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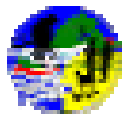
Land Water Interface

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DFID Natural Resources Systems Programme

Policy Brief



AGRO-CHEMICAL MANAGEMENT FOR HEALTH AND THE ENVIRONMENT



CGPC



AGRO-CHEMICAL MANAGEMENT: HEALTH AND THE ENVIRONMENT

The poor management and use of agro-chemicals has emerged as one of the more significant challenges confronting the environment health and trade in the region.

Increasingly, Caribbean governments are recognising the utmost importance of procedures for selecting appropriate agro-chemicals for use in our ecosystems in order to protect the health of humans and the environment.

There is now emphasis on the economic cost of poor agro-chemical management and use, the inherent threat to human health and life, and the threat to non-target and/or beneficial organisms. The persistence of certain agro-chemicals and accumulation adding to infertility of our soils must be measured against the potential benefits of their use to increase agricultural productivity.

Serious impacts on our people's health and a safe environment

The negative impacts of the phenomenon of poor agro-chemical practices are not exclusive to the Caribbean. There is now mounting evidence that developing countries worldwide suffer a disproportionate share of serious consequences. While developing countries use only 10% to 25% of the world's pesticides, they suffer up to 50% of the reported cases of acute poisoning, and between 73% and 99% of the reported fatalities among pesticide applicators.

This suggests a lack of effective management, and poor selection of chemicals. In a recent three-year Caribbean study, cases of incorrect application of agrochemicals, inadequate application equipment and protection, and an absence of long-term monitoring of the impacts were found.

Furthermore, it is evident that the children and the poor, and the little-educated and socio-economically disadvantaged are the ones at greatest risk from improper pesticide use. Studies in Jamaica on human health effects, for example, have shown that 50% of cases of acute poisoning were under the age of five.

There was no data on chronic effects on the population although it is known that long term exposure can result in birth defects, reduced fertility, damage to the immune system, genetic disorders, hormonal effects, damage to the nervous system, and impaired learning.

Activities to which the more serious impacts of this problem have been attributed include:

- Illegal imports and their use
- Repackaging of chemicals by vendors without labelling
- Incorrect application methods and application equipment
- Failure to wear protective clothing
- An absence of consistent long-term monitoring and research
- A lack of long-term monitoring programmes and targeted research activities, including bioaccumulation hence
- Lack of financing and full time staff in some territories

A Regional Issue

The Caribbean environment is especially vulnerable to agro-chemical pollution mainly because of the small size of the islands and regular hurricanes that transport chemicals through waterbodies and a profusion of watersheds.

An investigation of agrochemical pollution cannot be confined to one or two Caribbean countries, and must be treated at the regional level. The European Union (EU) and the USA are increasingly demanding that Caribbean agricultural produce reach certain safety standards, but it is also necessary to look at the food we produce and eat ourselves.

The Cartagena Convention (1983) and its Protocol on Land Based Sources of Pollution set out the obligations of Caribbean states in ameliorating agro-chemical pollution, including the development of national action plans to address land-based pollution.

However, in order to achieve such obligations, more emphasis needs to be placed on generating data on agro-chemical pollution and coordinating all the relevant stakeholders, manufacturers, importers, tertiary institutions, Ministry of Agriculture, Ministry of Health, Ministry of Commerce, Bureau of Standards and laboratories to tackle the problem,

The region must seek to become parties to the conventions related to agro-chemical management such as Rotterdam, Montreal and Stockholm.

Regional Consensus

The Coordinating Group of Pesticide Control Boards of the Caribbean (CGPC) - comprising the chairpersons from each National Pesticide Control Board, the University of the West Indies, other regional intergovernmental agencies such as CARDI and CEHI and members of the pesticides trade - has spent the last four years developing a strategy entitled, 'Management of Agrochemicals for Improved Public and Environmental Health'.

This strategy is necessarily multi-disciplinary and requires support from governments across the region.

The CGPC will undertake a number of regional projects to assist the countries with information or financial support and seek donors who can support these projects.

