



# **Integrated Assessment of Trade Liberalization and Trade-Related Policies**

*A Country Study on the Banana Sector in Ecuador*



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## **NOTE**

The views and interpretation reflected in this document are those of the author(s) and do not necessarily reflect an expression of opinion on the part on the United Nations Environment Programme.

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## EXECUTIVE SUMMARY

### *Project Overview*

The international trade in bananas is one of the most important economic activities for Ecuador, and is very significant in terms of labour and use of natural resources. Given that bananas have become one of the most controversial commodities within the multilateral trade system in recent years, Ecuadorian policy making and current and future negotiations must focus on achieving better conditions for the Ecuadorian people. To do so, policy measures must promote sustainable development in the banana industry, inform negotiators, increase transparency, achieve joint positions and generate national capacity in other sectors such as government, academia, and the private sector.

To direct policy making and to conduct current and future negotiations with the goal of sustainable development, the relationship between international trade and sustainable development must be established. Without determination of the effects of trade liberalization, the possibility of convincing policy makers to adopt measures that might signify a sacrifice in terms of income and in this case, market share, is remote.

To distinguish the effects of trade liberalization from the effects of economic growth is difficult. However, this assessment attempts to define the effects of trade liberalization as derived from structural adjustment policies in Ecuador from 1980 to 1999, as well as the effects of the application of international trade policies for the same period.

Structural adjustment and trade liberalization policies were implemented in Ecuador in the 1980s to favour economic development, correcting macroeconomic deficiencies and leading the economy to a more open market. Several of these policies are reflected in domestic trade policies that have affected banana industry activities. Both domestic trade policies and multilateral trade agreements have had an impact on Ecuador's banana industry in terms of production, cultivated area and yields, and use of natural resources and labour, *inter alia*, in the 1980s and 1990s.

The main purpose of structural adjustment policy review has been the identification of foreign and domestic trade policies that have had an impact on the banana industry as a whole during specific periods.

Trade liberalization has affected the 'product chain' behaviour. Thus, domestic trade policies, existing legal and regulatory structures, and domestic and multilateral trade agreements have affected the economic, social and environmental facets of the banana industry. In other words, trade policies affected banana production, exports, foreign trade and consumption, all of which are elements of the banana product chain.

The product chain demonstrates banana production, processing and distribution activities; it refers to both direct and indirect participants (workers, technicians, families, etc.) in agricultural production flow, from acquisition of supplies to final consumption of

the product; it describes the industry's representative behaviour, and could also be used to explain impacts of trade liberalization on the chain itself. Connections between the product chain and structural adjustment policies helped to identify the sector's representative behaviour and the impact of trade liberalization. Significant information on transportation and commercialization of bananas has been scarce and this has impeded a complete analysis of the banana product chain.

### *Present Limitations*

One of the most common limitations for such assessments, especially those performed in developing countries, is the lack of the necessary resources and information. In this analysis, the information available from official sources is highly deficient and at times is incomplete, null or contradictory. For instance, the National Banana Programme that was created in late 1970s was eliminated in 1999, along with virtually all of the programme records. Another problem is that several public institutions have differing statistical data concerning the same issues, making credibility of the sources difficult.

Although the corporate banana sector has some useful information, most have been reluctant to disclose that information. This presents a third problem, the lack of transparency of the corporate banana sector. The corporate sector's reticence is a result of the commonly held belief that most environmentally and socially based studies harm them at the international stage.

Finally, timing has been another significant limitation. Banana trade talks have intensified during the last few years, for reasons that are well known. The European Union (EU) constitutes a key international banana market that is employing political responses to the WTO panel decision regarding the discriminatory banana regime that the EU has enforced since 1993. Ecuador, the largest banana exporter worldwide and to the EU in particular, along with other Latin American banana producers and the United States, is involved in disputes with the EU over their proposed 'first-come, first-served system'. This is another reason why the banana industry maintains a high degree of secrecy.

### *Proposed Methodology*

The assessment develops an ex post, sectoral and qualitative analysis of the Ecuadorian banana industry. The proposed methodology comprises six sections. The first section (Section 3) includes an analysis and systemization of those structural adjustment and trade policies with the greatest influence on the productive and commercial structure of the banana industry. The second section analyses the connection between the structural adjustment and foreign trade policies and their economic, environmental and social effects throughout the production cycle, as well as the national and institutional regulatory structure that manages banana production in Ecuador (Section 4). The third section evaluates the sustainability of the banana industry by breaking down environmental, economic and social factors (Section 5). The fourth section determines the positive and negative effects on the banana industry that are created by structural adjustment and foreign trade

policies by examining scale, product or composition, technology, structural and regulatory effects (Section 6).

Having obtained these results, the fifth section includes policy recommendations for the relevant institutions, whose market apparatus will promote sustainable development in the banana industry (Section 7). Finally, the sixth section reveals insights and experiences related to this study. Conclusions are made indicating the banana sector's tendency for sustainable development, increased competitiveness, and economic, social and environmental responsibility, as well as pointing out what the sector lacks and what it still needs (Section 8).

### *Sustainability Assessment*

Effects between indicators are the result of changes in the product chain due to implementation of structural adjustment policies and trade liberalization. Effects likely to be expected can be identified as: scale effect, product effect, technology effect, structural effect and regulatory effect.

