

European Health Regulations and Brazil nuts: Implications for biodiversity conservation and sustainable rural livelihoods in the Amazon

H. Newing and S. Harrop (2000, *Journal of International Wildlife Law and Policy* 3(2): 109-124).

ABSTRACT

The Brazil nut industry fits closely with the principal objectives of European policy on development co-operation (poverty reduction linked with environmental protection) and forest conservation (maintaining forest cover). However, European Regulation 1525-98 EC, which decreases acceptable levels of aflatoxins in Brazil nuts to 4 parts per billion, may cause a crash in the Brazil nut trade. Thus, European policies on food quality, development co-operation and forest conservation are likely to work in opposition. Brazil nut producer countries have questioned the legal basis of the Regulation in terms of scientific justification for the stricter limits on aflatoxin content and lack of conformity with international standards set by Codex Alimentarius. The EC has countered by calling for use of the precautionary principle. This paper documents the debate in the context of the World Trade Organisation's Sanitary and Phytosanitary Agreement and discusses the implications for the relationship between agendas of trade, environment and sustainable development.

Introduction

Brazil nuts have been widely promoted since the late 1980s as a product that meets the twin goals of forest conservation and poverty reduction, and are marketed under both Fair Trade and eco-friendly labels¹. The Brazil nut industry fits well with the objectives of European development co-operation, which since the 1992 Maastricht Treaty² have been based increasingly on poverty reduction³. Furthermore, poverty is recognised to be closely linked with environment protection.⁴ Brazil nuts are probably the most economically important plant product that is harvested sustainably from the natural Amazonian forest, and Brazil nut harvesters include the poorest sectors of society in a region with some of the highest levels of biodiversity in the world. As a result, the European Union and its member nations have given considerable support to the Brazil nut industry and related extractive systems.⁵ However, the industry

¹ NGOs that have supported the Brazil nut industry through Fair Trade and eco-friendly labelling include development organisations such as Oxfam UK and conservation organisations such as WWF and Conservation International. For ethical trade see p. 65 in Assies, W (1997), *Brazil nut extraction and sustainable development in Amazonia*.

Tropenbos newsletter 14/15: 8-9; Ch. 3 in Hall, A. (1997), *Sustaining Amazonia: Grassroots action for productive conservation*. Manchester University Press.

² Treaty of the European Union (1992), Maastricht. Article 130u.

³ For example, a recent European Council press release defined the fight against poverty as the "overarching objective of Community development co-operation" and emphasised the linkages between poverty and the environment. Council Press Release 156 - 8571/00 on 2263rd Council Meeting, Brussels, 18 May 2000.

⁴ Treaty of the European Union (1992), Maastricht. Article 130r2

⁵ According to Annex 3 of the Communication from the Commission to the Council and the European Parliament: *Forests and Development: The EC Approach* COM (1999) 554, the EU has so far contributed 93% of the \$250 million phase 1 of the G7 "Pilot Programme to Conserve the Brazilian Rainforest" (PPG7), which included over \$9 million for extractive reserves in Brazilian Amazonia. In

currently faces a threat from an apparently unrelated area of EU policy that has also grown in part from environmental concerns, in the form of increasing food quality control. In 1998, the EC passed a Regulation to reduce the maximum acceptable level of aflatoxins - carcinogenic chemicals produced by moulds that grow on protein-rich foods such as nuts - from 20 ppb to 4 ppb (Regulation 1525-98 EC). Thus, three areas of European policy, each in itself laudable, are set to work in opposition in producer countries, who have made formal complaints to the World Trade Organisation challenging the legal basis for the new Regulation.

Producer countries fear that the aflatoxin Regulation could close the European market for some time to come and cause a slump in global Brazil nut markets. If so, the probable results would include extensive loss of livelihoods by the poorest sectors of society in producer regions and a dramatic increase in deforestation across a large area of southwestern Amazonia which contains some of the highest levels of biodiversity anywhere in the world.

This paper will begin with an examination of the merits of the Brazil nut industry for rural development and rain forest conservation. Next, international food quality control mechanisms will be described, together with the debate about scientific justification for the new Regulation. The core of the paper will document reactions to the EC Regulation within the framework of the World Trade Organisation's Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement). Finally, the implications will be discussed in terms of globalisation of standards, the role of the WTO and the need for integration of international policy on trade, environment and development.

THE BRAZIL NUT INDUSTRY, FOREST CONSERVATION AND DEVELOPMENT

Although global trade in Brazil nuts is not large, the patchy distribution of Brazil nut trees (*Bertholletia excelsa* Humb. & Bonpl.: Lecythidaceae) means that production is concentrated in southeastern Amazonia⁶, where nuts are a major export product. The main production region comprises the state of Acre in Brazil, the department of Madre de Dios in Peru and lowland Amazonian Bolivia.

Brazil nuts are Bolivia's second largest agro-industrial export product and are produced in a remote area of 100,000 km² in the Amazon Basin, or 10% of the national territory. 80% of households in the region are below the poverty line and the region has possibly the poorest infrastructure in the country. It is estimated that more 50% of the economically active population is directly involved in Brazil nut production, which provides about 4,500 jobs in processing and involves an additional 7,500 families in harvesting.⁷ In Madre de Dios in Peru, the Brazil nut industry is

Bolivia, export promotion of Brazil nuts has been supported with financial aid from the World Bank and the Dutch and Swiss governments.

