

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

A Country Study on the Export Crop Sector in Nigeria



# **NOTE**

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

UNEP/ETB/2002/9

UNITED NATIONS PUBLICATION

ISBN 92-807-2218-2 ISSN 1683-8157

# **EXECUTIVE SUMMARY**

#### Preamble

The issue of environmental management has assumed a worldwide dimension, cutting across both developed and developing nations, and necessitated by the impacts generated by diverse social and economic activities, including global trade. Developing nations are the worst hit by environmental degradation arising from the exploitation of their natural resources in their quest to earn more foreign exchange. Most of the exports are from agriculture. Those that were or are oil or mineral resource exporters have started to switch to agriculture, thereby exploiting more natural resources.

Nigeria, despite her oil resources, has put in place various trade policies aimed at changing the country from a monolithic oil dependent economy to one in which the non-oil sector can contribute substantially to the gross domestic product (GDP) and exports, among other reasons. A Structural Adjustment Programme (SAP), including trade liberalization was a major policy designed to achieve these goals.

Agriculture is a major component of Nigeria's non-oil sector, contributing on average 81 per cent in 1962-1964, 56.41 per cent in 1983-1985, 64.64 per cent in 1986-1988, and rose to 71.66 per cent in 1992-1994. The value of agricultural exports increased by about 1,500 per cent, from only N 193.6 million in 1985 to an annual average of N 2,575 million in 1988-1992, representing 0.82 per cent of Nigeria's total GDP in 1985 and an average of 2.89 per cent in 1988-1992. Cocoa, rubber, fish and shrimps, forestry products and cotton are the main agricultural commodities boosting Nigeria's agricultural exports. Several policies and programmes put in place by the Government also significantly contribute to this achievement.

# The broad objective of the study

This study attempted to assess the degree of the impacts of trade liberalization and trade-related policies on the environment, and consider the linked social and economic effects using the cocoa sector and rubber sub-sector for the case study. The aim is to identify any positive or negative impacts of the policies of trade liberalization, with a view to coming up with policy proposals that will:

- 1. Enhance the positive impacts
- 2. Mitigate the negative impacts
- 3. Promote coherence and sustainability of agricultural trade policy.

#### Methodology

A National Stakeholders' Workshop consisting of about 55 participants took place in June 2000 to sensitize the public and launch the study. A National Steering Committee was formed to guide the focus of the study. Thereafter, a sectoral inputs workshop, guided by the National Steering Committee, was held on 17 August 2000, and came up with some procedures, methods and modalities subject to the observations in the field. Arising from the secondary data collected from the relevant State and Federal Ministries, the Cocoa Research Institute of Nigeria (CRIN), the Rubber Research Institute of Nigeria (RRIN), the Nigerian Institute of Social and Economic Research (NISER), the Central Bank of Nigeria (CBN), the Federal Office of Statistics (FOS), universities, the six main states producing cocoa (Ogun, Ondo, Cross River and Abia States) and rubber (Edo, Delta, Abia and Cross River States) were selected. After preliminary visits to these states, high, low and negligible (or none) producing local government areas (LGAs) were identified for each state and crop, where Rapid Rural Appraisal (RRA) exercises were conducted and farm household crosssectional data were collected. Soil and water samples were collected in numerous villages, farm and factory sites for analysis on nitrate, phosphate and metal concentrations. Secondary and primary data on yield, domestic and world prices, gross margin, net income, prices of agrochemicals, levels of use of fertilizers, pesticides, herbicides etc., were collected for the periods before SAP (1986), during SAP (1992-1993) and after SAP (1999-2000) was implemented. However, the primary data were collected between August and November 2000 for soil and water analysis, while secondary data were used for the SAP period and other identified regimes, as obtained from the Federal Office of Statistics, the Central Bank of Nigeria, the relevant research institutes and universities, as well as from the private sector.

#### Major findings

Some of the major findings derived from the study are:

# (a) Production/outputs

- (i) Output and exports of cocoa and rubber in Nigeria declined between 1980 and 1985 (pre-SAP) and took an upward turn after SAP policies were introduced in 1986.
- (ii) New areas were planted to cocoa before the SAP period compared to during SAP, but the rate of abandonment of cocoa farms fell sharply during SAP as farmers took care of their existing cocoa farms. There was an increasing trend for new areas planted to rubber during and after the SAP period.

#### (b) Inputs and services profile

(iii) The importation of fertilizers and fungicides rose sharply during the SAP period compared to the pre-SAP period but importation of fungicides declined after the SAP period.

- (iv) Chemical input prices have been rising sharply, partly because of the continued depreciation of the *naira*<sup>1</sup> since the SAP period, but the prices of cocoa and rubber declined after the SAP period and hence lowered the demand for agrochemicals by tree crop farmers.
- (v) Even though farmers indicated that agrochemicals are important for increasing output, the high prices of agrochemicals relative to those of export crops accounted for little or no demand for agrochemicals.

