



FAO CODE MONITORING MODULE

An updated users' guide to monitoring the
implementation of the FAO/WHO International
Code of Conduct on Pesticide Management, 2014

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About PAN UK

Pesticide Action Network UK (PAN UK) is the only UK charity focused on tackling the problems caused by pesticides and promoting safe and sustainable alternatives to pesticides in agriculture, urban areas, homes and gardens. Our work includes campaigning for change in policy and practices at home and overseas, co-ordinating projects in the developing world which help smallholder farming communities escape ill-health and poverty caused by pesticides, and contributing our wealth of scientific and technical expertise to the work of other organisations who share our aims.

Website: <http://www.pan-uk.org/>

About PANAP

Pesticide Action Network Asia and the Pacific (PAN AP) is one of the 5 regional centres of Pesticide Action Network (PAN), a global network dedicated primarily towards the elimination of harm caused to humans and the environment by pesticides and towards promoting biodiversity-based ecological agriculture. PAN AP's vision is of a society that is truly democratic and culturally diverse, based on the principles of food sovereignty, gender justice and environmental sustainability. PAN AP has developed strong partnerships with peasants, agricultural workers, indigenous peoples, fisherfolks, rural women movements and other small food producers in the Asia Pacific region.

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Foreword

The publication of *Communities in Peril: Asian regional report on community monitoring of highly hazardous pesticide use* containing the results of a survey conducted in 12 communities across 8 countries in Asia revealed very remarkable but sad results. From the widespread use of hazardous pesticides to ill-harm done, from the inappropriateness or ineffectiveness in the use of protective personal equipment (PPE) to the mishandling of pesticide containers, from the lack of information among retailers up to the end users – the dismal state of pesticide management and use across the region leaves us to wonder about what concerned sectors have done to minimize harm.

The FAO Code of Conduct on the Distribution and Use of Pesticides was first adopted in 1985. Since then it has gone through three revisions. The latest version of the Code, which was published by FAO and WHO in 2014, broadened the scope of the Code beyond agricultural pesticides, giving greater attention to health and environmental aspects of pesticides and it is more closely aligned with developments in international chemicals management. The revised Code of Conduct strengthens the obligations on governments and the pesticide industry, and calls on a wide range of parties to address pesticide problems. Unfortunately, many governments fail to meet the standards articulated in the Code and the ill effects of pesticides on farmers, their communities and the environment continue.

The pesticide industry, estate owners or even government agencies dictate agricultural workers to use highly hazardous pesticides paying minimal compliance if not lip service to national pesticide regulatory bodies as well as international instruments protecting human rights particularly people's labour rights, rights to health or to a healthy environment.

Being a voluntary Code, stakeholders are not legally bound to follow the provisions of the Code. However, the Code specifies certain minimum standards that governments and other parties are morally bound to comply with. Sometimes, following the provisions stated in the Code could prove ineffective in mitigating risks of ill harm. In this regard, it would be useful to document that even a full compliance with the Code's provision will not lead to less harm to people, their communities and the environment.

How are countries around the world doing with respect to pesticide management? Unfortunately, few countries collect the necessary information to determine the key areas in which current practice falls short of the standard agreed in the code, thereby putting human and environmental safety at risk. For this reason, the need to monitor responsibilities of stakeholders particularly governments and the industry under the FAO Code of Conduct is paramount. In this toolkit we share tools and experience to help concerned organisations to monitor the compliance of FAO Code by governments and industry players. The survey can be conducted regularly - say every two to three years – in order to identify areas where progress has been made and others where more effort is needed. The results can be compiled in a report for distribution to the FAO, government bodies, Secretariats of the Stockholm and Rotterdam Conventions, international organisations and other civil society organisations.

This module presents a monitoring survey checklist, how to fill-in the checklist and monitor the provisions to ensure uniformity in the interpretation of survey data. However, only selected provisions of the FAO Code were chosen - provisions whose violations were highlighted in the Asian Regional Report, those that would make the most impact among farming communities or practical

to monitor in Asia. Furthermore, the module should help ensure the sustainability of future surveys by becoming an integral part of training programmes for researchers.

Sarojeni Rengam
Executive Director

Background

The International Code of Conduct on the Distribution and Use of Pesticides (or 'Code of Conduct') is a key international instrument setting forth the roles and responsibilities of the major stakeholders with respect to pesticides safety. It is a voluntary instrument designed as an international standard and point of reference in relation to sound pesticide management practices, in particular for government authorities and the pesticide industry, but also for civil society. The Code of Conduct focuses on risk reduction, protection of human health and the environment, and support for sustainable agricultural development by using pesticides in an effective manner and applying Integrated Pest Management (IPM) strategies. A particular concern is the impact of pesticide use in countries where regulatory capacity is limited and where living and working conditions make pesticide use more risky.

The Code of Conduct was first adopted in 1985 at the 25th Session of the Conference of the Food and Agriculture Organisation (FAO). The objective was "to increase international confidence in the availability, regulation, marketing and use of pesticides for the improvements of agriculture, public health and personal comfort". The first Code of Conduct did not include the then-controversial concept of prior informed consent (PIC), but coordinated civil society action through the Pesticide Action Network (PAN) International succeeded in getting the 1987 FAO Conference to agree to the principle of PIC. In 1989, after two years of working out voluntary mechanisms for implementation, the Code of Conduct was amended to include PIC and the PIC provisions began to be implemented. In view of the changing international policy framework, including the adoption of the Rotterdam Convention in 1998. Since that time the Code of Conduct has been revised and updated four times. The current version was published by both FAO and WHO in 2014. It broadened the scope of the Code beyond agricultural pesticides, giving greater attention to health and environmental aspects of pesticides and it is more closely aligned with developments in international chemicals management.

Importance

Pesticide poisonings and harm to human health and the environment as well as economic and social disadvantages are major continuing problems found the world over from pesticide usage, especially in developing countries. The Code of Conduct can contribute to the implementation of less hazardous pest management systems. The revised Code of Conduct strengthens the obligations on governments and the pesticide industry, and calls on a wide range of parties to address pesticide problems.

Its comprehensive implementation could make a real difference to the majority of the world's population: women and men farmers and agricultural workers, especially in developing countries, who are daily exposed to pesticides. It is recognised as the globally accepted standard for pesticide management upon which many countries base their pesticide laws.

Some of the factors that have made the revised Code of Conduct a stronger tool in advocating for safer pest management systems are:

- Emphasis on reducing risks and hazards, including a strong warning against the availability of extremely and highly toxic and hazardous products (WHO classes Ia and Ib) in developing countries
- Explicit recognition of the importance of addressing environmental risks in addition to health, with a call for monitoring of pesticide residues in food and the environment, protection of biodiversity, and minimizing the adverse effects of pesticides in the water, soil, air and on non-target organisms

- Support for IPM that emphasises growth of a healthy crop, with least disruption to agro-ecosystems, and encourages natural pest controls
- Stronger requirements on protective equipment for tropical areas, and for improved application technology
- Introduction of collection systems for empty pesticide containers
- Request for commodity and food industry groups to influence agricultural practices
- Application of the life-cycle concept involving product stewardship strategies that address field level impacts

Limitations

Whilst recognising its importance it is also good to note the Code of Conduct's objectives are limited with its ethos embedded in "the benefits to be derived from the necessary and acceptable use of pesticides... without significant adverse effects on human health or the environment" (Article 1.3). The Code assumes that the use of pesticides could be necessary or beneficial. Current studies such as the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) show that agricultural yields from organic agricultural systems could supply global food needs and food production can be increased without pesticide use. Furthermore, this approach whilst encouraging less hazardous systems does not address the larger issue; that decades of pesticide intensive agricultural systems have already caused immense damage to human and environmental health and drastic changes in this system are necessary.

