Endosulfan banned in West Africa

The decision to ban endosulfan in nine countries in West Africa was a vital step in preventing the ongoing cycle of poisonings. ***Abou Thiam*** *of* ***PAN Africa*** *explains the origin of the ban and key requirements to ensure its implementation.*

Endosulfan is increasingly being viewed internationally as a priority for phase-out. An expanding body of evidence demonstrates its hazards to human health and the environment. It has recently been recommended for addition to a trade watch list, it is being reviewed as a 'Persistent Organic Pollutant', and is banned by a steadily growing number of countries and supply chains (see box). The most recent ban is a group of nine West African countries that have a common system for regulating and registering pesticides (Burkina Faso, Cap Vert, Gambia, Guinée Bissau, Mali, Mauritania, Niger, Senegal and Chad).

Common regulation

The Permanent Inter-State Committee for Drought Control in the Sahel ('Comité Permanent Inter-Etats de Lutte Contre la Secheresse dans le Sahel' or CILSS in French) was established in 1973 to carry out research on food security and to help in the fight against drought and desertification. Droughts had led to outbreaks of pests which were controlled by the massive use of pesticides. In 1992 the CILSS member states adopted the 'Réglementation commune aux états membres du CILSS sur l´homologation des pesticides'. The Common Regulation establishes the Sahelian Pesticides Committee ('Comité Sahelien des Pesticides' or CSP in French) with representatives from each member country, which registers pesticide on a sub-regional level and replaces national regulations concerning registration of pesticides. As well as reducing costs this system means that the same chemicals are registered for all the neighbouring countries, and should help address the major issue of illegal trade between these countries which have very porous borders.

Member countries should establish 'National Committees for Pesticide Management (Comités Nationaux de Gestion des Produits Chimiques or CNGP in French) which are responsible for implementing the decisions of the CSP nationally. The Common Regulation for the CILSS countries places a number of requirements on member countries, including :

- Article 24: member countries have a responsibility for post-registration control of the distribution and use of pesticides
- Article 24: authorised products will be followed with regard to toxico-vigilance
- Article 25: member countries are required to monitor compliance with the conditions of that common regulation. This includes monitoring the quality of the formulations put on the market (the authorised field use areas and restrictions given on APV (Temporary Selling Authorisation) and registrations, standards and guidance on labels and the use of pesticides marketed under the guidance listed on labels. It also includes monitoring pesticide effects on the environment.

Reasons for the ban

In November 2007, the CSP agreed Decision 0691/MAE , banning the distribution of endosulfan from 13 November 2007, and its use from 31 December 2008. A number of reasons were cited.

Health and environmental impacts

A review of documented health and environmental problems of endosulfan in the CILSS countries demonstrates the wide range of impacts in all member countries. Poisoning cases documented by various studies include 37 deaths in 1999 in Benin,

Farmers often use no protective clothing when handling pesticides and may even be barefoot.
Photo: PAN Africa

20 in 2003-4 in Senegal, and poisoning symptoms experienced by cotton farmers in Burkina Faso – severe headaches (92%), dizziness (83%), hand tremors (54%), nausea/vomiting (21%). These symptoms are all characteristic of endosulfan poisoning. In Togo, a 2003 study showed that the public hospital in Lomé-Tokoin recorded 500 endosulfan poisoning cases every year.

Environmental monitoring studies in the region indicate that endosulfan is a common water pollutant, appearing in almost all river samples taken in a 2003 study in the W and Pendjari reserves in Benin, as well as in aquatic species in the Central Benin rivers of Dridji. Endosulfan residues were found in seven out of 38 groundwater samples taken in 2006 in the Niayes zone of Dakar (which is used for vegetable production) and at levels exceeding safe drinking water levels in 85% of contaminated wells in Cote d'Ivoire in 2006.

Inadequacy of regulation

The Decision of the CSP banning endosulfan refers to the difficulties experienced by regulators in the member countries in complying with the restrictions and security measures that are generally recommended for the use of World Health Organisation class 1b pesticides. Specifically referring to the conditions of use of pesticides in the member countries, the CSP recognises that the reality of conditions of use does not allow the responsible use of hazardous chemicals. The absence or non-functioning of national committees of toxico-vigilance required by the Common Regulation is also cited as a motivating factor in banning endosulfan. The absence of systematic monitoring of actual endosulfan impacts, despite worrying indications of the extent of endosulfan contamination in the few studies that do exist, indicates a lack of control which is at odds with the precautionary principle.

Countries that have banned or restricted endosulfan

Austria, Bahrain, Belgium, Belize, Benin, Bulgaria, Burkina Faso, Cambodia, Cap-Vert, Colombia, Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Gambia, Germany, Greece, Guinea Bissau, Hungary, Indonesia, Ireland, Italy, Jordan, Kuwait, Latvia, Lithuania, Luxembourg, Malaysia, Mali, Malta, Mauritius, Mauritania, Netherlands, New Zealand, Niger, Nigeria, Norway, Oman, Poland, Portugal, Qatar, Romania, Saudi Arabia, Senegal, Singapore, Slovakia, Slovenia, Spain, Sri Lanka, St Lucia, Sweden, Syria, Chad, the United Arab Emirates, United Kingdom.

Companies or supply chains that have banned or phasing out endosulfan

Rainforest Alliance: Fair-trade Labelling Organisation

Alternatives

Alternatives are listed for the various uses of endosulfan. This includes chemical options, listing for example the pesticides which are registered in the EU for use on vegetable crops, to allow exporters to conform to EU import criteria. Non-chemical options include the use of biological control, biopesticides, and integrated pest and crop management[1].

