to be fairly highly regulated. These include legal, accountancy, architectural, urban planning, engineering, and scientific and technical consulting. Other business services include computer services, research and development, real estate, management consulting, technical testing and analysis, services incidental to agriculture, fishing, mining and manufacturing, and rental and leasing. Many of these services are not highly regulated, and existing GATS commitments tend to be more liberal than in many other services sectors\textsuperscript{112}.

Computer-related services that can be provided electronically provide important opportunities for developing countries to export high value services to developed ones and to each other, such as, for example, the software industry in India. Reduced trade

\textsuperscript{109} Dee and Hanslow (2000), Jomini et al (2002)
\textsuperscript{110} Jomini et al (2002)
\textsuperscript{111} World Bank (2002a)
\textsuperscript{112} Communication from the European Communities, WTO (2000b)
barriers can be expected to have a significant beneficial effect in this area, both for suppliers and for the purchasers of more cost-effective services.

For professional services, significant market entry barriers (e.g. for the purpose of consumer protection) are generally applied in the form of qualification requirements, either by state regulation or through self-regulating professional bodies. These barriers are retained under the scenario. In many developing countries, residency requirements are also applied. These are removed under the scenario, leaving professional qualifications as the principal barrier. The relative effects in developed and developing countries will depend on the relative values attached to these qualifications. Generally, those obtained in a developing or least developed country are less acceptable in developed countries than vice versa. Hence, the scenario suggests an economic benefit to developed countries, and a decrease of professional employment in developing ones. Discussions in the WTO on the mutual recognition of professional qualifications are not expected to change this significantly. The magnitude of the effect will therefore depend on the extent to which purchaser preferences for developed country qualifications offset the lower wage rates of local professionals.

Communication services

Communications in general, and telecommunications in particular, are an increasingly important component of business competitiveness in developed countries, and in the formal sectors of the economy in developing countries. Improving communications may therefore be regarded as a highly significant component of these countries' development processes. It has been estimated that countries with fully open markets for telecommunications and financial services achieve higher growth rates than other countries by up to 1.5 percent.

For trade in telecommunications services a World Bank review, while generally supportive of liberalisation, notes contrasting experience. In the mid-1990s India liberalised its market for local telecommunications services while retaining the public monopoly on long-distance and international services. Ineffective regulation created conflicts over interconnection and licensing terms, delayed network expansion, and adversely affected private investment. China by contrast maintained its state monopoly, but an ambitious public investment program led to a more than tenfold expansion of the telecommunications network. From this and other case studies the review concludes that 'successful liberalisation depends on a combination of privatisation, competition, and effective regulation'.

Regulation is a key factor in this sector as well as many others, but here the effect is not so much on the containment of adverse indirect effects as on achievement of the intended benefit. While some adverse social and environmental effects may occur, if not properly regulated, they will be associated more with the expansion of the industry than with liberalisation as such. The potentially positive economic and developmental benefit may be highly significant, but will depend on countries' ability to introduce appropriate regulation. This factor is discussed below, in relation to all the sectors to which it applies.

Construction and related engineering services

Construction and civil engineering are essential components of many development processes, generating potentially large economic benefits. Potentially adverse

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113 WTO (2000a)
114 Mattoo et al (2001)
115 Hodge (2002)
environmental and social impacts can occur (e.g. in the construction of dams), and need to be managed effectively. All these impacts may be considered to be a consequence of expansion of the activity itself, rather than through trade liberalisation as such.

Liberalisation is likely to increase supply from more highly developed countries to less developed ones rather than vice-versa, since the scenario assumptions for movement of unskilled workers limit the potential for export of low skill services. Export opportunities are however expected to increase for those developing countries which have established a strong, internationally competitive construction sector, such as China. In other developing countries a decrease in professional employment be expected, along with a benefit from the transfer of skills and technology. The removal of Article XVI and Article XVII restrictions may place some constraints on governments’ ability to ensure that such transfers take place, but is unlikely to prevent them in situations where the employment of local professionals is in a company’s commercial interest. Additionally, a greater involvement of overseas companies used to working to high standards may in some cases reduce potentially adverse environmental impacts.

**Distribution services**

Distribution services include wholesale trade, retail trade, franchising, and commission agents’ services. The further liberalisation scenario is expected to achieve significant improvements in the ability of international chains to establish outlets in overseas countries, particularly developing ones, since many developed country markets are already fairly open.

The technological capability of multinational corporations is likely to give them a competitive advantage over local distributors. An economic gain is expected in their parent countries from the return on investment, and in importing countries from increased economic efficiency. Most of this increase in efficiency is likely to come from reduced employment in the industry. The number of small traders can be expected to decline, with a smaller number of jobs becoming available in new outlets. Increased efficiency can be expected to feed through to lower consumer prices, particularly for higher income urban communities. All of these beneficial and adverse impacts have been observed in a study of the actual effects of retail services liberalisation in Thailand, where they have been the subject of intense political debate\(^\text{116}\).

The efficiencies of scale attainable through modern distribution services may result in goods being sourced from a wider area, including internationally. The additional transport associated with this may have adverse environmental effects.

Liberalisation can be expected to improve the effectiveness of those distribution services which supply modern industrial and commercial equipment to other sectors of the economy, and hence have a significant beneficial long term effect on developing countries’ growth rates.

**Educational services**

Along with health services, fewer GATS commitments have been made in education services for than for any other service sector. It has been suggested\(^\text{117}\) that some WTO members may have felt that health services are covered by GATS Article I.3, which provides a general exception for services provided in the exercise of government authority that are not supplied on a commercial basis or in competition. The further liberalisation

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\(^{116}\) WTO (2002e)

\(^{117}\) Adlung et al (2002)
scenario is not expected to change this situation significantly, so that no major impacts are anticipated.

Environmental services

A detailed sectoral SIA for environmental services has been carried out in a parallel study\textsuperscript{118}, with special emphasis on water and waste treatment.

For water and wastewater, developed countries are expected to achieve a significant economic benefit from overseas investments. An economic benefit is also expected in developing countries, through increased efficiency due to competition, with knock-on effects in other sectors of the economy. This may be associated with a possible short term loss of jobs. Increased efficiency is expected to lead to improved overall availability of water, although regulatory and subsidy frameworks are critical to maintaining access for poorer communities. Some environmental benefits are expected, while others are uncertain, depending on regulation and the quality of the service.

Developed countries also benefit economically from increased export opportunities in solid waste management. In developing countries an environmental benefit is expected from better management, with a corresponding economic loss from the cost of facilities, or payment of interest on loans. Health benefits are associated with environmental ones, but with loss of livelihood opportunities for waste pickers.

Other environmental services not covered by the sectoral SIA include air quality protection, remediation services for contaminated land and water, noise abatement, and services to protect biodiversity and landscape\textsuperscript{119}. These are not large markets, and the effects are expected to be fairly small. There will be a small economic benefit to exporting (mainly developed) countries. If liberalisation results in greater cost-effectiveness of available services, economic and environmental benefits should occur in developing countries, but any such effect is expected to be small.

Energy services

Energy supply (primarily electricity, gas and oil) is partially a social good, similar to water, as well as being an economic good, essential for certain parts of the economy and its development. Oil supply is generally liberalised, and the production and manual aspects of the energy sector are not part of GATS. The further liberalisation scenario is expected to lead to greater services trade flows from developed countries to developing ones, with anticipated equilibrium economic benefits to both. As with water, increased efficiency is expected to improve availability, particularly for electricity, but sophisticated regulatory and subsidy frameworks are needed to prevent the formation of private monopolies, and to maintain access for poorer communities.

The difficulties of achieving the necessary regulatory controls are illustrated for example by much publicised regulatory difficulties in California, and the closure of the Dabhol power station in Maharashtra, India, built by the US company Enron. Irrespective of alleged improprieties in project clearance, the prime fault has been ascribed to failure to establish an appropriate regulatory framework prior to opening the market\textsuperscript{120}. Similarly financed projects elsewhere have been more successful, but where failures occur, adverse economic and social effects can be anticipated. Environmental effects are likely to be beneficial, due to the introduction of improved technologies.

\textsuperscript{118} Kirkpatrick and George (2003)  
\textsuperscript{119} WTO (2000c)  
\textsuperscript{120} Zarrilli (2002)
Large numbers of professional and skilled staff are employed in the energy industry. There may be some loss of local employment, but this may be more than offset by a high degree of skill transfer. This may translate into the creation of competitive domestic energy services, depending on the country’s development strategy and its success in building the appropriate social and economic infrastructure.

Financial services

As noted above in relation to telecommunications services, there is evidence that financial liberalisation can have a beneficial effect on economic growth. Improved financial services of different types can contribute to the growth of a wide range of activities, from the smallest to the largest. There is strong potential for direct social benefits for some types of service, such as the provision of microfinance for small and medium sized enterprises (SMEs). As with telecommunications however, the benefits of financial services liberalisation may depend on effective regulation, and the same World Bank review reports mixed experience. While the banking systems in three of the countries studied showed significant improvements in performance after liberalisation, experience in Korea and many African countries was less positive. The failure in Korea, closely associated with the East Asian economic collapse of 1997, is ascribed to liberalising short-term but not long-term foreign borrowing, fragmented financial regulation and supervision, unclear division of responsibilities, and a restrictive regime regarding foreign bank entry. In Africa it is argued that restructuring was insufficient to change the behaviour of the financial institutions, that uncontrolled fiscal deficits combined with liberalisation to increase public debt, and that regulatory and supervision mechanisms were inadequate to monitor the working of the system.

Evidence is similarly mixed regarding the effects which the establishment of foreign financial institutions may have on the coverage of lending, and on the efficiency and stability of the financial sector. The World Bank’s 2001 report ‘Finance for Growth’ presents a strong case that entry of foreign financial institutions improves the efficiency of the domestic financial sector (through competition and international expertise), strengthens its stability, and increases access to lending for small and medium-sized enterprises (SMEs). The report cites Argentina, Australia and Hungary as examples of the dynamic impact foreign entry has had on the efficiency and competitiveness of local banking systems, and Argentina and Mexico as cases where foreign-owned banks have proved a stabilising force. By contrast, the World Bank’s former Chief Economist Joseph Stiglitz has argued that domination of Argentina’s domestic banking industry by foreign ownership, and its reluctance to lend to SMEs, played a major role in the country’s subsequent collapse. Domestic banks, Stiglitz argues, are more sensitive to pressures to expand credit when the economy needs stimulating and contract it on signs of overheating, as well as being more likely to address holes in the credit system for underserved groups and disadvantaged regions. Such problems may however be avoided by controlling the pace of liberalisation, which may be considered as a potential M&E measure. Strong regulation is a key factor in achieving the intended benefit.

Health-related and social services

Along with education, fewer GATS commitments have been made for health services than for any other service sector. GATS Article I.3 provides a general exception for services

121 Mattoo et al (2001)
122 Hodge (2002)
123 World Bank (2001a)
124 Stiglitz (2002)
125 Adlung et al (2002)
that are provided in the exercise of government authority, and not supplied on a commercial basis or in competition with one or more service suppliers. Some governments may have interpreted this as meaning that health services are exempted\textsuperscript{126}, so that the opening of markets to foreign health service companies is largely a matter for individual governments’ choice.

It has been suggested that health care services are an area in which developing countries ‘could become major exporters, either by attracting foreign patients to domestic hospitals and doctors, or by temporarily sending their health personnel abroad\textsuperscript{127}. While this may provide an economic benefit, it has been suggested that it is only in countries like Cuba, with high health standards and a surplus of medical personnel, where such exports would not have an adverse effect on the health of the country’s own population\textsuperscript{128}. Against this, it may be argued that other countries might follow Cuba’s example, to gain an economic benefit from investing in their competitive advantage of low cost professional skills, and improve their own health services as a by-product.

Parallel concerns have been expressed over the temporary or permanent migration of trained doctors and nurses from developing countries to developed ones\textsuperscript{129}, whose markets are open to such services under Mode 4. The further liberalisation scenario is not expected to increase this effect, but it is one that has to be taken into account in developing countries’ strategies for investment in health service training.

A review by UNCTAD concludes that health services liberalisation has had a beneficial effect in most cases, by exercising downward pressure on health service costs\textsuperscript{130}. The report notes however that poorer countries, especially LDCs, are not well placed to benefit, and that direct action by the international community is needed. Enhancement measures associated with the WTO negotiations would fit in this category.

Improved health service management can be expected to lead to better controlled medical wastes, with environmental as well as health benefits.

\textit{Tourism and travel-related services}

The potential impacts of trade in tourism have been examined in some detail by the United Nations and the WorldWide Fund for Nature\textsuperscript{131}. In many areas tourism is an important sector of the economy, providing large numbers of jobs, generating resources for infrastructural investment, and contributing strongly to economic growth. While many of the jobs may be fairly menial, others require high skill levels and offer good opportunities for local development of managerial and entrepreneurial capabilities. The industry can however have a major influence on local cultures, affecting people who are not involved in it as well as those who benefit directly. In some countries, some forms of tourism have been reported to encourage drug usage, the development of a sex industry or use of child labour\textsuperscript{132}. These may have associated health impacts. The local population’s access to clean water and sanitation may be compromised, although more commonly, the influence on these services is beneficial. Water usage, wastewater and solid waste can have major environmental impacts, and both terrestrial and marine ecology can be severely disrupted. The building of airports, port facilities and roads may also have major ecological impacts.

\begin{footnotes}
\item \textsuperscript{126} Adlung et al (2002)
\item \textsuperscript{127} World Bank (2002a)
\item \textsuperscript{128} Hilary (2002a)
\item \textsuperscript{129} UNCTAD (1997), Kinuthia (2002)
\item \textsuperscript{130} UNCTAD (1997)
\item \textsuperscript{131} UN (1999), WWF (2001)
\item \textsuperscript{132} Equations (2002)
\end{footnotes}
All of these potential impacts are associated with the development of a tourist industry, rather than with trade liberalisation as such. Further liberalisation may have some influence on accelerating the growth of the industry, although the effect is expected to be small. In general, growth is determined mainly by market opportunity and the policy of the national government, which would not impose market access constraints if they were believed to counter its own growth objectives. Similarly, management of the social and environmental effects noted above is primarily a function of government policy and regulation. The main effects of the further liberalisation scenario are expected to derive from the ownership of the industry, and influences on its management.

A beneficial economic effect can be expected from an increase in FDI and foreign exchange earnings, and an adverse one from the repatriation of profits to investing countries. The widening of the skill base from foreign expertise is expected to be beneficial, both in the short term and through its long term influence on development processes. The management practices of large, foreign owned corporations may also have a beneficial effect on environmental issues, although the experience of countries such as Egypt and Tunisia suggests that government regulation may be the more important factor.

Recreational, cultural and sporting services

No major effects of the further liberalisation scenario are anticipated for this sub-sector.

Transport services

For air transport services the further liberalisation scenario presumes that little progress will be made, and that impacts will be minimal.

Maritime transport services are one of the largest service sectors, where a degree liberalisation has already been achieved. The scenario is nonetheless expected to result in increased competition, and hence to cheaper shipping costs. This expected to give an overall benefit to most countries, including higher competitiveness in international trade, with consequent potential for accelerated development. Small adverse social effects may occur in the short term, through low skilled jobs being replaced by fewer high skill ones. A small positive impact on the marine environment may occur, through improvements in service quality.

Influence of policy and regulatory frameworks

The assessment to date has shown that, for many service sectors, the potential impacts on sustainable development depend strongly on the policy and regulatory frameworks in place. There are three main factors:

- the policy and regulatory frameworks needed to contain or avoid adverse social or environmental impacts
- the regulatory processes necessary to achieve the intended benefit
- the policy frameworks necessary to achieve significant economic growth and poverty reduction

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134 METAP (2001)
135 World Bank (2002a)
UNEP have produced a checklist\textsuperscript{136} which addresses the first of these factors. For the potential environmental impacts, the frameworks in place in many developing countries have been found to be inadequate\textsuperscript{137}.

The case studies reported by the World Bank\textsuperscript{138} suggest that many countries are in the same position in relation to the second factor, of achieving the intended direct benefits of liberalising some service sectors. A further concern in this respect is the suggestion that GATS Article XXI imposes constraints on a country’s ability to introduce the necessary regulations - if these may be regarded as discriminatory - once it has entered into a market access commitment\textsuperscript{139}. The process through which a country schedule is modified cannot start until three years after the commitment is made, and entails long and difficult negotiations over compensation to trading partners\textsuperscript{140}.

The third effect, on the policy frameworks that are needed in order to translate services liberalisation into significant economic growth and poverty reduction, is equally influential. As noted above, the direct economic welfare gains in developing countries that have been predicted for liberalisation of services and other trade are a small proportion of what is needed to achieve the millennium goals for poverty reduction. Several of the types of service considered above, notably telecommunications and to a lesser extent, financial services, are expected to make a positive contribution to growth, and indirectly to poverty reduction. The effect is however likely to be largest in those developing countries that have already embarked on export-oriented industrial-based development strategies, for which such services have the most influence. In less developed countries, where the benefit is most needed, the effect may be smaller. This suggests a need for flanking measures related to other aspects of economic and social infrastructure, whose aim is to amplify the potential benefits to such countries.

6.6. Methodology for detailed SIA studies

While valuable information may be obtainable from appropriate CGE studies, strong reliance may need to be placed on detailed analysis of case studies for individual sub-sectors.

6.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario discussed above are summarised in Table 6.4.

Table 6.4. Services - potential impacts of further liberalisation scenario

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<th>Factors affecting significance</th>
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\textsuperscript{136} UNEP (2001)
\textsuperscript{137} George and Kirkpatrick (2002)
\textsuperscript{138} Hodge (2002)
\textsuperscript{139} Hilary (2002b)
\textsuperscript{140} Howse and Tuerk (2002)
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<td>market access for qualified staff</td>
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<td>benefit to LDCs</td>
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<td>Social</td>
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<tr>
<td>health</td>
<td>developing</td>
<td>better service for non-poor</td>
<td>government policy</td>
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<td></td>
<td>developing, less</td>
<td>loss of or investment in trained staff</td>
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<tr>
<td>benefit to LDCs</td>
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<td>medical waste</td>
<td>developing</td>
<td>better management</td>
<td></td>
<td>△</td>
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<tr>
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<td>Type of country affected</td>
<td>Causal factors</td>
<td>Factors affecting significance</td>
<td>Potential significance</td>
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<td>Process</td>
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<td><strong>Tourism services</strong></td>
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<tr>
<td>Economic income</td>
<td>developed</td>
<td>return on investment</td>
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<td>Δ</td>
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<td></td>
<td>developing</td>
<td>foreign exchange, repatriation of</td>
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<td>?△</td>
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<td>effects due to growth of industry</td>
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<td>rather than liberalisation</td>
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<tr>
<td>Environmental pollution, waste</td>
<td>developing</td>
<td>better management</td>
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<td>Process</td>
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<tr>
<td>SD strategy</td>
<td>developing</td>
<td>skill transfer</td>
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<td><strong>Transport services (maritime)</strong></td>
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<tr>
<td>Economic income</td>
<td>all</td>
<td>cheaper shipping costs</td>
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<td>Δ</td>
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<td>employment</td>
<td>developing</td>
<td>short term loss of jobs</td>
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<tr>
<td>Social</td>
<td>developing</td>
<td></td>
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<td>▼</td>
</tr>
<tr>
<td>poverty</td>
<td>developing</td>
<td>employment, short term</td>
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<td>▼</td>
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<td>Environmental pollution</td>
<td>developing</td>
<td>better management</td>
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<td>Process</td>
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<tr>
<td>SD strategy</td>
<td>developing</td>
<td>export competitiveness</td>
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<td>△</td>
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</tbody>
</table>

**Symbols used to show impact significance**

- Blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▼: negative lesser significant impact
- △△: positive greater significant impact
- ▼▼: negative greater significant impact
- △▼: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain
7. TRADE AND ENVIRONMENT

7.1. Background

Any trade measure can have direct or indirect environmental effects, and environmental goods and services are themselves traded; but under this heading the Doha agenda is concerned primarily with how trade policy and environmental protection and conservation measures can be made more mutually supportive. From the trade perspective, environmental protection should not be used as an excuse for circumventing agreements on trading rules. From the environmental perspective, commitments on trade should not force countries to abandon their commitments to environmental protection, nor create inconsistencies which enable them to do so. Several provisions of GATT 1994, along with the Agreement on Technical Barriers to Trade (TBT) and the Agreement on Sanitary and Phytosanitary Standards (SPS), outline the conditions under which environmental considerations can be used legitimately to support trade restricting measures\(^{141}\).

