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LESSONS FROM EMPIRICAL STUDIES:

The case of Zimbabwe

Synthesis report by the UNCTAD secretariat

* This synthesis report is based on Jabavu Clifford Nkomo, Benson Mutongi Zwizwai and Davison Gumbo, Interlinkages between trade and environment: a case study of Zimbabwe

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I. INTRODUCTION

1. The study "Interlinkages between trade and environment: a case study of Zimbabwe" was conducted as part of the UNCTAD/UNDP project on "Reconciliation of environmental and trade policies" by a research team consisting of Jabavu Clifford Nkomo, Department of Economics, University of Zimbabwe; Benson Mutongi Zwizwai, Institute of Development Studies, University of Zimbabwe; and Davison Gumbo, Environment and Development Activities, Zimbabwe. The study was completed in 1995. Information for the study was collected through interviews in relevant Government ministries, industry associations and individual companies. The present report, prepared by the UNCTAD secretariat, summarises and updates the findings of the study.

2. Exports are vital for Zimbabwe, especially with regard to the structural adjustment programme undertaken by the country. Zimbabwe has two major preoccupations that relate to external developments that may affect its ability to earn foreign exchange through exports: falling international commodity prices and the potential emergence of protectionist measures and trade barriers in export markets, which, it is feared, may at times include environmental measures. Bearing in mind the dominant share of food in total exports, emphasis is also put on sanitary and phytosanitary requirements of food products.

II. BACKGROUND TO ZIMBABWE'S ECONOMY¹

3. Zimbabwe has one of the most diversified economies in sub-Saharan Africa, and among developing countries it belongs to the middle income group. The country has got a comparatively strong physical infrastructure, rich natural resources and a well-educated labour force that put it ahead of many other countries in the region in terms of development. Further, the level of industrialisation is relatively high and broad-based, and the country, independent since 1980, has long been politically stable. The most important sectors in Zimbabwe's economy are agriculture and mining, and related manufacturing industries. International trade plays an important role in Zimbabwe's economy with exports of goods and services exceeding 30 per cent of GDP.

4. Agriculture remains the backbone of the economy, providing employment and livelihood for some 70 per cent of the population; the main crops include tobacco, corn, tea, sugar and cotton. Normally agriculture contributes 20 percent to GDP and 50 per cent to total exports. However, the dependency of agricultural production on weather conditions is a major disadvantage of the sector. For example, in 1992 Zimbabwe was hit by the worst drought in its history, and agricultural output declined drastically, seriously hurting also several related sectors of the economy.

5. Zimbabwe has got abundant deposits of coal, chromium, asbestos, gold, and other minerals. Mining contributes 5 per cent to GDP and 15 to 20 per cent to total exports; the largest mineral export item is gold. However, the mining sector is very sensitive to world price fluctuations, and there has been a downward trend in the prices of metals.

6. The manufacturing sector of Zimbabwe is relatively well developed, accounting for 25 per cent of GDP and 30 to 35 per cent of exports. The diversity and large size of the sector, compared to countries with a similar size and income level, reflect the decades-long import substitution policy, and over 90 per cent of all manufactured goods is still consumed domestically.² The largest industries in the sector are food and beverages, textiles and iron and steel. The manufacturing sector has strong linkages with agriculture, since almost 60 per cent of manufacturing output is based on agricultural products.

7. Despite the natural advantages of the country, the protectionist import substitution strategy did not bring the desired economic results. Real GDP per capita levels stagnated through the 1980s, and in 1992 the external debt exceeded 50 per cent of GDP. Zimbabwean companies were segregated from world markets and protected from import competition, and there was a longstanding isolation from state-of-the-art technologies. Also, the Government wanted to reduce the

dependency of the economy on agriculture and weather conditions by promoting manufacturing and mining, including manufacturing that does not rely on agricultural inputs. This is an interesting case where environmental conditions necessitated changes in economic policy.

8. Foreign exchange shortage was probably the most serious problem which confronted Zimbabwe, and it also bred other problems like unemployment, debt crisis and fiscal deficits. After 1985, the shortage began to have such a negative impact on the whole economy that by the late 1980s, calls for structural change of the economy intensified.³

9. For these reasons, the Government embarked in 1991 on a five-year economic reform programme with the aim of moving towards a freer market economy. Liberalisation of foreign trade and the elimination of price and exchange controls constitute a major part of these reforms. The goal of the Government is to create a competitive and efficient economy that can bring economic growth and development through exports; the competitiveness of Zimbabwe's exports in international markets are a critical element in the success of the economic reform programme.

10. Against this background, changing environmental and health standards for commodities are a very important issue for Zimbabwe if they may threaten to have an adverse effect on the country's trading position. Moreover, since almost all Zimbabwe's major industries are based on natural resources, sustained economic growth and continued trade depend very much on effective natural resources management and environmental conservation. The fact that the environmental policy framework of Zimbabwe has not yet been fully developed so as to deal with issues of environment and trade as they arise internationally magnifies the importance of dealing with the subject at this point.

III. DOMESTIC ENVIRONMENTAL POLICY-MAKING

A. Environmental legislation in Zimbabwe

11. Analysing the environmental legal regime of Zimbabwe as a whole, it has been noted that the generally well-working sections are wildlife and nature preservation and chemical regulation. The weaknesses of the regime lie in hazardous waste disposal, water pollution prevention, lack of environmental impact assessment requirements, and in energy and natural resource utilisation where environmental considerations have been secondary. Strict enforcement has been difficult due to a lack of financial and human resources.⁴

12. Of the around thirty Acts of Parliament in Zimbabwe that relate to environmental protection, only the Atmospheric Pollution Prevention Act and the Hazardous Substances and Articles Act may have a significant bearing on trade. However, the enforcement of both Acts has been difficult. The effectiveness of the Atmospheric Pollution Prevention Act is reduced by the fact that the Act does not stipulate specific emission levels. There is also a need to strengthen the provisions concerning the disposal of hazardous materials in the Hazardous Substances and Articles Act.

