EU: Integrated Impact Assessment of International Trade Policy and Agreements: the European Union's Sustainability Impact Assessments of Proposed WTO Agreements on Agriculture and Forest Products

Case study compiled for the drafting of CBD guidelines on Biodiversity in SEA.
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Background

International trade can have major impacts on biodiversity both locally and globally, and is itself strongly influenced by international trade agreements. The *ex-ante* impact assessment of such agreements can in principle identify impacts that are likely to be significant, and introduce appropriate mitigation and enhancement into the agreements themselves, or in parallel national and international actions. Strategic environmental assessment (SEA) of trade agreements evaluates all potentially significant environmental impacts, including biodiversity impacts. Sustainability impact assessment (SIA) extends the assessment to include social and economic impacts as well as environmental ones.

The European Commission launched a programme of sustainability impact assessments of trade agreements in 1999, in preparation for the Seattle inter-Minsterial conference of the World Trade Organisation (WTO). A methodology was developed and applied in a preliminary assessment of the proposed new round of WTO negotiations[1]. The methodology was subsequently refined for application to the negotiation agenda agreed at the WTO Ministerial conference held in 2001 in Doha[2], and a series of SIA studies have since been carried out. These include a preliminary overview SIA of the full Doha agenda, several detailed sectoral studies, and related SIAs for regional trade agreements involving the EU[3].

The preliminary overview SIA for the WTO Doha agenda identified three priority areas for further study, two of which (agriculture and forest products) have particularly significant biodiversity implications[4]. Preliminary findings from these two studies are now available[5] and form the basis of this case study.

Impact assessment methodology

The EC framework for SIA is broadly similar to those developed elsewhere for assessing the impacts of trade policy and agreements. It has been reviewed by the CBD Secretariat along with the methodologies developed by OECD, UNEP, the North American Commission for Environmental Cooperation, the Canadian government, and the US government[6]. The EC approach, along with that of UNEP, differs from most of the others in that it assesses social and economic impacts in parallel with environmental impacts.

The overall methodological approach includes the following elements:

- selection of trade measures to be assessed (screening);
- identification of priority issues and impacts (scoping);
- selection of scenarios for the assessment;
- choice of country groupings and case study examples for the assessment;

[1] Kirkpatrick, Lee and Morrissey (1999)
[2] Kirkpatrick and Lee (2002)
[3] Details of these studies are available at http:www.sia-trade.org
[4] George and Kirkpatrick (2003)
[5] Katila and Simula (2004), Morrissey et al (2005)
[6] UNEP/CBD (2003)

- assessment of impacts;
- evaluation of alternative mitigation and enhancement measures;
- monitoring and *ex post* evaluation

together with, at key stages of the process,

- consultation and stakeholder participation.

Screening, the initial stage of scoping, and the selection of scenarios, were undertaken as part of the preliminary overview SIA of the Doha agenda. This was subject to public consultation prior to decisions being made on more detailed assessments. More detailed scoping, and the choice of country groupings and case study examples, were undertaken in the initial stage of the detailed SIA studies. Proposals were published in the project inception reports, and further public consultation was undertaken before proceeding to the detailed assessments.

The assessment of impacts includes the following components:

- evaluation of the baseline situation, including economic, social and environmental trends and their causes, and existing socio-economic development processes;
- economic assessment of the effects of the trade negotiation scenario on market incentives and opportunities;
- assessment of consequent effects on consumer and producer behaviour, and hence on production systems;
- evaluate interlinkages between the production and consumption system and social and environmental factors, to assess likely magnitude and significance of likely economic, social and environmental impacts;
- evaluate the dynamic nature of these effects, to identify short and medium term adjustment effects, and longer term outcomes once the production and socio-economic systems have adjusted to the changed trade measure;
- assess the impacts of the trade negotiation scenario on underlying socio-economic and environmental trends and processes, and hence on economic growth rates, processes of social transformation, resource utilisation and depletion, and corresponding long term dynamic effects.

Within these components, a combination of economic modelling studies, empirical evidence from the literature, case study findings and causal chain analysis is used to assess potential impacts.

The project mid-term reports present preliminary findings, along with initial evaluations of potential mitigation and enhancement measures. Following further consultation, these will be developed into fuller evaluations in the final stages of the studies. The final stage of the overall SIA programme for the WTO agenda will include the development of proposals for ongoing monitoring and *ex-post* evaluation.