These issues are influenced by the relationship between multilateral trade agreements and multilateral environmental agreements (MEAs), and their relative enforceability. The principal MEAs with trade provisions are:

- Convention on Biological Diversity (CBD), 1993
- Framework Convention on Climate Change (FCCC), 1994
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1975
- Montreal Protocol on Substances that Deplete the Stratospheric Ozone Layer, 1987
- Cartagena Protocol on Biosafety, 2000

Some of these agreements, such as CITES and the Basel convention, contain detailed provisions requiring parties in certain circumstances to restrict or prohibit trade with other countries. Others, such as the Biodiversity Convention, are less specific. This leaves greater flexibility in determining whether a particular trade barrier, or its removal, is or is not necessary to protect environmental resources.

7.2. Negotiation issues

The Doha Declaration established a negotiating mandate for trade and environment on three issues:

- The relationship between WTO rules and specific trade obligations in MEAs;
- The reduction or elimination of tariff and non-tariff barriers to environmental goods and services (catalytic converters, air filters or consultancy services on wastewater management could, for example, be considered as environmental goods and services); and
- Procedures for regular information exchange between MEA Secretariats and the relevant WTO committees, and the criteria for granting observer status.

\(^{141}\) UNEP/IISD (2000)
Negotiations on a fourth issue relevant to trade and environment were mandated under the heading of WTO rules:

- Clarify and improve WTO disciplines on fisheries subsidies.

**WTO rules and MEAs**

The negotiations are not intended nor expected to place constraints on the ability of MEAs to make use of trade measures. Rather, they relate primarily to the interpretation of MEAs.

Some countries have argued that only the specific trade related MEAs should be subject to negotiation. Of approximately 200 MEAs in place today, there are only 20 that contain mandatory trade provisions. However, it may be argued that more general changes to environmental impacts may occur as a result of stronger linkages between MEAs and WTO rules. Under Article XX of GATT 1994, a trade restriction may be applied for environmental reasons only if it is demonstrated to be necessary, and is not arbitrarily discriminatory or a disguised restriction on international trade. It has been proposed that this condition should be relaxed, such that a trade measure would be automatically accepted as valid if it is adopted in pursuance of the provisions of an MEA. It may be argued that, while potentially strengthening environmental protection, this may encourage the citation of environmental factors as an excuse for avoiding trade obligations. Approaches which have been considered include:

- the status quo, with actions under GATT Article XX subject to the WTO dispute settlement procedures where there is a prima facie complaint that they constitute a breach of WTO obligations;
- exempting actions taken under an MEA from other WTO requirements;
- the requirement that a specific waiver from WTO obligations should be obtained before a measure is introduced in pursuance of an MEA.

**Tariff and non-tariff barriers**

The principal argument in favour of negotiating on tariff and non-tariff barriers for environmental goods and services under the trade and environment heading, rather than under market access for non-agricultural products and services, is that this can enable stronger measures to be taken, leading to greater environmental benefits. The main argument against is that these products and services are exported primarily by developed countries, and that, under this heading, developing countries are not in a position to negotiate a reciprocal trade benefit that is comparable.

**Liaison and fisheries subsidies**

Improving liaison between the WTO and MEA secretariats is generally regarded as desirable.

The potential impacts of the fourth item for negotiation, fisheries subsidies, are assessed in the Section on WTO Rules.

**Discussions**

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142 WTO (2002a)
In addition to these Doha agenda items under negotiation, the Committee on Trade and Environment has been given a renewed mandate for discussion of all other items under its agenda, with particular attention to:

- the effect of environmental measures on market access (especially in relation to developing countries, in particular the least developed among them);
- relevant provisions of the TRIPs Agreement; and
- eco-labelling.

Work on these issues is to include the identification of any need to clarify relevant WTO rules, with a report to be presented to the Fifth Session of the Ministerial Conference. This report may include, as appropriate, recommendations on future action, including possible negotiations on these issues.

The discussions on market access extend the debate on protectionist measures to all environmental issues. On the TRIPs Agreement and the environment, issues subject to discussion include its effect on biodiversity, which is also subject to discussion in the TRIPs Council. The discussions on eco-labelling revolve around its potential to focus consumer pressure against environmentally damaging products. The costs of operating a labelling scheme are however a cause for concern in developing countries.

7.3. Scenarios

The **Base Scenario** assumes that no changes are made in relation to existing WTO agreements and procedures.

The **Further liberalisation scenario** assumes:

- clarification of the relationship between WTO rules and specific trade obligations in MEAs;
- a significantly greater reduction of tariff and non-tariff barriers to environmental goods and services than would be achieved in the negotiations on market access for non-agricultural products and services;
- improved coordination between MEA Secretariats and the relevant WTO committees.

It is assumed that no agreement is reached on environmental protection measures beyond those related to MEAs, that no change is made to the provisions of the TRIPs agreement, and that no provisions are made within the WTO context for eco-labelling. The potential sustainability impacts of these additional measures are however discussed briefly, separately from the scenario analysis.

7.4. Assessment methodology

In most respects the assessment can be broadly as for other sectors, based on an analysis of causal linkages and reported effects discussed in the literature. A degree of quantification might be achieved by evaluating the number of product lines that are actually or potentially affected by environment-related barriers to trade\(^\text{143}\), but this does not give any indication of the extent to which such barriers are justifiable, nor of the impacts likely to arise from the negotiations.

There is one important respect in which the assessment of changes to trade-related environmental measures differs from most other sectors, in that the principal issue of concern is the global environment. For other sectors, the SIA aims primarily to identify

\(^{143}\) Fontagné et al (2001)
economic, social and environmental impacts within different country groupings, from which any significant global impacts can be inferred. However, many environment-related barriers (as distinct from food safety barriers) aim to protect the environment in the exporter’s country rather than the importer’s. The prime concern is for an environmental impact which, immediately or cumulatively, has global importance. Otherwise, an environment-related barrier that is designed to protect the environment of another sovereign state would be subject to considerable controversy. Certain other measures, such as those related to ozone depleting substances or migratory species, affect the global environment directly. In either case, the global impact is the principal issue of concern. This therefore needs to be brought out specifically in the assessment, in addition to in-country impacts.

7.5. Assessment of impacts

Relationship between WTO rules, MEAs and other environmental issues

The current position within the WTO arena is defined largely by case law, particularly from the shrimp-turtle dispute and the tuna-dolphin dispute\footnote{Mavroidis (2000)}. In both of these cases the USA imposed import restrictions on goods produced using methods whose impacts on other species were considered to be more damaging than those of the methods used in the USA. The WTO Appellate Body ruled that these restrictions were inadmissible (because the technical means adopted introduced an illegal form of discrimination).

Under the liberalisation scenario assumption, the current situation will be replaced by one in which WTO agreement will have to be reached before a restrictive measure is applied rather than after. Since actions such as those discussed above will no longer be able to be applied during the period before a dispute ruling is made against them, their environmental effect will no longer occur.

Measures such as those taken in the shrimp-turtle and tuna-dolphin cases generally have a significant beneficial effect on the local environment in the producing country. The reduced production in that country may be replaced by increased production in another, including the importing country. If the restriction is applied rationally, the environmental impact of the new production will be smaller than that replaced, resulting in a net beneficial effect. If the measure conserves a species that has global importance, there will be a net beneficial effect on the global environment, whose global significance may be inferred from its status under relevant MEAs.

On the basis that the significance of global environmental impacts is determined through international environmental agreements rather than through the WTO, any improvement that is not specifically required by an MEA would be of only minor global significance. However, many MEAs such as the Convention on Biodiversity suffer from a lack of enforceability of agreements that may be highly significant. The use of trade restrictions can in principle rectify this situation. However, this entails either taking the negotiation of enforceable measures to conserve the global environment out of the environmental arena, to place it in the hands of the WTO, or taking it out of the multilateral arena altogether, and giving the necessary powers to those countries with sufficient market influence to apply an effective trade restriction. Until such action has been agreed internationally, it must be presumed that the global significance of global environmental effects is determined through the enforceability of MEAs, and not through the enforceability of restrictive trade practices.
Economic and social effects will generally be in the opposite direction from environmental ones. Reduced production in the exporting country is likely to have adverse effects, while increased production in the importing and other countries will have beneficial ones. In countries or localities where the change in production is a significant component of the economy, these effects may be significant.

In the base scenario, these impacts occur for a short period of time, and may then be stopped by action taken in the WTO under the DSU. Under the liberalisation scenario, those that are stopped will not occur at all. Hence, the impacts of the liberalisation scenario compared with base will be in the opposite direction from those discussed above, but of much shorter duration. The adverse environmental effect is likely to be non-significant in the long term. The beneficial social and economic effects may be more significant, through the avoidance of unnecessary short term disruptions.

An agreement which relaxed the requirements of GATT Article XX, to permit restrictive trade measures taken in pursuance of an MEA without the necessity for a clear demonstration of need, would have effects in the opposite direction from the liberalisation scenario, but larger and of longer duration. The same would apply if negotiations were extended beyond MEAs, increasing the magnitude of the effects. Effects on the environment would be positive in exporting countries, with adverse social and economic impacts. Effects in importing countries would be in the opposite direction. As discussed above, the effect on the global environment would be positive but non-significant.

In general, trade restrictions in pursuance of environmental improvement are likely to be applied by countries with high environmental standards, against those with lower ones. The level of a country’s environmental standards generally increases with its level of development. Hence, the impacts discussed above for importing countries are likely to occur for the EU and other developed countries, while those for exporters will apply to developing countries, particularly the least developed.

In the longer term, clarification of the relationship between trade measures and MEAs may have more significant effects on the international governance of environmental issues, as discussed below under information exchange.

**Reduction of tariff and non-tariff barriers to environmental goods and services**

The impacts of the Doha environmental services negotiations have been assessed in a separate SIA conducted in parallel with this study. For the negotiations on trade and environment, the liberalisation scenario presumes that a greater reduction of tariff and non-tariff barriers will be achieved than would be possible if the negotiations were conducted under market access for services, causing an increase in magnitude of all impacts.

In respect of trade in environmental goods, the liberalisation scenario for trade and environment similarly presumes that a greater reduction in trade barriers will be achieved than under negotiations on market access. This is likely to result in an increase in the export of environmental goods from developed and newly industrialised countries to other developing and least developed countries. Beneficial economic and hence social impacts can be expected in exporting countries, while importing countries may experience a small economic loss through loss of tax revenues.

For those environmental goods associated with the supply of environmental services, such as water supply, the impacts will be felt through the liberalisation of services trade,

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145 Kirkpatrick and George (2003)
supported by a small cost reduction for the goods required. For environmental goods supplied independently of services trade, some environmental improvement might be expected in importing countries. However, environmental quality in developing countries tends to be influenced primarily by the strength of the regulatory regime, often with a shortage of funds for adequate numbers of regulatory staff\textsuperscript{146}. The cost of equipment may in such circumstances be a relatively small factor. Hence the beneficial impact on the environment in developing countries may be fairly small.

**Information exchange**

Greater information exchange between MEA Secretariats and the relevant WTO committees is likely to reduce disputes, reduce associated trade disruptions and their consequential economic and social effects, and lead to more balanced action on environmental issues. The impacts are expected to be beneficial in all three spheres, of lesser significance.

In the long term the negotiations may lead to considerably greater synergy between MEAs and WTO rules, and hence to multilaterally agreed means of using trade measures to strengthen the enforceability of certain MEAs. Should this occur, it may lead to beneficial impacts on the global environment that are highly significant, along with equally significant social or economic effects in developed or developing countries, some of which may be adverse. Such agreements are not however expected to be achieved under the further liberalisation scenario.

**Provisions of the TRIPs Agreement**

The further liberalisation scenario assumes that no change is made to the relevant provisions of the TRIPs agreement, and therefore no impacts will arise from this aspect of the scenario compared with the base situation. However, the discussions under the Doha agenda may need to take account of potential sustainability impacts related to TRIPs, in coming to an agreement on future actions including possible negotiations. As well as the discussions in the WTO Trade and Environment Committee, similar discussions are mandated in the TRIPs Council, on the relationship between TRIPs and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant developments.

There is no clear evidence that TRIPs and the Convention on Biological Diversity are incompatible with each other\textsuperscript{147}. However, many concerns have been expressed that the extension of intellectual property rights may run counter to the aims of the convention, or otherwise affect the environment\textsuperscript{148}. These concerns include:

**General environmental issues**
- erosion of farmers’ rights and their traditional role in conservation
- usurpment of traditional knowledge and folklore, reducing their capacity to conserve biodiversity
- wider use of a smaller number of monocultures, reducing agricultural biodiversity
- prevention of low cost manufacture of patented environmental products such as CFC alternatives

**Issues associated with transgenic crops**
- beneficial effects of lower pesticide use, from varieties with built-in pest resistance

\textsuperscript{146} METAP (2001)
\textsuperscript{147} CEAS (2000), CEC (2002a)
\textsuperscript{148} CIPR (2002)
• adverse effects of higher herbicide use, from herbicide-resistant varieties
• transfer of genes to wild relatives or conventional crops
• indirect impacts on other components of the ecosystem that have not co-evolved with the varieties introduced
• more fragile, less sustainable agricultural systems
• more fragile, less resilient ecosystems

In relation to transgenic crops in particular, assessing the validity of these concerns, and identifying other issues of potential concern, is hampered by an exceptionally small core of scientific information\textsuperscript{149}. The long-run environmental implications of transgenic crops cannot yet be evaluated with any certainty. Evidence to date is limited even for the potential environmental benefits that certain varieties are designed to achieve.

In these circumstances, assessing the specific impacts of TRIPs within the more general arena of these developments is impractical, beyond clarifying the uncertainties as far as possible. It may however be noted that beneficial impacts on conservation are unlikely. ‘Conservation is fundamentally about protecting habitats and IPRs make no real contribution to this’\textsuperscript{150}.

In respect of potential negative impacts, it is the responsibility of each country’s government to decide how to interpret the Rio Declaration’s uncertainty principle in its national decisions on transgenic varieties. The Commission on Intellectual Property Rights has concluded that ‘when there is so much uncertainty and controversy about the global impact of IPRs, we believe it is incumbent on policy makers to consider the available evidence, imperfect as it may be, before further extending property rights in scope or territorial extent’\textsuperscript{151}.

For issues other than those related to transgenic crops and their potential environmental impacts, the evaluation is somewhat less problematic, although large uncertainties remain. It is fairly widely accepted that protection of traditional knowledge needs to be strengthened, and that a requirement for patent applicants to disclose the origin of their genetic resources may contribute to this\textsuperscript{152}, with related benefits for biodiversity and benefit sharing. However, it has been suggested that such arrangements may be of little value unless they are legally enforceable within the international IPR regime\textsuperscript{153}.

The introduction of a harmonised international system of IPRs presents difficulties for developing countries, both in their capacity to introduce such a system and the costs of regulating it\textsuperscript{154}. The TRIPs Agreement allows for ‘effective’ means of Plant Variety Protection (PVP) as an alternative to patenting, with flexibility in adaptation to specific national situations\textsuperscript{155}. However, the meaning of the word effective has yet to be fully defined, and difficulties remain in designing workable national systems that balance countries’ own interests with those of their trading partners.

The basic aim of IPRs is to promote innovation, and hence to generate economic and social benefits. Here too the evidence is inconclusive. A study on the effects of introducing PVP in the US revealed no evidence that total R&D activity had increased\textsuperscript{156}. A similar study in middle income developing countries came to similar conclusions.

\textsuperscript{149} Batie and Ervin (2001)
\textsuperscript{150} CEAS (2000)
\textsuperscript{151} CIPR (2002)
\textsuperscript{152} CEC (2002a)
\textsuperscript{153} CIPR (2002)
\textsuperscript{154} Rangnekar (2002)
\textsuperscript{155} CEC (2002a)
\textsuperscript{156} CIPR (2002)
Commercial farmers and the seed industry were perceived as the main beneficiaries, while poor farmers had not benefited directly, and might suffer future adverse impacts from restrictions on seed saving and exchange. This suggests that the main economic gains will occur through commercial farming and seed supply.

In addition to the social gains that result from economic ones, new plant varieties are expected to increase food production per unit of land and labour, with potentially beneficial impacts on poverty, and potentially lower pressures on natural habitat. Again the evidence is mixed on whether these benefits will actually accrue. Food security is influenced as much by issues of distribution as it is by total availability\(^{157}\), food supply is closely linked to population growth, and increased labour productivity generates the ‘surplus rural labour’\(^{158}\) which drives increasing urbanisation in developing countries. Unless significant progress is achieved in reducing poverty, primarily by means other than increasing total food supply, agricultural pressures on natural habitat are likely to remain.

**Eco-labelling**

In general eco-labelling can be expected to have a beneficial effect on the environment in the exporting country, and globally where impacts are of international importance. The effect is limited by the proportion of consumers who are influenced by environmental concerns, but may nonetheless be significant, and potentially increasing with time through its educational role.

The economic costs of operating a labelling scheme, and hence potential social ones, will be felt more strongly in developing than developed countries, because of these countries’ limited administrative capacity.

As discussed above, it may be argued that any binding international requirement in respect of global environmental impacts should be negotiated in an appropriate environmental forum rather than in the WTO. In respect of impacts that are not of global importance the case for binding requirements is weaker, since each country is free to determine the value it places on its own environment. Hence it may be argued that eco-labelling for any impacts other than internationally agreed global ones should be voluntary, operating solely through the market pressures generated by concerned consumers.

### 7.6. Methodology for detailed SIA studies

For the detailed assessment of WTO Rules, information may be obtained from the evaluation of past disputes.

For environmental goods and services, the results of CGE studies may be used to indicate quantitative effects, together with evaluation of past performance and the effects of regulation in a variety of countries.

### 7.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario discussed above are summarised in Table 7.1. This includes only those measures which are subject to negotiation, and not those for which the Doha mandate covers discussions only.