The Code also explicitly assumes that "safe use" of pesticides is possible. Whilst proper training or the use of personal protective equipment is encouraged by the Code of Conduct, it fails to consider the conditions with which pesticides are used on the ground as well as to evaluate the full impact of the alleged benefits over real risks of danger and harm. The Precautionary Principle, increasingly becoming part of the legal and regulatory framework in some countries especially in the European Union, encourages governments to take action to minimise morally unacceptable harm that is plausible even in the absence of certainty.

Although the revised Code of Conduct explicitly invites NGOs and other interested parties to "monitor activities related to the implementation of the Code and report these to the Director-General of FAO" (Article 12.9), the Code ultimately remains voluntary and only serves as a guideline or benchmark for governments, industry and other stakeholders to follow.

Scope

The revised Code of Conduct uses a life cycle approach, and addresses the development, production, management, packaging, labelling, distribution, handling, application, use, control and disposal of pesticides. Its articles set detailed standards for pesticide management, testing, reduction of risks to human health and the environment, regulatory requirements, the availability and use of pesticides, their distribution and trade, and the labelling, packaging, storage and disposal and advertising of pesticide products. The Code of Conduct is complemented by a number of more detailed technical and legal guidelines on various aspects of pesticide management published by the FAO, including guidelines on pest and pesticide management policy, guidelines on pesticide advertising, and guidelines for governments and industry for the implementation of the Code of Conduct.

The Code of Conduct recognises the role of public interest groups in pesticide management. In support of the Code's implementation, PAN International and its regional offices help to promote its standards and to monitor how pesticides are advertised, distributed, sold and used. The industry

trade group, CropLife International, has made adherence to the Code of Conduct a condition for membership.

How to Use this Module

Target audience

This module is intended for NGOs and community volunteers who will conduct the FAO Code monitoring on the field. A background on pesticide issues or experience in field surveys is highly recommended but not necessary.

The chapter on PIC Incident reporting should provide a good overview on the requirements of the Rotterdam Convention on completing incident reports.

Training of Researchers

This module can be used as a reference material for training field researchers. It also contains the monitoring checklist that will be used in the FAO Code monitoring survey.

As the survey is on specific provisions of the FAO Code, it is best to provide a training course on the FAO Code specifically on the specific provisions used in this the survey.

For those with sufficient background on pesticide issues, a three- to four-day training course would suffice. However, a separate introductory course on pesticides can be given separately. A CPAM training would prove most useful for new volunteers or researchers.

Sections in the module

The module contains a section on “Tools for Monitoring”. This section offers researcher ways or techniques that can be used to conduct the survey.

In “Pesticide Life Cycle Concept”, the researcher is introduced to the possible points of intervention pertinent to the specific provisions of the Code that will be monitored.

Monitoring is then divided into three major chapters focusing on specific responsibilities by stakeholders – government responsibilities, industry responsibilities and joint responsibilities by government and industry. Under these chapters, responsibilities of the stakeholders in some point on the pesticide life cycle are presented. For example, under government responsibilities, these are regulation, and health and environmental surveillance.

The purpose and text of the relevant Articles from the Code are presented followed by a subsection on how to monitor the specific articles as listed on the provided checklist. All checklists are then compiled and added as a reference at the end of the Module.

The chapter on the Rotterdam Convention provides an overview of the Convention including specific Annexes on the Convention’s charter. A process flowchart on the listing procedure of severely hazardous pesticide formulations is shown. A case study along with guidelines for completing the form is presented.

Tools for Monitoring – How do I document my findings?

When monitoring whether government and industry is implementing the Code of Conduct in your country it is important that your findings are documented in order to be able to present evidence to back up your findings. Well documented evidence can be used in any number of ways to tell your story and share your concerns.

There are numerous ways in which to document evidence successfully and it is entirely dependent upon your situation, what type of information you are documenting and the resources available to you. The following will give you some ideas on how you can record and document your evidence and suggest a variety of techniques potentially available to you.

Downloading and printing documents

When looking at information on websites or documents from other sources it is important that you save any documents that you think might either be of use or provide information to back up your claims. The reason for this is the transitory nature of websites and the common problem of disappearing documents.

When saving, ensure that you include the URL and some form of date as a reference. Keep any documents that you have safely filed in an appropriate place. If making notes do this on a copy document so that you have one clean document if required.

Interviews

Interviewing people is a great way to get information. This might be government officials, shop owners, farm workers or others of relevance to the section of the Code of Conduct you are investigating. Ideally you will be able to record the interview on some way. There are a number of devices that are suitable for this purpose including cassettes, CD recorders, digital recorders, telephones with video and cameras etc. In all cases it is important to seek the permission of the person you are interviewing before you start recording.

Before starting you must have a very clear idea of the questions you want to ask and have them written down to refer to. Try to ask open questions to ensure that you get a proper response; you want more than “yes” or “no” answers. An example of this is given below:

“Do you sell pesticides?” could result in an answer of yes, which is not very helpful.

“Can you tell me what pesticides you sell?” serves the same purpose as that above but will hopefully get a fuller response with some useful information.

Ensure that you get the full title and position of the person being interviewed and record the date, time and place that the interview occurred.

After you have asked all the questions that you want answers for ask if the interviewee has anything that they would like to add.

Once you have finished and are back at office or home make a duplicate copy of the interview and also transpose the interview into a written document word for word. This will make it much easier to find the relevant parts when you come to refer to it later.

Photographs and filming

Photographic and video evidence is perhaps the most powerful evidence you can present when preparing your case. It can capture the reality of a situation and grab the viewers' attention like no other medium.

Photographs can be used to document all sorts of things from documents to pesticides on sale in shops. But remember that you are taking photographs as evidence and not for their aesthetic qualities. It is important that you focus on the subject that best captures what you are trying to convey. So if it is a sign in a field make sure that is the main part of the picture and ignore the sunset, however beautiful that may be!

Video recordings are particularly effective in situations where there is action to record. Documenting the use or lack of use of personal protective equipment in a field situation would be an excellent use. Video recordings are also perfect to use when doing an interview with somebody.

Recording internet evidence

We have already mentioned the importance of printing and making copies of documents including those you find on the internet but there is another area that you need to be aware of; information on websites. Like documents on websites actual websites are prone to change and having a permanent record of them is of great importance. This is particularly useful when you are looking into companies offering pesticides for sale or making claims about the products that they are selling.

A simple way is to print the webpage off while you are looking at it although this may not always give particularly satisfactory results and can be quite wasteful of paper. A more effective method is to use the Print Screen function on your computer. This often appears as a key on your keyboard that has "PrtScn" on it. It is simple to use and will allow you to capture most websites exactly as you are viewing them.

You press the button and then it is possible to copy the webpage into a document, an example of the output is given below:



You can make it any size and save it as an image file for use in any application that you wish.

Covert Recording

This is a method worth considering when you do not believe that you can get the information that you require by other means. It is vital that you ensure it is legal to do this in your country as it is not always the case and you could face serious penalties if caught.