13. Zimbabwe's wildlife resources constitute perhaps the major environmental management challenge for the country, but the environmental policy framework has been able to deal with the challenge successfully. There are 17 well-maintained national parks in Zimbabwe that also support a strong tourist industry. These national parks are among the last remaining habitats for many endangered species such as the white and black rhinoceros and crocodiles.⁵ The most notable distinction of wildlife management in Zimbabwe is the role of rural communities who participate in wildlife management and receive economic benefits from wildlife through the CAMPFIRE programme.

14. Any efforts by industry to reduce negative environmental impacts are rendered difficult by the facts that quantitative information on industrial pollution is lacking and much of the country's technology is outdated. Export-oriented sectors are not adequately addressed by environmental legislation. At

the same time, some industries feel that they are not sufficiently consulted when domestic environmental legislation and standard setting takes place. Despite these problems, industry is slowly becoming aware of the importance of decreasing harmful environmental impacts.

B. Trade impacts of domestic environmental policy

15. Most foodstuffs have to comply with the Zimbabwe Standards Association's stipulations. However, these standards do not deal with storage and packaging. Domestic legislation for the sector is set by the Ministry of Health, but the study reported that the food industry felt that most of the legislation and standard setting is hurried and that too little consultation with industry takes place. The Ministry of Health is knowledgeable of international developments (whereas the industry is not) and perceived to be influenced by the strict Nordic countries.

16. There is an Environmental Labelling Programme (ELP) in Zimbabwe that awards both product labels and corporate environmental labels. It is hoped that the Zimbabwean eco-label could enhance the competitiveness of labelled products in export markets. However, at the moment even the domestic significance of the ELP programme is questioned: the implementation of the programme is undermined by the low level of environmental awareness in the general public; especially the link between consumption patterns and the environment may not be easily perceived. Also, the lack of alternative products places limitations on consumers' choice.

17. The relatively loose nature of domestic environmental regulations and the difficulties in their enforcement could also harm exports in the longer term. An example are food products that may in developing countries include higher levels of contaminants than in developed countries. This is due to the fact that in many developing countries, persistent pesticides and other relevant chemicals (such as DDT) have not been banned and general pollution regulations contributing to a fall in food contamination (e.g. of lead, cadmium and mercury) have not been introduced. Countries in hot or humid regions like Zimbabwe also suffer from high levels of biological contaminants that are difficult to fight.

IV. EFFECTS OF EXTERNAL ENVIRONMENTAL REQUIREMENTS ON TRADE

18. The study points out that environmental, health and sanitary requirements in the importing countries are sometimes perceived in Zimbabwe as new non-tariff barriers to trade. The potential emergence of such barriers to trade would be especially crucial for Zimbabwe given the difficulties it is already having in maintaining existing export markets or penetrating new ones. Accordingly, it is feared that environmental and health requirements in the importing countries might have serious adverse impacts on Zimbabwe's market access and export competitiveness.

19. Food standards and strict limitations on the use of certain substances are likely to have the most significant effects on market access. Among the problems reported by Zimbabwean exporters are the costs and difficulties of testing and verification procedures; the perceived lack of scientific data for specific thresholds or limit values; and the uncertainty arising from rapidly changing requirements in overseas markets. By increasing the risk involved in export operations, environmental factors may delay investment decisions aimed at adjusting technologies to meet overseas environmental standards. Phytosanitary regulations and food standards may create market access problems on account of differing national standards, lack of transparency and inconsistent application of procedures.

20. Barriers to trade may emerge in particular if the standards are set so that it is easier for domestic producers in developed countries to meet them than for Zimbabwean exporters. This can be the case e.g. if the fulfilment of the standard requires particular inputs that are available to domestic producers on more favourable terms. The dominant participation of local industry in the standard-setting process may sometimes even lead to deliberate lobbying for creating entry

barriers to foreign producers.

21. Compliance with external environmental requirements may be difficult for Zimbabwean producers both with regard to the procedure and content of such requirements. Further, in addition to incremental production costs, trade effects may also arise if Zimbabwe is increasingly forced to source material, service or technology inputs from developed countries in order to meet the stipulated standards.

22. Moreover, the study suggests that so far, discussions on trade and environment in the OECD countries have tended to focus on the environmental impacts of production and trade in developing country commodities such as tropical timber and certain minerals. Although admitting that environmental damage may in cases be caused by these natural resource based products, the study notes that the trade and environment dialogue should not be limited to developing country products, nor to only raw materials, but it should also cover other products, including those of developed countries, and the export, from developed countries, of goods prohibited domestically. Further, it is pointed out that environmentally related trade measures are perceived to be applied only to selected sectors; an example is gold whose market access has not been subjected to environmental requirements despite the negative environmental effects of mining.