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\(^{157}\) Scoones (2002)  
\(^{158}\) DFID/UN (2002)
Table 7.1. Trade and Environment - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
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<td>Economic</td>
<td>increased income, short term</td>
<td>developing</td>
<td>effect of trade restriction on production</td>
<td>number of disputes and volume of production affected in a locality</td>
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<td>developing</td>
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<td></td>
<td>reduced employment, short term</td>
<td>developed</td>
<td>effect of trade restriction on production</td>
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<td></td>
<td>beneficial, short term</td>
<td>developed</td>
<td>higher standards in importing country and other producers</td>
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<td>adverse, short term</td>
<td>global</td>
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<td>Process</td>
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<td>2. Reduction of barriers to trade in environmental goods and services</td>
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<tr>
<td>Economic</td>
<td>increased income</td>
<td>developed and newly industrialised</td>
<td>export of services, and goods partly in association with services</td>
<td>size of environmental industry</td>
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<td>increased employment</td>
<td>developed and newly industrialised</td>
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<td>Factors affecting significance</td>
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<td>Social</td>
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<td>derived from economic, same direction</td>
<td>developed and newly industrialised</td>
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<td>as discussed in detailed SIA for trade in services</td>
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<td>reduced pollution</td>
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<td>quality of services</td>
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<td>reduced pollution</td>
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<td>3. Information exchange</td>
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<tr>
<td>increased income</td>
<td>all</td>
<td>fewer disputes and trade disruptions</td>
<td>lesser significance</td>
<td>△</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>derived from economic, same direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>greater consistency with SD principles</td>
<td>all</td>
<td>better balanced decisions</td>
<td>potentially high significance</td>
<td>△ ▼</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- `blank` impact has been evaluated as non-significant compared with the base situation
- `△` positive lesser significant impact
- `▼` negative lesser significant impact
- `▲` positive greater significant impact
- `▼` negative greater significant impact
- `△ ▼` positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- `?` effects are uncertain
8. DISPUTE SETTLEMENT

8.1. Background

Disputes between WTO members over interpretation of WTO trade rules, and violations of them, are dealt with under the Dispute Settlement Understanding (DSU). This was introduced with the creation of the WTO, and is widely regarded as a significant improvement on the system which operated previously under GATT. Under the previous system rulings could only be adopted by consensus, with the result that they could be blocked by a single party, including (most often) one of the parties to the dispute in question. Under the DSU’s Dispute Settlement Mechanism (DSM), dispute settlement reports are adopted automatically unless there is a consensus to reject them. This “reverse consensus” approach facilitates binding decisions, although they may be altered through the appeal process, which may alternatively result in implementation being postponed.

Operation of the DSM is governed by the Dispute Settlement Body, composed of representatives of all WTO members. Individual disputes are handled by dispute resolution panels appointed for each case. Appeals are referred to the permanent Appellate Body, whose rulings are effectively final unless they are as a last resort altered by full consensus of the Dispute Settlement Body (DSB). In practice this has never happened.

The fundamental preference of the WTO, explicitly stated in the DSU, is for disputes between members to be settled by consultation and negotiation between the parties. When a dispute has nevertheless reached the stage of formal proceedings and a panel or the Appellate Body finds that a member is in breach of a WTO obligation, the normal recommendation is for that member to come into compliance with the rules, although suggestions may also be made as to how this might be done. The norm is to seek full compliance. It is possible for a country against which the ruling is made to negotiate compensation for continuing non-compliance through the grant of concessions in the same or a different sector, provided of course that this can be agreed with the complainant(s). Once all available options have been exhausted and as a last, and generally deplored, resort the DSB may authorise the complainant to introduce retaliatory trade sanctions against the country in default.

Difficulties arising with the DSM include:

- rulings may lead to a series of further disputes over whether they have been properly complied with;
- the expertise necessary to pursue a dispute is high, with high associated costs;
- developing countries perceive the system to be weighted in favour of those countries with sufficient market power to apply trade sanctions without significantly damaging their own interests;
- DSU provisions for giving special attention to the problems of developing countries have little operative content;
- lack of transparency in the system

Several of these issues have been given prominence by major actions, such as the banana and steel disputes in which the EU and the US have been the major parties, and respectively the defendants.

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159 Delich (2002)
In order to make legal expertise more readily and more cheaply available to developing countries, an Advisory Centre on WTO Law has been established by member states, to provide advice and training. Beyond this, developing countries may need to develop their own legal expertise, to avoid dependence on expensive developed country experts.\(^{161}\)

The WTO dispute system has, for all its shortcomings, been extremely active and widely used by member countries. A substantial number of proceedings has been launched by developing countries, including complaints both against developed countries and against other developing countries. In the eight years since the WTO came into operation in 1995 consultations have been launched in more than 250 cases. Approximately half of such cases are settled, as encouraged by the DSU, at the stage of consultation. The rest have proceeded to formal dispute steps. This compares with a total of 115 cases which reached the stage of a dispute panel report during the entire lifetime of the GATT. In most cases under the WTO acceptable compliance measures have been agreed, and only a few dozen cases have been referred to the appellate Body. Serious differences over compliance have arisen in only a handful of high-profile disputes (such as the bananas dispute, discussed below) where there were national financial and policy issues of particular sensitivity at stake for the parties.

### 8.2. Negotiation issues

The Doha Ministerial Declaration commits members to negotiations on improvements and clarifications in the DSU, with the aim of concluding an agreement by May 2003.

Improving the efficiency of the DSM is the basis of the EU’s proposals, which include:

- mechanisms to make compensation more attractive than retaliation, e.g. by introducing the formal obligation to offer compensation as an alternative to the suspension of concessions (sanctions);
- the establishment of a permanent panel body, instead of the present system of ad hoc panellists;
- a clearer text to regulate the ‘sequencing’ of procedures in the implementation phase;
- an increased transparency and openness for dispute settlement proceedings, in terms of public access both to documents and hearings;
- a procedure for the admission of amicus briefs by NGOs in dispute settlement proceedings.

Increased transparency has also been proposed by the US. Other proposals include:

- a joint Chilean/US proposal on ‘flexibility’;
- a Mexican proposal on retroactivity and interim measures;
- Indian and Chinese proposals on litigation costs;
- an African proposal on the creation of a DS fund for developing countries;
- proposals from various members to enhance 3rd parties’ rights;
- various proposals on SDT, notably as regards timeframes and reasonable period of times for implementation;
- amendments to the DSU procedures for compliance panels, to address the ‘sequencing problem’ of obtaining multilateral authorisation of retaliatory action;
- clarification of compensation, to include financial compensation;

\(^{161}\) Raghavan (2000)
\(^{162}\) CEC (2002b)
\(^{163}\) Laird (2002a)
amendment of the DSU to reform or eliminate cross-retaliation.

Several of these issues revolve around the extent to which the existing system favours developed countries over developed ones, primarily in relation to the high costs of legal fees, and if so, the extent to which this should be redressed.  

8.3. Scenarios

The Base Scenario assumes that no changes are made to the DSU or the existing DSM.

The Further liberalisation scenario assumes:

- a limited degree of greater transparency in making dispute submissions publicly available;
- continued flexibility in the acceptance of amicus curiae briefs, and clarification of procedures for expert submissions;
- clarified procedures for making appropriate expertise more readily available for dispute settlement panels, including a professional roster of dispute panellists;
- greater flexibility in establishing compliance panels.

No significant changes are assumed in relation to financial compensation or barriers to retaliation against developing countries.

8.4. Assessment methodology

The aim of the Doha agenda negotiations on dispute settlement is to redress shortcomings in the mechanism that have become evident in relation to past disputes. Impacts arising from those disputes will give an indication of those which may result from future ones, and of the differences to be expected from the scenario’s assumed changes in the DSU and DSM. Analysis of causal chains may then indicate consequential impacts.

Additionally, the assessment needs to consider the suggestion that the existing mechanism inhibits developing countries taking action against developed ones, so that disputes have not arisen in the past which otherwise might have done. It therefore needs to evaluate this possibility, consider whether changes to the DSU might influence the situation, and assess the types of impact which may arise if new forms of dispute were to result.

8.5. Assessment of impacts

An indication of impacts from past disputes may be obtained from the EU bananas case. The history of the dispute goes back over nearly 20 years. There were two panel reports (neither adopted) under the GATT in 1993 and 1994 respectively, before the matter came to a panel and the Appellate Body under the WTO. The dispute arose from the historical preferences given by the EU to its former colonies in Africa, Caribbean and Pacific countries (ACP). Separate tariff quotas were established, and traditional suppliers were granted 30 percent of all import licenses for non-country-specific quotas. These could be sold to firms importing from Latin America, mainly US-based, which had to pay rents to those which owned the quota rights. With the support of the US, four Latin American countries challenged the EU’s quota allocations. The dispute panel found against the EU, subsequently endorsed by the Appellate Body. Further challenges have

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165 Raghavan (2000)
166 Hudec (2002)
been made against the EU’s response, and remained the subject of ongoing discussions after the Doha Ministerial meeting\textsuperscript{167}.

It has been argued that the EU's banana policy was an inefficient way of supporting developing countries, at an estimated cost to EU consumers of about US$2 billion, with receipts to ACP suppliers of about US$150 million\textsuperscript{168}. In the face of the great legal and political difficulty which the EU encountered in complying with the WTO findings, the US eventually requested retaliation worth US$520 million, and the dispute panel authorised action to the value of US$190 million. In 1999 Ecuador also obtained authorisation to retaliate, to a value set at US$200 million by the arbitrators. In this case, retaliation could be by suspending concessions under other agreements, including TRIPS, as the panel accepted that Ecuador was too small a country to retaliate effectively against imports of EU consumer goods. The EU is now, over a transitional period, moving to a tariff-only regime for imports of bananas, in compliance with the WTO findings.

These figures give an indication of the economic impacts of this particular settlement, respectively in the EU, the US, Ecuador, and ACP countries. In themselves they may be judged as highly significant for all four, in different directions. However, the changes in the DSU that are assumed in the liberalisation scenario may have no more than a minor effect on equivalent impacts which might result from similar disputes in the future.

It may be reasonably argued that the lessons learned from this and other disputes reduce the probability of similar ones occurring in the future, although other highly contentious disputes such as that over US steel imports, may still be expected to arise. However, the changes to the DSU and DSM envisaged in the further liberalisation scenario are considered unlikely to have a major effect on dispute rulings. Rather, they can be expected to have some influence in reducing the time taken to reach an eventual settlement. The economic impacts may still be significant, but minor.

The overall economic effect in developed countries, such as the EU and the US in this example, can be expected to be positive. For any one dispute, one will gain while the other loses. On the assumption that the eventual ruling will lead in the direction of greater economic efficiency, its net effect is positive, and the effect of reaching it more quickly is positive. Over a series of disputes, the net effect for each developed country can be expected to balance out to be small but positive.

For disputes that occur between developing countries, similar conclusions may be drawn.

For those between developed and developing countries, the bananas case was the first in which a developing country has obtained authorisation to retaliate against a developed one. In this instance, Latin American countries can be expected to gain economically, while ACP countries may lose. The net effect of resolving disputes more quickly will be a small reduction in what may be highly significant economic impacts in developing countries, in either direction. The changes assumed in the further liberalisation scenario are not expected to influence developing countries' ability to initiate successful disputes.

On the whole, social impacts in both developed and developing countries will result directly from economic ones, through employment effects. Environmental effects are likely to result from production changes, both in developed countries (e.g. steel) and in developing ones (e.g. bananas). Since the anticipated effect of the liberalisation scenario is only a fairly small reduction in the time taken to reach a settlement, environmental

\textsuperscript{167} WTO (2001b)  
\textsuperscript{168} Hudec (2002), from Borrell (1997)
impacts are unlikely to be significant. Social ones are likely to be small, but possibly significant in some cases, in either direction.

While developing as well as developed countries have made use of the dispute settlement system, no least developed country has yet been involved in a dispute, either as a complainant or as a respondent\(^{169}\). This may be ascribed to the DSU itself, which calls for restraint in its application against LDCs, or to their limited ability to take retaliatory action. The further liberalisation scenario is not expected to change either aspect significantly, so that significant impacts are unlikely to occur in LDCs.

8.6. Methodology for detailed SIA studies

Detailed assessment may be based on the evaluation of past disputes, using causal analysis to evaluate potential future effects.

8.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario discussed above are summarised in Table 8.1.

Table 8.1. Dispute Settlement - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic income</td>
<td>developed and developing</td>
<td>greater economic efficiency</td>
<td>insignificant</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>LDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social equity, poverty, derived from economic</td>
<td>developed and developing</td>
<td>employment effects</td>
<td>number of disputes and volume of production affected in a locality</td>
<td>△ ▼</td>
</tr>
<tr>
<td></td>
<td>LDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental production effects</td>
<td>all</td>
<td></td>
<td>effects too short term to be significant</td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symbols used to show impact significance

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▼: negative lesser significant impact
- ▲: positive greater significant impact
- ▼: negative greater significant impact

\(^{169}\) Delich (2002)
9. TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (TRIPS)

9.1. Background

Intellectual Property Rights (IPRs) are unusual among trade-related measures, in that they place deliberate constraints on a free market. Their aim is to prevent competitors from copying an innovator’s design without permission (and normally the payment of royalties), enabling the innovator to earn sufficient profit to warrant the original investment. Competitors cannot enter the market freely, limiting their ability to add further innovations, until the right has expired.

Protection is given under national laws. International obligations under the WTO are defined in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), which came into effect in 1995 with the establishment of the WTO.

The general coverage of intellectual property legislation includes:

**Industrial Property**
- Patents: exclusive rights awarded to inventors (granted under TRIPS for a minimum of 20 years).
- Industrial Designs: protection for the aesthetic aspects of design (eligible under TRIPS for a minimum of 10 years).
- Trademarks: exclusive rights to the use of marketing symbols, which can be renewed indefinitely.
- Geographical Indications: protection for product names which indicate the geographical source of a product, associated with the perceived quality of the product.
- Trade Secrets: commercially valuable information, which is protected as long it remains secret.

**Artistic and Literary Property**
- Copyright: exclusive rights to the creator of original literary and artistic works, including computer software (which is interpreted as being literary). Formal registration is not needed, and protection normally lasts at least 50 years beyond the life of the creator.

**Specific (sui generis) protection systems**
- Integrated Computer Circuits: protected under TRIPS for a minimum of 10 years.
- Plant Breeders’ Rights: granted to breeders of new plant varieties, normally with protection for at least fifteen years.

Intellectual property laws are designed in such a way as to achieve what is considered to be the most competitive market overall, balancing restrictions on freedom to compete with existing IPR holders against incentives to innovate. Legislation aims to maximise the performance of the economy to which it applies. Innovators do not necessarily have any

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170 CIPR (2002)
protection against competitors who copy their designs in export markets, unless other governments pass similar legislation and/or come to agreements on mutual enforcement of IPRs.

TRIPS goes beyond previous international agreements on IPRs, which are administered by the World Intellectual Property Organisation (WIPO), to require all WTO members to recognise a minimum set of worldwide rules for intellectual property rights. It also extends the coverage of IPR recognition, in some cases into areas not even included in some industrial countries’ own legislation. The Agreement recognised the difficulties that would be encountered in introducing IPR legislation in developing countries, giving them until 1 January 2000 to comply (developed countries had to comply by 1 January 1996). For product patent protection in new areas such as pharmaceuticals, a further five years was allowed. Least developed countries are not required to enact TRIPS until 2006, and the Doha Ministerial Declaration on the TRIPS Agreement and Public Health gave them a further 10 years for pharmaceutical products.

9.2. Negotiation issues

Fundamental changes or developments of the TRIPs Agreement are not proposed. Instead, the Doha Declaration commits members to negotiations on a number of specific points:

- the establishment of a multilateral system of notification and registration of geographical indications for wines and spirits.

These are to be completed by the Fifth Session of the Ministerial Conference. The Declaration also confirms ongoing discussions in the TRIPs Council on

- extending the protection of geographical indications to products other than wines and spirits;
- the relationship between TRIPs and the Convention on Biological Diversity;
- the protection of traditional knowledge and folklore;
- other relevant new developments.

Additionally, the relationship between TRIPs and public health was the subject of a specific ministerial declaration at Doha, which instructs the TRIPs Council to

- find an expeditious solution to the problem that WTO Members with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing (to obtain low cost drugs).

The TRIPs Council was instructed to report to the General Council before the end of 2002. This was not achieved, although a draft decision on compulsory licensing was endorsed by the majority of WTO members (but not the USA). Members agreed to extend negotiations on the issue.

The discussions on the Convention on Biological Diversity and the protection of traditional knowledge and folklore overlap with those on Trade and Environment, and have been covered in the corresponding Section.

Geographical Indications (GIs)

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171 Watal (2002)
172 WTO (2001c)
The existing agreement requires WTO members to provide means of guarding against misleading or deceptive product descriptions which suggest false origin, for any product. For wines and spirits, it is not necessary to demonstrate a potential for consumers to be misled. Under proposals for a register, countries would notify those names which they consider to be associated with geographical origin, which, if approved by other member states, would be included on the list.

The negotiations on wines and spirits are concerned largely with whether the creation of a register would include provisions for additional mandatory protection of the product names whose registration is approved\textsuperscript{174}. The discussions on extension of the system relate to whether the protection afforded to wines and spirits should apply to any product. The EU favours a degree of mandatory protection for any product. Some other countries seeking greater protection for their own geographical names support this, while some others whose own products may be regarded as using misleading indications do not.

Arguments in favour of the extension of GIs to other products include the suggestion that they are particularly appropriate for protecting developing countries’ traditional knowledge, since other IPRs do not easily accommodate collective ownership. This is a major concern in many developing countries, although it has been argued that the potential benefits may not be attainable in countries or regions with limited ability to invest in the advertising or marketing necessary to establish a brand image. In such circumstances a name may gain greater market exposure without GI protection\textsuperscript{175}.

**TRIPs and public health**

The Doha Declaration reinforces the importance of implementing and interpreting TRIPs in a manner supportive of public health, while the accompanying Declaration on TRIPs and public health affirms that the TRIPS Agreement does not and should not prevent members from taking measures to protect public health, notably in cases of national emergency. This reaffirms a country’s right under TRIPs to grant compulsory licences, and the freedom to determine which grounds can support such licenses. Members also retain the right to determine what constitutes a national emergency or other circumstances of extreme urgency. This enables countries to manufacture low cost generic drugs for their own use. However, this leaves the problem that was identified in the Declaration, of smaller and less developed countries that do not have the necessary manufacturing capacity. Full implementation of TRIPs limits the ability of developing countries which do have the capacity to manufacture generic drugs to export to others which do not.

The negotiations concern possible amendments to the TRIPs agreement or clarification of its interpretation, in order to address the problem faced by countries with insufficient or no manufacturing capacities. Developing countries, supported by NGOs, argue for their continued ability to manufacture generic drugs for export. Some developed countries, with large R&D intensive pharmaceuticals industries, argue that two-tier pricing structures which enable the provision of low cost drugs to developing countries can achieve the same end within the existing arrangements. The US leans towards this view, while the EU is more supportive of member states’ freedom to export under compulsory licensing (as well as two tier pricing). Both groups however argue for arrangements which maintain pharmaceutical companies’ incentives for research and development.