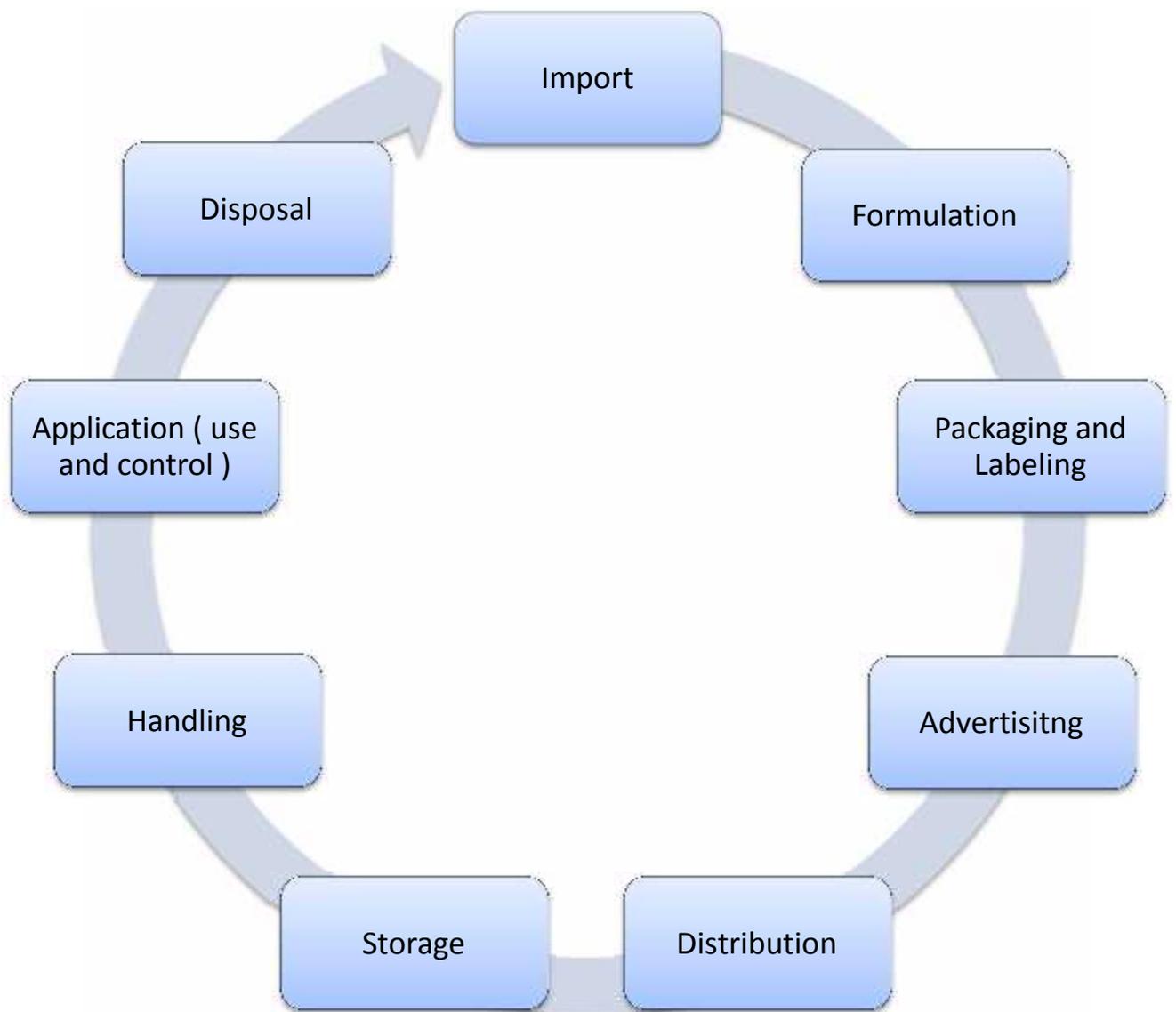
Covert recording is simply making audio, photo or video recordings without the person involved being aware of it. It may require specialist equipment and training and is outside the scope of this document to go into great detail.

For examples of what covert recording is and how it can be used you can visit the website of the Environmental Investigation Agency (EIA) in particular this page will explain more about the uses and benefits of this type of recording: http://www.eia-international.org/visual_media/footage/

Pesticide Life-Cycle Concept and Points of Intervention

Why use the Pesticide Life-Cycle Concept?

The life-cycle concept for pesticides, an approach also known as 'cradle-to-grave', was incorporated into the revised Code of Conduct; this concept enables the identification and consideration of a pesticide's significant impacts at various stages throughout its lifecycle. At points along the life-cycle where specific risks arise, solutions are identified to avoid, mitigate, manage or eliminate these risks. The life cycle of a pesticide is comprised of the following stages;



Examples of intervention points are identified at each stage of the life-cycle below.

Import

In areas of weak custom points, pesticides can be illegally imported across country borders and go on to create a range of problems.

Intervention points at the import stage:

- Quality control checks of pesticides at borders
- Custom officers aware and informed on up-to-date pesticide legislation
- Persons involved in illegal sales of pesticides faced with prosecution, with substantial fines imposed if they fail to comply

Formulation

Intervention point at formulation stage:

- Checks that pesticide formulations are at the defined standard/concentration

Packaging and Labelling

Intervention points for labelling:

- Quality control checks on pesticide labels to ensure all necessary information is included and that the label is readable
- Regulator can decide whether to register or refuse high risk pesticides if there are concerns over labelling
- Limitations of label instructions recognised and linked to assessment of suitability of products that are available to small-scale farmers

Intervention points for packaging:

- Use of least hazardous packaging for a product
- Use of a range of packaging types and sizes suitable for small-scale farmers

(Look at section on 'Labelling and Packaging')

Advertising

Advertising plays a key role in the sale of pesticides. Inappropriate adverts can lead to pesticides being used in circumstances in which their use is uneconomic and could cause harm, both to the environment and to human health.

Intervention points at the advertising stage:

- Control adverts concerning pesticides to avoid abuse of international guidelines
- Establishment of a regulatory body to approve advertisements before they are placed in the media.

(Look at section on 'Advertising')

Distribution

Intervention points at the distribution stage:

- Regulations and licensing procedures that cover pesticide sellers
- Ensure that pesticide sellers are sufficiently trained to provide guidance on safe use to pesticide users
- Compulsory sales of PPE through pesticide outlets

(Look at section on 'Steps to Restrict Sale')

Storage

Poor storage facilities are a significant factor behind pesticide stocks becoming out-of-date and deteriorating in quality.

Intervention points at the storage stage:

- Supply farms with lockable storage cupboards in which to store pesticides
- Provide training to shopkeepers on how to safely store pesticides and storing large quantities of pesticides in accordance with international standards, along with detailed chemical information supplied to local emergency services about how to deal with fire, flood or leaks.

Handling

At any point when handling pesticides measures should be taken to ensure that risk of exposure to the pesticide is minimised or prevented; the use of PPE is one such measure.

Intervention point at the handling stage:

- Ensure affordable and appropriate PPE are readily available at all pesticide outlets
- Provide users with training on the safe handling of pesticides

(Look at section on 'Personal Protective Equipment')

Application (use and control)

The use of personal protective equipment (PPE) and good quality equipment, along with the provision of information and training to pesticide users is vital in helping to minimise and eliminate the risk of exposure.

Intervention points at the application stage:

- Provide affordable and appropriate PPE at all pesticide outlets
- Ensure that pesticide users receive suitable training in the proper use of pesticides,
- Establish and implement strategies that limit or ban access to hazardous pesticides
- Work to reduce the health impact of pesticide spraying and spray drift on small-scale farmers, agricultural workers, bystanders and neighbours

Disposal

If not safely disposed of or allowed to accumulate at home, used pesticide containers can present a threat to the environment and human health.

Intervention points at the disposal stage:

- Avoid the stockpiling of unused pesticides by carrying out routine assessments to measure the quantity of pesticides required for a season
- Establish a collection service or take-back scheme for used or excess containers

(Look at section on 'Storage and Disposal')

Government Responsibilities

It is the responsibility of any government to protect its citizens from harm, pesticides and their use are potentially harmful to both people and the environment and therefore it should be beholden on governments to minimise any risks associated with pesticide use. The Code of Conduct provides an invaluable guide to how this can be achieved.

The following are the key areas of responsibility for government under the Code of Conduct and it is vital that you as citizens monitor their implementation and highlight any and all failings that you find.