A. Vulnerability to external environmental requirements

23. The vulnerability of Zimbabwe's exports to external environmental requirements is partly determined by the sectoral composition of exports. See Table 1. Zimbabwe's exports are diversified compared to those of many other

Table 1

**Total exports and imports of Zimbabwe by main commodity groups, 1980-1993
(millions of dollars)**

Commodity groups:	1980	1985	1990	1991	1992	1993
Imports: (in value)						
Food and agr. products	15.8	69.2	115.9	101.8	439.3	240.9
Fuels	22.4	213.4	288.3	253.6	261.4	266.8
Ores and metals	1.3	23.5	45.3	54.5	33.0	58.3
Manufactured goods	141.4	565.1	1347.3	1555.3	1416.9	1217.2
Total	192.9	896.6	1851.4	2026.8	2206.5	1813.3
(share in percentages)						
Food and agr. products	8.2	7.7	6.3	5.0	19.9	13.3
Fuels	11.6	23.8	15.6	12.5	11.8	14.7
Ores and metals	0.7	2.6	2.4	2.7	1.5	3.2
Manufactured goods	73.3	63.0	72.8	76.7	64.2	67.1
Exports: (in value)						
Food and agr. products						
Fuels	188.0	493.0	753.7	703.4	592.5	642.1
Ores and metals	12.9	9.8	10.9	6.1	4.7	7.6
Manufactured goods	74.2	155.2	234.0	184.3	189.8	164.3
Total	155.1	279.4	453.3	382.5	441.8	500.7
(share in percentages)	433.3	954.5	1467.6	1286.5	1238.8	1320.5
Food and agr. products						
Fuels	43.4	51.7	51.4	54.7	47.8	48.6
Ores and metals	3.0	1.0	0.7	0.5	0.4	0.6
Manufactured goods	17.1	16.3	15.9	14.3	15.3	12.4
	35.8	29.3	30.9	29.7	35.7	37.9

Source: UNCTAD, based on the COMTRADE database

Note: Food and agricultural products consist of SITC 0+1+2+4 less (27+28); Fuels consist of SITC 3; Ores and metals consist of SITC 27+28+68; Manufactured products consist of SITC 5+6+7+8 less 68.

developing countries and include tobacco, sugar, maize, coffee, gold, asbestos, nickel, copper, ferro-alloys, iron and steel, cotton lint, textiles, chemicals and machinery. Table 1 shows the development of the composition of Zimbabwe's imports and exports both in value and relative terms over the period 1980-1993.

24. The destination of exports also affects vulnerability to environmental requirements. Around 50 per cent of Zimbabwe's total exports are destined for the OECD markets, where environmental requirements are strictest. Of these exports, the majority goes to the European Union market (where Zimbabwe benefits from preferential access under the Lomé Convention), United Kingdom and Germany being its main trading partners within the European Union. The United States and Japan also constitute significant export markets; their share of Zimbabwe's exports has typically been 5-7 per cent each. However, the single most important trading partner is South Africa with its share of 15 per cent, and other African countries account for another 15 per cent of exports. All in all, a relatively large share of Zimbabwe's export trade is conducted with low-income countries. Table 2 shows Zimbabwe's exports in 1993 by commodity groups and markets in more detail.

Table 2

Zimbabwe's exports by commodity groups and markets, 1993
(millions of dollars)

	World	OECD countries ¹			South Africa	Developing countries ²
		Total	United States and Canada	European Union		
Total	1320.5	674.4	97.8	417.3	268.2	346.6
Food and agr. products	642.1	353.8	40.9	235.7	87.3	184.0
Food	559.8	295.5	39.9	182.0	69.8	178.1
Agr. raw materials	82.3	58.3	1.0	53.7	17.5	5.9
Fuels	7.6	0.0	0.0	0.0	1.5	6.1
Ores and metals	164.3	97.2	6.9	53.3	19.5	35.2
Manufactured goods	500.7	219.8	49.7	125.2	158.3	121.0
of which:						
Chemicals	38.4	1.5	0.1	0.8	7.0	29.9
Textiles and clothing	111.6	71.1	11.6	59.0	27.2	12.7
Leather	7.6	4.0	0.0	3.5	3.3	0.3
Footwear	11.3	0.8	0.0	0.8	9.5	0.9
Machinery and equipm. Other man. products	39.6	2.2	0.4	1.5	18.6	18.7
	292.2	140.2	37.6	59.6	92.7	58.5

Source: UNCTAD, based on COMTRADE database

Note: 1) Excluding Austria, Iceland, Mexico, Norway and Turkey. 2) Excluding South Africa.

25. To analyse more closely the vulnerability of Zimbabwe's exports to external environmental requirements, it is necessary to look at the extent to which environmentally sensitive products are exported to environmentally sensitive markets. The UNCTAD secretariat has identified some sectors sensitive to environmental regulations (and sanitary and phytosanitary standards), based on environmental regulations applicable in OECD markets to each sector. Table 3 shows the destination and value of Zimbabwe's exports in those of the identified sensitive product categories that are of most significant export interest to Zimbabwe.

Table 3

**Zimbabwe's exports of selected goods sensitive to
environmental regulations by destination, 1993
(millions of dollars)**

	World	OECD countries			South Africa	Developing countries
		Total	United States	European Union		
Food	152.7	51.9	0.8	48.7	40.6	60.2
Textiles and clothing	117.7	75.5	11.4	62.2	28.8	13.3
Asbestos	56.9	16.8	0.2	4.9	7.7	32.0
Flowers	26.8	26.6	0.2	26.0	0.1	0.1
Wood and wood products	21.5	8.6	0.8	7.7	11.6	1.3
Leather and leather prod. (excl. footwear)	16.3	9.4	0.1	8.2	5.4	1.5
Footwear	11.3	0.8	0.0	0.8	9.5	0.9
Fertilizers	10.6	0.0	0.0	0.0	0.0	10.6
Plastics and plastic products	7.4	0.6	0.0	0.5	2.0	4.8
Paper and paper prod.	7.0	0.3	0.0	0.2	1.9	4.9
Detergents	5.7	0.2	0.0	0.2	0.3	5.2
Beverages	5.1	0.9	0.0	0.9	0.3	3.9

Source: UNCTAD, based on COMTRADE database

Note: see table 2.