These discussions include debate on parallel imports (products made in one country and imported into another, without the approval of the patent owner), and the applicability of

\textsuperscript{174} McCalman P (2002)
\textsuperscript{175} McCalman P (2002)
the principle of exhaustion of IPR rights (under which a company has no control over the ultimate destination of a product once it has sold it). This can allow the import of low cost generics into developed countries, and hence prevent the establishment of an effective two-tier pricing structure. The creation of a two-tier structure, and the contribution it might make to reducing prices in developing countries, therefore depends on the way in which individual countries’ IPR legislation deals with exhaustion, over which the TRIPs agreement has no control\[176_.

9.3. Scenarios

The Base Scenario assumes that no changes are made to the existing TRIPs agreement, and that it is fully implemented within the currently defined timescales.

The Further liberalisation scenario (which may be regarded as a misnomer in this instance) assumes:

- agreement on a system of notification and registration of geographical indications for wines and spirits, with limited additional provisions for mandatory protection;
- extension of the same protection of geographical indications to products other than wines and spirits;
- agreement on limited measures for the export of generic drugs under compulsory licences.

9.4. Assessment methodology

The assessment can in principle be similar to that used for market access. For both GIs and pharmaceuticals this would entail identifying trade volumes in relevant products, estimating the changes expected from the negotiation scenario, and evaluating consequent causal effects. Alongside this, the administrative cost of introducing relevant IPR protection and of pursuing lawsuits needs to be evaluated.

This overview study concentrates primarily on the causal linkages, with only a broad indication of the potential significance of impact magnitudes.

9.5. Assessment of impacts

Geographical Indications

The proposed system of notification and registration of geographical indications for wines and spirits can be expected to have a beneficial economic effect in countries which produce protectable products. In those cases where exceptions do not apply, and a contestable name is no longer able to be used, the opposite effect is anticipated. Among developed countries, the EU is expected to benefit more than others, through its large heritage of valued geographical names. The extension to other products will have similar effects.

Production changes will occur in the same direction, with consequent short term effects on employment. In some areas these could be significant. In countries with poor environmental controls, production increases may have adverse environmental impacts, while production decreases may have beneficial effects. These are expected to be small or non-significant.

\[176_ Mishra (2002)\]
Meanwhile, reduced competition is expected to have an adverse economic effect in all consuming countries, felt by consumers. A corresponding increase in consumer satisfaction may be assumed, related to perceptions of product quality. No studies have been identified which evaluate the relative importance of these effects, but it is considered that the net effect on consumer welfare will be small and negative.

TRIPs and public health

The further liberalisation scenario assumes that agreement is reached on limited measures for the export of generic drugs under compulsory licences, which would go some way towards addressing concerns that full implementation of the existing TRIPs agreement would increase prices in non-manufacturing developing countries. The following effects may be anticipated, by comparison with the base situation:

- lower drug prices in non-manufacturing developing countries
- greater production of generic drugs, primarily in developing countries
- decreased production in patent-holding countries
- decreased royalties in patent-holding countries

While strong arguments have been put forward regarding the magnitude of some of these effects, very little systematic investigation has been undertaken. The South African experience of proposing the use of a compulsory licence for HIV/AIDS drugs gives an indication of possible price changes. The initial cost of treatment has been quoted as US$ 10,000 per patient per year in May 2000, falling to US$ 700 per patient per year by April 2001. The cost of equivalent generic drugs from India has been estimated to be less than $300. By importing such drugs in Uganda, it has been reported that a major health clinic was able to triple the number of patients receiving HIV/AIDS therapy.

Such figures give no more than an indication of potential price differences, and cannot be used as a measure of the total number of patients who would benefit. The actual delivery of therapy depends on the human and physical resourcing of health services as well as the price of drugs. A more reliable indication might be obtained by inference from the change in total cost of delivery in the countries affected, and comparison with the total number of sufferers. It should also be noted that while treatment relieves suffering, it does little to address the fundamental HIV/AIDS problem. Nonetheless, the beneficial impact on public health of the assumed agreement is considered be significant.

While the magnitude of the HIV/AIDS crisis is cause for particularly strong concern, similarly beneficial effects may be anticipated for diseases such as tuberculosis, malaria, pneumonia, meningitis, diarrhoea, and other sexually transmitted diseases.

Loss of production and royalties for patent-holders will have an adverse economic effect, primarily in developed countries. The loss of royalties received by OECD pharmaceutical companies has been estimated at less than $1 billion, compared with these companies’ R&D expenditure of approximately $22 billion. Evidence that R&D would decrease significantly as a result, in developing countries or developed ones, is limited. From the information available it is considered that the direct economic impact is significant, while the long term impact on pharmaceutical product development is expected to be non-significant.

177 Abbott (2002)
178 Oxfam (2002a), Oxfam (2002b)
179 Mishra (2002)
180 Oxfam (2002b)
181 Abbott (2002)
A beneficial economic impact for developing country producers of generic drugs is expected, although its significance will depend on profitability at affordable prices.

Social impacts associated with employment will be directly related to the production changes. The pharmaceutical industry tends to be well regulated in all countries, developed and developing, and so the environmental effects associated with production are expected to be non-significant.

9.6. Methodology for detailed SIA studies

For Geographical Indications, a detailed assessment may start with an evaluation of trade flows and volumes.

A similar approach may be used for public health issues, together with evaluating the effect of drug price on service delivery, and the effect of pricing structure on pharmaceutical companies’ royalties and potential R&D investment.

9.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario are summarised in Table 9.1.

**Table 9.1. TRIPs - potential impacts of further liberalisation scenario**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
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<tr>
<td><strong>1. Geographical indications</strong></td>
<td></td>
<td></td>
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<tr>
<td>Economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>increased income</td>
<td>producers of protected products</td>
<td>volume of protectable trade</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>increased employment</td>
<td></td>
<td></td>
<td>△</td>
<td></td>
</tr>
<tr>
<td>decreased income</td>
<td>producers of competing products</td>
<td></td>
<td>▼</td>
<td></td>
</tr>
<tr>
<td>decreased employment</td>
<td>consumers countries</td>
<td>reduced competition</td>
<td>▼</td>
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<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equity, poverty</td>
<td>as economic</td>
<td>short term employment effects</td>
<td>social policy</td>
<td>△ ▼</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pollution</td>
<td>as economic</td>
<td>changes in production</td>
<td>effectiveness of regulation</td>
<td>△ ▼</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. TRIPs and public health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>increased income</td>
<td>generic manufacturers</td>
<td>increased production</td>
<td>▲</td>
<td></td>
</tr>
<tr>
<td>Impact</td>
<td>Type of country affected</td>
<td>Causal factors</td>
<td>Factors affecting significance</td>
<td>Potential significance</td>
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<tr>
<td>------------------------------</td>
<td>----------------------------------------------</td>
<td>--------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>decreased income</td>
<td>patent-holding manufacturers</td>
<td>decreased production</td>
<td></td>
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</tr>
<tr>
<td>Social health equity, poverty</td>
<td>less and least developed countries as economic</td>
<td>lower cost of drugs changes in production</td>
<td>total cost of medical service</td>
<td>▲ △</td>
</tr>
<tr>
<td>Environmental pollution</td>
<td>as economic</td>
<td>changes in production</td>
<td>effectiveness of regulation</td>
<td>-</td>
</tr>
<tr>
<td>Process new product development</td>
<td>patent-holding manufacturers</td>
<td>reduced royalties</td>
<td>profitability</td>
<td>-</td>
</tr>
</tbody>
</table>

Symbols used to show impact significance

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▼: negative lesser significant impact
- ▲: positive greater significant impact
- ▼: negative greater significant impact
- △ ▽: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain
10. WTO RULES

10.1. Background

The negotiations on WTO rules relate to the five basic principles under which the WTO operates. These are.\(^{182}\)

**Nondiscrimination**

This has two components: the most favoured nation (MFN) rule, which requires that a product made in one member country be treated no less favourably under trade procedures and tariffs than a similar one produced in another member; and the national treatment principle, under which foreign products must be treated no less favourably under national taxation and other regulations than like products which are produced domestically.

**Reciprocity**

This is the basis on which reductions in tariffs and other barriers are negotiated, such that a reduction in other countries’ import barriers is obtained in return for reducing domestic ones. Reciprocity can take two main forms: the exchange between negotiating parties of specific and identified matching trade concessions within the same sector or in different sectors; and a more general form of reciprocity which has been the basis of GATT tariff negotiations since 1947, under which a member expects at the end of a negotiation to make and to receive concessions which overall are matched by its trading partners, though not necessarily item by item.

**Binding and Enforceable Commitments**

The commitments made by WTO members are defined in national schedules, and are mostly “bound”, which means that a concession once agreed may not be reduced without the offer of matching compensation in trade terms to other parties concerned. GATT also lays down that commitments once undertaken should not be circumvented by other measures. Agreements to this effect include Article VII of GATT (customs valuation), Article XI (prohibiting quantitative restrictions on imports and exports), and the Agreement on Subsidies and Countervailing Measures (which limits export subsidies, and allows countervailing duties to be applied in response). The WTO dispute settlement procedures determine whether these rules are properly complied with.

**Transparency**

Article X of GATT and Article III of GATS establish legal obligations for WTO members to publish their trade regulations, to establish and maintain institutions allowing for the review of government decisions affecting trade, to respond to requests for information by other members, and to notify changes in trade policies to the WTO. Multilateral surveillance of trade policies by WTO members reinforces these provisions.

**Safety Valves**

Governments are allowed to apply trade restrictions in specific circumstances. There are three main provisions: the use of trade measures for non-economic objectives, such as public health, national security and protection of industries seriously injured by imports; the promotion of fair competition, including the right to impose antidumping duties, or countervailing duties on imports that have been subsidised by the exporting country; and intervention for economic reasons, which allows certain actions to be taken in response to balance of payments difficulties or to support infant industries.

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\(^{182}\) Hoekman (2002)
The main aims of these principles and rules are to maintain the stability of the trading system, and to ensure that larger and more developed countries do not exploit their market power to the detriment of smaller and less developed ones. Much of the discussion on potential changes to WTO rules relates to the extent to which they have achieved these aims. In addition, improvements are desired which minimise the disruptions caused by lack of clarity in the rules, and the time taken to enforce them.

10.2. Negotiation issues

The Doha Ministerial Declaration gives a mandate for negotiations aimed at clarifying and improving:

- GATT disciplines on Subsidies (including Countervailing Measures) and anti-dumping;
- the WTO disciplines on fisheries subsidies in particular;
- the disciplines and procedures applying to regional trade agreements.

The negotiations on subsidies (including countervailing measures) and anti-dumping are aimed at clarifying and improving the disciplines while preserving the basic concepts, principles and effectiveness of existing agreements, taking into account the needs of developing and least-developed countries. Those on regional trade agreements (RTAs) are to take into account their developmental aspects.

Subsidies (including countervailing measures) and anti-dumping

Pressure to strengthen these rules is related to the observation that, as tariffs have been reduced through the Uruguay Round, the use of anti-dumping measures and related practices has risen. This is illustrated in Figure 10.1 for the APEC countries of the Pacific Rim.

Figure 10.1. Tariff Reductions and Anti-Dumping Measures by and against APEC countries

![Graph showing tariff reductions and anti-dumping measures](source: Spinager (2002))
The inference has been made that anti-dumping measures have increasingly been misused, to afford the same level of domestic protection as was previously attained through tariffs. Subsequently to the data of Figure 10.1, the use of anti-dumping measures declined in the first half of 2002\textsuperscript{183}. It has however been suggested that, since the legal costs of challenging an anti-dumping investigation are high, the mere threat of an investigation may be sufficient to deter exporting companies from taking advantage of tariff reductions\textsuperscript{184}.

The countries initiating the greatest number of anti-dumping investigations are shown in Table 10.1, and the principal targets in Table 10.2\textsuperscript{185}.

**Table 10.1. Main initiators of anti-dumping investigations**

<table>
<thead>
<tr>
<th>Country</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC</td>
<td>66</td>
<td>1 US</td>
<td>46</td>
</tr>
<tr>
<td>India</td>
<td>60</td>
<td>2 Argentina</td>
<td>36</td>
</tr>
<tr>
<td>US</td>
<td>46</td>
<td>3 India</td>
<td>35</td>
</tr>
<tr>
<td>Australia</td>
<td>24</td>
<td>4 EC</td>
<td>31</td>
</tr>
<tr>
<td>Argentina</td>
<td>21</td>
<td>5 Canada</td>
<td>21</td>
</tr>
<tr>
<td>Canada</td>
<td>18</td>
<td>6 South Africa</td>
<td>20</td>
</tr>
<tr>
<td>South Africa</td>
<td>16</td>
<td>7 Australia</td>
<td>15</td>
</tr>
<tr>
<td>Brazil</td>
<td>14</td>
<td>8 Brazil</td>
<td>11</td>
</tr>
<tr>
<td>Mexico</td>
<td>14</td>
<td>9 New Zealand</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Stevenson (2002)

**Table 10.2. Main targets of anti-dumping investigations initiated in 2001**

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>48</td>
</tr>
<tr>
<td>Korea</td>
<td>21</td>
</tr>
<tr>
<td>Taiwan</td>
<td>20</td>
</tr>
<tr>
<td>Thailand</td>
<td>16</td>
</tr>
<tr>
<td>Indonesia</td>
<td>15</td>
</tr>
<tr>
<td>USA</td>
<td>15</td>
</tr>
<tr>
<td>Japan</td>
<td>14</td>
</tr>
<tr>
<td>Brazil</td>
<td>13</td>
</tr>
<tr>
<td>India</td>
<td>12</td>
</tr>
<tr>
<td>Singapore</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>10</td>
</tr>
<tr>
<td>South Africa</td>
<td>9</td>
</tr>
</tbody>
</table>

\textsuperscript{183} WTO (2002b)  
\textsuperscript{184} Spinager (2002)  
\textsuperscript{185} Stevenson (2002)
While the potential misuse of anti-dumping and countervailing measures is a cause for concern, the dumping practices and subsidies they are intended to counter may themselves have important economic, environmental and social effects. When used to promote nascent industries, some of these practices may have beneficial effects, and developing countries have argued for greater flexibility in their permissible use\textsuperscript{186}. The potential adverse effects are of particular concern for fisheries, which are singled out for attention in the Doha declaration.

\textit{Fisheries subsidies}

The principal concern is that fisheries subsidies contribute to over-capacity of fishing fleets, and hence to depletion of fish stocks and damage to the marine environment. Concerns have also been expressed for possible discrimination against developing countries in the use of constraints.

The issue is related to those being discussed in the Trade and Environment Committee on the relationship between WTO rules and MEAs, and a cross-reference between the two is made in the Doha declaration. The same question arises, of whether measures to conserve the global environment should be negotiated in the WTO, or in a multilateral environmental forum. On the one hand, trade measures may be used to reinforce weak environmental agreements, while on the other, unilateral environmental concerns may be used as a justification for restrictive trade practices.

\textit{Regional trade agreements}

Under the most favoured nation rule, RTAs would not be permissible, but are exempted under Article XXIV of GATT, which defines conditions under which they may be established. All WTO members are party to at least one such agreement, or are in the process of joining one\textsuperscript{187}.

The negotiations focus on clarifications to reduce the trade-diverting effect which bilateral or regional agreements may have, while maintaining the contribution they can make to the liberalisation of trade and to promoting development. The aim is to maintain support for increased multilateral trade integration, and at the same time to retain the flexibility offered by regional agreements and their potential to assist developing countries. Proposals for greater provisions for special and differential treatment are countered by the argument that excessive protection inhibits development\textsuperscript{188}.

Among issues that have been raised is the clarification of rules under which the WTO can examine RTAs for compliance\textsuperscript{189}.

\textbf{10.3. Scenarios}

The \textit{Base Scenario} assumes that no changes are made to existing disciplines and procedures.

\begin{tabular}{|l|c|}
\hline
EC & 8 \\
Russia & 8 \\
\hline
\end{tabular}

Source: Stevenson (2002)

\textsuperscript{186} Laird (2002a)
\textsuperscript{187} CEC (2002b)
\textsuperscript{188} EU-LDC Network (2002)
\textsuperscript{189} DFAIT (2002)
The Further liberalisation scenario assumes:

- clarification of the disciplines on Subsidies, including Countervailing Measures, (SCM) and Anti-Dumping (AD), which reduce the misuse of these measures;
- stricter limitations on the use fisheries subsidies;
- clarification of disciplines for RTAs, giving greater freedom for support to developing countries.

10.4. Assessment methodology

The economic impacts of amending the disciplines on SCM and AD may be assessed by evaluating the past use of such measures and the outcomes of investigations. This can in principle be done quantitatively, to provide estimates of the effect of the changes. Causal analysis can then be used to assess social and environmental effects.

The economic effects of amendments regarding fisheries subsidies may be evaluated similarly. In linking the results to environmental and social impacts, use may be made of case studies on fisheries impacts. While the economic factors in such studies may be unrelated to subsidies, the relationships between economic, social and environmental effects will be similar.

The liberalisation scenario for RTAs entails changes to trade flows within regions and outside them, together with greater use of trade restrictions in support of developing countries. Both may be evaluated using similar a methodology to that used for market access, with reference to SIA studies that have been undertaken for RTAs themselves.

For this overview study the assessment is limited to a broad analysis of causal effects and likely impact significance.

10.5. Assessment of impacts

Subsidies (including countervailing measures) and anti-dumping

It has been estimated that the value of ‘perverse’ subsidies ranges from $500 billion to $1.5 trillion a year, of which approximately $145 billion is given to nuclear and fossil fuel energy. The trade value influenced by countervailing measures has been estimated to average around $20 billion for each investigation initiated.

To the extent that certain subsidies are indeed perverse, they will have a net adverse effect on economic efficiency. Improving the WTO rules can be expected to have a significant beneficial overall economic effect, within which the effect will be adverse for those cases and those countries which currently benefit from the trade distortion. On the assumption that all countries will ultimately benefit from greater efficiency in their use of resources, these adverse effects will be short term only.

Data such as those reproduced in Figure 10.1 imply that the misuse of anti-dumping measures has grown to outweigh the misuse of subsidies. Assuming that this concern takes priority in the strengthening of WTO rules, an indication of the likely short term winners and losers may be inferred from Tables 10.1 and 10.2. Among developed countries, the US would lose economically, while the EU would suffer a smaller loss. Among developing countries, the East Asian economies would gain, while India and Argentina would lose. Smaller least developed countries would not be significantly affected.

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190 UNEP/IISD (2000)
191 Spinager (2002)
Through employment effects, social impacts would follow the economic ones, and are expected to be more significant in developing countries than developed ones.

Environmental effects will vary according to type of industry, but typically, production increases may have adverse impacts on natural resources or pollution, while decreases may have beneficial ones. In developed countries, with strong environmental regulation, these effects are expected to be non-significant. In developing ones they may be larger, particularly for natural resource dependent industries such as forestry and fisheries.

The rule changes may also have process effects, by changing the ability to support infant industries in developing countries, and influencing subsidised investment in new technology, primarily in developed ones. The long term economic effect would be positive or negative, depending on whether the freedom to invest is enhanced or inhibited. Associated environmental effects are uncertain. Subsidies for renewable energy are likely to have a beneficial impact, while those for nuclear energy may be considered to be adverse. However, rule changes which might have a significant influence in this respect are not anticipated. In view of the Doha declaration’s requirement to give particular attention to the needs of developing and least-developed countries, the rule changes envisaged in the scenario are presumed to have a small but beneficial impact on economic development in developing countries.