Government

This section will look at three areas related to government responsibilities under the Code of Conduct, Regulation (articles 5.1.1, 7.5), Health and Environmental Surveillance (Articles 4.5, 5.1.3, 5.1.4, 5.1.5, 5.1.6, 5.1.9, 5.1.10) and Steps to Restrict Sales (Article 5.2.4). Should we add the articles here ?

There are three main groups of actors involved in implementing and monitoring the Code of Conduct; the pesticide industry, government and civil society. This section will look at the responsibilities of governments, either individual or regional, where appropriate to issues of pesticide regulation. The aim is to provide a tool for civil society to be able to monitor and report on whether governments are implementing and enforcing the Code of Conduct or not.

Careful monitoring will enable civil society to call for action where specific Articles are not being implemented and to campaign for change that could lead to improvements in protection of human health and the environment from the worst effects of pesticide use.

Monitoring of government responsibilities can often be as straightforward as establishing whether regulatory systems are in place; this can indicate whether governments are taking their responsibilities seriously or not.

Regulation

'5.1.1 implement a pesticide policy, and a pesticide registration and control system along the lines set out in Article 6'

Article 5.1.1

Purpose of the Article

Article 5.1.1 is intended to ensure that governments have in place means of controlling all aspects of pesticide use. The control system should be able to, amongst other things, regulate pesticides, approve or withhold approval for pesticides, specify conditions of use, revoke approvals and punish companies that sell pesticides illegally.

All governments have a responsibility to ensure that the sections of the Code of Conduct applicable to them are implemented and also that the areas of the Code of Conduct applicable to industry operating within their jurisdiction are also implemented.

Article 6

Article 6 states that;

6.1 Governments should:

6.1.1 introduce the necessary policy and legislation for the regulation of pesticides, their marketing and use throughout their life cycle, and make provisions for its effective coordination and enforcement, including the establishment of appropriate educational, advisory, extension and health-care services, using as a basis FAO and WHO guidelines and, where applicable, the provisions of relevant legally binding instruments. In so doing, governments should take full account of factors such as local needs, social and economic conditions, levels of literacy, climatic conditions, availability and affordability of appropriate pesticide application and personal protective equipment;

6.1.2 as recommended by the International Partnership for Cooperation on Child Labour in Agriculture introduce legislation to prevent the use of pesticides by and sale of pesticides to children. The use of pesticides by children in a work situation should be included in National Hazardous Work Lists for children under ILO Convention No. 182 on the Worse Forms of Child Labour in countries which have ratified it;

6.1.3 establish regulatory schemes such as licenses or permits for pest control operators;

6.1.4 establish pesticide registration schemes and infrastructures under which each pesticide product is registered before it can be made available for use;

6.1.5 conduct risk evaluations and make risk management decisions based on all relevant available data and information, as part of the registration process(21,22);

6.1.6 As part of the registration process establish Good Agricultural Practice in line with the definition of GAP in article 2, for each pesticide that is registered for agricultural use;

6.1.7 use the principles described in the Manual on Development and Use of FAO and WHO Specifications for Pesticides for determining equivalence of pesticides (27);

6.1.8 promote the advantages of, and cooperate with other governments in, the establishment of harmonized (regionally or by groups of countries) pesticide registration requirements, procedures and evaluation criteria, taking into account appropriate, internationally agreed technical guidelines and standards, and where possible incorporate these standards into national or regional legislation (32, 33);

6.1.9 allow for re-evaluation and establish a re-registration procedure to ensure the regular review of pesticides, thus ensuring that prompt and effective measures can be taken if new information or data on the performance or risks indicate that regulatory action is needed;

6.1.10 improve regulations in relation to collecting and recording data on import, export, manufacture, formulation, quality and quantity of pesticides;

6.1.11 collect and record data on the import, export, manufacture, formulation, quality, quantity and use of pesticides in order to assess the extent of any possible effects on human health or the environment, and to follow trends in pesticide use for economic and other purposes;

6.1.12 permit pesticide application equipment and personal protective equipment to be marketed only if they comply with established standards (5, 8, 9);

6.1.13 detect and control counterfeiting and illegal trade in pesticides through national inter-agency and intergovernmental cooperation and information sharing;

6.1.14 Regulate and monitor pesticide residues in food in accordance notably with the recommendations of the Codex Alimentarius. In the absence of Codex standards, national or regional standards should be used. This should be done in a manner that is consistent with WTO requirements and will not lead to technical barriers in trade

All of the above are the essential components required for a fully functioning regulatory system that will, in theory, have the ability to minimise the associated risks of pesticide use.

How to monitor

The best way to monitor this is via a simple check list:

Article	YES	NO
5.1.1 Is there a “ <i>pesticide policy, and a pesticide registration and control system along the lines set out in Article 6 in place in your country or across the region?</i> ”	If yes complete the following check list to see if it complies with the guidelines in the Code. State whether it is local or regional	If no monitoring is complete
Is there legislation in place for regulating pesticides?		
Is there a pesticide registration scheme in place?		
Is there an official risk assessment or risk management system for pesticides in place?		
Are there regionally harmonized pesticide registration requirements?		
Are approved pesticides reviewed on a regular basis?		
Is data on import, export, manufacture, formulation, quality and quantity of pesticides recorded and available?		
If recorded what is the information used for?		
Is the sale of Personal Protective Equipment (PPE) regulated to ensure only those		

products that meet established standards are available?		
Are there measures in place to control the illegal trade in pesticides?		

Article 7.5 Availability and Use

Purpose of the Article

Article 7.5 is aimed at preventing the use of highly hazardous pesticides if it is thought that the control measures in place are insufficient to ensure that no unacceptable harm will come to humans or the environment. This Article is of particular relevance in countries that have no, or very little, regulatory systems in place for the control of pesticides, and could be a very powerful tool in the hands of civil society.

The text of Article 7.5

“Prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if, based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment.”

How to Monitor

In the first instance it is necessary to establish that there is no regulatory authority or system in place that governs pesticide registration or control in your country. There may be a regional control body rather than a country specific body so the existence of such will also need to be established. There may be voluntary controls put in place by the government or industry as well as mechanisms for dealing with issues under existing non-pesticide specific legislation. This could be related to public health or environmental controls that are more general in their approach but could also cover pesticide issues.

Once it has been confirmed that there is no effective control system in place, it is necessary to identify those products that are available which may be considered as highly toxic or hazardous. The suggestion in the Article is for those classed as WHO Ia and Ib although the Pesticide Action Network list of Highly Hazardous Pesticides would provide a more thorough guide to possible actives of concern and will include the WHO classifications. Both of these lists can be found at:

WHO Highly Hazardous Pesticides:

http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf

PAN HHP list: www.pan-germany.org/download/PAN_HHP_List_150602_F.pdf

Once a list of substances of concern has been drawn up actual evidence of the harmful use of each item will be required. Careful and accurate recording of such will be necessary if any attempt to restrict or halt the use, sale or importation of a pesticide is the ultimate goal.

The following is a check list for monitoring purposes:

	YES	NO
Is there a pesticide registration authority in your country or regionally?		
Are there any voluntary measures in place?		
Have you a list of all potentially hazardous pesticides and products currently available in your country?		
Have you identified those which are causing problems?		
Have you established a case history for each pesticide of concern?		

Health and Environmental Surveillance

Purpose of the Article

This Article clearly calls for there to be systems for evaluating the real fate of pesticides post approval in terms of their effects on human health and the environment. These are two very separate issues that need to be looked at independently and for which it is possible for civil society to have input to.

Text of the Article

4.5 “Pesticide industry and governments should collaborate in post-registration surveillance and conducting monitoring studies to determine the fate of pesticides and their health and environmental effects under operational conditions.”