26. All in all, US\$ 466 million, or 34 per cent of total exports were in products identified as sensitive to environmental regulations (and sanitary and phytosanitary standards) in 1993. It is interesting to note that in the EU market, the share of sensitive exports of total exports was 38.5 percent, while in the US market the share was only 14 per cent (mainly textiles and clothing) and in Japan 13 per cent (mainly asbestos). Of the products identified above, food products, textiles and clothing, asbestos and flowers had most significant markets in the OECD.

27. The fact that Zimbabwean industry tends to receive information on changing regulations and respond to them rather late augments Zimbabwean exporters' compliance difficulties with external environmental requirements, and thus their susceptibility to resulting negative trade impacts. It would be important for exporters to be aware of contemplated changes in environmental regulations before they are adopted so as to have enough time to adapt the products and production processes to meet the required standards.

28. Information on environmental requirements is already to an extent available from the Standards Association of Zimbabwe. In addition, the national trade development organisation ZimTrade has an Export Promotion Support Scheme (EPSS) developed to assist Zimbabwean enterprises in strengthening their exporting capabilities. Assistance from foreign consultants to meet import requirements of specific markets or international standards can be received through a program also run by ZimTrade. Many industry associations play an important role in educating their members on environmental issues, and the Confederation of Zimbabwe Industries and the Employers' Confederation of Zimbabwe have set up committees geared specifically to disseminating environmental information.

29. Thus, channels for information dissemination exist, but, according to the study, they may not be very effective especially concerning export markets and the environment. The extent to which firms are finally able to acquire the necessary information depends on the efforts of individual firms. Since the industry developed in isolation from international markets for a long time until the trade liberalisation programme, firms may not be very practised in obtaining information on export markets.

B. Specific requirements affecting Zimbabwe's exports

1. Regulatory measures

Food standards

30. The Zimbabwean export sector most likely to be affected by new environmental standards and regulations is foodstuffs. It is feared that Zimbabwe might lose some of its present and potential markets, in particular if the standards are tightened and extended to cover growing and processing methods. Especially the required testing and certification procedures are often difficult and sometimes also very costly. And, since it may already be difficult for Zimbabwean small scale producers to meet food quality standards (as opposed to food safety standards), complying with emerging environmental standards may pose similar difficulties to them. However, high value products such as ostrich meat have sufficiently large margins to absorb some increase in environment and health related costs without losing their international competitiveness.

Ostrich exports

The case of ostrich production is interesting for Zimbabwe. Ostrich meat is in high demand due to its low cholesterol; the main markets for live ostriches are Europe, United States and Australia, and for ostrich skins Japan and the USA. For ostrich meat producers exporting is profitable: they can expect a net return of US\$ 100 per bird from export sales as compared to US\$ 40 from domestic sales. However, the recent spread of the New Castle disease has complicated ostrich export programmes.

The long term strategy in Zimbabwean ostrich industry is to export ostrich meat and skin. This is more attractive to ostrich farmers than the export of live birds due to the higher value added. At present, Zimbabwe cannot export ostrich meat to the European Union. To do that, it should have an European Union approved abattoir. However, there are no clear requirements that the abattoir should satisfy - in fact there is no European Union approved ostrich abattoir anywhere in the world. Nevertheless, an ostrich abattoir facility is being constructed in Zimbabwe at the cost of US\$ 1 million; farmers are contributing 25% of their earnings from exports of ostriches and ostrich eggs towards this fund. If the abattoir is completed and approved, the EU will still check the management of the facility to guarantee that sufficient standards are met.

The rules of ostrich trade are largely still open. For example, it has not been determined whether ostriches are poultry or wildlife. This makes it difficult for Zimbabwean producers to obtain information about regulations that vary very much from country to country.

Although the strict regulations are based on veterinary concerns, they also protect the poultry industry of developed countries from competition from ostrich imports. Developed countries, too, are preparing to engage in ostrich production, which means that by the time Zimbabwean producers are allowed to export ostrich meat in developed countries, they will have to meet domestic competition.

The costs of complying with the veterinary requirements imposed by developed countries are high. In spite of these costs, the ostrich industry of Zimbabwe remains viable and competitive due to the high prices obtainable in the international markets. Yet, the future of the sector is not clear in the face of increasing supply and competition from developed countries.

31. Environmental requirements are considered troublesome in the sense that they may be unilaterally imposed by importing countries without being subjected to much discussion, and that they may be country specific. Phytosanitary requirements do indeed differ significantly between countries, and the precautionary principle is in extensive use. Since the products of food industry are homogenous, harmonisation of the requirements would benefit producers.

32. The study also notes a perceived lack of scientific basis for certain environmental regulations in the developed countries. For example, in peanut butter processing, Zimbabwe has adopted an aflatoxin limit of 20 parts per billion, but the Nordic countries are proposing to adopt a standard of 4 to 5 parts per billion. The study reports that Zimbabwean industry has raised the question on whether there is scientific justification for this difference and whether investments should be made in Zimbabwe to adapt to the potential new Nordic standards. The question can also be raised to what extent technological implications for producers are considered when setting strict requirements in importing countries, especially if there is no domestic production.

33. Environmental standards typically increase in stringency over time. Because Zimbabwe is at a lower level of technological development than the developed countries, and because it can devote only limited resources to research and development, it is likely that the standards evolving in the developed countries will prevalently exceed the standards evolving in Zimbabwe. Thus, Zimbabwe will be forced to assuming the role of reactively adjusting to standards evolving in the developed countries.

34. In particular the horticulture (mainly fresh fruits and vegetables) and beef exports to Europe are feared to be affected unless Zimbabwe can quickly adapt to new requirements. The EU has discussed a wide range of environmental, health and sanitary regulations for possible implementation in the short term and proposed a harmonised system to apply to all member states. Even if Zimbabwean farmers could adapt to the new demands, the proposed phytosanitary checks (requiring that importers inspect all products before they leave the country of origin and that a bill of health be issued) will make it difficult to penetrate the market. As for meat, Zimbabwe has so far not faced problems in meeting its beef quota to Europe, but environmental and health considerations are expected to emerge in the future.