⁶ Formerly, the Brazilian states of Para and Amapa in eastern Amazonia were also important but production has declined because of deforestation.

⁷ Statement Made by Bolivia at 12th Meeting of SPS Committee, 15-16 September 1998 G/SPS/GEN/93.

estimated to provide an income for 30% of the rural population⁸. In Acre in Brazil, the Brazil nut trade has contracted over the past ten years due to competition from Bolivia but is still a significant economic activity. Assies (1997) estimated that it involved about 2,000 people.

Brazil nuts are seen as an environmentally friendly product because they are probably the only Amazonian product with a sizeable world market supplied almost entirely from the wild⁹. Unlike rubber, Brazil nuts have never been produced very successfully in plantations, probably because of the complex ecological chain necessary for their pollination¹⁰. From a natural resource management perspective, harvesting of Brazil nuts presents few problems in terms of sustainability; there are some concerns about the effects of overharvesting on regeneration¹¹ but these should be amenable to technical assistance. Brazil nut trees have a high quality timber, but felling has been prohibited in Peru and Brazil in recognition of the greater medium-term value of the nuts.

Social and economic issues are more complex, and must be placed in the wider discourse on extractivism.

Brazil nuts have been an important local food since pre-Colombian times and have been traded globally on a small scale for at least four centuries,¹² but only became primarily a commercial product only after the end of the rubber boom.¹³ The story of rubber exploitation is well-known. After seeds were smuggled out of Brazil to Kew Gardens in the UK by Henry Wickham, rubber from Malayan plantations supplanted

⁸ Comision Multisectorial para la Promocion y Desarrollo de la Actividad Castañera en Madre de Dios (1999), Plan Estrategico de la Castaña (*Bertholletia excelsa* H.B.K.). Unpublished working document, Puerto Maldonado, Peru.

⁹ Many other products are marketed locally but are too perishable to reach world markets. Thus, in Peters et al's 1989 benchmark study showing the economic value of non-destructively harvested products from a hectare of Amazonian forest, 95% of the value calculated for non-timber products was from the sale of forest fruits, which was only possible because the study site was just 30 km from one of the largest markets in the Amazon, at Iquitos. Lescure et al (1994) go into more detail on perishable products in a study carried out near the city of Manaus in central Amazonia). For most of the Amazon region, the most suitable forest products for extractivism are those that are high-value and easy to transport (low-bulk and relatively non-perishable). Lescure, J-P, F. Pinton and L. Emperaire, *People and Forest Products in Central Amazonia: The Multidisciplinary Approach of Extractivism*. pp. 58 - 88 in Clusener-Godt and Sachs (1994), *Extractivism in the Brazilian Amazon: Perspectives on Regional Development*. MAB Digest 18, UNESCO.

¹⁰ Mori, S.A. and G.T. Prance 1990 *Taxonomy, ecology and economic botany of the Brazil nut* (*Bertholletia excelsa*). *Advances in Economic Botany* 8: 130-150.

¹¹ Allegretti (1994) expresses concerns (see *Policies for the use of renewable natural resource: The Amazon Region and Extractive Activities*. pp. 14 - 33 in Clusener-Godt, M. and Sachs, I. (Eds), *Extractivism in the Brazilian Amazon: Perspectives on Regional Development*). MAB Digest 18, UNESCO. . For an update on current research on regeneration see Myers, GP, Newton, AC, and Melgarejo, O (2000) *The influence of canopy gap size on natural regeneration of Brazil nut* (*Bertholletia excelsa*) in *Bolivia Forest Ecology and Management* 127(1-3): 119-128.

¹² Almeida, C.P. (1963), *Castanha do Para. Sua exportacao e importancia na economia amazonica*. *Estudos Brasileiros* 19, Ministerio de Agricultura, Brazil. Quoted in Ortiz, E.g., Forsyth, A., and Rubio, F. (1997), *Conserving Castanals: A cross-Boundary science and policy program to sustain the world's most biodiverse ecosystem*. Unpublished report, Proyecto Castanals, Puerto Maldonado, Peru.

¹³ Dijkman, W., Stoian, D., A.B. Henkemans., W. Assies, R.G.A.Boot (1998), *Temporal and spatial dynamics in the extraction of non-timber forest products in the northern Bolivian Amazon*. pp. 149 - 158 in *Research in tropical rain forests: its challenges for the future*. Seminar proceedings, 25-26 November 1997, the Tropenbos Foundation, Wageningen, The Netherlands.

wild-harvested rubber from most of the world market. As the demand for wild rubber contracted, many rubber estates survived by developing commercialising Brazil nuts as a complementary product and increasing small-scale agriculture. The three activities are carried out in different seasons, and the result was a mixed economy based on an agro-extractive seasonal cycle - Brazil nuts were collected in the rainy season from mid-December until March; rubber was tapped from April to June and again from October to mid-December, and new fields were prepared from July to September¹⁴. This cycle still exists and changing markets for the two commercial products are accommodated in part by a change in the balance between the three activities. Thus, the further contractions of the rubber trade in Bolivia in the late '80s caused a rise in the Brazil nut extraction activities together with increased urban migration.¹⁵ In both Bolivia and Peru, Brazil nuts are now the more important product, and since the market for wild-harvested rubber is currently very poor, a sudden contraction of the Brazil nut industry would almost certainly result in a massive increase in slash-and-burn agriculture.