Regarding the surveillance on adverse health effects the ideal situation would be for each country and/or region to have a specific monitoring system for recording incidents of ill health related to pesticide exposure. This would monitor the whole range of potential health effects including; acute ill health related to one time exposures, chronic ill health related to one time exposure and chronic health problems associated with long term exposure to pesticides.

However, it is unlikely that there is such a system in place and more likely that any recording of health effects will be undertaken within the general medical system. Access to such information could be useful in determining negative health effects of approved pesticides.

In some countries such as the UK the pesticide industry has dedicated telephone lines for users affected by their products to call and report incidents. This again, if available, can provide useful information on health effects.

Regarding post approval environmental fate of pesticides it is necessary that any changes in the effects of approved substances are monitored in order that problems, such as the development of resistance or problems with water pollution, can be monitored and avoided. This should be undertaken as routine by pesticide manufacturers and the information shared with the relevant authorities in the given country. This will then be used to make decisions on future approvals. However, this information may well be subject to commercial confidentiality clauses and not available to the public.

How to Monitor

The following are key questions that you should ask of your government in order to ascertain whether an effective post approval monitoring system is in place:

- Is there any official body tasked with the collection, analysis and dissemination of information related to pesticide poisoning?
- Is such work undertaken by the general health services in the country?

- Do pesticide manufacturers supply a telephone or other system for the public to report pesticide poisoning incidents?
- If so what is done with this information?
- Does the government regulatory body, if one exists, monitor post registration environmental effects of pesticides?
- Do pesticide manufacturers monitor post approval environmental effects of pesticides?
- If so do they make this information available to the regulatory authorities?

Article 5.1.3 – 5.1.6

Purpose of the Articles

This section of the Code of Conduct is aimed at ensuring that any incidents of pesticide poisoning and associated ill health, either acute or chronic, are recorded and that health workers etc. are trained to be able to recognise the symptoms of pesticide poisonings and are able to treat such problems effectively.

Text of the Code of Conduct

5.1.3 Carry out health surveillance programmes of those who are occupationally exposed to pesticides and investigate, as well as document, poisoning cases;

5.1.4 Provide guidance and instructions to health workers, physicians and hospital staff on the diagnosis and the treatment of suspected pesticide poisoning as well as on the prevention of exposure and poisoning, and the reporting and recording of incidences;

5.1.5 Establish national or regional poisoning information and control centres at strategic locations to provide immediate guidance on first aid and medical treatment, accessible at all times(33);

5.1.6 Utilize all possible means for collecting reliable data and maintaining statistics on health effects of pesticides and pesticide poisoning incidents, using harmonized tools where available and submit, where appropriate, the Rotterdam Convention Human Health Incident Report Form on Severely Hazardous Pesticide Formulations (SHPF), to the relevant designated national authority (34). Suitably trained personnel and adequate resources should be made available to ensure the accuracy of information collected;

How to Monitor

This is a yes / no monitoring system with the question for all sections: does the government do this? However, if the answer is yes to any of the Articles above it is necessary to ask further questions in order to establish whether or not it is an effective program of data collection and is fulfilling its requirements.

For each of the Articles above a check list should be filled in and details elaborated upon where necessary.

AN EXAMPLE OF A HEALTH MONITORING SYSTEM – GERMANY

ÄRZTLICHE MITTEILUNGEN

Bundesinstitut für Risikobewertung - Poison and product Documentation Centre - Germany

Germany has a system in place for reporting poisoning incidents associated with a wide range of chemicals including pesticides. The list of notifiable substances is: biocides, pesticides, cosmetics, wood preservatives (also classified as biocides), any professionally used chemical, harmful chemical substances from the environment and toxic plants and animals.

This is a legally mandated system under German law whereby physicians are obliged to notify the BfR of any concrete or suspected cases of poisoning by any of the above mentioned substances.

BfR provides details of poisoning incidents to manufacturers and distributors to alert them to any issues related to their products. In the case of severe health problems the incident is notified immediately, whilst in the case of less severe health impairments the notification comes in the form of an annual report. The reports are also available publicly.

There are a number of ways that incidents can be reported to BfR: by using the official form for notifications of poisonings, anonymised physicians' letters or test results, anonymised telephone notifications or anonymous written notifications submitted by post, fax or email.

The scheme seems to be comprehensive in nature as it includes virtually all classes of chemicals that people can be exposed to and potentially suffer ill effects from. The feedback to industry should help to ensure that any information on ill health effects is acted upon but it is not clear as to what provisions are made for industry follow up once notified.

There are also concerns, as with any reporting system, that not all incidents are either reported or recorded.

BfR main page: http://www.bfr.bund.de/en/notification_of_poisoning_incidents-10143.html

2008 incident report:

http://www.bfr.bund.de/cm/238/aerztliche_mitteilungen_bei_vergiftungen_2008.pdf

Would be good to add

- Something about the difficulties of diagnosis and importance of training – which has new emphasis in latest Code of Conduct
- Link to some safety information?
- More explanation about SHPF

<http://www.pic.int/Procedures/SeverelyHazardousPesticideFormulations/tabid/1191/language/en-US/Default.aspx>

Article 5.1.10 – 5.1.11

Purpose of the Article:

Similar to the Articles above related to human health this section of the Code of Conduct is aimed at establishing a monitoring system for pesticides in the environment. Monitoring of the environmental effects of pesticides and their presence as residues on food and in the environment can assist in avoiding problems such as the development of resistance, ensuring that pesticides are being used correctly and avoid contamination of food that may lead to health problems for consumers.

Text of the Code of Conduct

5.1.10 utilize all possible means for collecting reliable data, maintaining statistics on environmental contamination and adverse effects, and reporting specific incidents related to pesticides. Where appropriate governments should submit the Rotterdam Convention Environmental Incidents Reporting Forms on Severely Hazardous Pesticide Formulations (SHPF) to the designated national authority (34). Suitably trained personnel and adequate resources should be made available to ensure the accuracy of information collected;

5.1.11

Implement a programme to monitor pesticide residues in food, feed, drinking water, the environment and habitations where pesticides have been applied.

How to Monitor

This is a very simple area to monitor but it is necessary to ascertain whether this is done at a local or a regional level first.

- Does the government have a system for monitoring pesticide contamination of the environment? This might be undertaken by any number of authorities within the government but is most often associated with water quality monitoring.
- Does the government or any other body monitor the presence of pesticide residues in food?

An Example – the UK PRC

In the UK there is a body called the Expert Committee on Pesticide Residues in Food which monitors the presence of pesticide residues on produce available in the UK. The scheme is government funded and currently has a budget of approximately £1 million per annum.

The scheme tests a random selection of produce and checks to see if residues are within the Maximum Residue Level (MRL) set by the European Union. It also reports on what residues are being found and in what quantities as well as providing information on the presence of multiple residues. All the information is made available to the public.

The scheme targets those products that are most likely to have issues with residues or produce from countries that might have poor regulation on the use of pesticides. Built into the scheme is a system for notifying other countries once a problem is found. If an item of produce is found with residues above the MRL the retailer is notified and the product traced back all the way along the supply chain. The produce is removed from sale and other produce from the same supplier will be tested. One very useful tool of the scheme is the “name and shame” section whereby the location from where the product was obtained is named publicly. This has led to retailers placing more stringent requirements on their suppliers to ensure that residues are not present.

The UK scheme also provides information to the EU wide residue monitoring system.

It should be noted that the MRL is not a measure of safety in terms of the effects on human health but an indicator of good agricultural practise (GAP), or that a particular pesticide is being used in the approved manner.

Industry Responsibilities

This section highlights the provisions of the Code of Conduct for which the pesticide industry is responsible for; the advertising and packaging and labelling of the pesticide.

To ensure compliance with the Code of Conduct and help minimise any potential risk to the user, the pesticide industry must abide by set standards for any advertisements concerning pesticides, and in addition ensure that pesticides are appropriately packaged and labelled.