35. In addition to food standards, standards relating to other commodity exports are also important for Zimbabwe. Such standards may be national standards of the export markets or emerge in the context of Multilateral Environmental Agreements. However, the decreasing trend in international commodity prices may make it difficult for Zimbabwe to internalise the environmental costs of commodity production.

Bans

36. The trade measure with most dramatic effects is the banning of a product for environmental or health reasons. This has been the case for asbestos: Zimbabwe's asbestos exports significantly decreased due to a strong anti-asbestos lobby and the banning of products containing asbestos in certain developed countries. Production only picked up after new export markets were found in the former Eastern bloc; South East Asia is now targeted as a future market.

37. In clothing and textiles, the concerns with external environmental requirements relate to chemical use, since certain chemicals and processes used in Zimbabwe are not allowed in all export markets. Such chemicals include for example organophosphorus in dyeing, acrylic in sizing, and banned chemicals such as uria in easy care finishing. It is expected that complying with international regulations will be expensive for the industry. A mechanism for testing imported raw materials and intermediate products also needs to be developed to ensure that Zimbabwean products do not fail to meet required standards because of properties of imported materials.

Packaging regulations

38. Exporters to the European Union are increasingly required to use packaging materials that are recyclable and returnable. Most EU member states have implemented or proposed national programmes on packaging which are unique in structure and targets for recovery, reduction, recycling, and permitted means of packaging, as well as the use of instruments to achieve the set targets, such as take-back obligations, taxes, deposit-refund schemes and labelling.⁶ As a result of this, Zimbabwe may have to meet a variety of different packaging requirements for its European exports. A number of companies interviewed for the study, e.g. Flexible Packaging, reported that packaging which may be acceptable to the target market was not always very expensive to manufacture.

39. The EU Packaging and Packaging Waste Directive tries to harmonise the national packaging laws within the European Union. However, exporters are faced with the problem of finding out and understanding the regulatory requirements of the many different national or regional packaging schemes, and the acquisition of such information may be a costly exercise. Exporters may also be confronted with technical and resource problems that make it difficult to achieve conformity with a particular country's regulatory requirements. For example, using packaging materials that are recyclable in the importing country may be difficult for Zimbabwe, and recycled materials may be more expensive than traditional ones. The study reports e.g. that the costs of collecting and separating plastic waste result in recycled plastic being 20 per cent more expensive than using virgin resins. Finally, there may also be difficulties in submitting packaging for evaluation and obtaining necessary certification, especially if on-the-spot inspection of production and packaging facilities is required.

40. All this may result in packaging costs becoming high in relation to sales. Further, the packaging specifications of importing countries may force Zimbabwe to source export packaging from the target market. This not only increases the costs of exporters, but also harms the domestic and export market potential of Zimbabwean packaging industry. For example, Zimbabwe complained that its exports of flowers to Germany were refused on account of environmentally unfriendly packaging, and initially Zimbabwe may have had to import packaging to be able to export to the target market. Eventually the problem was resolved through information dissemination on the specific requirements and consequent adaptation.

2. Voluntary developments

Eco-labelling

41. Eco-labelling schemes are in principle designed to enhance the competitiveness of labelled products by pointing out their environmental qualities. They also indirectly convey the impression that unlabelled products in the same product category are relatively less environmentally friendly. Thus, although participation in an eco-labelling scheme is voluntary, it may in practice become necessary to apply for an eco-label in certain markets and for certain products.

42. The study holds that most of Zimbabwe's paper products and paper industry processes are environmentally friendly and should qualify easily for eco-labels. External environmental requirements are therefore not perceived as a threat to the industry, and it is felt that eco-labelling would affect the industry positively. The study lists the use of mechanical pulping processes, the use of recycled materials, replanting of trees, and the use of cotton as raw material for fine paper as environmentally friendly features of the industry.

Voluntary international standards

43. The study reports that compliance with the requirements of international standards that include process-related aspects is not easy for Zimbabwean producers. Despite serious efforts by several companies, only two Zimbabwean companies had fulfilled the requirements of the quality standard ISO 9000. There

may be similar difficulties in complying with the environment-related ISO 14000 standard series.

Consumer preferences

44. In the furniture sector, due to pressure from environmentalists in developed countries, demand for hardwood (and hardwood based furniture) has decreased and correspondingly that of softwood, especially pine, has increased. Thus, timber producing firms of Zimbabwe are now increasingly exporting pine logs due to the high prices obtainable in the international markets. This has resulted in raw material shortages for local furniture industry, in particular since the better quality timber tends to be exported. This reduces the quality of Zimbabwean furniture and prevents the expansion of an otherwise internationally competitive export branch with high value added (on average, by making furniture, the value of timber is increased by three and a half times). Hence, as a result of these developments, the sector may be moving down on the value chain.

45. Increasing consumer demand for insecticide-free or chemical-free cut flowers in the European Union is feared to lead to a fall in Zimbabwe's exports of flowers to this market, unless methods to produce flowers without the use of harmful chemicals can be developed. Considering the recent growth of the flower industry and its export potential, it would be in Zimbabwe's interests to be able to keep the flower export markets.

V. EFFECTS OF MULTILATERAL ENVIRONMENTAL AGREEMENTS ON TRADE

46. Regarding Multilateral Environmental Agreements (MEAs), the study suggests that globally binding conventions may need to be adapted, e.g. through admission of one-by-one exceptions, to better serve the environmental and other interests of individual developing countries. So far, regional developments in environmental regulations relevant to Zimbabwe have been sparse and have tended to focus on specific environmental threats. However, there are now indications that the region may be moving towards adopting regional environmental standards, e.g. in the contexts of the Africa Economic Community and the Common Market for Eastern and Southern Africa (COMESA).