*Fisheries subsidies*

The liberalisation scenario presumes that more stringent conditions for providing subsidies will be applied for fisheries than for other industries. This is expected to have a significant positive economic impact for fishing countries that do not provide subsidies for their own fisheries. For those that do, the net economic effect should again be beneficial, through increased economic efficiency. A short term adverse economic impact will however occur in those countries’ fishery sectors. In developing countries where fishing rights have been sold to foreign companies, there may be a loss of income, but potential for positive social impacts for local fishers. To the extent that subsidies are designed to assist the development of more efficient and competitive local fishing industries, there may be adverse process effects, but these are not expected to be significant.

Potentially, highly beneficial environmental impacts might be expected, through reduced incentives for over-fishing. However, over-capacity in the fishing industry tends to occur with or without subsidies, through the ‘tragedy of the commons’. Unless a common resource is strongly regulated, by government or social tradition, competition between its users tends to lead automatically to over-exploitation. Improved overall management of the resource is considered to be the more important factor. Reduction of subsidies is nonetheless expected to have a significant beneficial effect.

*Regional trade agreements*

On the assumption that trade liberalisation produces economic benefits for all trading partners, greater freedom to treat regional partners preferentially would have an adverse overall economic effect. However, the liberalisation scenario presumes that this extra freedom will apply only in circumstances which specifically benefit the development of developing countries.

The economic benefits expected in developing countries are likely to be small but significant, with corresponding social ones. Possible adverse environmental effects

192 Hardin (1968)
associated with increased production could be significant for some types of product, both agricultural and industrial, unless countered by strengthened regulation.

The scenario contains no specific inference for process effects, although greater freedom to help enhance development processes may arise.

10.6. Methodology for detailed SIA studies

Detailed assessment of subsidies and countervailing measures may be based on quantitative evaluation of their past use.

The same approach may be used for fisheries subsidies, with a quantitative evaluation of effects based on case studies.

For Regional Trade Agreements, the methodology may be similar to that used for market access, drawing on the results of existing SIAs of RTAs.

10.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario are summarised in Table 10.3.

**Table 10.3. WTO rules - potential impacts of further liberalisation scenario**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Subsidies (including countervailing measures) and anti-dumping</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income, employment</td>
<td>US, to a lesser extent EU, East Asia, India, Argentina</td>
<td>removal of unjustified AD measures</td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Social equity, poverty</td>
<td>as economic</td>
<td>employment effects</td>
<td></td>
<td>△ ▼</td>
</tr>
<tr>
<td>Environmental resource stocks, biodiversity, pollution</td>
<td>East Asia, India, Argentina</td>
<td>increased production, decreased production</td>
<td>regulation, existing stress (particularly on natural resources)</td>
<td>▼</td>
</tr>
<tr>
<td>Process sustainable development strategy</td>
<td>developing</td>
<td>protection of infant industries</td>
<td></td>
<td>△</td>
</tr>
<tr>
<td><strong>2. Fisheries subsidies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income, employment</td>
<td>non-subsidising fishing countries, subsidising countries</td>
<td>greater competitiveness, short term adjustment</td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Social equity</td>
<td>subsidising countries</td>
<td>loss of employment</td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>Impact</td>
<td>Type of country affected</td>
<td>Causal factors</td>
<td>Factors affecting significance</td>
<td>Potential significance</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------</td>
<td>---------------</td>
<td>-------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Environmental sustainability of fish stocks</td>
<td>subsidising countries</td>
<td>reduced incentive for over-fishing</td>
<td>resource management</td>
<td>△</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Regional trade agreements

<table>
<thead>
<tr>
<th>Economic</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>income, employment</td>
<td>developing</td>
<td>greater preferential treatment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>equity, poverty</td>
<td>developing</td>
<td>employment effects</td>
<td></td>
</tr>
<tr>
<td>Environmental pollution, resources</td>
<td>developing</td>
<td>production effects</td>
<td>regulation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>sustainable development process</td>
<td>developing</td>
<td>greater freedom for assistance</td>
<td>specific use of RTAs</td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▼: negative lesser significant impact
- ▲: positive greater significant impact
- ▼: negative greater significant impact
- △▼: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain
11. IMPLEMENTATION ISSUES IN DEVELOPING COUNTRIES

11.1. Background

During the preparations for the Seattle and Doha WTO conferences, many developing countries expressed concerns over difficulties they faced in implementing the commitments of the Uruguay Round, and what they saw as lack of implementation of developed countries' commitments. The issues cover the special and differential treatment provisions of a wide range of agreements made in the Uruguay Round, together with various aspects of WTO rules and related issues.

It was argued by developing countries that these implementation issues should be satisfactorily addressed before negotiations began on a new round. Developed countries took the line that they had met their own commitments, and that other countries should meet theirs.

At the Doha conference a compromise was reached, in which Ministers ‘attach the utmost importance to the implementation-related issues and concerns raised by Members and are determined to find appropriate solutions to them’. The Doha declaration sets out how these issues should be treated further, and eventually be transferred into the negotiations.

11.2. Negotiation issues

Of around 100 issues raised, some 40 were settled at or before the Doha conference. The main issues identified in the Doha implementation decision include:

- **Agriculture.** The Implementation Decision requires WTO members to show restraint in challenging measures taken by developing countries (notified under the Green Box) that address rural development and food security concerns. As discussed in Section 4, discussions have been agreed on provision of assistance to least-developed and net food-importing developing countries, in response to possible increases in world food prices resulting from trade liberalisation. These cover food aid, technical and financial assistance to improve productivity and infrastructure, and financing for imports. Discussions have also been agreed on export credits, export credit guarantees and insurance programmes, in order to counter circumvention of export subsidy commitments, and to consider how a possible agreement on export credits might be brought into the WTO (in parallel with the agriculture negotiations). Continuing work is taking place to make tariff rate quota administration more transparent, equitable and non-discriminatory.

- **General Agreement on Tariffs and Trade (GATT).** Ministers reaffirmed GATT provisions on special and differential treatment for developing countries. The Decision clarified procedures and initiated further work on anti-dumping investigations, and agreed to discussions on the extension of transitional periods for developing countries. Customs Valuation requirements were clarified, with further work on time-frames, procedures and terms and conditions.

- **Agreement on Textiles and Clothing.** The Decision confirmed provisions on elimination of quota restrictions, and discouraged antidumping investigations against developing countries for a period of two years. A requirement was agreed for

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193 WTO (2001a)
194 WTO (2001g)
notification of changes in rules of origin, and further work was initiated on quota levels for small suppliers, with similar treatment extended to LDCs.

- **Trade-related investment measures (TRIMs).** Discussions were agreed on requests for extension for LDCs of the seven-year transition period given to them under the TRIMs Agreement.

- **Trade-related aspects of intellectual property rights (TRIPS).** Discussions relate to governments’ ability to bring a dispute to the WTO even if no WTO agreement or commitment has actually been violated. Non-violation complaints of this nature are possible in the areas of goods and services, but the TRIPs Agreement set a temporary moratorium on non-violation complaints. Other discussions are aimed at strengthening Article 66.2 of the TRIPs Agreement, which requires developed countries to provide incentives to promote and encourage technology transfer to least-developed countries.

- **Agreement on Rules of Origin.** Further work was agreed on harmonisation of rules.

- **Agreement on Subsidies and Countervailing Measures.** An agreement was reached on eligibility rules for exemptions. Discussions were agreed on the acceptability of subsidies by developing countries in pursuit of development goals, export subsidy exemptions for LDCs were reaffirmed, and the transition period for developing countries’ export subsidies was extended.

- **Technical Barriers to Trade (TBT).** The Decision clarified requirements of the TBT Agreement, encouraged provision of technical assistance, and agreed further work. Continued co-operation with international standards organisations was approved, to include the involvement of LDCs.

- **Sanitary and phytosanitary (SPS) measures.** The time-frame for developing countries to comply with other countries’ new SPS measures was clarified. An agreement was made on an outline of steps designed to make it easier for all WTO members to make use of the SPS Agreement’s equivalence provisions. The Implementation Decision calls for members to provide financial and technical assistance to least-developed countries, so that they can respond adequately to new SPS measures that could obstruct their trade, and assistance to help them implement the agreement as a whole.

- **Cross-cutting issues.** The Implementation Decision mandates the Trade and Development Committee to identify which special and differential treatment provisions are mandatory, and to consider the implications of making mandatory those that are currently non-binding. It also instructs the committee to examine additional ways in which special and differential treatment provisions can be made more effective, and how developing countries may be assisted to make best use of these provisions.

The decision also urges developed countries to grant preferences, allowed under the GATT ‘Enabling Clause’ of 1979, in a generalised and non-discriminatory manner, i.e. to all developing countries rather than to a selected group. The GATT clause allows developed countries to give non-reciprocal differential and more favourable treatment to developing countries, and to unilaterally determine which countries and which products are included in their preference schemes.

In the Doha discussions of these issues, the only substantive changes agreed were those on timescales for implementing the SPS and TBT agreements, and on exemption rules for Subsidies and Countervailing Measures. The majority of other settlements have related to
the provision of information or commitments to further work, with substantive agreements yet to be reached.

Some of the negotiations on implementation issues are taking place as part of other negotiations, while others are being discussed separately by the Trade Negotiations Committee, as defined in Paragraph 12 of the Doha declaration:

a) where we provide a specific negotiating mandate in this Declaration, the relevant implementation issues shall be addressed under that mandate;
b) the other outstanding implementation issues shall be addressed as a matter of priority by the relevant WTO bodies, which shall report to the Trade Negotiations Committee... by the end of 2002 for appropriate action.

By the deadline of December 2002 set in paragraph 12b, significant progress had been made on only a small number of issues:\footnote{CEC (2003a), WTO (2003a)}

- SPS: agreement was reached on a revision of notification procedures, with progress on other issues;
- TBT: provisions for technical assistance were made;
- Subsidies and Countervailing Measures: further refinements to the agreement made in the Doha implementation decision;
- Anti Dumping: agreement on timescale for determining anti-dumping cases and for annual reviews;
- Rules of Origin: progress on harmonisation work programme, and agreed extension to deadline;
- Customs Valuation: progress on agreeing information on export values;
- Special and Differential Treatment; agreement in principle on a number of agreement specific issues, including some of the provisions of GATT, GATS and TRIPs.

This represented only a minority of the issues covered by the Doha declaration’s paragraph 12b. The majority had not been resolved by the deadline, and little progress had been made. The question then arises\footnote{CEC (2003a)} of whether these issues should be absorbed into the other negotiation areas, as with those covered under paragraph 12a.

11.3. Scenarios

The base scenario is the starting point, of no change to existing agreements (prior to the settlements that have already been made).

The Further liberalisation scenario assumes that:

- agreements will be reached on a large number of current issues;
- these agreements will take full account of the needs of developing countries.

Although progress in this direction has been less than expected, the scenario assumes that the current negotiation difficulties will be overcome.

11.4. Assessment methodology

In this overview study, the impact of the liberalisation scenario is assessed in broad terms only. For a more detailed study it would in principle be possible to identify detailed scenarios for the most probable outcome of each individual issue under negotiation or
discussion. However, many of the issues have already been incorporated into the negotiations on other measures in the Doha agenda, and the others are closely related to other measures for which negotiations have been mandated. The analysis is therefore based largely on a review of the issues raised, linked to the findings of the other sectoral analyses.

For those issues which have already been incorporated into the negotiations on other measures, care must be taken to avoid double counting. For example, Section 4 considers implementation of the Marrakesh decision on LDCs and NFIDCs, as part of its overall assessment of agricultural liberalisation. For this and other issues, the further liberalisation scenario for Implementation Issues is interpreted as a stronger response to developing countries’ concerns than is assumed in the individual sectoral assessments.

The causal chain analysis undertaken for other sectors is not repeated here. Instead, the assessment is based primarily on the impact summary tables for the relevant other measures.

### 11.5. Assessment of impacts

The implementation issues that have been raised reflect the concerns of developing countries, with particular focus on the needs of least developed countries. In broad terms the benefits that are sought would counter potentially negative effects in these countries, as identified in the assessments of individual sectors.

Satisfactory resolution of the implementation issues would reduce some of the potentially adverse impacts for developing countries that have identified for these measures, to create a beneficial impact. In some cases there may also be a corresponding negative impact for developed countries.

From the impact summary tables for these measures, the potential impacts of the negotiations on implementation issues are identified in Table 11.1.

For developed countries, a small adverse economic effect is anticipated. For some of the issues there may also be social and environmental effects, which may be beneficial, but these are not expected to be significant.

In developing countries, beneficial economic and social effects are expected in most developing countries, particularly the least developed. The environmental effects of the relevant other measures are not expected to be influenced significantly by implementation issues. A beneficial effect is however anticipated in relation to countries’ development strategies.

### 11.6. Methodology for detailed SIA studies

A more detailed SIA may need to identify specific scenarios for each individual issue under negotiation or discussion. It would then examine the extent to which this would change the further liberalisation scenario for each of the other measures under negotiation. The expected change in predicted impacts for each of these measures would then be inferred.

### 11.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario for implementation issues are summarised in Table 11.1.
Table 11.1. Implementation Issues – potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income</td>
<td>all</td>
<td></td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income</td>
<td>sub-Saharan Africa and small island states other than East Asia</td>
<td>market access cost of incentives, balance of payments, legal costs adjustment loss of tariff revenues short term adjustment, e.g. textiles and clothing short term adjustment</td>
<td>the significance of all impacts is influenced by the details of agreements on implementation issues</td>
<td>△</td>
</tr>
<tr>
<td>employment</td>
<td>most</td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>subsidising countries</td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Social poverty</td>
<td>LDCs, NFIDCs, urban poor</td>
<td>consumer prices, food security employment electricity</td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>equity, gender</td>
<td>all</td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Environmental</td>
<td>no significant effects</td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Process</td>
<td>all</td>
<td>commercialisation of agriculture limits on development strategy</td>
<td></td>
<td>△</td>
</tr>
</tbody>
</table>
12. TRADE AND INVESTMENT

12.1. Background

Foreign Direct Investment (FDI) has grown from about $60 billion in 1982, to about $200 billion in 1990, and almost $1,300 billion in 2000. Investments are made primarily by transnational corporations (TNCs), and can make a positive contribution to employment, technology transfer, growth, productivity and competitiveness in the host country, as well as generating profits for the corporation and its home country. Countries generally aim to attract FDI in order to obtain the perceived benefits, by offering incentives such as tax concessions. At the same time governments negotiate with investing TNCs, in order to maximise the benefits and minimise any adverse effects on domestic competitors. In doing so they may place restrictions on the activities of investing companies, which are considered to be trade-distorting (Trade-Related Investment Measures, or TRIMs).

TRIMs may include:

- local content requirements
- import restrictions
- export requirements
- manufacturing requirements
- domestic sales limitations

The 1994 WTO Agreement on TRIMs set out a number of provisions prohibiting their use. This short Agreement did little more than formalise or re-state what was already the established position under the GATT, resulting from a series of decisions and dispute cases over the years. It was not possible in the Uruguay Round to negotiate a fuller agreement setting out internationally agreed provisions on the treatment of investment, and a separate attempt conducted within OECD to establish a Multilateral Agreement on Investment (MAI) collapsed in 1998. It has been argued that while the current TRIMs Agreement aims to prevent the trade-distorting effects of TRIMs, it makes no corresponding provision for the potentially trade-distorting activities of TNCs. Additionally, the Agreement is not comprehensive and applies only to those measures defined in an illustrative list.

The Doha agenda established a work programme to discuss the issues, with a view to negotiations taking place after the fifth WTO Ministerial Conference in 2003.

12.2. Negotiation issues

Trade and investment is one of the Singapore issues, introduced to the WTO agenda at the 1996 Ministerial conference in Singapore. In the Doha Ministerial Declaration, Ministers agreed that:

- negotiations will take place after the Fifth Session of the Ministerial Conference, on the basis of a decision to be taken by explicit consensus at that Session on modalities of negotiations.

In recognising the needs of developing countries, the Declaration committed the WTO to work in cooperation with other relevant intergovernmental organisations to:

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197 UNCTAD (2001)  
198 Morrissey (2001)
• provide strengthened and adequately resourced assistance to respond to the needs of developing and least developed countries, and required that:

• the special development, trade and financial needs of developing and least developed countries should be taken into account as an integral part of any framework.

During the closing plenary session of the Doha conference, the chairman clarified his interpretation of the wording of the Declaration, which in his view would ‘give each member the right to take a position on modalities that would prevent negotiations from proceeding after the Fifth Session of the Ministerial Conference until that member is prepared to join in an explicit consensus’\textsuperscript{199}. This interpretation applies also to the discussions on competition policy, transparency in government procurement, and trade facilitation.

The Doha declaration defines the work to be undertaken prior to the 2003 conference, to focus on the clarification of:

• scope and definition;
• transparency;
• non-discrimination;
• modalities for pre-establishment commitments based on a GATS-type, positive list approach;
• development provisions;
• exceptions and balance-of-payments safeguards;
• consultation and the settlement of disputes between Members.

The TRIMs agreement gave developing countries a transition period for removing investment measures, which expired at the end of 1999. Many countries have failed to meet this obligation, but in the course of the current WTO discussions, dispute cases that have been raised against them have been put on hold\textsuperscript{200}.

The principal argument in favour of clarifying investment provisions is that it would create a more stable, predictable commercial climate for investors, and thereby promote world economic stability and growth. This argument is put forward primarily by countries which host the major TNCs, led by Europe and Japan. The principal counter-argument, put forward by developing countries, is that the main beneficiaries would be the TNCs, at the cost of reducing recipient countries’ ability to steer investment towards their developmental needs, and potentially against the interests of their own competing companies.

A further issue relates to the cost of the legal changes needed. Some commentators suggest that the cost of negotiating and implementing new regulations and institutions may be better spent elsewhere\textsuperscript{201}, while others argue that removing the most significant types of investment barrier is simple and straightforward\textsuperscript{202}. Others suggest that while repealing a local content law may be straightforward, replacing it with WTO-compatible measures to contain the anti-competitive practices of TNCs may entail introducing much more complex competition law.

\textsuperscript{199} WTO (2001d)
\textsuperscript{200} Laird (2002a)
\textsuperscript{201} Finger (2002)
\textsuperscript{202} Bora (2002)
Associated with this, it has been argued that within the framework of the WTO, competition policy can deal only with the trade distorting actions of governments, and not with those of TNCs\textsuperscript{203}. To deal with this, the EU has proposed that the behaviour of investors and their responsibility to host countries may be addressed through the negotiations, for example to develop guidelines on the responsible behaviour of TNCs\textsuperscript{204}.

12.3. Scenarios

The base scenario presumes that the TRIMS agreement is unchanged, and is fully implemented.