### (c) Trade liberalization (economic, social and environmental)

- (vi) Due to the low usage of chemicals by the small-scale producers (that represent over 85 per cent of Nigerian farmers), the concentrations of nitrates and phosphates in the water and soil samples were low. The potential for using harmful levels of these elements is however high, if supportive policies were put in place without adequate guidance and control in the appropriate use of different levels and types of agrochemicals.
- (vii) There was an apparent lack of knowledge of the potential consequences of misuse of agrochemicals, as some farmers used them to treat toothache, stomach-ache, etc. Furthermore, when applied on trees without using protective clothing, there were reported cases of body itching, swollen hands and faces of some farmers.
- (viii) Over-tapping (slaughter tapping) of rubber leading to the early destruction (death) of the rubber trees, has started to expose the soil to processes of degradation, particularly when the trees (after drying up and used for fuel wood) are not replanted to maintain a desirable ecosystem.
  - (ix) Dumping of cocoa pod husks serves as an inoculum for *blackpod disease*, a major disease influencing the yield of cocoa. This environmental problem could lead to a loss of yield which may be as high as 20 per cent, necessitating the use of fungicides. If the pod husks are dried and properly managed, they could serve as inputs for livestock feed, soap making and organic fertilizer.
  - (x) Trade liberalization and trade-related policies have led to substantial gains for many farmers and the economy. However, they potentially have negative net environmental and social impacts to the tune of N 69.92 million in the case of rubber—mainly because of over tapping—but positive environmental impacts of N 11.859 billion in the case of cocoa production.

<sup>&</sup>lt;sup>1</sup> Nigerian currency.

#### (d) Strategic policy measures for buoyant and sustainable agricultural trade

The Government should:

- (a) Put in place a Farm Advisory Services Unit specifically meant for agrochemicals, to guide the optimal use of appropriate chemicals, as well as to publicize the productive use of cocoa pod husks (when dried as raw materials for soap, livestock feed and manure)
- (b) Strengthen the Environmental Agency at the Federal and State levels so as to be able to monitor agrochemicals usage at the grass-roots level as well as in (rubber) factories. This should be through capacity building programmes and provision of an enabling environment.
- (c) Establish a non-bureaucratic supervisory marketing body comprising farmers' associations, researchers, etc., which will ensure that domestic export crop prices received by farmers are close to world prices, serving as an incentive for increased crop production and reasonable demand for agrochemicals for optimal use on farms. This could be done through zonal arrangement by the Federal Ministry of Commerce and the NEPC, with adequate facilities at the local level.
- (d) Develop infrastructures such as roads, water supplies, health centres, schools, etc. in export crop producing areas to serve as an incentive and encouragement to farmers and minimize the negative environmental impacts of trade liberalization.

The costs for all these proposed policies have been estimated and are in relevant sections of the report. On the other hand, it is suggested at the local level that:

- (a) Farmers' Associations should continually inform their members on environmental degradation behaviour of the farmers through training, workshops, seminars, etc. and educate the rubber farmers on sustainable tapping techniques in order to avoid slaughter tapping as currently practiced.
- (b) Farmers should serve as information disseminators to fellow farmers on sustainable production practices as well as on prices and good quality chemicals, to eradicate the 'sharp' practices of Licensed Buying Agents as observed during the study period.

# ABBREVIATIONS AND ACRONYMS

ADP Agricultural Development Programme
ANCE Association of Nigerian Cocoa Exporters

CAN Cocoa Association of Nigeria

CBA cost-benefit analysis
CBN Central Bank of Nigeria
CDU Cocoa Development Unit

CPAN Cocoa Producers' Association of Nigeria
CRIN Cocoa Research Institute of Nigeria

FAO Food and Agriculture Organization of the United Nations

FDAS Farm Deelopment Advisory System
FEPA Federal Environment Protection Agency

FMARD Federal Minitry of Agriculture and Rural Development

FME Federal Ministry of Environment

FOS Federal Office of Statistics
GDP gross domestic product

IITA International Institute of Tropical Agriculture

IPM Integrated Pest Management

LGA local government area naira Nigerian currency, N

NGOs non-governmental organizations

NISER Nigerian Institute of Social and Economic Research

NTCDU National Tree Crop Development Unit

OECD Organization for Economic Cooperation and Development

RPAN Rubber Producers' Association of Nigeria

RRA Rapid Rural Appraisal
RRIN Rubber Research Institute

SAP Structural Ajustment Progamme
UNAAB University of Agriculture, Abeokuta
UNP United Nations Development Programme
WARDA West African Rice Development Authority

WTO World Trade Organization



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