47. The study recognises, nevertheless, advantages in being a signatory to multilateral environmental agreements. As a signatory Zimbabwe is in a better position to voice its concerns regarding the agreements. For example, the recent ratification by Zimbabwe of the Biodiversity Convention might be partly attributed to a desire to be able to participate in the debate (concerning e.g. the right of indigenous people to participate in the exploitation of genetic resources by biotechnology) as an "insider". Finally, even if Zimbabwe did not sign an MEA, it might still be affected by the decisions taken in the framework of that agreement.

A. CITES

48. Zimbabwe has been party to the Convention on International Trade in Endangered Species in Wild Fauna and Flora (CITES) since 1981. However, there is a conflict between the regulations of the Convention and Zimbabwe's interests with regard to ivory trade. The Conference of the Parties to CITES agreed to include the African elephant in Appendix I of the convention as from January 1990.⁷ Zimbabwe, however, considers its population of the African elephant to be well managed and able to withstand exploitation on a sustainable basis; in fact, the elephant populations in Zimbabwe may exceed sustainable levels.

49. Zimbabwe and a number of other southern African elephant range states entered reservations against the Appendix I listing of the African elephant. This means that these states could continue to trade in ivory and other African elephant products if they could find buyers. However, parties other than those that had entered reservations against the listing may not authorise the import of ivory and other elephant products for commercial purposes. For example, three years after the introduction of the ivory trade ban, Zimbabwe had from culling operations an estimated stock pile of US\$ 12 million worth of ivory that it could

not legally sell.

50. Thus in Zimbabwe's view, CITES is clearly restrictive. It is thought that international agreements overshadow local initiatives, which can have serious implications on national environmental management and prohibit rural communities from economically benefitting from wildlife. Therefore, case-by-case exceptions should be allowed in global environmental agreements when necessary.

51. A possibility for such exceptions has been built in CITES; the convention provides for the inclusion, deletion and the transfer between appendices of species on the basis of well documented scientific evidence on the trade and on the status in the wild of the species concerned. A process has been established for consideration of proposals from any interested African elephant range states wishing to have its elephant population transferred back to Appendix II of CITES, and Zimbabwe has attempted this transfer. However, many parties to the convention, including the majority of African elephant range states have not supported any such proposals for fear that poaching of elephants for their ivory would escalate.

52. In the event that the world-wide ivory trade ban cannot be relaxed, the study suggests that consideration should be given to allowing countries to establish clearing houses for by-products from culling activities. The Southern African Centre for Ivory Marketing (SACIM), whose member countries are Botswana, Malawi, Namibia and Zimbabwe, is considered a good starting point to this effect.

B. Basel Convention and Bamako Convention

53. Zimbabwe did not originally ratify the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, because it believed that the Basel Convention did not sufficiently address problems related to Africa, especially as a potential recipient of wastes. However, Zimbabwe is now planning to ratify the Basel Convention due to increasing incidences of dumping of hazardous wastes by the developed world, against which non-ratification did not provide appropriate protection, especially in the search for compensation or re-export of the hazardous waste.⁸

54. Zimbabwe is party to the Bamako Convention on the Ban of Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, which it considers to be more defensive than the Basel convention due to its larger scope. The Bamako Convention has not yet entered into force, but once it will, Zimbabwe expects to benefit environmentally from it. Thus, in the field of hazardous waste management, it is possible for stronger or more specific regional agreements to coexist with a global convention.

C. Montreal Protocol

55. Signatory countries to the Montreal Protocol on Substances that Deplete the Ozone Layer have agreed to gradually reduce and eliminate by the year 2000 the production and consumption of chlorofluorocarbons and other ozone depleting substances (ODS). Zimbabwe ratified the Montreal Protocol in 1992 and the London and Copenhagen amendments to the Protocol in 1994. The amendments introduced a faster schedule for phasing out CFCs and halons.

56. The Government of Zimbabwe has developed a ODS phase-out strategy consistent with the economic reform and industrial development programme. The strategy will be adopted uniformly throughout all affected sectors and the Government encourages the adoption of alternative technologies for the effective reduction of controlled substances. A registration system for all qualified ODS users will be developed to promote greater discipline in their practices; targeting the extensive informal and small scale sectors is a priority here.

57. As Zimbabwe's consumption of ozone depleting substances is only 0.07 kg per capita, the country is allowed an extra ten-year period to fulfil the protocol requirements with regard to ODS used to meet basic domestic needs. Almost all ODS used in Zimbabwe are imported, and the impacts of the Protocol are already

felt in increased prices and restricted availability of the affected substances.

58. There is a high degree of awareness of the Montreal Protocol in Zimbabwe, and a UNEP-supported programme for phasing out ODSs has been set up. Alternative technologies and recycling possibilities are being sought, and, in some cases transitional chemicals are being used. For example, air conditioning manufacturers have replaced CFC-12 by alternative chemicals.

59. According to the Government programme, halons 1301 and 1211 would be completely phased out by 2005 and CFC-11, CFC-12 and CFC-113 by 2010. The main uses of ODS in Zimbabwe are in refrigeration, air conditioning, fire-fighting, aerosols and agriculture. Accordingly, the sectors expected to be affected by the phase-out programme include domestic refrigeration, air conditioning, polymethane foams and aerosols. Sectors that depend on refrigeration facilities such as food industry are also likely to be indirectly affected, which may have important consequences bearing in mind the export significance of food products.