The Further liberalisation scenario assumes that a negotiated agreement will be reached on each of the items defined for discussion in the Doha declaration:

- a definition of investment, covering enterprises, capital transactions and foreign direct investors;
- transparency requirements covering publication and notification of investment measures, deadlines for compliance, response to enquiries and procedural arrangements, with scope for exemptions;
- non-discrimination in accordance with GATT principles, including most favoured nation and national treatment obligations, with scope for exceptions;
- national commitments based on a GATS-type, positive list approach;
- development provisions which include technical assistance and freedom for developing countries to regulate in accordance with basic WTO principles;
- balance-of-payments safeguards;
- dispute settlement through the existing DSU;
- guidelines on investor behaviour.

12.4. Assessment methodology

The direct economic impact of investment measures can in principle be estimated by economic modelling, such that consequential social and environmental effects may then be assessed in the same way as for market access for products and services. The application of computable general equilibrium techniques in this area is however relatively untested, and so use may also be made of partial equilibrium methods, as in the parallel SIA on market access for non-agricultural products\textsuperscript{205}. Alongside this, the legal and administrative costs of introducing and implementing relevant legislation and procedures need to be evaluated.

The assessment of sustainable development process effects may be undertaken by evaluating the causal linkages between investment and development, in both investing and recipient countries, under the circumstances defined by the scenario.

This overview study makes reference to quantitative studies that have been carried out, but concentrates primarily on case study evidence, causal linkages and potential impact significance.

\textsuperscript{203} Morrissey (2001)
\textsuperscript{204} WTO (2002c)
\textsuperscript{205} Morrissey and te Velde (2003)
12.5. Assessment of impacts

Direct economic effects

An assessment of the direct economic impact of a WTO investment agreement, based on an admittedly approximate analysis of TNC value-added, has indicated a global welfare gain of $75 billion\(^{206}\). The type of agreement studied was as envisaged in the preparations for the Seattle conference, which is broadly similar to that assumed in the further liberalisation scenario for Doha. The distribution of the expected gain was not evaluated, but on the assumption that it would favour those countries whose current investment regime is most in need of improvement, it was concluded that many developing countries could be significant beneficiaries.

Bernard Hoekman of the World Bank and Kamal Saggi of Southern Methodist University, Dallas, have conducted a fuller analysis of distributional effects\(^ {207}\). Potential gains to developing countries occur when local firms adopt technologies used by TNCs, when trained TNC workers are employed by local firms or start their own, and when TNC supply chains generate local provision of inputs to and from local firms. The empirical evidence for positive spillover effects of this nature was found to be ambiguous. It is noted that when governments pursue such gains by providing incentives for inward FDI they may find themselves in a bidding war, which may result in benefits being given to the investor which exceed the social value of the expected gains.

The empirical evidence was also found to be uncertain on whether such incentives are effective. Some studies show that incentives do not play an important role in altering the global distribution of FDI, while others show that they do. Hoekman and Saggi conclude that when incentives do not distort global FDI allocation, they end up as transfers to TNCs. A review by UNDP\(^ {208}\) comes to a similar conclusion, citing evidence that incentives merely lower the collective potential gains of developing countries from FDI.

The UNDP review also looked at the distributional effects of other aspects of investment. For mergers or acquisitions, some studies suggest that these may not represent any addition to capital stock, employment or even output. Others note that such investment may lead to subsequent investment, technology transfer or beneficial effects on balance of payments. The review concludes that FDI through mergers and acquisitions appears less likely to create value added in developing countries than greenfield investments which add to the host country’s capital stock.

Meanwhile, studies on the impact of greenfield FDI give mixed results, with variations between different countries, sectors and settings. Latin American countries have tended to use FDI to finance balance of payments deficits, while Asian countries have used it more for technology transfer. At the level of individual firms, data from developing countries showed no conclusive evidence of productivity spillovers from FDI, and suggested that in some countries the presence of TNCs had depressed the productivity of domestic plants, with adverse employment and social effects. The UNDP review concludes that sustainable technology transfer through FDI has been more the exception than the rule, and that even when it is effective it can be an expensive way of achieving technology transfer.

The UNDP study also notes that FDI can have negative development effects through its impact on balance of payments. Further, case studies of the impacts of the North

\(^{206}\) Nagarajan (1999)
\(^{207}\) Hoekman and Saggi (2002)
\(^{208}\) UNDP (2003)
American Free Trade Agreement (NAFTA) highlight the cost to governments of defending
their legal systems from investor challenges, such that considerable sums may have to be
paid to investors in order to defend countries’ public interest regulations.

The further liberalisation scenario does not include constraints on non-discriminatory
 provision of incentives for FDI, and hence will not address the ‘bidding down’ effect
 through which the benefits to TNCs can exceed the value of the expected gains. The
effect can therefore be expected to influence the distribution of the anticipated global
welfare gain in much the same way as in the past investments studied.

Beyond this, the scenario provides for a strengthening of investor rights, limited through
exceptions and safeguards, and balanced by provisions to strengthen investor obligations.
Although the provisions for government transparency and non-discrimination exclude
permissible exceptions and are subject to the positive list approach, they will be
enforceable through WTO rules. Those for investor behaviour are assumed to be
implemented as guidelines, and not enforceable. Hence the constraints on governments
are likely to be stronger than those on TNCs, thereby tending to reinforce the effects
discussed above.

From this it may be concluded that the direct economic impacts of the further liberalisation
scenario in developing countries will be mixed. Asian countries in particular may benefit
significantly from an increase in global welfare, while others may fail to do so. Developed
countries which host the majority of TNCs can be expected to receive significant
economic gains.

Social impacts

Economic gains are likely to result in social gains, but may also be accompanied by
adverse social effects, which will depend on the nature of the investment.

In developed countries, investment in overseas production may be accompanied by
closure of domestic facilities, with consequent unemployment and loss of earnings. This
may be restricted to a short term effect as the economy adjusts, but may continue into the
long term if domestic investment fails to provide employment of equivalent or greater
value added. There is significant evidence of rising income inequalities in developed
countries, although studies which have explored the evidence for a direct correlation with
international trade have produced mixed results\(^{209}\). Income inequality is strongly
influenced by other factors, particularly technological change. This in turn has a major
influence on international trade, and so the entire system which links income distribution
to trade is a complex one which is not fully understood.

In developing countries, adverse social effects may similarly occur, depending on the
nature of the investment. Investment is likely to create employment opportunities, but
may reduce others. These changing opportunities may affect men and women in different
ways. Investment in agriculture has particular potential to reduce rural employment
through increased labour productivity, contributing to migration to the cities. Investment in
manufacturing and other urban activities may generate employment opportunities there,
but not necessarily at levels of income and social welfare any greater than those
previously available in rural areas. Short term adverse effects are likely as the economy
adjusts, whose magnitude will depend on policy measures adopted in individual countries.
The long term effects will depend on the value added of the jobs that are created, again
dependent on national policy measures.

\(^{209}\) Wolff (2000)
Environmental impacts

Environmental impacts will similarly depend on the nature of the investment. Resource extraction, agricultural products and industrial manufacturing all have potential for adverse environmental effects. Investments which increase production in developing countries may have adverse effects if regulation is weak. Any corresponding decrease in production in developed countries may have a beneficial environmental effect, but probably non-significant, as regulation is generally stronger.

It has been suggested that with increased investment opportunities overseas, TNCs may seek out host countries with poor environmental standards, in order to avail themselves of lower abatement costs. Most studies of this ‘pollution haven’ thesis show little evidence that it is a significant factor in TNCs’ choice of location. Research conducted by the US government has indicated that environmental protection costs have sometimes been a factor in industry relocation, but studies by the Mexican government of the affects of NAFTA suggest that foreign corporations have better environmental and safety records than domestic firms\textsuperscript{210}. Similar findings have come from a comparison of multinational and local companies’ operations in China. Other studies have shown that, overall, environmental protection costs are rarely a major factor in international companies’ relocation decisions\textsuperscript{211}.

For most corporations, environmental costs are only one of many factors in their choice of location. In manufacturing, the cost of environmental control is typically 2 to 3 per cent of total costs, although it can be much higher in particular sectors, such as aluminium or cement manufacture\textsuperscript{212}. Even there, modern clean technologies which do not waste their raw materials may be more efficient economically as well as environmentally, so a company’s choice of location may be irrelevant to its environmental performance.

In general, any advantage manufacturing TNCs may take of weak environmental regulation tends to be indirect, operating through local producers rather than through laxer standards in their own relocated activities. However, this does not apply so strongly for commodities. Here, economic and environmental efficiency may be less closely aligned, and consumer pressures to maintain environmental standards overseas may have less effect\textsuperscript{213}. Since the production of commodities is a major component of the economy in many developing countries, the environmental impacts of increased investment in such activities may in some cases be significant, particularly when regulation is weak.

Impacts on sustainable development processes

The global economic welfare gain of $75 billion predicted in the study reported above is approximately 0.25% of global GDP. In representing the economic equilibrium effect of greater efficiency in resource allocation, this may be considerably smaller than the potential dynamic influence of the proposed investment measures. As noted above, the main argument in favour of strengthening investment provisions is not efficiency of resource allocation, but the promotion of world economic stability and growth. Compared with a one-off GDP increase of 0.25%, a significant increase in growth rates can, if realised, make a much greater contribution to achieving the Millennium goals.

\textsuperscript{210} Grossman (2002)  
\textsuperscript{211} Grossman (2002), van Liemt (2001)  
\textsuperscript{212} UNEP/IISD (2000)  
\textsuperscript{213} UNEP/IISD (2000)
Investment, in both the spread of existing technologies and their further development, is one of the principal mechanisms for growth-led poverty reduction. The dynamic process effects of the proposed investment measures are therefore likely to be highly influential.

As discussed in Section 5 in relation to market access for non-agricultural products, development theory offers two contrasting views on the relationships between investment and growth, one focusing on the dynamism of a competitive market, and the other identifying a need to steer that dynamism through government intervention. Evidence supporting the non-interventionist approach is given for example in a study of Australia’s automotive industry\textsuperscript{214}. Beginning in the mid-1930s, the country adopted policies aimed at creating a domestic industry, with a variety of support measures which included extensive local content requirements, as well as subsidies, concessional loans, import licensing and import tariffs. Even after protection of the industry was reduced at the end of the 1980s, it was calculated to be the equivalent of a tax of about US$3000 on each car sold, and US$34,000 for each person employed in the industry. Reducing protection caused total car production to fall by about 15% by 1996, but with considerably increased efficiency, and a substantial increase in exports of both cars and components.

The opposing view argues that while protection may damage a country’s economic growth if it is retained beyond the establishment of a domestic industry, it may be necessary for creating the industry in the first place. Further, it is argued that interventionist government policy has been more influential in creating economic growth than foreign direct investment. As prime examples, Japan and the Republic of Korea are cited as having relied only marginally on FDI for their industrial success\textsuperscript{215}. While FDI flows were higher for Korea than for Japan, they were lower than in most developing countries, including sub-Saharan Africa. Korea’s experience is reported to have relied strongly on FDI restrictions, including local ownership and performance requirements. Meanwhile China has become the largest developing country recipient of FDI, despite extensive regulatory constraints and ownership requirements. In an analysis of comparative industrial performance in developing countries, UNIDO argues that the spectacular success of East Asia benefited considerably from the judicious use of infant industry protection, local content rules and other FDI restrictions\textsuperscript{216}.

This experience suggests that neither government intervention nor a competitive market can, on its own, deliver a significant improvement in developing countries’ growth rates. The evidence indicates that success depends on a combination of the two together, along with other equally significant factors in the development process. Replicating the East Asian success in other developing countries is a difficult task, which may require positive efforts to increase transparency in TNC behaviour, curtail restrictive business practices, promote technology transfer, training, local ownership, profit retention and developing countries’ own R&D capacity, along with targeted investment in their human resources. The further liberalisation scenario does not remove developing countries’ freedom to pursue such policies, but it does restrict it. Meanwhile, the measures in the scenario which promote such action are primarily in the form of guidance, and are not expected to be sufficiently enforceable to replace measures that can be imposed through law by individual governments.

None of the studies examined indicates that the further liberalisation scenario will have a negative effect on developing countries’ growth rates. Large countries whose large markets are particularly attractive for FDI need not see their growth rates fall, while those that have already achieved newly industrialising status have less need of continued

\textsuperscript{214} Pursell (2002) \\
\textsuperscript{215} UNDP (2003) \\
\textsuperscript{216} UNIDO (2002)
intervention. The exemptions, exceptions and safeguards assumed in the scenario leave some freedom for other countries to adopt similar policies. Additionally, other components of the scenario encourage investors to adopt policies which promote recipient countries’ development. However, the lack of enforceability of these measures suggests that their beneficial effect will be considerably smaller than would be needed to achieve the rates of growth necessary to achieve the Millennium goals. The scenario is in this sense a missed opportunity, which fails to take full advantage of the potential for development which investment policy offers. This area is therefore a rich one for international flanking measures beyond the WTO negotiations, to enhance the contribution which foreign direct investment can in principle make to sustainable development.

### 12.6. Methodology for detailed SIA studies

Detailed SIA of trade and investment may make use of CGE studies or partial equilibrium analysis as used in the sectoral studies on market access\(^{217}\), supported by information from case studies.

### 12.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario are summarised in Table 12.1.

#### Table 12.1. Trade and Investment - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic income</td>
<td>developed</td>
<td>return on investment economic activity</td>
<td>return on investment</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>developing, mainly Asia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>developing, other</td>
<td>cost of incentives, balance of payments, legal costs</td>
<td>investment policy</td>
<td>▼</td>
</tr>
<tr>
<td>employment</td>
<td>developed</td>
<td>domestic closures, short term long term</td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>developing</td>
<td>employment opportunities</td>
<td>nature of investment</td>
<td>△</td>
</tr>
<tr>
<td>capital stock</td>
<td>developing</td>
<td>labour productivity</td>
<td>investment policy</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>developing, mainly Asia</td>
<td>greenfield rather than merger/acquisition</td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Social equity (including gender)</td>
<td>developed</td>
<td>employment</td>
<td>domestic investment</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>developing</td>
<td>employment, labour productivity</td>
<td>nature of investment, social policy</td>
<td>△▼</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{217}\) Morrissey and te Velde (2003)
<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>pollution, resource depletion</td>
<td>developing</td>
<td>increased production</td>
<td>effectiveness of regulation</td>
<td>▼</td>
</tr>
<tr>
<td>Process</td>
<td>developing</td>
<td>limits on development intervention</td>
<td>market size, existing technology capacity</td>
<td>?</td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- □ blank: impact has been evaluated as non-significant compared with the base situation
- ▲ positive lesser significant impact
- ▼ negative lesser significant impact
- ▲ positive greater significant impact
- ▼ negative greater significant impact
- ▲▼ positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ? effects are uncertain
13. COMPETITION POLICY

Background

A detailed SIA for competition policy has already been carried out in a parallel study\(^{218}\). This overview presents a brief summary of that work.

There has been an evolution in the importance given to different objectives of competition or antitrust policy over the past 100 years. Initially, protecting market processes and rights to engage in commerce were accorded a high priority. Only after competition laws were enacted did a school of thought develop that justified certain competition laws on the grounds that they resulted in improvements in economic efficiency. More recently, a wide range of opinion has stressed the importance of dynamic efficiency as an objective of competition policy.

Competition policy is concerned both with private anti-competitive practices and with government measures or instruments that affect the state of competition in markets. Its instruments include competition advocacy and competition law.

The 1990s saw a number of jurisdictions sign bilateral agreements on competition law and policy matters with other nations. These agreements differ markedly in their content and legal status; ranging from Mutual Legal Assistance Treaties (such as the one treaty between Canada and the United States) and more informal arrangements between enforcement agencies.

Trade and competition policy is one of the Singapore issues, introduced at the 1996 WTO conference. The Doha Declaration recognises the case for a multilateral framework to enhance the contribution of competition policy to international trade and development, agreeing that negotiations will take place after the Fifth Session of the Ministerial Conference on the basis of a decision to be taken by explicit consensus at that Session on modalities of negotiations.

Cooperation is called for with relevant intergovernmental organisations, including UNCTAD, to provide assistance to respond to the needs of developing and least-developed countries. The Working Group on the Interaction between Trade and Competition Policy will focus on the clarification of: core principles such as transparency, non-discrimination and procedural fairness, and provisions on hardcore cartels; modalities for voluntary cooperation; and support for progressive reinforcement of competition institutions in developing countries through capacity building, with full account to be afforded to the needs of developing and least-developing countries and the appropriate flexibility provided to address those needs.

Scenarios

The Baseline scenario takes as given the nations which have already enacted competition laws and assumes that no other nation will enact such laws.

The principal elements of the Future liberalisation scenario are taken to be:

- A commitment to enact and enforce a national cartel law.
- A commitment to apply a set of core principles (including non-discrimination) to whatever competition laws a nation already has on the statute books.

\(^{218}\) Clarke et al (2003)
• The development of a set of modalities on voluntary cooperation between competition agencies and such cooperation need not be limited to cartel enforcement actions.
• A framework of measures that support the introduction and strengthening of competition policy-related institutions.

**Summary of sustainability impacts**

In general, beneficial short and long term economic and social impacts are identified in all countries, resulting from reductions in various anti-competitive practices. Some adverse economic adjustment costs are however identified in developing and least developed countries, from the cost of compliance with the proposed multilateral framework on competition.

More efficient production and transport are expected in all countries, with beneficial environmental impacts. Increased levels of production and transport may however have some adverse environmental effects, again in all countries.
14. TRADE FACILITATION

14.1. Background

The increase in both volume and complexity of trade has increased the need for effective procedures for processing trade transactions. Trade facilitation involves reducing the transaction costs associated with the enforcement, regulation and administration of trade policies. The objective of trade facilitation is therefore to reduce the costs associated with cross-border transactions.

It has been estimated that inefficiencies in trade facilitation procedures may be up to 2 percent of the value of goods shipped in a developed country, and considerably more than this in a developing country environment. Pressure for WTO negotiations on trade facilitation has come from a broad range of stakeholders, and in particular from the business community, including the International Chamber of Commerce. Developing countries have been concerned about customs regulations and procedures (including rules of origin and technical regulations and standards) which may act as an impediment to their export trade.

A number of international organisations have been active in trade facilitation, including the World Customs Organisation (WCO), UNCTAD, the World Bank the United Nations Economic Commission for Europe (UNECE). The successful implementation of various non-binding trade facilitation initiatives have however not been successful. The absence of a coherent international architecture and framework including a set of multilateral binding rules have been identified as a key missing element. Good practices in customs procedures have been identified and agreed multilaterally under the auspices of WCO, and are contained in the International Convention on the Simplification and Harmonization of Customs Procedures (the Kyoto Convention). However, many developing countries are constrained in achieving the level of good practice laid out in the WCO convention, by weak institutions, lack of modern communications and information systems, and inadequately skilled human resources. Somewhat less stringent requirements have been defined by UNCTAD in the Columbus Declaration, which is widely regarded as a target for improving international procedures.

14.2. Negotiation issues

Trade facilitation was added to the WTO Agenda at the Singapore Ministerial Meeting, which directed the Council for Trade in Goods (CTG) to undertake work on the simplification of trade procedures in order to assess the scope and need for introducing WTO rules in this area. This objective of trade facilitation is to reduce the transaction costs in trade, and is defined by the WTO as ‘the simplification and harmonisation of international trade procedures’. Trade procedures are defined as ‘activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade’.