Indicators

The methodology identifies nine generic core indicators of sustainability outcomes, to focus attention on key issues of sustainable development. These aggregate indicators are:

Economic:	real income; fixed capital formation; employment
Social:	poverty; health and education; equity
Environmental:	biodiversity; environmental quality; natural resource stocks

Biodiversity is highlighted as one of the key areas for attention in the environmental sphere. For each key area, specific impacts and more detailed indicators are identified during the scoping and assessment stages of the SIA.

Interlinkages between the agriculture and forest SIAs

The agriculture SIA and the forest SIA both identify strong linkages between the two sectors, particularly in relation to biodiversity impacts. The principal effect is that on forests of agricultural trade liberalisation. In many developing countries with high biodiversity, an increase in incentives for exports leads to greater agricultural production, and in many cases, accelerated land clearance.

A small interlinkage also occurs in the opposite direction, but barriers to trade in forest products are already fairly low, and further liberalisation has only small effects on the agriculture sector. The greatest pressures on biodiversity are expected to arise from liberalisation of agriculture itself.

The studies conclude that the environmental impacts of agricultural trade liberalisation, especially through land-use change, may be much larger than the effects resulting from forest product trade liberalisation. The single greatest source of biodiversity loss is linked to loss of habitats and ecosystems, often associated with deforestation and forest degradation, which are primarily linked to agricultural expansion and secondarily to wood extraction.

Country groupings and case studies

Both studies examine impacts in the EU, non-EU high income countries, developing countries and least developed countries. These broad groupings are sub-divided according to the characteristics of each sector.

For agriculture the sub-groupings are:

- Developing countries that are significant net agricultural exporters. Brazil is taken as a case study example.
- Developing countries with a relatively protected agricultural sector. The case study is India.
- Least developed countries, with Tanzania as a case study.
- Low-income developing countries, with Ghana as a case study.

The agriculture SIA also gives special attention to trade in particular crops. These are sugar, cotton, wheat, rice, beef and vegetables.

The forest SIA pays particular attention to the following country characteristics:

- Major high income forest product importers, which includes the EU, the United States and Japan
- Major developed country forest product exporters, e.g. the United States, Canada, Austria, Finland, Sweden, Norway, New Zealand
- Developing country exporter/producers. Brazil and Indonesia are taken as case studies.
- Developing countries with very limited forest exports. Tanzania is taken as a case study.
- Developing countries with with limited forest exports but high biodiversity and problems with forest governance. Mexico and Ecuador are taken as case studies.

The developing country case studies included local consultation, and were undertaken by local experts in the countries concerned.

Among the case study countries, Brazil and Indonesia contain a large proportion of the world's tropical forests with high levels of biodiversity, and experience high rates of deforestation and forest degradation.

Biodiversity impacts

In countries where large areas of natural vegetation still exist, increased agricultural production is likely to lead to land conversion and consequent biodiversity impacts. Although some general patterns emerge, impacts tend to be country-specific. The studies identify characteristics associated with particular types of impact, which may be applicable more generally.

Impacts in the EU	Production decreases are expected in beef and cattle, cotton and sugar, with small decreases in dairy products. Effects on biodiversty are likely to be generally beneficial but fairly small.
Impacts in non-EU high income countries	Adverse environmental impacts in the Australian crop sector are expected to increase, including clearing of natural vegetation resulting in biodiversity loss. Biodiversity loss may also be aggravated by increased salinity. Dairy products production in US is expected to fall, but to rise in Australia and New Zealand. Environmental concerns include land clearance and reduced biodiversity.
Net exporting developing countries	If export increases are met by expanding the land areas under cultivation, negative impacts are expected. Deforestation has been identified as one of the main threats to biodiversity. Export incentives may also accelerate the introduction of new varieties, for example of rice. New varieties have been associated with reduced biodiversity.
Livestock production in Latin America	Livestock production in parts of Latin America has been linked to forest conversion, and is expected to increase. Argentina and Brazil are major producers with significant exports.
Livestock production in Argentina	In Argentina, cattle are feed naturally on pampas grass, and a viable beef industry protects the pampas from encroachment of crop cultivation. No significant adverse impacts are expected from liberalisation.
Livestock production in Brazil	Amazon forest destruction is common in Brazil to create grazing land, and conversion of land to grazing also occurs in Central America. The Brazilian Amazon has been ranked as one of the top ten global hot spots by number of endemic species. Significant impacts are expected from liberalisation.
Soybean production in Brazil	A 10% increase in soybean production is forecast, much of which may occur through an expansion in the tilled area. If all the increase were in area expansion, 18,000 km^2 would be lost (an area more than half the size of the Netherlands). Areas with unusually high biodiversity, would thus come under pressure. The actual impact will depend heavily on specific details of development of road, rail and river transport links.
Accelerated production trends in India	Agricultural liberalisation is expected to accelerate an aggressive thrust towards commercial farming, feeding the export market. This threatens the small-scale biodiverse farm. New export trends include floriculture, industrial aquaculture, and other forms of intensive farming, with less diversity than traditional production systems.