60. In agriculture, the major substance used is methyl bromide that is also used in horticulture and bulk grain storage. There are so far no controls on methyl bromide on developing countries and the Montreal Protocol provides for complete exemption for quarantine and pre-shipment applications. However, the importing country may have standards for the use of methyl bromide. For example, the State of California and the Government of the Netherlands are considering banning the use of methyl bromide. In such cases, Zimbabwe's exports could be affected, in particular given the fact that almost half of total exports is food products.

D. Climate change convention

61. Zimbabwe's economy is characterised by a heavy dependence on favourable climatic conditions. Economic growth is largely based on reliable agricultural performance and climatic variations such as recurrent droughts are a common concern. Consequently, the issue of climate change is very important for Zimbabwe's economy, and Zimbabwe was one of the first countries to ratify the climate change convention.

62. Most of Zimbabwe's greenhouse gas emissions come from energy production, in particular the burning of coal. Coal, a domestic energy source for Zimbabwe, is used as a major industrial fuel. National development plans are also relying on the use of coal. The study questions whether it is in Zimbabwe's best interests to reduce carbon dioxide emissions considering that 40 per cent of all energy for both domestic and industrial purposes comes from coal based thermal power stations and woodfuel for rural folks, and that Zimbabwe's greenhouse gas emissions are an insignificant proportion of global emissions. In other words, the cost of adaptation would be high, but the fairness of imposing such a high cost on Zimbabwe is questionable.

63. It is also feared that the convention might have serious implications if it leads to, for example, trade restrictions in tobacco cured using coal, steel from conventional blast furnaces, and other products which may be assumed environmentally unfriendly by the developed world.

64. The study states that the objectives of the climate change convention can be fully implemented only if new and additional funds are identified and effectively transferred, environmentally sound technologies are made available at non-commercial terms, and existing GEF funds are made more accessible.

VI. EFFECTS OF TRADE POLICIES ON THE ENVIRONMENT

65. Trade policy reform is an essential element of the general economic reform programme undertaken in Zimbabwe. Therefore, the effects of trade liberalization and export expansion on the environment is a key issue in the overall analysis of trade and environment linkages in Zimbabwe. The study notes that such effects may be positive or negative, and may largely depend on accompanying policies. On the one hand, to the extent that trade liberalization leads to increased production, and if relevant domestic environmental regulations are loose, there may be negative environmental effects (scale effects).

66. On the other hand, trade liberalization may also have positive effects on the environment, for example import liberalization may facilitate the introduction of environmentally sound technologies and access to environment-friendly inputs. For example, prior to the trade liberalization programme, only a limited number of chemicals, including pentachlorophenol (PCP), were available to leather tanneries in Zimbabwe. Now, leather tanneries have easier access to environment-friendly chemicals, at prices which are closer to international prices.

67. Increased openness also leads to intensified commercial and investment linkages with markets where environmental requirements are stringent. Thus, consumer demand for environment-friendly products in the developed country markets encourages Zimbabwean producers participating in these markets to modify their products accordingly. What this means is that liberalized trade could help to spread environmental standards. This would have a positive effect on the environment in Zimbabwe, to the extent that such standards are also relevant in the context of local environmental conditions and priorities. (To the extent that environmental requirements in the importing country are inappropriate or irrelevant for the country of production, compliance with such standards, while securing access to developed country markets, would be of limited environmental benefit for the producer country in the short run).

68. With regard to the environmental effects of export production, in Zimbabwe, the domestic environmental priorities seem to have been oriented towards wildlife management and correcting environmentally harmful land use patterns. Trade-related environmental issues, and the potential environmental damage caused by the production activities of the manufacturing and industrial sectors which, incidentally, are also major exporters and earners of foreign exchange, have not been focused on. However, production in export-oriented sectors may contribute to increased pollution unless improved measures are introduced to monitor and regulate e.g. the storage, handling and disposal of hazardous materials; agricultural chemical runoff into surface waters and aquifers; and surface water polluting by the mining industry.

69. The scale effects of intensive mineral extraction can be quite damaging to the environment. In Zimbabwe, continuing pollution from mining is largely due to institutional factors. For instance, the Mines and Minerals Act is so powerful that it supersedes all other Acts, including those that are meant to protect the environment. Very few restrictions are attached to mining rights once a mining permit has been issued, and thus incidents like timber felling without reforestation, poaching by mine workers and siltation from eroding dumps can take place. The study attributes this to the need to secure foreign exchange earnings from mining. According to the study, the extraction and processing of mineral ores has several negative impacts on the environment of Zimbabwe, and including environmental provisions in the Mines and Minerals Act would be beneficial.

70. Mining interests in Zimbabwe are largely foreign-controlled by a few major transnational companies and a number of smaller foreign companies. The foreign companies are mainly active in the medium-sized to large end of the sector. State participation in the sector is also significant, and in addition, there is a considerable domestic private small-scale mining industry. The larger companies tend to have more resources to address their environmental issues than the small-scale miners.

71. Metal works are also major polluters, and metals are major export items for Zimbabwe. Emissions could be reduced at these facilities by fitting scrubbers to recover sulphur. The problem of industrial waste has, too, reached significant proportions as a result of a lack of effective waste management systems by most companies. All in all, there is a general lack of awareness of environmental standards, the monitoring of pollutants is poor and waste management measures frequently inadequate.

VII. CONCLUSIONS AND RECOMMENDATIONS

72. According to the study, the central issues in trade and environment for Zimbabwe are (a) to take measures to avoid or mitigate the adverse trade effects of environmental policies, standards and regulations so that the products of weaker trading countries are not discriminated against and that the environment is not misused as a protectionist weapon by the strong against the weak; and (b) how to identify and minimise the potential negative impacts of trade on the environment.