Projects have been developed for establishment of a regional database; implementation of good agricultural practice, sustainable financing and institutional analysis.

The CGPC Strategy and Regional Plan provides a framework for action under four main areas (see figure 1):

1. Harmonised agro-chemical management across the Caribbean
2. Good Agricultural Practices (GAPs);
3. Environmental and public health monitoring;
4. Support systems for such a strategy including:

- Sustainable financing
- Communication and education
- Capacity building of the staff and ministries involved.



Figure 1: From problems to solutions

The Way Forward

Through the CGPC, the Chairpersons of the Boards who are high-ranking officials of the Ministries of Agriculture or Health have endorsed the strategy. There is support of regional traders in pesticides, regional institutions CEHI, UWI, IICA and CARDI and it calls for holistic approach to managing pesticide use. Support from CARICOM is expected to facilitate development of actions at the national level and allocation of resources to manage the use of pesticides for the good of the region.

Individual countries will focus on developing and implementing National Action Plans through a process of consultation with all stakeholders.

Donor support for the regional Plan of Action is being sought and a public awareness drive to inform decision makers of the effects of pesticide use on the various sectors (agricultural trade, tourism, environment, human health, water quality, employment and rural development).

The recommendations in the Strategy can be divided into four main areas:

- Harmonised procedures and legislation
- Supporting system for agro-chemical management
- GAPs and other good practices (mitigation of pollution)
- Informing management decision (monitoring and research)

Harmonised Procedures and Legislation

- Harmonised procedures for agro-chemical management should be adopted throughout the Wider Caribbean.

Harmonized agro-chemical management across the Caribbean needs to begin with legislation. The OECS has developed model legislation known as the Pesticides and Toxic Chemical Act which has so far been adopted by St Kitts & Nevis and St Lucia. All countries should consider this legislation.

Registration of pesticides also needs to be harmonized with the possibility of regional registration to assist countries that do not have capacity for screening

All countries should consider establishing a common licensing procedures for the import/manufacture of pesticides.

Along with these changes a regional database is required to share and manage information that is relevant to the region.

Supporting System for Agro-Chemical Management

A number of support systems are required to assist such as strategy. These will include:

- Sustainable financing and cost recovery mechanisms must be investigated and, where necessary, novel and creative means found to develop capacity, and to fulfil all the functions of the various institutions involved in all aspects of agro-chemical management. External sources of funding must be explored and fully utilised.
- Communications experts should be engaged for communication, education, and training purposes; change-management concepts should be applied.
- Undertake an institutional analysis and evaluation of the capacity and resource needs of Pesticide Control Boards (PCBs) and other relevant executing agencies (e.g. extension services, monitoring and research agencies, medical laboratories) throughout the Wider Caribbean. Duplication of effort should be rationalised.
- PCBs must be adequately staffed and financed to administer and implement national legislation relating to agro-chemicals. There should be a dedicated full-time staff. The composition of the Board of Directors should include representation from the private sector and persons with experience in ecological issues and the fate of agro-chemicals in the environment.

GAPs and other good practices (mitigation of pollution)

- GAP and other good practice codes of conduct for agro-chemical use need to be implemented, particularly for domestic products not already covered by existing arrangements.

Informing management decision (monitoring and research)

- Promote implementation and further research on Integrated Pest Management (IPM) and Integrated Management of Pests and Pesticides (IMPP) as a means of improved management of use of pesticides.
- Socio-economic analyses, including cost-benefit analyses, should be conducted for different farming practices, including options for agro-chemical use (e.g. Integrated Pest Management (IPM)).
- Carefully designed public health monitoring plans must be developed. Ensure adequate analytical capacity to enable monitoring for compliance with standards for public health (i.e. medical and food residue monitoring laboratories).

- Carefully designed long-term environmental monitoring plans must be developed (from the farm to the sea).

Additional information is available on the following websites:

- PCA website: <http://www.caribpesticides.net>
- MRAG website: <http://www.mragltd.com>
- CEHI website: <http://www.cehi.org.lc/agrochemical.htm>