Deforestation in Indonesia	Illegal logging is a significant cause of deforestation and forest degradation, but the single largest impact on biodiversity has been identified as the clearing of forest land for oil palm. Indonesia is a major producer of oil palm, natural rubber, cocoa and coffee. Export production is expected to increase. More than 70 percent of Indonesia's original frontier forests have been lost, over half of those that remain are under threat, and the rate of forest loss is accelerating.
Deforestation in Tanzania	Tanzania is one of the richest countries in terms of biodiversity and has been classified as a "megadiversity" nation. Annual deforestation is estimated at about 500,000 ha per year. This occurs primarily through agricultural expansion, livestock grazing, and unsustainable utilisation of wood resources, but these are mainly for subsistence use and the domestic market. The effects of trade liberalisation are expected to be fairly neutral.
Deforestation in Ecuador	Annual deforestation in the 1990s was about 1.2 percent, posing a threat to globally important biodiversity resources. Commercial logging has been an important source of deforestation and forest degradation. A small increase is expected from trade liberalisation.

Mitigation and Enhancement

The studies include a preliminary examination of potential mitigation and enhancement measures.

Impacts in the EU and other OECD countries

Opportunities are identified for enhancing beneficial biodiversity imacts as well as mitigating adverse ones. These relate to:

- The use of landuse planning to optimise the biodiversity and amenity value of rural areas.
- Expanded designation of conservation areas.

Impacts in developing countries

The greatest biodiversity impacts identified in the studies occur in developing countries. Four categories of M&E measures are identified: (i) trade-related measures, (ii) international and regional measures to improve the national policy environment and strengthen national regulatory capacity, (iii) national sectoral policy measures, and (iv) national extra-sectoral policy measures.

Measures in the last three categories address the key domestic factors influencing sustainability, and should receive high priority. They are similar to actions needed in general to improve biodiversity management and include:

- Clarifying the legal framework and strengthening monitoring and law enforcement.
- Clarifying and strengthening land tenure arrangements.
- Introducing more transparent and competitive log sales and concession allocation systems.
- Developing wood pricing systems that fully account for environmental costs and benefits.
- Eliminating monopolies in production, harvesting and transport, and processing of wood.

International assistance to support such measures may include:

- Providing advice on improving the policy and legal framework governing sustainable forest management and illegal forestry activities.
- Providing support to regulatory capacity building, including strengthening of compliance and dispute settlement mechanisms within MEAs.
- Providing support to help developing countries and LDCs develop standards and meet the standards, regulated under the TBT and SPS Agreements.
- Supporting the preparation and implementation of national forest programmes.
- Provide support to developing countries to build up local capacity to implement sustainable forest management and meet certification requirements.
- Enhance transfer of environmentally sound technology for the forest sector.

Potential trade-related M&E measures for forest products include:

- Labelling and certification schemes
- Log export bans and prohibitive export taxes
- Government procurement policy.
- Sanitary and phytosanitary (SPS) measures in trade agreements.
- Preferential tariff treatment for certified forest products
- Introduction of a licensing scheme for legal timber
- Unilateral ban on imports of non-verified wood products
- A multilateral ban on all timber from specified areas at risk to illegal logging.

The likely effectiveness and potential adverse impacts of such measures will be evaluated more fully in the final stage of the studies.

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