73. Inter alia, the need to service debt, especially hard-currency debt, dictates for Zimbabwe a need to export to OECD markets. In addition to international commodity prices, how possible protectionist tendencies in industrialised countries may affect the country's exports is a major concern for Zimbabwe. Consequently, as for the first issue above, the study questions the scientific justification for certain environmental measures in the developed countries. A protectionist intent of specific measures related to phytosanitary food standards is also perceived, e.g. in the case of ostriches.

74. The study summarises that exporters from Zimbabwe will have to comply with the new environmental requirements arising in their export markets, be they regulatory or voluntary instruments, or risk losing exports. Meeting the requirements may involve extra costs and the need for technological improvements, but high interest rates on local private sector borrowing are a major constraint for investments in environmental improvements. In addition, the study indicates that in some cases there may be a trade-off between environmental standards and quality standards, like in the case of food production, or environmental standards and productivity, like in the case of cotton growing.

75. However, since stricter standards are likely to spread with time to new markets, Zimbabwean industry might be better off trying to start action to meet the new standards right away rather than giving up market share and attempting to avoid compliance with the standards by diverting exports to other markets. Nevertheless, in cases where the environmental requirements in the importing countries are not environmentally significant for Zimbabwe, the country might at times be environmentally better off by giving priority to environmental improvements in areas which may not be immediately trade-related.

76. Positive measures can be envisaged to mitigate the potential trade effects of both domestic and external environmental policies and to facilitate industry compliance. Capacity building in Zimbabwe can help the country to participate meaningfully in the international dialogue on trade and environment, and to respond quickly to the challenges arising from the linkages between trade and environment without sacrificing development and growth. The study also emphasises the importance of information collection and dissemination on environmental requirements in export markets. Some channels for this purpose exist, but their effectiveness could be strengthened. Capacity building and improved access to environmental information are important at the company level, especially since Zimbabwean industry tends to receive information on both domestic and international environmental requirements rather late.

77. Strengthened cooperation between the Government and firms would be useful since the Government is often much more knowledgeable about international requirements than industry, and the industry feels that there is not enough consultation when domestic standards are set. The study also proposes Government compensation for the added costs of environmental protection for companies through a system of market based incentives.

78. In the light of the prevailing high interest rates that inhibit investments in environmental improvements, improved access to technology and capital could further expedite the compliance of Zimbabwean industry with environmental requirements.

79. As for the second issue, potential negative impacts of trade on environment, the study has pointed out that the environmental impacts of trade liberalisation depend on the environmental policies that accompany the trade policies. In the case of Zimbabwe, the relative looseness of domestic environmental legislation both in design and enforcement could have led to some harmful environmental impacts created by production, including export production. It would be necessary to strengthen the legislation in certain areas, especially hazardous waste management, and to ensure that the environmental impacts of all sectors of economic activity are properly addressed, taking into account the environmental, economic and social conditions and priorities of the country. On the other hand, the country has in place a good policy for wildlife preservation that is based on sustainable use and involves the local communities.

80. The study argues that instances could arise in which compliance with Multilateral Environmental Agreements could have negative consequences both for the trade and the environment of a country, unless the specific circumstances of countries or regions are sufficiently taken into account in the design of such agreements; CITES is mentioned as an example. Regional agreements may be particularly interesting for African countries that have very specific problems. Also, due to the structure of its exports, Zimbabwe may be especially vulnerable to the effects of certain MEAs such as the Montreal Protocol. However, in some cases adjustment to the requirements of MEAs can be made quite easily.

81. The environmental effects of distortions in international trade, such as those caused that by agricultural subsidies in the developed countries, and other factors that limit the development of Zimbabwe should also be addressed when analysing the impacts of exports, or trade policies in general, on the environment. Declining international commodity prices have forced Zimbabwe to increase natural resources extraction in order to maintain its foreign exchange earnings.

Notes

1. This section also draws on the following sources: Handbook of international trade and development statistics, UNCTAD, Geneva, 1993; Wright, Rupert, "Zimbabwe", Project & Trade Finance, Issue 137, Sep 1994; Trade Policy Review, Zimbabwe, GATT, Geneva, February 1995.

2. Nickerson, Brian J., "The environmental laws of Zimbabwe: a unique approach to management of the environment", Boston College Third World Law Journal, Vol. 14, No. 2, Summer 1994, p. 189-230.

3. Kadenge, P.G., H. Ndoro and B.M. Zwizwai, "Zimbabwe's Structural Adjustment Programme: The First Year Experience", in: Structural adjustment programmes in SADC: experiences and lessons from Malawi, Tanzania, Zambia and Zimbabwe, ed. A.M. Mwanza, Harare, 1992.

4. Nickerson, op.cit.

5. Ibid.

6. Perrone, M.A., "Fitting the Environmental Piece into the Maastricht Puzzle", The Environmental Law Reporter, Vol. XXV, No.4, April 1995.

7. Appendix I species are those "threatened with extinction and are or may be affected by trade". Import of Appendix I species is prohibited for "primarily commercial purposes". Appendix II contains species that "although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival". Trade in Appendix II species is allowed if authorities in the country of export determine that the export will not be detrimental to the survival of the species.

8. Any transboundary hazardous waste transaction taking place in contravention of the provisions of the Basel Convention is considered "illegal traffic". According to Article 9 (illegal traffic), the State responsible for movement of hazardous wastes has the obligation to ensure its environmentally sound management, if necessary by re-importation into the State of origin. In conformity with Article 8, if disposal is not carried out in accordance with the terms of the contract, the State of export has a duty to reimport. In addition, if a transaction takes place in accordance with relevant provisions, but disposal cannot be carried out as foreseen, the State exporting has an obligation to ensure re-importation of the wastes if alternative arrangements cannot be made for their environmentally sound disposal.