Extractivism caught the global public eye in the late 1980s with the increasingly powerful and well-publicised political movement formed by the rubber-tappers or *seringueiros* in Brazil. The rubber tappers' movement was formed in the 1970s to defend their land rights and forest-based livelihoods,¹⁶ and campaigned successfully for the creation of extractive "settlements" in Brazil within the 1987 National Program for Agrarian Reform¹⁷. Extractive settlements were particularly significant in that they were based on "notions of collective land-use and of issuing of usufruct rights, rather than individualised land titles".¹⁸ As the rubber tappers' movement became aligned with international rain forest campaigning groups the discourse gradually changed from one of land rights to one of sustainability and traditional forest lifestyles,¹⁹ and the change was reflected in 1989 when extractive "reserves"

¹⁴ pp. 8-10 in Assies, W. (1997) Going nuts for the rainforest. Non-timber forest products, forest conservation and sustainability in Amazonia. Thela Latin American Series, Thela Publishers, Amsterdam.

¹⁵ For Bolivia, see Dijkman, W., Stoian, D., A.B. Henkemans,, W. Assies, R.G.A.Boot (1998), Temporal and spatial dynamics in the extraction of non-timber forest products in the northern Bolivian Amazon. pp. 149 - 158 in Research in tropical rain forests: its challenges for the future. Seminar proceedings, 25-26 November 1997, the Tropenbos Foundation, Wageningen, The Netherlands. For Brazil, see Clusener-Godt and Sachs (1994) (Eds), Extractivism in the Brazilian Amazon: Perspectives on regional development. MAB Digest 18. Unesco, Paris.

¹⁶ A study in the Cachoeira estate near Xapuri, Acre concluded that mixed market extraction (rubber, Brazil nuts) and subsistence activities (agriculture, hunting, gathering, fishing) provide an average family cash income USD 960 / year; if subsistence goods are given a monetary value, equivalent cash income would be USD 1500 - or twice the minimum wage. Many in the region earn less than the minimum wage. Thus, extractivism in a mixed economy was concluded to be viable. See Schwartzmann, S (1989), Extractive Reserves: The rubber tappers' strategy for sustainable use of the Amazon Rainforest. Ch. 10, pp 150 - 165 in: Browder (Ed) (1989) Fragile Lands of Latin America: Strategies for Sustainable Development. Westview Press, Boulder, CO.

¹⁷ Extractive Settlement Project in Policy 627, 30/07/1987: INCRA

¹⁸ p. 100 in Hall, A. (1997), Sustaining Amazonia: Grassroots action for productive conservation. Manchester University Press.

¹⁹ See Homma, A. K. (1994), Plant Extractivism in the Amazon: Limitations and Possibilities. pp. 34 - 57 in Clusener-Godt, M. and Sachs, I. (Eds) (1994), Extractivism in the Brazilian Amazon: Perspectives on Regional Development. MAB Digest 18, UNESCO; and Assies, W. (1997) Going nuts for the rainforest. Non-timber forest products, forest conservation and sustainability in Amazonia. Thela Latin American Series, Thela Publishers, Amsterdam.

became part of the National Program for the Environment.²⁰ Extractive reserves were defined as “territorial spaces designated for the self-sustaining use and conservation of renewable natural resources by extractivist populations”, and were the first productive conservation category to be formalised under Brazilian federal law.²¹

The assassination of Chico Mendes, a political leader of the rubber tappers, caused international outcry and a flood of support for extractivists. One result was a rush of international aid to Brazil for extractive reserves, most notably the G7 “Pilot Program to Conserve the Brazilian Rainforest” which has been funded mainly by Europe. By 1991 extractive reserves and settlements covered a total of 2,992,537 hectares²² or about 0.8% of the Brazilian Amazon. This compared to 17,412,700 hectares or 4.7% in protected areas.²³ Mendes’ assassination also undoubtedly had a significant influence on the location and agenda of the United Nations Conference on Environment and Development (The Earth Summit) held in Rio de Janeiro in 1992.

For Brazil nut producing countries, the threat posed by the new EC Regulation is that the new quality regulations will be beyond their reach, at least for several years to come. All three producer countries have brought the EC Regulation to the attention of the World Trade Organisation, questioning its justification and demanding mitigating measures. Next, food quality issues will be summarised, before turning to the international debate on the EC Regulation.