Subsequent to the Singapore meeting, the CTG has considered, inter alia, the following issues: import and export procedures and requirements, physical movement of consignments (transport and transit), and electronic facilities and their importance for facilitating international trade. Elements relating to the simplification and harmonisation of trade procedures are included in a number of the Uruguay Round agreements, including

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219 Messerlin and Zarrout (1999)
220 Hoekman (2001)
221 Staples (2002)
222 WTO (1999a)
Agreements on Customs Valuation, Import Licensing, Pre-Shipment Inspection, Rules of Origin, Technical Barriers to Trade, and the Agreement on the Application of Sanitary and Phytosanitary Measures.

The Doha Ministerial Declaration recognised the case for further expediting the movement, release and clearance of goods, including goods in transit, and the need for enhanced technical assistance and capacity building in this area. Ministers agreed that:

- negotiations will take place after the Fifth Session of the Ministerial Conference, on the basis of a decision to be taken by explicit consensus at that Session on modalities of negotiations.

In the period before the Fifth Session, the Council for Trade in Goods is to review, and as appropriate, clarify and improve, relevant aspects of Articles V, VIII and X of the GATT 1994 and identify the trade facilitation needs and priorities of members, in particular developing and least developed countries. This was accompanied by a commitment to ensure adequate technical assistance and support for capacity building in this area.

14.3. Scenarios

The **Base Scenario** represents full implementation of commitments already made in previous agreements.

The **Further liberalisation scenario** assumes:
- agreement to implement a degree of simplification in trade procedures in member countries;
- capacity building and technical assistance for developing and least developed countries.

14.4. Assessment methodology

The prime aim of the assessment of trade facilitation is to consider the economic benefits and costs that would follow from agreement to implement rules proposed by WTO members since Doha. These are broadly similar to those proposed in the Columbus Convention. The costs will impact mainly on the public sector, through any loss of tax revenue and the additional costs of implementing the new procedures. Canada, a country with ample resources, took five years to complete its implementation of the WCO Customs Valuation Agreement\(^\text{223}\).

Given that the potential benefits of trade facilitation will be spread over all trade flows, a detailed SIA may need to consider the process of diffusion of benefit at the sector level. The distribution of the benefits would also need to be considered, and may vary with the degree of market competition in the sector. In this overview study the analysis is limited to the macro level.

The costs of implementing new procedures may be significant for countries with limited institutional and human resource capacity, and are likely to be spread out over time.

14.5. Assessment of impacts

The potential benefits and costs of adopting trade facilitation measures are likely to be different in developed and developing countries. The best practices for customs procedures are increasingly being adopted by industrial countries, with verification of

\(^{223}\) Staples (2002)
prices on the basis of risk assessment techniques. However, shifting to a risk-based valuation system that depends on examination of a sample of shipments may increase rather than reduce the number of shipments on which importers attempt to under-invoice\textsuperscript{224}. This is more likely to occur where tariffs are high and where access to electronic information is limited. The impact may therefore vary according to the trading environment and institutional capacities of different country groups.

The existence of the single market in the EU implies that the opportunity for further gains from trade facilitation measures for their own transaction costs would be limited. Significant gains can however be expected from more efficient and streamlined trade procedures in relation to the coming enlargement to 25 member states, which will require the collaboration of 25 national border and customs administrations. There may also be a significant economic benefit from cheaper and more efficient access to developing country markets. The same will apply in other developed countries whose procedures meet similar standards.

For developing countries, potentially significant economic benefits may arise, from short-term allocative efficiency gains and a longer term increase in investment and trade flows. However, the implementation of trade facilitation measures is likely to require a certain investment in human resources, capacity building, physical infrastructure and institutional reform. Whether these investment costs are mitigated by proposed capacity building initiatives will determine the net economic impact. It has been argued that, where the implementation of trade facilitation measures causes a diversion of scarce resources from higher priorities, the gains to developing countries could be negligible, or outweighed by the losses\textsuperscript{225}. A review of studies of these effects\textsuperscript{226} concludes that insufficient information is available to draw firm conclusions. Purely qualitative considerations suggest that without considerable capacity-building assistance, the losses will outweigh the gains, since governments would otherwise have already introduced the necessary procedures.

This may not be the case in situations where government decisions are strongly influenced by other factors. In some developing countries, the introduction of tighter procedures may result in a significant economic gain, through a reduction in rent-seeking activities. However, unless a more general improvement in governance occurs, this may be fully negated by rent-seekers moving their activities to other areas of the economy.

Social impacts will be directly associated with economic ones.

No significant environmental impacts are anticipated from improvements in trade facilitation procedures, although there may be a small positive impact from more efficient use of public resources.

14.6. Methodology for detailed SIA studies

A more detailed study would need to draw on existing case studies and analyses to make quantitative estimates of both the benefits and the costs of improving cross-border procedures. This may need to consider the diffusion of costs and benefits between sectors, the distribution of the benefits, and the potential influence of market competition in each sector. For countries with weak governance systems, the analysis may need to take account of rent-seeking activities associated with cross-border transactions, including their potential for movement to other areas of the economy.

\textsuperscript{224} Finger and Schuler (1999)
\textsuperscript{225} Winters (2002)
\textsuperscript{226} WTO (2001h)
14.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario are summarised in Table 14.1.
Table 14.1. Trade Facilitation - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>income</td>
<td>developed</td>
<td>lower transaction costs, increased trade</td>
<td>overall governance</td>
<td>△</td>
</tr>
<tr>
<td></td>
<td>developing</td>
<td>higher administrative costs, less rent-seeking</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poverty</td>
<td>developing</td>
<td>from economic</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symbols used to show impact significance

- blank: impact has been evaluated as non-significant compared with the base situation
- △: positive lesser significant impact
- ▽: negative lesser significant impact
- ▲: positive greater significant impact
- ▼: negative greater significant impact
- △▽: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- ?: effects are uncertain
15. TRANSPARENCY OF GOVERNMENT PROCUREMENT

15.1. Background

Government spending has become a major proportion of all countries’ GNP (estimated at 10-20 percent of GDP in OECD countries\(^{227}\)), with preference often given to domestic suppliers. This discrimination has in part been used to support Keynesian macroeconomic policies, in order to maximise the increase in national income arising from increased government expenditure\(^{228}\), and to promote the development of domestic industry. Partly for this reason government procurement was initially excluded from GATT, but since the mid-1970s increasing pressure on government budgets, together with associated moves towards privatisation, has led to a greater acceptance of liberalisation by developed countries. The Tokyo round of trade negotiations included a code of conduct for government procurement, and the Uruguay Round’s Government Procurement Agreement (GPA) extended the agreement and included services as well as goods. The GPA defines thresholds and procurement procedures, with provisions for transparency and for avoiding the use of technical specifications as barriers to trade.

The GPA is a plurilateral agreement, separate from GATT’s single undertaking, and therefore binds only its signatories. Many developing countries have not entered the agreement for a variety of reasons. These include fear of foreign companies using their market power to drive out domestic ones, loss of control over macroeconomic and development policy, and the costs of international tendering procedures\(^{229}\). In some circumstances, exporters may circumvent discriminatory policies by establishing local subsidiaries, although the status which they are afforded is not always clear\(^{230}\).

Despite the GPA, preference for domestic suppliers remains common in developed countries, where it may be used to favour particular regions or types of supplier, such as small firms\(^{231}\). Even within the European Union, with its internal single market as well as the external requirements of the GPA, only a small proportion of eligible government contracts are placed with firms outside the buying country\(^{232}\). It is also common practice for developed countries to tie their bilateral development aid to procurement from the donor country\(^{233}\).

The potential extension of government procurement to a multilateral agreement, applying to all WTO members, was introduced into the discussions at the 1996 Ministerial conference in Singapore. During the preparations for the conference, proposals for multilateral extension of the GPA were narrowed to focus on the transparency issue, although this was seen at the time by the US and the EU as an initial step in forming the basis for a wider multilateral agreement on non-discrimination\(^{234}\).

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\(^{227}\) UNEP/IISD (2000)
\(^{228}\) Evenett (2002)
\(^{229}\) Laird (2002a)
\(^{230}\) Sauvé (2002)
\(^{231}\) Evenett (2002)
\(^{232}\) UNDP (2003)
\(^{233}\) Sauvé (2002)
\(^{234}\) Khor (1997)
15.2. Negotiation issues

Ministers agreed in the Doha Declaration that:

- negotiations will take place after the Fifth Session of the Ministerial Conference on the basis of a decision to be taken by explicit consensus at that Session on modalities of negotiations;
- negotiations shall be limited to the transparency aspects and therefore will not restrict the scope for countries to give preferences to domestic supplies and suppliers.

The Declaration recognises the case for a multilateral agreement on transparency in government procurement, without stating explicitly what the case is. Since any agreement would not restrict countries’ ability to discriminate in favour of domestic suppliers, it is not immediately clear that this is a trade issue. At the Singapore conference the US stated the objective of reducing corruption, but developing countries argued that this is a non-trade issue\(^\text{235}\). In the Doha negotiations, one of the main concerns of developing countries is to avoid any agreement becoming a first step in removing domestic preferences\(^\text{236}\).

In the Doha declaration Ministers also agreed that negotiations would

- take into account participants' development priorities, especially those of least-developed country participants; and committed to
- ensuring adequate technical assistance and support for capacity building both during the negotiations and after their conclusion.

15.3. Scenarios

The *Base scenario* assumes no change to the voluntary plurilateral nature of the GPA.

The *Further liberalisation scenario* assumes that
- a multilateral agreement is reached on transparency in government procurement, to cover both goods and services.

15.4. Assessment methodology

The first step in the assessment is to evaluate the influence of transparency on governments’ purchasing decisions. From this an analysis of causal linkages may be used to identify changes in the domestic economy, international trade, and potential economic, social and environmental effects.

The assessment needs also to consider the costs associated with introducing and administering effective policies to ensure transparency.

15.5. Assessment of impacts

The agreement postulated in the further liberalisation scenario may have some effect on increasing transparency in developed countries' government procurement procedures, but this is not expected to be significant. Any significant impacts in developed countries will therefore depend on the extent to which the agreement influences their exports to developing countries, where a greater increase in transparency is expected.

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\(^{235}\) Khor (1997)
\(^{236}\) Das (2002)
In many developing countries, an effective agreement may be expected to result in an increase in the transparency of governments’ purchasing decisions. This may reduce any corrupt practices, and in other circumstances may improve the quality of those decisions that are exposed to external scrutiny.

It is not expected that all procurement decisions will be subjected to effective scrutiny. Since the procedures to be introduced will be a WTO requirement, as opposed to an internal national initiative, there is a strong probability that they will be applied effectively only to those purchasing decisions that are challenged by foreign companies.

For such contracts, three effects are expected. First, any corrupt practices within the purchasing authority are more likely to be exposed. Second, decision-makers will have better information on which to base a rational decision. Third, decision-makers will be less able to resist lobbying pressures from companies that challenge them, which may have a counter-effect on the rationality of their decisions. The net result will depend on the relative magnitudes these three effects.

In some cases if not all, a more rational decision can be expected. Where government policy is to give preferential treatment to domestic firms, it is considered unlikely that this policy will be over-ridden, unless the transparency requirements reveal a major unexpected difference in price and performance between domestic and foreign suppliers.

No empirical evidence has been identified to indicate the relative influence of these various effects, but the net outcome for purchasing decisions is expected to be small. A small increase in economic efficiency may result, but may be at least partially countered by the cost of introducing and administering the necessary procedures. Technical assistance and capacity building may have a significant influence on the net impact.

Correspondingly small social impacts may be expected, resulting from changes in economic performance. No significant environmental impacts are anticipated.

15.6. Methodology for detailed SIA studies

A detailed SIA may need to evaluate the relative magnitudes of the various influences on purchasing decisions that have been identified. A number of different country situations would need to be examined, embracing different forms and levels of influence on government decisions. Where possible, cases should be identified in which transparency procedures similar to those proposed in the negotiations have been implemented in practice. Information will be needed on both the costs and benefits of introducing the procedures.

15.7. Summary of sustainability impacts

The potential impacts of the further liberalisation scenario are summarised in Table 15.1.
### Table 15.1. Transparency of government procurement - potential impacts of further liberalisation scenario

<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic income</td>
<td>developed</td>
<td>higher exports</td>
<td>effects in developing countries</td>
<td>?△</td>
</tr>
<tr>
<td></td>
<td>developing</td>
<td>economic efficiency implementation costs</td>
<td>corruption, lobbying</td>
<td>?△</td>
</tr>
<tr>
<td>Social poverty, equity</td>
<td>all</td>
<td>as economic</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Environmental Process SD principles</td>
<td>developing</td>
<td>reduced corruption</td>
<td></td>
<td>?△</td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- **△** impact has been evaluated as non-significant compared with the base situation
- **▼** positive lesser significant impact
- **▲** negative lesser significant impact
- **◀** positive greater significant impact
- **▼** negative greater significant impact
- **△▼** positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- **?** effects are uncertain
16. OTHER MEASURES

16.1. Background

The Doha Declaration identified seven other measures for which a WTO work programme was established or continued, but with no commitment to negotiations. The first, electronic commerce, covers the particular market access issues which arise for this newly emerging form of trade. The other six concern the particular needs of developing countries, and are related to negotiations taking place for other measures.

The seven other measures are:

**Electronic commerce.** The volume of global business-to-business e-commerce in 2000 has been estimated to be between 200 and 600 $ billion\(^{237}\). Most of this activity has grown since the adoption of GATS\(^{238}\), such that GATS rules are not necessarily appropriate to deal with this type of trade.

**Small economies.** Small economies face particular problems in participating in world trade, through limited economies of scale and access to resources.

**Trade, debt and finance.** Many developing countries are encumbered with high external debts. In addition to the immediate effect on poverty and the dangers of financial crises, this strongly influences these countries' trade policies.

**Technology transfer.** One of the most significant potential benefits to developing countries of international trade is the contribution it can make to their technological development. The discussions concern the extent to which trade rules encourage these benefits to be realised.

**Technical cooperation and capacity building.** Developing countries often face considerable difficulties in negotiating effectively, in meeting the commitments they are expected to make under a trade agreement, and in implementing policy measures to mitigate potentially adverse effects.

**Least-developed countries.** The least developed countries have the greatest need to benefit from international trade. They may be considered to warrant favourable treatment in gaining membership of the WTO and in the negotiation of trade agreements, particularly in achieving market access for their exports.

**Special and differential treatment.** Existing trade agreements include a number of special and differential treatment provisions for developing countries. A key issue under discussion is that not all of these are mandatory or sufficiently precise, and may not be strong enough to achieve their objective of promoting these countries' development.

16.2. Negotiation issues

The Doha declaration defined the issues to be discussed by WTO work programmes as follows.

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\(^{237}\) UNCTAD (2001a)  
\(^{238}\) Kirkpatrick and Lee (1999)
Electronic commerce

The WTO adopted a work programme on global electronic commerce in 1998, following the Second Ministerial Conference in Geneva. The Doha Declaration continues this work, and restates the recommended practice of not imposing customs duties on electronic transmissions, until the Fifth Ministerial Conference in 2003. Developing countries have expressed a desire to impose duties after this date, which is resisted by developed countries.239

In this context the question arises of whether electronic supplies are classed as services or goods, and whether the absence of a specific entry in a country’s national schedule prevents the collection of customs duties.240 It is anticipated that this problem may become more acute as the use of e-commerce expands. The expansion of such trade raises concerns about fiscal implications, where duty-free e-commerce may erode sources of tax revenue, particularly in developing countries.

A further aim of this work is to decide whether and how special provisions for e-commerce should be included in the negotiations on services, with particular reference to whether mode 1 (cross-border transactions) or mode 2 (consumption abroad) is more appropriate.241

Small economies

The Doha Declaration mandates the WTO to examine problems faced by small economies in participating in world trade. The work will lead to recommendations at the next Ministerial Conference on trade-related measures to improve the integration of small economies.

Trade, debt and finance

A working group on Trade, Debt and Finance was established in Doha, to consider trade-related measures which might contribute to addressing developing countries’ external debt problems. The group will report to the 5th Ministerial Conference in 2003.

Technology transfer

The Doha conference agreed to establish a working group to examine how the references made in various WTO agreements to promoting technology transfer to developing countries might be given more substance. A report will be made to the next conference in 2003.

Technical cooperation and capacity building

The Doha Declaration recognises difficulties faced by developing countries in meeting its commitments, and promotes technical assistance to help overcome them. The sections on market access for non-agricultural products, trade and investment, competition policy, transparency in government procurement, trade facilitation and environment all include reference to this need, and further paragraphs in the agreement give general consideration to technical cooperation and capacity building and the needs of least-developed countries. Meanwhile, developing countries are encouraged to include trade measures in their development strategies. The agenda gives priority to small, vulnerable,
and transition economies, and calls for coherence between the WTO and other relevant international organisations in their technical assistance.

Following the Doha conference the WTO General Council increased its own budget for technical assistance and established a Doha Development Agenda Global Trust Fund\textsuperscript{242}. Further progress is to be reported to the 5th Ministerial Conference in 2003.

**Least-developed countries**

The Doha declaration commits members to the objective of duty-free, quota-free market access for products of least developed countries, and to consider measures to improve market access for these countries' exports. Members also agreed to help make it easier for least-developed countries to negotiate WTO membership. A WTO work programme on these issues was established.

**Special and differential treatment**

The Doha Declaration commits members to reviewing all special and differential treatment provisions for developing countries, with the aim of strengthening them and making them more precise. These provisions include longer time periods for implementing agreements, and commitments or measures to increase trading opportunities for developing countries.

The Declaration endorses the work programme on special and differential treatment set out in the Decision on Implementation-Related Issues and Concerns, which requires the Committee on Trade and Development to identify which special and differential treatment provisions are mandatory, and to consider the implications of making mandatory those which are currently non-binding. Recommendations were required to be made to the WTO General Council by July 2002. As discussed in Section 11, this is one of the areas where the negotiations on implementation issues had achieved reasonable progress by the due date.

### 16.3. Scenarios

The *Base Scenario* is equivalent to the current situation.

The *Further Liberalisation Scenario* assumes:

- that agreement will be reached on levying customs duties on e-commerce, within the framework of GATS;  
- clarification and strengthening of agreements to take account of the needs of developing and least developed countries.

### 16.4. Assessment methodology

The Doha agenda for these issues is for discussions only, related to negotiations that are taking place for other measures. Since there is no mandate for additional negotiations on these issues, the assessment is confined to a broad overview of the potential impacts in each of the measures in the group.

The assessment approach for electronic commerce may be broadly similar to that for trade in services, with particular reference to the issues raised in this new sub-sector.

\textsuperscript{242} WTO (2002a)
The remaining measures relate primarily to mitigation and enhancement for developing countries, in relation to agreements made under other measures. Their analysis is based on a review of the issues raised, related to the findings of the other sectoral analyses.

16.5. Assessment of impacts

Electronic commerce

The expansion of e-commerce has the potential for a great many impacts of considerable significance for both developed and developing countries, with corresponding potential for differentiation between beneficial and adverse impacts between countries at different levels of development. In view of the limited role of the discussions on this measure within the Doha agenda, it is beyond the scope of this study to evaluate these potential impacts in any depth. It is however noted that the issues are being investigated in several WTO groups\textsuperscript{243}, as summarised in Box 16.1.