The Senegalese Direction de la Protection des Végétaux (DPV) has eight research programmes on biological control, including large scale and promising trials of *Epidinocarsis lopezi* for cassava mealy bug, and a combination of biological control using the Coléopteran *Neohydronomus affinis* from IITA in Benin and salinisation of infested environments which practically eradicated water lettuce (*Pistia stratiotes*). Other trials still at the pilot stage but with promising early results include using the Hymenopteran parasite *Bracon hebetor* against the cereal borer *Heliocheilus alpipunctella* which reduced the chrysalid population by 90%, and preliminary tests against fruit cochineal (*Rastrococus invadens*) which was accidentally introduced to mango trees.

Natural pesticides including those based on the neem tree are also available and promoted by organisations such as PAN Africa in its farmer field schools. In Senegal, SENCHIM developed a neem-based product in 2003, marketed under 'Nemazal 1.2EC' and a biopesticide for locust control based on *Metarhizium anisopliae var acridum* marketed as Green Muscle has been successfully tested by DPV in Senegal.

A number of other relevant regional research programmes exist. For example a programme focused on preventing and managing *Helicoverpa armigera,* USAID's West Africa Cotton Improvement Programme, The United Nations Food and Agriculture Global Facility and CERES Locustox's IPM programmes, PAN Africa's Programmes on Cotton and Vegetable crops and a number of Fair Cotton Trade programmes,

Implementing the ban

Updating national legislation

Whilst the registration for endosulfan has now been withdrawn by the CSP, the CILSS Common Regulation requires national authorities in the member countries to translate this decision into national legislation, so the ban enters into force in each of the nine countries. This will be facilitated by effective flow of information from the CSP to explain the reasons for its decision, and to establish mechanisms to transmit new information about endosulfan to CNGPs and other authorities in the countries as it becomes available.

Enforcement of regulation

Once national legislation is in place to prevent the use and distribution of endosulfan, it will be important to ensure that the ban is practically enforced: a responsibility which clearly falls to the CNGP under the terms of the Common Regulation. Some examples of practical steps to implementing a ban include banning marketing of endosulfan, and enforcing FAO guidelines on disposal and prevention of obsolete accumulation. Pesticide producing companies in the region (such as SENCHIM and SPIA), and cotton and horticultural boards have already stopped producing endosulfan or including it in pesticide procurement processes.

Strengthening national regulatory capacity can be addressed at both regional and national levels, starting from a CSP regional project to strengthen national monitoring and inspecting capacities and establish a sustainable system in each of the countries. Operational control and inspection mechanisms need to be established which take advantage of all stakeholders, including civil society, who could be involved in monitoring the enforcement of regulations and promotion of alternatives as suggested in the International Code of Conduct on the Distribution and Use of Pesticides.

Effective monitoring and inspection capacities must be combined with reporting mechanisms to ensure that data collected on poisoning and environmental accidents are forwarded to CSP and can be added to the evidence base for informed policy making.

Public awareness

In addition to the decision to ban endosulfan, which will address the supply side, the report suggests that action to address demand for endosulfan will help enforce the ban in each country. Given the length and nature of the borders between the countries, and with neighbouring countries outside the common regulation, illegal supply of endosulfan is unlikely to be completely stopped immediately.

Public information and awareness campaigns on the hazards of endosulfan and the new ban are required to educate users so they no longer seek it. Given the particularly problematic uses of endosulfan on vegetable crops, without respect for post-harvest intervals for example, and subsequent poisoning of consumers, campaigns on pesticide residues on foods and the issues for consumers as well as growers would be effective in building support and voluntary application of the ban. Finally, pesticide exporters, importers, producers and customs officials are all key audiences for any campaign.

Information campaigns should adopt a variety of approaches to ensure the best dissemination of key messages. Schools are one channel to pass information through to pesticide users and communities affected by endosulfan, and the CNGP and other focal points (such as the Rotterdam Convention's Designated National Authorities) could inform civil society on endosulfan hazards, so that NGOs and CSOs can contribute to the development and rollout of appropriate information and awareness campaigns.

Continued development of alternatives

Continued efforts to consolidate and expand existing research into alternatives to endosulfan are essential to provide farmers with the tools to successfully grow crops without endosulfan. Some key recommendations are to establish a monitoring and evaluation network to demonstrate successful alternatives, and transfer such alternatives to farmers, through training, strengthening technical institutions, and providing marketing and advice on alternatives.

Implications of the ban

Member countries should also ensure that the ban is reflected in their international obligations, in particular with respect to the Rotterdam Convention. Whilst endosulfan is not yet on the list of substances which are subject to the Prior Informed Consent procedure, it has been recommended by the Chemical Review Committee panel of experts, whose recommendation was effectively vetoed at the last Conference of Parties by a very small number (<10) of countries, led by the leading manufacturer of endosulfan, India. Frustration by the majority of the Parties resulted in a proposal (supported by the CILSS countries) to voluntarily apply the convention to endosulfan, which will be facilitated by the Secretariat. So far, only the CSP and Senegal have notified their bans to the Rotterdam Secretariat as described in the Prior Informed Consent procedure.

Stockpiles of endosulfan exist in many states, including a 34 tonne stockpile in SENCHIM warehouses in Senegal, and an estimated 576,000 litres in Benin. In the case of Benin, these stocks can be used legally even though a ban was also passed there in 2008, to avoid the risk of obsolete stockpiles being created as a result of this measure.

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This article is based on a recent report by IPEN and PAN Africa, 'Ban of Endosulfan in the Sahelian Countries in West Africa'. As the report notes, 'While the authorisation for endosulfan has been withdrawn, it still remains that actions must be taken at State level to enable the effective implementation of this ban at national level. The CILSS member state decision makers need to know the reasons which led the experts of the Sahelian Pesticides Committee to ban endosulfan'.

1. PAN Germany, 'Growing Crops without Endosulfan'