FOOD QUALITY ISSUES

Aflatoxins and health

The harmful effects of mycotoxins – toxins produced by fungi – have been known for thousands of years, but it was only in 1960 that the aflatoxins were specifically identified following the death of 100,000 turkeys, ducklings and chicks in England after eating contaminated peanuts from Brazil. Aflatoxins are a group of chemicals produced by the moulds *Aspergillus flavus* (whence their name), *A. parasiticus* and *A. nomius*. The moulds grow on protein-rich foods including seeds of several cereals, many vegetables, and nuts; dietary intake arises principally from contamination of maize and peanuts. Aflatoxins B1, B2, G1 and G2 are produced directly by the moulds, while M1 and M2 are metabolites of B1 and B2 and are found in milk from livestock that has eaten contaminated feed. Intensive research soon established that acute toxicity of aflatoxins was a global problem, and this was underlined by mass deaths of humans in Taiwan in 1967 and Kenya in 1982. Aflatoxin B1 is the most frequent in foodstuffs and is reported to be the most potent of the aflatoxins.

²⁰ Regulated on 30/01/90 by Decree 98.897 - just over a month after Chico Mendes’s assassination.

²¹ Whereas settlements focused on land tenure, and were dependent on formal titling for their legal creation, extractive reserves were first created as areas for restricted use, and then subjected to the titling process; thus prior expropriation of lands was unnecessary. See p. 92 in Hall, A. (1997), *Sustaining Amazonia: Grassroots action for productive conservation*. Manchester University Press; and Allegretti, M H, (1994), *Policies for the use of renewable natural resource: The Amazon Region and Extractive Activities*. pp. 14 - 33 in Clusener-Godt, M. and Sachs, I. (Eds), *Extractivism in the Brazilian Amazon: Perspectives on Regional Development*. MAB Digest 18, UNESCO.

²² Allegretti, M H, (1994), *Policies for the use of renewable natural resource: The Amazon Region and Extractive Activities*. pp. 14 - 33 in Clusener-Godt, M. and Sachs, I. (Eds), *Extractivism in the Brazilian Amazon: Perspectives on Regional Development*. MAB Digest 18, UNESCO.

²³ IGBE 1990 in Lescure, J-P, F. Pinton and L. Emperaire (1994), *People and Forest Products in Central Amazonia: The Multidisciplinary Approach of Extractivism*. pp. 58 - 88 in Clusener-Godt, M. and Sachs, I. (Eds), *Extractivism in the Brazilian Amazon: Perspectives on Regional Development*. MAB Digest 18, UNESCO.

In addition to acute effects from high doses, constant exposure to low doses of aflatoxins are now known to have chronic effects on health. Aflatoxins are among the most powerful mutagenic and carcinogenic substances known, and both lab tests and epidemiological studies link aflatoxin intake to increased incidence of liver cancer.²⁴ It was this finding that stimulated a re-examination of international standards for aflatoxin levels in food.

European Regulation

The European Community is the world's largest importer and exporter of food products, and therefore its regulations on food quality have a major effect on global trade. In addition to progressive international regulation of food quality control, which has grown partly from concerns of the environmental lobby about contamination with agrochemicals, several recent food scares in Europe have added momentum to tougher control measures in Europe²⁵. European policy on imported foodstuffs expressed in a new White Paper on food quality released in January 2000 is based on a key principal "that they must meet health requirements at least equivalent to those set by the Community for its own production"²⁶.

European Regulation on Aflatoxins

Following consideration of aflatoxin toxicity in 1997 by the EC's Scientific Committee for Food²⁷, on July 16th 1998 the EC adopted Commission Regulation 1525/98 reducing maximum residue limits (MRLs) for aflatoxins in food, and Commission Directive 98/53/EC detailing sampling procedures and methods for sample analysis. The limits for Brazil nuts "intended for direct human consumption or as ingredients of foodstuffs" were set at 4 parts per billion (ppb) in total, and 2 ppb for aflatoxin B1. This compares with a current limit in the USA of 20 ppb and a limit in the international standards defined by Codex Alimentarius of 20 ppb.

The extremely low MRLs introduced by Europe were justified on the basis that aflatoxins are highly carcinogenic and any dose, however low, would involve a risk²⁸. However, they have been challenged by Brazil nut producer countries as without scientific justification and thus contrary to WTO's regulations on Sanitary and Phytosanitary measures.

International regulations on food safety

The main vehicles for international regulation of food safety are Codex Alimentarius (the Food Code), and the World Trade Organisation (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement).

²⁴ report on 49th meeting, JECFA

²⁵ Specifically, bovine spongiform encephalitis (BSE), dioxins, and GMOs.

²⁶ EC White Paper on Food Safety COM 1999 719, 12 Jan 2000, Chapter 8.

²⁷ Minutes of 108th meeting of Scientific Committee for Food, held on 18 – 19 September 1997 in Brussels.

²⁸ "Aflatoxins are genotoxic carcinogens. For this type of carcinogen, it is generally felt that there is no threshold dose below which no tumour formation would occur. In other words, only a zero level of exposure will result in no risk". Report of the Scientific Committee for food, 35th Series, 23rd September 1994.

Codex Alimentarius comprises “a set of technical standards, evaluations and recommendations for food quality, including food standards for commodities; codes of hygienic or technological practice; pesticide evaluations and limits for pesticide residues; guidelines for contaminants; and evaluations of food additives and veterinary drugs”.²⁹ Established in the early 1960s, it is run jointly by the World Health Organisation (WHO) and the Food and Agriculture Organisation (FAO) through the Codex Alimentarius Commission. Codex standards are set according to recommendations of technical committees.