Advertising

Aim

The Code of Conduct includes provisions that can be used to control the way pesticides are advertised for sale and for use. The overarching aims are:

- to ensure that advertising is **accurate**,
- that advertising **does not compromise or make false claims** about the safety of a pesticide,
- that advertising **does not promote uses for which the pesticide is not intended**,
- that advertising **does not make claims** about the pesticide that cannot be substantiated in fact,
- that any advertising **draws attention to any safety concerns**,
- that all staff involved in sales of pesticides are **trained and knowledgeable** about the product and
- that **gifts and incentives** are not used to encourage purchase of a pesticide.

Articles of the Code of Conduct relevant to advertising

11.1 Governments should control, by means of legislation, the advertising of pesticides in all media to ensure that it is not in conflict with label directions and precautions, particularly those relating to proper maintenance and use of application equipment, appropriate personal protective equipment, special precautions for children and pregnant women or the dangers of reusing containers.

11.2 Pesticide industry should ensure that:

11.2.1 all statements used in advertising are technically justified;

11.2.2 advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the "safety" of the product, its nature, composition or suitability for use, official recognition or approval;

11.2.3 pesticides which are legally restricted to use by trained or registered operators are not publicly advertised through journals other than those catering for such operators, unless the restricted availability is clearly and prominently shown;

11.2.4 no company or individual in any one country simultaneously markets different pesticide active ingredients or combinations of ingredients under a single brand name;

11.2.5 advertising does not encourage uses other than those specified on the approved label;

11.2.6 promotional material does not include recommendations at variance with national regulatory decisions;

11.2.7 advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess;

11.2.8 claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic", "environmental friendly" or "compatible with IPM/IVM," are not made on labels, pamphlets or other public material, with or without a qualifying phrase such as "when used as directed". [However, reference to use within specified IPM/IVM programmes may be included if validated by the regulating authority and the claim qualified accordingly];

11.2.9 statements comparing the risk, hazard or "safety" of different pesticides or other substances are not made;

11.2.10 no misleading statements are made concerning the effectiveness of the product;

11.2.11 no guarantees or implied guarantees, such as "more profits with..." or "guarantees high yields," are given unless definite evidence to substantiate such claims is available;

11.2.12 advertisements do not contain any visual representation of potentially dangerous practices, such as mixing or application without sufficient protective clothing, use near food or use by or in the vicinity of children;

11.2.13 advertising or promotional material draws attention to the appropriate warning phrases and symbols as laid down in the GHS and FAO/WHO labelling guidelines (3);

11.2.14 technical literature provides adequate information on correct practices, including the observance of recommended application rates, frequency of applications and pre-harvest intervals in language that is understandable to end users;

11.2.15 false or misleading comparisons with other pesticides are not made;

11.2.16 all staff involved in sales promotion are adequately trained and possess sufficient technical knowledge to present complete, accurate and valid information on the products offered for sale;

11.2.17 advertisements encourage purchasers and users to read the label carefully, or have the label read to them if they cannot read;

11.2.18 advertisements and promotional activities should not include inappropriate incentives or gifts to encourage the purchase of pesticides.

11.3 International organizations and public interest groups should call attention to departures from this Article.

What information will you need to monitor Article 11?

There are four areas - three of which fall under industry responsibilities - that will need to be monitored to ensure that the Code of Conduct is being adhered to:

- government legislation / regulatory approach;
- the product;
- general advertising of the product
- point of sale advertising for the product.

Although governments should play a crucial role in controlling advertisements to ensure that the industry implement the Code provisions under Article 11, the focus of this section is on industry responsibilities.

3. a The Product

The product itself will have labels front and back as well as packaging and possibly accompanying literature. It is essential to check over all of this and assess whether any of it is in direct contravention of the Code of Conduct or is not in the 'spirit' of the Code of Conduct. Consider things like photographs/images – how does it describe the product; etc.

The checklist at the bottom should be used for each product suspected of being in breach of the Code of Conduct.

3.b General Advertising

For many of the brands of pesticide available there will be advertising of one sort or another to encourage users to purchase the product. These can be adverts in the general press, magazines and newspapers; trade press, radio, television or the internet and billboards. The Article is aimed at preventing adverts and claims which make claims about pesticides that could result in their misuse, and harm users or the public. The checklist at should be used for each product suspected of being in breach of the Code of Conduct.

3.c Point of sale

This is the point at which pesticides are sold to professional users or the public. There will be a range of different outlets potentially selling pesticides from qualified agronomic advisers and farm supply shops to garden centres and supermarkets and small hole-in-the-wall shops. However, **the Code of Conduct applies equally across the board and should be recognised and implemented by any outlet selling pesticides for use.**

The best way to ascertain whether the Articles are being followed is to observe what is happening in store and to talk to the staff at the store or outlet. As with any monitoring of the Code of Conduct it is essential to keep an accurate record of any compliance failures that you may come across. Documentation can include written notes accompanied by sound and / or video recordings as well as photographs. Details of the type of information and how it can be recorded are provided in the section on Monitoring Tools.

Questions to ask on specific articles;

11.2.16 all staff involved in sales promotions are adequately trained and possess sufficient technical knowledge to present complete, accurate and valid information on the products offered for sale

This can be best ascertained by asking some key questions firstly about whether there is trained staff available to tell you about the product in question. The second thing to do is to have a list of relevant technical questions about the product that you can ask the staff present and see if it matches your knowledge.

11.2.18 advertisements and promotional activities should not include inappropriate incentives or gifts to encourage the purchase of pesticides

There are a number of ways that this part of the Article could be breached. The classic example would be offering a gift, such as a motorcycle, if you decide to purchase X amount of pesticide X. The other way is if a retail outlet is offering pesticides at discounted prices such as a 2-for-1 offer or large price reductions to encourage people to purchase more pesticides than are necessary. An example of the second approach and what was done about it is presented in the following case study:

Case study – UK retailer in contravention of Article 11.2.18 (Advertising)

Relevant Article 11.2.18 text: *“advertisements and promotional activities should not include inappropriate incentives or gifts to encourage the purchase of pesticides.”*

In July 2008 PAN UK became aware that a major supermarket chain was offering 25% off all chemicals – including pesticides – at one of its stores in the UK. The 25% offer contravened article 11 in that the retailer was offering an inappropriate incentive or gift to encourage the purchase of pesticides.

Due to the fact the PAN UK has a long history of working with this particular retailer, PAN UK first contacted the person in charge of pesticide policy at the retailer directly pointing out that PAN UK believed a breach of the Code of Conduct was being undertaken in a local store and asking them to look into the matter. The initial response was very quick; it was to ask what the Code of Conduct is and what legal bearing it has, indicating that the person responsible for pesticide policy was unaware of the Code of Conduct.

The retailer responded that they had been unaware of the Code of Conduct and would deal with the matter by taking the items out of the 25% off offer. However, they explained that it had happened as a way of using up excess stock at the end of the season and that due to overstocking it was a necessity. The final communication from the retailer informed us that there would be a re-evaluation of stocking practise to ensure that next season there was nothing left over that would need price reductions in order to sell off.



At the same time as informing the retailer the information and a question regarding the legal status of this activity in the UK was sent to the regulatory authority, the Chemical Regulation Directorate (CRD). The response from this body was that there is no statutory or regulatory requirement prohibiting such offers but the practise is certainly not encouraged by the regulatory agency. However, once again there was a lack of knowledge about the Code of Conduct in general and the particular Article dealing with this issue.