#### **Scale Effect**

The scale effect occurs when economic growth, based on the increase in a country's production and export, determines change in the use of natural resources and in the general environment. Thus, a positive scale effect occurs when economic growth fosters a demand for an improved environment and the internalization of certain environmental costs. On the other hand, a negative scale effect occurs when economic growth generates or fosters an increase in the use and depletion of natural resources.

The increase in production and exported volume, coupled with the fact that banana production in general is a mono-culture crop occurring in extended areas, has generated a great burden on the natural environment, thus causing a *negative scale effect*. The increase in production and exported volumes since 1994 did not occur with an improved yield per hectare. The increase in production was due primarily to an increase in the planted surface area rather than an increase in production yields (productivity), signalling a *negative scale effect*.

However, in the case of the implementation of the European Banana Regime, the increase in exports did not generate this burden *per se*; trade distortions produced by the EU's trade regime generated it.

#### **Product Effect**

This type of effect is associated with goods or inputs that can improve or deteriorate the environment. Trade in energy-efficient equipment and sewage treatment technology

would be an example of a positive product effect. On the other hand, trade in hazardous substances and endangered species would constitute a negative product effect.

Trade liberalization and structural adjustment policies related to the banana industry sought the improvement of producers' competitiveness in the market. Banana producers have implemented environmental standards in their plantations, adopted new technology and cultivated new varieties of plants. As a result, the producers have reduced their production costs and increased their productivity.

By adopting trade liberalization and structural adjustment policies that are mainly concerned with the banana sector, the Government has sought to improve the producers' competitiveness in the market. In many cases this situation has determined an increase in the use of agrochemicals, and many producers have not adopted environmental regulations, which would indicate a preliminary *negative product effect*. A decrease in the use of agrochemicals occurred primarily because of higher costs and the introduction of stricter regulations. Although the statistical data showed a decrease in the fungicides used, this information has not been corroborated or quantified. Nevertheless, this seems to potentially indicate a *positive product effect*.

### **Technology Effect**

The technology effect refers to changes in technological development in an economic activity generated or fostered by trade liberalization policies. A positive technology effect occurs when trade liberalization and an increase in exports promote the use of better technology, which improves the economic yield and internalizes environmental and social impacts.

The evaluation of the banana industry conveys a *positive technology effect*, which can be explained by the following: (i) a higher level of technology use in the producing farms, which not only improves economic yields by reducing certain production costs, but also improves natural resources use, and (ii) the adoption of environmental certifications and Environmental Management Systems. There has been a significant increase in certified banana plantations and businesses that use environmental management systems and that abide by national environmental laws. These initiatives include waste and toxic products management programmes, disease control programmes, conservation and restoration of natural areas, and training programmes for the employees in the sector.

### **Structural Effect**

The structural effect focuses on microeconomics in order to explain changes in the patterns of economic activity. It refers to changes in a sector's productive structure because of internal and external policy reforms. In the presence of economic opening and trade liberalization reforms, countries tend to reassign their resources as a function of their comparative advantages to the kind of exports that make use of that advantage. A positive

or negative structural effect would result from a smaller or larger impact on the environment arising because of the comparative advantage.

Banana plantations have undergone a re-engineering process, and most of them have become specialized in banana farming, producing a relative specialization in the industry's taskforce, giving the country a comparative advantage in this input.

Ecuador's economic opening has fostered the specialization of the banana producers in order to maintain access to the world markets. The sector's farming techniques have improved with the use of top technology in their plantations that require the intensive but more efficient use of water and land resources. Thus, specialization at all levels in the banana production cycle produced by the economic opening has generated a *positive structural effect*. But from another perspective this specialization in products that use comparative advantages, has also led to an increased use of natural resources (by the use of more intensive technology), which can on the other hand have configured a *negative structural effect*.

### **Regulatory Effect**

The regulatory effect arises when trade policy measures or the adoption of agreements produce changes in the legal and political structures within a country. A *positive regulatory effect* occurs when these agreements or policies are strengthened or maintain the state's ability to develop and implement effective environmental policies. A negative effect occurs when a trade agreement or policy makes it difficult for the state to implement adequate environmental policies.

Economic and trade liberalization reform policies have structured a positive regulatory effect, which can be observed by a series of regulations enforced during the 1990s. The most important regulations are: (i) the Environmental Management Bylaws for Banana Sector; (ii) the Plant Quarantine handbook; (iii) the Export Facilitation Law; (iv) disease control provisions; (v) packaging standards; and (vi) the banana policy for plantation re-conversion.

The positive effect can also be corroborated by the harmonization in the sanitary, phytosanitary, technical and environmental regulations enacted before 1995, when Ecuador entered the WTO.

### *Policy Recommendations*

#### ***Environmental***

- Problems
  - Expansion of the agricultural frontier.
  - Loss of biodiversity.

—Waste emissions.

- Policy proposals

—Training of government authorities and private businesses in environmental assessments and environmental protection regulations; encourage cultivation with clean and efficient technologies.

—Environmental award policies.

—Open channels of dialogue and training with certification organizations in order to adopt clean production processes.

### *Economic*

- Problems

—Low productivity of small and medium sized producers.

—Low prices for the small and medium sized producers.

—Extreme vulnerability to prices and trade restrictions.

—Oligopolistic banana industry and transportation structure, reducing opportunities for diverse allocation in international markets.

- Policy proposals

—Encourage diversification into new niche markets for ‘clean’ banana production.

—Credit incentives: preferential credits for the adoption of clean technology and organic production.

—Training for production alternatives and environmental certification.

—Strengthening trade connections for organic bananas.

### *Social*

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