Box 16.1. E-commerce issues being studied by the WTO

<table>
<thead>
<tr>
<th>Council for Trade in Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• scope (including modes of supply);</td>
</tr>
<tr>
<td>• MFN;</td>
</tr>
<tr>
<td>• transparency;</td>
</tr>
<tr>
<td>• increasing participation of developing countries;</td>
</tr>
<tr>
<td>• domestic regulation, standards, and recognition;</td>
</tr>
<tr>
<td>• competition;</td>
</tr>
<tr>
<td>• protection of privacy and public morals and the prevention of fraud;</td>
</tr>
<tr>
<td>• market-access commitments on electronic supply of services (including telecommunications services and distribution services);</td>
</tr>
<tr>
<td>• national treatment;</td>
</tr>
<tr>
<td>• access to and use of public telecommunications transport networks and services;</td>
</tr>
<tr>
<td>• customs duties;</td>
</tr>
<tr>
<td>• classification issues.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Council for Trade in Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>• market access for and access to products related to electronic commerce;</td>
</tr>
<tr>
<td>• valuation issues arising from the application of the Agreement on Implementation of Article VII of the GATT 1994;</td>
</tr>
<tr>
<td>• issues arising from the application of the Agreement on Import Licensing Procedures;</td>
</tr>
<tr>
<td>• customs duties and other duties and charges as defined under Article II of GATT 1994;</td>
</tr>
<tr>
<td>• standards in relation to electronic commerce;</td>
</tr>
<tr>
<td>• rules of origin issues;</td>
</tr>
<tr>
<td>• classification issues.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Council for TRIPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• protection and enforcement of copyright and related rights;</td>
</tr>
<tr>
<td>• protection and enforcement of trademarks;</td>
</tr>
<tr>
<td>• new technologies and access to technology.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Committee for Trade and Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• effects of electronic commerce on the trade and economic prospects of developing countries, notably of their small- and medium-sized enterprises (SMEs), and means of maximizing possible benefits accruing to them;</td>
</tr>
<tr>
<td>• challenges to and ways of enhancing the participation of developing countries in electronic commerce, in particular as exporters of electronically delivered products: role of improved access to infrastructure and transfer of technology, and of movement of natural persons;</td>
</tr>
<tr>
<td>• use of information technology in the integration of developing countries in the multilateral trading system;</td>
</tr>
<tr>
<td>• implications for developing countries of the possible impact of electronic commerce on the traditional means of distribution of physical goods;</td>
</tr>
<tr>
<td>• financial implications of electronic commerce for developing countries.</td>
</tr>
</tbody>
</table>

\textsuperscript{243} WTO (1998)
The last group of issues listed in Box 16.1, being discussed in the Committee for Trade and Development, may in particular have important impacts on sustainable development, through the development of e-commerce itself. The further liberalisation scenario does not however address how the WTO might in due course influence these impacts, other than in its assumption that agreement will be reached on levying customs duties.

The manner by which taxes might be levied raises practical difficulties for all countries, related in particular to whether supplies should be taxed at source or on consumption. The assessment is confined to the effect of imposing duties, without reference to how they might be levied.

Two main effects can be anticipated: a restraint on international trade flows; and an increase in government revenue compared with the absence of taxation of electronic products.

Both developed and developing countries are exporters of electronic supplies, although the number of developing countries with a capability in this area is relatively few. The bulk of the trade flow is between developed countries, with a smaller flow to developing ones, and a considerably smaller flow from developing to developed.

Between developed countries, a decrease in economic efficiency can be expected from applying duties, and also a decrease in the rate of technological development. In view of the vibrant nature of the industry however, the effects are expected to be of fairly low significance.

The same effects can be expected for trade from developed to developing countries, and from developing to developed. The effects would be smaller if developed countries chose not to impose duties, so that only developing countries apply them (primarily for revenue purposes). For developed countries, the loss of efficiency and technological innovation is considered unlikely to be significant, although there would be a small loss of earnings for some suppliers.

For developing countries which do not themselves have a production capacity, there may be a positive effect on incentives to develop one, and a negative effect on the capability to do so. The shorter term economic effects would also be in both directions, from less usage of potentially beneficial products, and greater tax revenues. In developing countries that are themselves exporters, the industry would benefit from the extra protection. The benefit would be reduced if developed countries chose to impose duties themselves, although such duties are unlikely to be large enough to offset developing countries’ lower wage rates.

No case studies or other analyses have been identified to give firm information on the relative importance of these different effects. The principal impacts are expected to be a small loss in developed countries’ export earnings, a small increase in some developing countries’ growth potential through infant industry protection, and greater flexibility in raising government revenues.

**Small economies**

Irrespective of their level of development, small economies face the difficulty of having small administrations, with limited capacity and expertise to engage effectively in the full range of negotiations being conducted through the WTO. The assistance that is expected to be given to them through the liberalisation scenario is considered likely to have a

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244 UNCTAD (2001a)
significant positive impact on all aspects of their sustainable development, at low cost to the countries which provide it.

Trade, debt and finance

The discussions in this area focus on two main issues; the debt burden faced by many developing countries; and their susceptibility to financial crisis in a volatile world economy. In principle, a better orientation of trade rules towards assisting with these problems can be expected to have a significant positive impact on sustainable development.

The actual impact will depend on the nature of any measures that are adopted. Similar initiatives which address the influence of international trade on these issues have been pursued through IMF support and World Bank Poverty Reduction Strategies. For some countries, it has been argued that these approaches have not gone far enough in addressing the underlying problems these countries face in achieving sustained growth in industrial production and capital accumulation\textsuperscript{245}. Careful research may therefore be needed in the design of any assistance through the WTO, and in the assessment of its potential impacts.

Technology transfer

The discussions on technology transfer aim to strengthen the numerous provisions in existing WTO agreements. As discussed in Sections 5 and 12, this area is considered to have considerable potential to make a highly significant positive contribution to sustainable development in developing countries.

Against this, actions which help to enhance developing countries’ competitiveness in high value added commercial activities may have adverse economic and social effects in developed countries. Identifying win-win opportunities through which both groups of countries can benefit may not be straightforward. Nonetheless, the scenario assumes that such opportunities will be found, with a consequential beneficial impact in all countries.

Technical cooperation and capacity building

Developing countries’ needs for technical assistance and capacity building for implementing the Doha agenda have been categorised into four areas\textsuperscript{246}:

1. reforming laws and regulations as WTO obligations demand,
2. providing the staff, staff training, laboratories, computers, etc. to make the regulations work,
3. maintaining larger Geneva delegations, engaging more actively in WTO affairs,
4. improving developing countries’ overall capacity to respond to the opportunities offered by the trading system.

The WTO Global Trust Fund for these activities has achieved commitments from developed countries that are more than twice the Doha target budget of $8 million, at approximately $20 million\textsuperscript{247}. However, the cost of the first item has been estimated at approximately $10 million for a single small country, and in a large country, $150 million for the first item plus part of the second. The same study notes that the WTO has over 100 developing country members.

\textsuperscript{245} UNCTAD (2002)
\textsuperscript{246} Finger (2002)
\textsuperscript{247} UNDP (2003)
It is not however clear that assistance of the suggested magnitude would achieve its aims. Experience with other capacity building initiatives suggests that success often comes primarily from technical inputs, with all ongoing finance committed from a country’s own fiscal budget\textsuperscript{248}. Otherwise, laws may remain as drafts or be deliberately unenforceable, staff contracts may be terminated, and equipment may become unusable as soon as the initial maintenance contract expires. On this basis, the bulk of the finance for the first two items may need to come from countries’ own budgets. The fourth is closely associated with countries’ overall development strategies, and may be better supported from outside the WTO arena.

The principal assistance needed may therefore be for the third item, the finance needed to maintain larger Geneva delegations, and training to allow delegates to engage more actively in WTO affairs. Additionally, a somewhat lower level of technical support for revising legislation may be of value. The WTO Global Trust Fund may be sufficient to make a significant contribution in these areas. Further support from bilateral and multilateral agencies in relevant development policy arenas may be equally valuable, in helping to develop appropriate flanking measures equivalent to the fourth item on the above list, to link development strategy more closely to trade opportunities.

**Least developed countries**

The scenario assumes that the WTO work programme to look at ways of strengthening support for least developed countries will achieve its aim. On this basis it is expected to have a significant beneficial impact on these countries’ sustainable development, at low cost to developed countries.

**Special and differential treatment**

This aspect of the ‘other measures’ in the Doha agenda is being addressed as an Implementation Issue, which is covered by the analysis of Section 11.

**16.6. Methodology for detailed SIA studies**

Should detailed SIA studies be undertaken for any of these areas, different variations in the methodology will be needed for each. An initial indication of suitable approaches and information needs is given in the above sections.

**16.7. Summary of sustainability impacts**

The potential impacts of the further liberalisation scenario are summarised in Table 16.1.

\textsuperscript{248} METAP (2001)
<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electronic commerce</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income</td>
<td>developed</td>
<td>reduced exports</td>
<td></td>
<td>? ( \downarrow )</td>
</tr>
<tr>
<td>Social</td>
<td>developing</td>
<td>government revenue</td>
<td></td>
<td>( \Delta )</td>
</tr>
<tr>
<td>Development strategy</td>
<td>developed</td>
<td>slower innovation</td>
<td></td>
<td>? ( \downarrow )</td>
</tr>
<tr>
<td>Social</td>
<td>developing</td>
<td>new industry</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td><strong>Small economies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic all areas</td>
<td>developing</td>
<td>better negotiation</td>
<td></td>
<td>( \Delta )</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trade, debt and finance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic all areas</td>
<td>developing</td>
<td>economic security</td>
<td>details of support</td>
<td>?</td>
</tr>
<tr>
<td>Social</td>
<td>developing</td>
<td>from economic</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technology transfer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic income</td>
<td>developed</td>
<td>loss of competitiveness</td>
<td>win-win options</td>
<td>? ( \downarrow )</td>
</tr>
<tr>
<td></td>
<td>developing</td>
<td>new technology</td>
<td>win-win options</td>
<td>? ( \uparrow )</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td>from economic</td>
<td></td>
<td>? ( \uparrow )</td>
</tr>
<tr>
<td>Process development strategy</td>
<td>developing</td>
<td></td>
<td>win-win options</td>
<td>? ( \uparrow )</td>
</tr>
<tr>
<td><strong>Technical cooperation and capacity building</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic all areas</td>
<td>developing</td>
<td>better negotiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>developing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SIA of WTO Negotiations —Preliminary Overview
<table>
<thead>
<tr>
<th>Impact</th>
<th>Type of country affected</th>
<th>Causal factors</th>
<th>Factors affecting significance</th>
<th>Potential significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Process development strategy</td>
<td>developing</td>
<td>better negotiation</td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Economic</td>
<td>developing</td>
<td>all forms of assistance</td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Economic</td>
<td>developing</td>
<td>from economic</td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Process development strategy</td>
<td>developing</td>
<td>all forms of assistance</td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Special and differential treatment</td>
<td>developing</td>
<td>included in Implementation Issues, Section 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td>Δ</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
<td>Δ</td>
</tr>
</tbody>
</table>

**Symbols used to show impact significance**

- **blank**: impact has been evaluated as non-significant compared with the base situation
- **Δ**: positive lesser significant impact
- **▽**: negative lesser significant impact
- **▲**: positive greater significant impact
- **▼**: negative greater significant impact
- **Δ ▽**: positive and negative impacts likely to be experienced according to context (may be lesser or greater as above)
- **?**: effects are uncertain
17. CROSS-CUTTING ISSUES AND OVERALL IMPACT

The impact assessments for individual measures have intentionally isolated them, in order to identify their potentially significant economic, social and environmental impacts. As a whole, the complete Doha agenda may have cumulative impacts which cut across many or all of the measures, and which have been only partially considered in the individual analyses. OECD and UNEP for example have reviewed these cross-cutting effects\(^{249}\), which may be classified in five broad groups; scale, technology, structural, location and regulatory. These are described in Box 17.1.

Box 17.1. Cross-cutting effects

<table>
<thead>
<tr>
<th>Scale effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth and increasing consumption make a positive contribution to the economic and social components of sustainable development, and may be accelerated by increasing trade. However, the resulting increase in the scale of production may be accompanied by increased use of natural resources and higher levels of pollution, with a negative impact on sustainable development’s environmental component.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological developments create new products and services whose impacts may be different from those they replace. When these new products or services are traded, this changes the associated impacts. In addition, diffusion of new technology from one country to another, for example through deliberate technology transfer, changes the impacts of products or services that are produced domestically.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Structural effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade liberalisation may lead to structural changes in a country’s economy, through specialisation in those goods or services where the country has a comparative advantage, for example in low labour costs, low natural resource costs, or high availability of skills and socio-economic infrastructure. If the changes favour industries which pollute less, extract less of the country’s natural resources, or provide higher wages, positive environmental or social effects can be expected. If the products for which the country has a comparative advantage have a high pollution intensity, a greater dependence on local natural resources, or a high demand for unskilled labour, the effects will be in the opposite direction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different structural effects in different countries may lead to transfer of production from one country to another, with consequent distributional effects between the trading partners. These may be adverse for some social groups or damaging to local environments. Concerns are expressed that trade liberalisation may promote the use of ‘pollution havens’ in which environmental regulation is weak, or a ‘race to the bottom’ in the exploitation of cheap labour.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regulatory effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>The impacts from all the cross-cutting effects discussed above depend on the nature and effectiveness of social and environmental policies or regulations in the affected country. Trade reforms may themselves have an impact on these policies and regulations, through explicit measures to improve standards, or provisions which impinge on a government’s ability to set them. For impacts that have global effects, each country’s policies and regulations may be constrained by the need to comply with multilateral agreements, whose aims may overlap with those of international trade rules.</td>
</tr>
</tbody>
</table>

The scale effect described in Box 17.1 may be regarded as the fundamental dilemma of sustainable development. Its resolution requires an appropriate balance to be drawn between the economic growth associated with social development, and the environmental considerations which determine whether that development is sustainable. As a global dilemma, it was expressed most sharply at the 1972 Stockholm UN Conference on the Human Environment, by India’s Prime Minister Indhira Ghandi: ‘Of all the pollutants we face, the worst is poverty. We want more development’. The 1992 and 2002 UN conferences in Rio and Johannesburg presented similar reports, which noted continuing

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\(^{250}\) Sandbrook (1992)
deterioration of ecosystems and of the global climate, and little progress in eradicating poverty.

It is widely accepted that resolving the dilemma due to scale effects lies in two other cross-cutting issues identified in Box 17.1, technology effects and regulatory effects. New technology offers the prospect of maintaining economic growth, while at the same time containing or reducing pollution and resource depletion. Regulation allows these environmental effects to be controlled at an acceptable level, irrespective of economic growth rates and technological development.

Meanwhile, structural and location effects can have significant social as well as environmental impacts, by changing the distribution of incomes and other qualities of life of different social groups. While economic growth or technological developments (including technology transfer) may help to rectify any social effects which are adverse, regulation or policy measures are generally necessary to contain them at a level that is considered acceptable.

For individual impacts in individual types of country, the detailed SIAs aim to provide sufficient information to assist governments in making balanced judgements on social, environmental and economic factors in the decisions they make during the negotiation process, and in the design of M&E measures. They serve also to provide similar information for the design of international support for such measures. For the overall impact on sustainable development of the Doha agenda as a whole, the aim of the SIA is to provide information on cumulative impacts, such that similar judgements may be made for aggregate global effects. Sufficient information is therefore needed on the likely scale, technology, structural and location effects, to allow balanced judgements to be made on regulatory or policy decisions which are made at the multilateral level.

In principle, all of the impacts assessed in individual sectoral SIAs may be added to estimate the aggregate global impacts. In practice, even in detailed SIAs, the data are insufficiently quantitative for cumulative totals to be estimated with any great precision. Nonetheless, the full set of SIA studies can be expected to yield a broad indication of the likely overall direction and significance of each of the cross-cutting effects. Depending on the findings, it may also be practicable to identify the overall impact on sustainable development, although this is more problematic. If all of the aggregate effects are positive, then the overall impact is clearly positive, and vice versa. However, if some social, economic and environmental impacts are positive and others negative, a judgement must be made on what is an appropriate balance. For global impacts, such judgements can only be made through multilateral decision-making processes.

A further observation may be made in this respect. The WTO framework is not, in itself, equipped or mandated to make multilateral decisions on sustainable development. The global issues of sustainable development may be seen as a consequence of technological developments which have extended the range and scale of human interactions, through trade and other mechanisms. The WTO system is as yet the only strongly enforceable mechanism of global governance to have evolved in response, but its task is only to govern trade. The continuing deterioration of global ecosystems and environmental quality that were reported at the Stockholm, Rio and Johannesburg conferences may be regarded as a result of failure to develop environmental regulatory mechanisms at the global level equivalent to those which pertain nationally. Lack of progress in the eradication of poverty may be regarded as due to a similar failure in relation to social policy.

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251 For contrasting views on managing the global commons see Vogler (2000) and Hardin (1968).
It has been argued\textsuperscript{253} that the rules which the WTO has established, and those which are being established under the Doha agenda, are weighted in favour of the major trading countries, and hence against the interests of developing countries and the environments on which they depend. The WTO is not however charged with the task of managing the global environment, nor of planning and implementing global wealth redistribution. It serves only as a forum through which national governments can negotiate and apply a set of rules to maintain the stability of the world trading system. Without such stability, the prospects of achieving globally sustainable development could decline sharply.

Towards the end of the negotiation process, when the full programme of detailed SIAs has been carried out, a second global overview SIA will draw together their findings in the manner discussed above, to indicate the likely contribution of the trade agreements to meeting the Millennium Goals. However, while the agreements under the Doha agenda may contribute to achieving these goals, sustainable development depends no less strongly on other multilateral mechanisms for strengthening more fundamental aspects of global governance. One of the objectives of the ongoing SIA studies will be to help maximise the contribution which the trade agreements and their associated flanking measures can make to achieving that broader aim.

**Mitigation and enhancement**

The main opportunities for M&E are likely to arise in respect of joint initiatives between the WTO and those multilateral bodies that are responsible for other international agreements.

For trade issues which have global environmental effects, initiatives of this nature are already in hand through the WTO Trade and Environment Committee. Certain aspects are specifically defined in the Doha declaration, as discussed in Section 7. For the other main global issues discussed in above, similar initiatives are in hand through several WTO groups, with relevant multilateral bodies including the International Labour Organisation and many others.

This preliminary overview has given a broad indication of the types of area where such initiatives might be strengthened, in order to maximise the contribution which international trade might make to globally sustainable development. In the later stages of the SIA programme, particularly in the final global overview, it may be appropriate to examine existing and potential areas of cooperation in more detail, in order to put forward specific recommendations.

Two initial observations may be made at this stage. First, cooperation between WTO bodies and other multilateral organisations can make a major contribution to sustainable development. Strengthening all aspects of this cooperation may be desirable, irrespective of the findings of more detailed studies. Second, the significance of any one aspect of the relationship between trade and sustainable development cannot be properly understood in isolation from the others. This suggests a need for a highly co-ordinated approach, which unites the efforts of all the relevant WTO bodies in pursuit of a single, clearly defined goal.

\textsuperscript{253} See for example WDM (2001)
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