On the 18/08/2009 the CRD sent out a Regulatory Update concerning sales of pesticides under 2-for-1 offers advising that retailers should not make such offers available to ensure that the public do not overbuy, store or overuse home and garden pesticides. The text of the update is available here: <http://www.pesticides.gov.uk/approvals.asp?id=2775>

Outcomes:

- Retailer agreed to remove the 25% offer
- Retailer agreed to look at stocking levels for coming seasons to ensure that no recurrence happened
- Regulator issued a notice calling on retailers to be careful about offering any deal that might result in over consumption of pesticides.

Lessons learned:

- Neither the regulator or the retailer were conversant with the Code of Conduct, at least in this particular area
- There are currently no statutory requirements prohibiting any breach of this aspect of the Code of Conduct, rather a reliance on voluntary cooperation with guidelines sent out by the Regulator
- Economic necessity seems to trump voluntarily sticking to non-statutory guidelines
- The close relationship between PAN UK and this particular retailer meant it was possible to communicate effectively on this particular issue
- A simple survey of retailers obtaining photographic evidence of reduced price pesticides on offer would provide a simple follow up and help to argue for a statutory approach to dealing with the issue

Next Steps

Once you have researched, recorded and documented any infractions of the Code of Conduct that you have found you will want to use them in order to make changes and help to ensure that all responsible parties are meeting their commitments to the Code of Conduct. This is in fact also a requirement in the Code of Conduct; the text of Article 11.3 reads: "International organisations and public sector groups should call attention to departures from this Article."

Checklists

Article 11 Advertising - Product Checklist

Name of the Product:

Manufacturer:

Active ingredient:

Date:

Article text	Container	Packaging	Additional literature
11.2.1 All statements used in advertising are technically justified;			
11.2.2 Advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the "safety" of the product, its nature, composition or suitability for use, official recognition or approval;			
11.2.4 no company or individual in any one country simultaneously markets different pesticide active ingredients or combinations of ingredients under a single brand name			
11.2.5 advertising does not encourage uses other than those specified on the approved label		X	
11.2.7 advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess			
11.2.8 claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic", "environmental friendly" or "compatible with IPM/IVM," are not made on labels, pamphlets or other public material, with or without a qualifying phrase such as "when used as directed". [However, reference to use within specified IPM/IVM programmes may be included if validated by the regulating authority and the claim qualified accordingly];			
11.2.10 no misleading statements are made			

concerning the effectiveness of the product			
11.2.11 no guarantees or implied guarantees, such as “more profits with...” or “guarantees high yields,” are given unless definite evidence to substantiate such claims is available			
11.2.14 technical literature provides adequate information on correct practises, including the observance of recommended application rates, frequency of applications and pre-harvest intervals in language that is understandable to end users;			

Notes of the infractions should be made on a separate sheet to explain why you believe the section marked with an X is in violation of the Code of Conduct.

For Evidence ensure that you include original packaging and / or photographs of packaging, container and any additional literature which clearly show any suspected breach of the Code of Conduct.

Article 11 Advertising – General Advertising Checklist

Name of the Product:

Manufacturer:

Active ingredient:

Date:

Article text	TV 	Radio 	Internet 	Newspaper / magazine 
11.2.1 All statements used in advertising are technically justified;				
11.2.2 Advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the “safety” of the product, its nature, composition or suitability for use, official recognition or approval;				
11.2.3 pesticides which are legally restricted to use by trained or registered operators are not publicly advertised through journals				

other than those catering for such operators, unless the restricted availability is clearly and prominently shown				
11.2.6 promotional material does not include recommendations at variance with national regulatory decisions;				
11.2.7 advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess;				
11.2.8 claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic", "environmental friendly" or "compatible with IPM/IVM," are not made on labels, pamphlets or other public material, with or without a qualifying phrase such as "when used as directed". [However, reference to use within specified IPM/IVM programmes may be included if validated by the regulating authority and the claim qualified accordingly];				
11.2.9 statements comparing the risk, hazard or "safety" of different pesticides or other substances are not made				
11.2.10 no misleading statements are made concerning the effectiveness of the product				
11.2.11 no guarantees or implied guarantees, such as "more profits with..." or "guarantees high yields," are given unless definite evidence to substantiate such claims is available				
11.2.12 advertisements do not contain any visual representations of potentially dangerous practises, such as mixing or application without sufficient protective clothing, use near food or use by or in the vicinity of children				
11.2.13 advertising or promotional material draws attention to the appropriate warning phrases and symbols as laid down in the GSH and FAO/WHO labelling guidelines ¹				
11.2.15 false or misleading comparisons with other pesticides are not made				

¹ Revised guidelines on good labelling practise for pesticides. FAO, Rome. 1995.

11.2.17 advertisements encourage purchasers and users to read the label carefully or have the label read to them if they cannot read				
11.2.18 advertisements and promotional activities should not include inappropriate incentives or gifts to encourage the purchase of pesticides.				

Insert the name of the programme / website / publication in the box where the relevant infraction is believed to have occurred.

Notes of the infractions should be made on a separate sheet to explain why you believe the section marked with an X is in violation of the Code of Conduct.

For Evidence ensure that you include original advertisement if possible and / or photographs or recordings of the advert which clearly show any suspected breach of the Code of Conduct.

Packaging and Labelling

Aim of provisions

Provisions are included under the Code of Conduct that set out requirements for pesticide containers and packaging with the aim to help reduce the risks posed by pesticide containers to both users and non-users (i.e. children).

This includes ensuring that pesticide containers pose little risk to children and are available in appropriate sizes and types suitable for small-scale farmers, which will also help to prevent the selling on of repackaged pesticides in unlabelled and inappropriate containers. In addition, the Code of Conduct aims to prevent containers being reused and advocates a collection system to allow containers to be returned.

The Code of Conduct clearly lays out what information the pesticide industry should include on container labels, to ensure the pesticides are used both appropriately and safely by farmers. Information displayed on the labels should be in the appropriate language(s) of the country.

Articles of the Code of Conduct relevant to industry

It is very clear that responsibility for controls on labelling and packaging is relevant to both government and industry. Whilst it is the government's responsibility to ensure that such measures are being adopted the industry should be:

5.2.4.2 Introducing products in ready-to-use packages;

5.2.4.3 Developing application methods and equipment that minimize exposure to pesticides;

5.2.4.4 Using returnable and refillable containers where effective container collections systems are in place;

5.2.4.5 Using containers that are not attractive for subsequent reuse and promoting programmes to discourage their reuse, where effective container systems are not in place;

5.2.4.6 Using containers that are not attractive to or easily opened by children, particularly for domestic use products

5.2.4.7 Using clear and concise labelling

8.2.8 provide, consistent with national, sub-regional or regional requirements, a range of pack sizes and types that are appropriate for the needs of small-scale farmers and other local users, in order to reduce risks and to discourage sellers from repackaging products in unlabelled or inappropriate containers;

10.2 Pesticide industry should use labels that:

10.2.1 Comply with registration requirements and include recommendations consistent with those of the relevant authorities in the country of sale;

10.2.2 Include appropriate symbols and pictograms whenever possible, with their signal words of hazard and risk phrases, in addition to written instructions, warnings and precautions in the appropriate language or languages;

10.2.3 Comply with national or international labelling requirements or, in the absence of more detailed national standards with the GHS, the FAO/WHO guidance in pesticide labelling, and other relevant international labelling requirements;

10.2.4 Include, in the appropriate language or languages, a warning against the reuse of containers and instructions for the safe disposal or decontamination of used containers;

10.2.5 Identify each lot or batch of the product in numbers or letters that can be understood without the need for additional code references;

10.2.6 Clearly show the release date (month and year) of the lot or batch (21), expiry date (as appropriate) and contain relevant information on the storage stability of the product.

PESTICIDES COMPANY ABC

Language of label in English. Most farmer in the region speak Thai.