Where international trade restrictions based on technical barriers are put in place by WTO members, the essential requirement by the WTO, epitomised in the *Agreement on Technical Barriers to Trade*³⁰, is that those international measures either conform with international standards issued by an official standardisation body or, if no such standards are in place, through an appropriate consensus seeking approach. As Campbell put it:

*Following the Uruguay round, the general agreement on tariffs and trade shows a strong preference for the use of international standards, particularly in areas concerning health and the environment, to avoid the possibility of national standards creating non-tariff trade barriers.*³¹

The barriers to trade which form the basis of the European unilateral measure in relation to aflatoxins concern standards of protection of human health in relation to food and therefore the WTO’s *Agreement on the Application of Sanitary and Phytosanitary Measures*³² (“SPS”) is relevant in this instance.³³

Codex standards on aflatoxin levels

In 1997, the Joint FAO/WHO Expert Committee on Food Additives (JECFA)³⁴ reviewed a broad range of studies on both animals and humans of the hepatocarcinogenicity of aflatoxins, and found widespread evidence for a link between aflatoxin intake and liver cancer. However, an interaction between aflatoxins and hepatitis made it difficult to assess the effects of aflatoxins alone on mortality. Based on epidemiological and lab studies, a risk assessment was carried out for the incidence of cancer in different populations at different hypothetical aflatoxin limits. Daily intake of aflatoxins was estimated from data on national diets in different countries together with data on contaminant levels for different foodstuffs. Some studies suggested that there is an effect in humans only if they are already suffering from other risk factors, most notably hepatitis B infection, and based on available

²⁹ FAO website, <http://www.fao.org/docrep/w9114c/W9114e01.htm>

³⁰ See Marrakech Declaration of 15 April 1994 in *The Results of the Uruguay Round of Multilateral Negotiations- The Legal Texts* GATT Secretariat, Geneva 1992

³¹ Campbell L.B. (1994) *International Environmental Standards: Their Role in Mutual Recognition of Ecolabelling Schemes* (Discussion Paper September 1994) UNEP.

³² *The Results of the Uruguay Round of Multilateral Negotiations- The Legal Texts* Supra note

³³ See Article 1.1 and Annex A of the SPS and Article 1.1.5 of the TBT.

³⁴ Report on 49th meeting, Joint FAO/WHO Expert Committee on Food Additives (JECFA). The Codex Committee on Food Additives and Contaminants (CCFAC) and the Codex Committee on Residues of Veterinary Drugs in Foods (CCVDF) identify priority chemicals for evaluation, and refer them to JECFA for assessment before incorporating them into Codex standards. JECFA carries out toxicological evaluations, which are published. It also provides scientific advice directly to FAO and WHO member countries.

evidence, potency values were used of 0.01 and 0.3 cancers / year / 100,000 population / ng aflatoxin/kg body weight per day, for hepatitis B-free and infected populations respectively. Data on incidence of hepatitis B in different countries was also fed in to the calculations³⁵. The Committee calculated that in countries with high levels of contamination and high levels of hepatitis, application of a maximum residue limit (MRL) for aflatoxins would greatly reduce average daily intakes by removing extremely contaminated samples from human consumption. However, in countries with low levels of contamination and low levels of hepatitis B infection, death rates following a change in the MRL from 20 ppb or 10 ppb in food would be “unlikely to exhibit detectable differences”. The implication is that a reduction in MRL would be unimportant in reducing health risks in European consumers. It would have some effect in producer countries and other developing countries, although it is unlikely that the aflatoxin problem would rank as a health priority in these countries. The Committee failed to reach a recommendation for a standard, but suggested that aflatoxin intake should be reduced to “levels as low as reasonably achievable”. The actual level to be recommended was still under discussion in late 1998, in the 30th Session of the Codex Committee on Food Additives and Contaminants (CCFAC).

The SPS and standardisation

Essential paraphrased principles within the SPS relevant to the present case are as follows.

1. Sanitary and phytosanitary measures are permitted to the extent necessary for the protection of human, animal or plant life or health, to the extent that the measures are based on scientific principles. (Article 2.1 and 2.2)
2. The need for scientific evidence to sustain such measures may be curtailed only when relevant scientific evidence is insufficient where a WTO member may then adopt such measures whilst seeking to obtain further information and review the measure within a reasonable time. (Article 5.7)
3. Measures should not unjustifiably discriminate between Members of the WTO nor should they be applied in a manner which constitutes a disguised restriction on international trade. (Article 2.3)
4. Existing international standards should form the basis for technical regulations (Article 3.1)
5. Higher standards may be implemented :
 - *If there is a scientific justification* (Article 3.3) or
 - Where a member determines a different level of protection through an objective assessment of the risks in accordance with Article 5, (which includes a requirement that trade effects are minimised) (Article 3.3, Article 5 and Annex A.4)
6. The relevant international standards are those established by the Codex Alimentarius where they relate to, *inter alia*, food contaminants etc.(Annex A.3(a))

³⁵ Initial studies of the effects of hepatitis C have been inconclusive. 50 to 100% of liver cancer cases were estimated to be associated with persistent infection with hepatitis B and /or C.

REACTIONS IN SPS

Reactions have focussed on the level of scientific evidence needed in order to justify the lowering of aflatoxin levels, and on excessive sampling requirements that could prove prohibitively expensive.

There are two aspects to the dispute on scientific evidence. On the one hand, producer countries have questioned whether there is scientific evidence that a lowering of aflatoxin levels to 4 ppb will cause a significant reduction in consumer health risks. On the other hand, the EC has argued that strong evidence is unnecessary, invoking the use of the precautionary principle within the terms of the SPS Agreement.

Both Brazil and Bolivia submitted written statements to the SPS about EC Regulation 1525/98, and Peru made a verbal statement. Brazil's communication indicated that "the EC measure ... seems based on insufficient scientific evidence". It stressed "the lack of sufficient data to justify the alleged benefit to the consumer" and "the inadequacy of the statistical data utilized by the European Communities concerning the potential cancer hazard of aflatoxin... although the EC interest in combating cancer may be legitimate, aflatoxins cannot be singled out as the only source of cancer, a disease with multiple origins"³⁶. Bolivia contended that "there is no scientific evidence that a decrease in aflatoxin levels in foodstuffs from 20 ppb to 4 ppb has a clear positive impact [in] the reduction of such effects as the incidence of cancer"³⁷. Peru made a verbal statement that the EC had failed to demonstrate the scientific basis for the measure, nor provided a risk analysis. Therefore the EC measure constituted an unjustified barrier to trade and a violation of the SPS Agreement³⁸. The USA stressed that setting maximum aflatoxin levels at such low levels "would likely result in trade disruption while providing little additional protection for consumers", and encouraged the EC to continue to take on board the recommendations contained in FAO/WHO risk assessments establishing maximum aflatoxin levels in consumer-ready products³⁹. The 30th Session of the Codex Committee on Food Additives and Contaminants (CCFAC) was also considering the matter at the time and it was felt that the EC should wait for the Codex to set international standards before implementing the proposed decrease in acceptable levels.

Sampling:

The proposed sampling⁴⁰ was criticised by both countries as "statistically unjustified and technologically and economically inappropriate", requiring sampling of a massive 15% of crates. Since nuts are air-sealed before export, all sampled packages would have to be discarded. Brazil reviews aflatoxin levels "when the case so warrants", and states that "the sampling methods proposed by the European Commission do not represent a favourable alternative to the consumer compared with the methods adopted by FAO". Bolivian Brazil nut exports are inspected by international trade surveillance firms SGS and Inspectorate, which operate under government mandate to "conduct detailed quality controls of the product through laboratory analysis,

³⁶ G/SPS/GEN/58 DRAFT EC Regulation, received from Brazil on 18/02/98.

³⁷ G/SPS/GEN/93: Statement Made by Bolivia at 12th Meeting of SPS Committee, 15-16 September 1998.

³⁸ 14th Meeting of SPS, 10-11 March 1999.

³⁹ G/SPS/R/12, 29 Oct 1998.

⁴⁰ Sampling procedures are laid out in detail in Commission Directive 98/53/EC of 16 July 1998.

including aflatoxin contamination tests”. Insistence by the EC on additional sampling at the place of import “amounts to a refusal to recognize the validity of specialised quality certification firms, produces insecurity in the marketing of the product both for sellers and buyers and affects the normal development of the Brazil nut market.” Both countries also criticised the EC stipulation that every single sample must meet the required standard, since variance is very high. They recommend that instead, the mean aflatoxin content for samples from a single crate should be used, and that the EC should recognise testing in the country of origin, to avoid further costs.

The EC Response

The EC argued to the SPS that “there was a justification for governments to be prudent and take a precautionary approach especially in situations where the scientific evidence was incomplete”⁴¹. There was solid evidence that aflatoxins were carcinogenic, and therefore in the absence of specific scientific data, only a zero level of exposure would entail no risk. In September 1997, the EC Scientific Committee for Food, “although recognising the significant work of JECFA, had also noted several limitations and assumptions inherent in the approach and had concluded that it was premature to draw definitive conclusions on this issue”.⁴²

This is part of a general lobby from the EC to promote the precautionary principle in WTO, expressed clearly in the recent White Paper on Food Quality:

“The Community plays an active role in the SPS Committee and in other WTO Committees, to ensure that the international framework encourages and defends the rights of countries to maintain high public health standards for food safety. The Community has the objective to clarify and strengthen the existing WTO framework for the use of the precautionary principle in the area of food safety.” (8: 100)⁴³.

The EC accepted that only the average of all sub-samples should comply with the established Maximum Residue Limit (MRL), and confirmed the “due recognition would be given to transitional arrangements”; as a result, the new measures would not enter into force before 1st January 1999.

Bolivia has been the most strategic in its response to the EC Regulation. Its original statement also made use of environmental and aid agendas by emphasising the value of the Brazil nut trade for forest conservation and rural livelihoods, as follows:

“as a result of intense Brazil nut production activity over the past five years, in spite of the high cost of transport, the inhabitants of the area now have access to food, provisions and supplies for everyday existence which have given them a more dignified standard of living”. Thus, “given the current commercial value of harvesting Brazil nuts in the shell, the inhabitants of the area have in interest in preserving the

⁴¹ Summary of SPS Committee of 12-13 March 1998, G/SPS/R/10

⁴² Only national governments are voting members of Codex; the EC can attend meetings in an observer capacity. However EC directives frequently refer to Codex, and the EC White Paper on Food Quality identifies a need “work on the accession of the European Community to the Codex Alimentarius”. (Ch. 8: 111).

⁴³ EC White Paper on Food Safety COM 1999 719, 12 Jan 2000.

forest... the maintenance of this activity is fundamental to the prevention of deforestation of the Amazon forest.”

DISCUSSION

The WTO and Standardisation

Where international trade restrictions based on technical barriers are put in place by WTO members the essential requirement by the WTO, epitomised in the *Agreement on Technical Barriers to Trade*⁴⁴, is that those international measures either conform with international standards issued by an official standardization body or, where no such standards are in place, they are determined through an appropriate consensus-seeking process. As Campbell put it:

*Following the Uruguay round, the general agreement on tariffs and trade shows a strong preference for the use of international standards, particularly in areas concerning health and the environment, to avoid the possibility of national standards creating non-tariff trade barriers.*⁴⁵

However, it may be that when different states are represented at the negotiating table (with their widely differing interests and with the concomitant need to compromise) the rigorous nature of reasonable standards may be lost or at best diluted in the negotiators' attempts to reach common ground. The result may be the lowest common denominator rather than a suitably rigorous standard.

This proposition is illustrated in the history of the development of standards for humane mammal trapping. In this case, as with the current case involving Aflatoxins, the European Union purported to unilaterally to ban the import of mammal pelts from animals caught by the leghold trap method. There were a number of derogations to the ban, including permission to derogate where an exporting country had ensured that its trapping methods operated within international standards. Unfortunately, at the original time of imposition of the ban, no relevant international standards were in place to allow this derogation to operate. Intense efforts had been undertaken to develop standards under the auspices of the International Standards Organisation which had involved all relevant, interested countries in addition to non-governmental organisations representing animal welfare and trapping interests. With the preponderance of differing views a compromise was difficult to achieve and the efforts failed to produce appropriate standards. Therefore, under the threat of a WTO attack on the European unilateral ban, a working group was set up with a much-restricted membership but which still consisted of many of the original States remaining at the negotiation table. This approach finally produced standards, which could operate as the basis for derogation from the unilateral action. However, even these standards were not inspiring from the animal welfare perspective and are regarded by some as very much the lowest common denominator establishing only the status quo.⁴⁶

⁴⁴ See Marrakech Declaration of 15 April 1994 in *The Results of the Uruguay Round of Multilateral Negotiations- The Legal Texts* GATT Secretariat, Geneva 1992

⁴⁵ Campbell L.B. (1994) *International Environmental Standards: Their Role in Mutual Recognition of Ecolabelling Schemes (Discussion Paper September 1994)* UNEP.

⁴⁶ See Harrop S.R. (1998) *The Agreements on International Humane Trapping Standards- Background, Critique and the Texts* Journal of International Wildlife Law & Policy Vol 1 No 3 387-394.

In the case of standards designed for the humane trapping of mammals now in two international agreements, there is much evidence to suggest that the standards could only be created when the negotiators were reduced in number.⁴⁷ Even then the standards which resulted could be seen as a lowest common denominator in respect of the achievement of their animal welfare objects. On the basis of this case study it is not difficult to appreciate how the WTO's aspirations for trade regulation to be based entirely on international consensus may be somewhat tenuous.

However, in the present case the European approach is based, not on the minimum common ground, but on a higher standard derived from its own scientific opinion, coupled with a precautionary margin of error to ensure that the quantity of aflatoxins in imported products conform with a no risk approach. It is to be expected that those with trade and other interests would hardly agree to such an extreme no-risk approach if it is practically unachievable for them. It is also understandable, therefore, that the internationally agreed standard is much lower than the European approach given the constraints on international negotiation and the need ultimately to provide a compromise between the various negotiating interests.

The precautionary principle and the WTO

Although the precautionary principle may be becoming established as a norm of international environmental law⁴⁸ (with its increasing presence in international and regional instruments such as the constitutional documents of the European Community, Convention on Biological Diversity, CITES listing criteria and so on) it is not a prescribed principle within the multilateral trade agreements of the WTO. Article 5 of the SPS examines the assessment of risk and the determination of levels of protection but does not specify the justification of precautionary measures but, as would be expected in the context, requires measures to minimise negative trade effects (Article 5.4). Nevertheless there is a glimmer of reference to precaution in Article 5.7 in that provisional standards may be adopted, pursuant to that article, where scientific evidence is insufficient. However, in the present case it might be argued that appropriate scientific evidence is available, in that such evidence is already embodied in the standards produced under the auspices of the Codex Alimentarius. To counter such a view the EU would need to discredit the scientific basis for those standards, demonstrating that the standards merely represent a lowest common denominator developed through a flawed international consensus approach. Thus the EU's approach may have to be taken without reliance on precaution but through its objective assessment of the risk based on its own demonstrable scientific evidence. In so doing the EU may also have to prove that the scientific basis for the Codex Alimentarius standards is wrong.

The invocation of the precautionary principle creates an interesting dilemma for environmental and human rights movements, who have fought hard for acceptance of

⁴⁷ For a full history of the case study referred to see Harrop S.R and Bowles D. (1998) *Wildlife Management, the Multilateral Trade Regime, Morals and the Welfare of Animals* Journal of International Wildlife Law & Policy Vol 1 No 1 64-94.

⁴⁸ See McIntyre O. and Mosedale T. (1997) *The precautionary principle as a norm of customary international law* Journal of Environmental Law Vol 9 No 2 221-241.

the precautionary principle in pressing for increased control over agrochemicals⁴⁹, GMOs⁵⁰ and new pharmaceutical products. Invoking the precautionary principle, while desirable from the point of view of food quality, could also open the door to new trade barriers with little need for scientific justification. In the case of aflatoxins, it may weaken economic arguments for the conservation of Amazon rain forests and increase rural poverty, by damaging the Brazil nut industry. On the other hand, environmental groups have also lobbied for legislative adoption of Codex by national governments.⁵¹ In the case of aflatoxins, this would result either in an increase in acceptable MRLs in Europe, or adoption by Codex of the stricter measures.

Environmental considerations

The dispute panel decisions dealing with environmental issues generally involve parties, who have introduced allegedly trade-distorting restrictions, arguing that those restrictions are justified on their environmental merits. In so doing those parties would argue that the restrictions were protected by one or more of the various “defences” in Article XX of the GATT 1947, which agreement is incorporated in the WTO regime.⁵² In this case, however, the boot is on the other foot: the parties seeking to demonstrate that the European action is trade distorting do not need to resort to Article XX. In summary and putting the complexities of the detailed provisions of the SPS and other relevant documents within the WTO’s portfolio to one side, they may restrict their approach to demonstrating that the EU measure is trade distorting because it does more than is necessary to achieve its objects. Therefore, the environmental considerations, although very real, need not be raised in detail if this issue proceeds to a full-blown trade dispute before the WTO dispute panel. Of course, it is entirely conceivable that detrimental environmental effects could substantiate an argument that distortion of trade could be the result of the EU’s measure especially if the effects are so wide ranging that they result in a party no longer being able to compete in an appropriate market.

In summary, the issue of the European Union’s approach to aflatoxins has the potential to create a cauldron of the key, controversial issues which pervade the work of the WTO. This is not just a question of the extent to which unilateral measures may be taken in line with the importing WTO member’s view of the risks. Instead the issue of how global standards are reached is highly relevant. The role of the precautionary principle in the regulatory approach taken by the WTO is also crucial to the issue. Finally, the extent to which environmental considerations are to be taken into account is also part of the debate. As has been pointed out, the latter point is somewhat unusual in the contexts of a WTO dispute in that, on this occasion, it is not

⁴⁹ For example see Dinham, B. (1993), *The Pesticide Hazard: A Global Health and Environmental Audit*. The Pesticides Trust, London.

⁵⁰ For example, see FoE at <http://www.foei.org/campaigns/Biotechnology/indexbiotechnology.html> 31-05-00

⁵¹ Dinham, B. (1993), *The Pesticide Hazard: A Global Health and Environmental Audit*. The Pesticides Trust, London. p. 186.

⁵² See *The Results of the Uruguay Round of Multilateral Negotiations- The Legal Texts* Supra note X and also the way in which these “defences” have been applied in, by example, the two *tuna – dolphin* decisions (Report of the Panel –*United States- Restrictions on imports of tuna* (DS21/R and DS/29/R) and the decision of the Appellate Body entitled *United States – import prohibition of certain shrimp and shrimp products* (See document WT/DS58/AB/R dated 12 October 1998).

the party who is acting unilaterally who is claiming the safe haven of environmental justification. Instead it will be those members of the WTO who are affected by the restriction that may be claiming environmental loss.

The major issue that arises out of this aspect is the simple fact that trade regulation is still not properly integrated with other international regulatory systems (at either the European or the global level) which are designed to preserve biodiversity, protect key global ecosystems from fundamental environmental degradation, or relieve global poverty. A mechanism needs to be developed whereby deleterious trade effects can be balanced against detrimental environmental and social effects. The European Union has recognised this need,⁵³ and is negotiating technical assistance to the Brazil nut industry in Bolivia. However, production in Peru and Brazil, which is less vertically integrated (and arguably therefore has greater benefits for poverty reduction) is likely to be hit hard.

At the very least this case confirms the extent to which all aspects of legislation affecting trade issues must take full account of the social and environmental implications of global trade if sustainable development is really the ultimate goal.

⁵³ The European Council has recently stressed the need for “taking full consideration of the interlinkages between environment and poverty” and to “address systematically the environmental and social implications of rapid globalisation, including trade and private capital flows”. European Council Press Release 160 – 8435/99, Council Meeting 2180, Brussels, 21/05/99.