Pest AWAY
Herbicide

Active Ingredients:
Monosodium acid methanearsonate75%
2,4-D dimethyl amine salt 25%

Manufactured:

PESTICIDE COMPANY ABC

USA

Does not provide full address



No first aid or medical information



Keep Away from Children

Net contains 1 gallon

Reg No: 1234567

No advice about method or timing

Halt Sale Recall

Aim of Provisions

In cases where the handling or use of a pesticide product poses a high risk under conditions of use, the Code of Conduct asks governments to halt sale and recall products to avoid harm and damages. The importation of such pesticide products may also be prohibited.

In order for this to be successful it is essential that industry and to some extent government agencies have in place a suitable system for monitoring the conditions that pesticides are being used in and for documenting any problems that are reported to them regarding the use phase post approval.

Articles of the Code of Conduct relevant to Halt Sale/Recall

5.2.5 Halt sale and recall products as soon as possible when handling or use pose an unacceptable risk under any use directions or restrictions and notify the government.

7.5 Prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if, based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment.

Monitoring checklist

When monitoring this section of the Code of Conduct it is useful to look on a company by company basis and at the products that those companies supply. There will in all likelihood be different approaches by different companies and this will help to show the differences between those adopting best practise in terms of the Code of Conduct and those that are not. It would also be useful to look at the individual products that a particular company supplies as they might not standardise their approach across the entire range of products.

In the first instance choose a company and compile a list of the products it supplies. The following checklist can be completed either for a company as a whole or for an individual product supplied by a company. It is up to you to determine what the most appropriate course of action to take is.

Article of Code	Yes	No	Notes
5.2.4.2 Do they have ready to use products available?			
5.2.4.3 Are application methods and equipment available that will reduce the chances of exposure to pesticides			

5.2.4.4 Are containers returnable or refillable and is there a system in place to return or refill empty containers?			
5.2.4.5 If no return system is in place are there measures to make reuse unattractive?			
5.2.4.6 Are the containers child proof?			
5.2.4.7 Is the labelling clear and concise?			
8.2.8 Is there a range of different size packs available of a particular product to ensure the correct amounts are purchased by the end user?			
LABELS			
10.2.1 Do the labels comply with registration requirements			
10.2.2 Are pictograms used alongside written safety instructions and warnings?			
10.2.3 Do they comply with national or international labelling requirements for dangerous goods in international trade and, if appropriate, clearly show the WHO hazard classification of the contents?			
10.2.4 Include in the appropriate language warnings about reuse of containers and instructions for safe disposal and decontamination?			
10.2.5 Identify each lot or batch of the product in numbers or letters that can be understood without the need for additional code			

references?			
10.2.6 Clearly show the release date (month and year) of the lot or batch and contain relevant information on the storage stability of the product?			
Halt Sale/Recall			
5.2.5 Is there a system in place either by industry or government that allows for the halt sale/recall of a product?			
7.5 Is there a system in place to prohibit the importation, sale and purchase of highly toxic and hazardous products if no other effective control measures are in place?			

Joint Responsibilities

The Code of conduct sets out a series of responsibilities for different types of organisation including governments, the pesticide industry and civil society.

Responsibility for some provisions in the Code of Conduct is restricted to one group – for example, governments are responsible for regulation. However, responsibilities for other provisions are spread across different groups and require groups to co-operate to implement the provisions effectively. Responsibility for the provisions covered in this section is shared between both industry and government. In general terms, companies should ensure that their products do not pose any potential risks to users while governments have a responsibility to create the regulatory framework to ensure that companies fulfil their obligations. This could include setting standards for plant protection, promoting transparency and introducing legislation to protect people and the environment from harm caused by pesticide use.

Non-governmental organisations (NGOs) have an important role in implementing the Code of Conduct – both by acting as a watch-dog and observer ensuring that governments and industry play their parts, but also in training and promoting IPM.

Personal Protective Equipment (PPE)

Aims/Purpose

Numerous sections of the Code of Conduct address the use of personal protective equipment (PPE). PPE is a key tool to reduce the risk of exposure to hazardous pesticides by workers. The Code of Conduct aims to ensure that workers are aware of the need to use PPE, are encouraged to utilise PPE properly, and that it is readily available.

Thus the Code of Conduct aims to encourage the use of proper PPE. The Code of Conduct set out to accomplish this by first discouraging the use of pesticides that require extensive, expensive, and cumbersome equipment. It also demands that governments in conjunction with the PPE industry should promote the use and purchase of PPE, as well as practical training. In addition to this there should be extensive oversight by both government and industry to insure that PPE is manufactured to the highest quality and safety standards.

Did You Know?

That pesticide residues can be found on the body despite using protective equipment

The Code of Conduct also states that governments and industry should cooperate to educate about the potential dangers of unprotected contact with pesticides. Governments are additionally instructed to have extensive oversight over the advertising and labelling of pesticides, from all areas from marketing intentions to label instructions and warnings. Industry should also ensure labelling is not potentially misleading the user into believing PPE is not required when handling the pesticide.

Relevant Articles

3.6 Pesticides whose handling and application require the use of personal protective equipment that is uncomfortable, expensive or not readily available should be avoided, especially in the case of small-scale users and farm workers in hot climates.

3.11 Governments, pesticide industry and the application equipment industry should develop and promote the use of pesticide application methods (7, 8, 9, 10, 11) and equipment (12, 13, 14, 15, 16) that minimize the risks to human and animal health and/or the environment and that optimize efficiency and cost-effectiveness, and should conduct periodic practical training in such activities (17). The application equipment industry should also provide users with information on proper maintenance and use of application equipment.

5.3 Government and industry should cooperate in further reducing risks by:

5.3.1 Promoting the use of personal protective equipment which is suitable for the tasks to be carried out, appropriate to the prevailing climatic conditions and affordable (6);

5.5 In establishing pesticide production facilities of a suitable standard in developing countries, manufacturers and governments should cooperate to:

5.5.1 Adopt engineering standards and operating practices appropriate to the nature of the manufacturing operations and the hazards involved, and ensure the availability of appropriate protective equipment;

6.1 Governments should:

6.1.1 Introduce the necessary policy and legislation for the regulation of pesticides, their marketing and use throughout the life cycle, and make provisions for its effective coordination and enforcement, including the establishment of appropriate educational, advisory, extension and health-care services, using as a basis FAO and WHO guidelines and, where applicable, the provisions of relevant legally binding instruments. In so doing, governments should take full account of factors such as local needs, social and economic conditions, levels of literacy, climatic conditions, availability and affordability of appropriate pesticide application and personal protective equipment;

6.1.12 Permit pesticide application equipment and personal protective equipment to be marketed only if they comply with established standards (5, 8, 9);

11.1 Governments should approve and implement legislation to regulate, the advertising of pesticides in all media to ensure that it is in line conditions of registration as regards label directions and precautions, particularly those relating to proper maintenance and use of application equipment, appropriate personal protective equipment, special precautions for vulnerable groups and the dangers of reusing containers (45).

11.2 Pesticide industry should ensure that:

11.2.12 advertisements do not contain any visual representation of potentially dangerous practices, such as mixing or application without sufficient protective clothing, use near food or use by or in the vicinity of children;

Monitoring

- Contact government regulatory agency concerning pesticides
- Ask to see statues related to PPE and pesticides/chemicals
- Check date of passage of the statute
- Compare statutes with Code of Conduct
- Investigate penalties for disobeying statutes
- Ask if government has any guidance and/or direct assistance for industry on implementing Code of Conduct
- Contact industry related companies and ask for proof of Code of Conduct being implemented in company wide policies
- Also enquire if the government has offered any assistance/ guidance

Surveys

Below are the tabulated results from two surveys performed for the 2010 PAN publication *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*.

Table 3.5 PPE indicated by respondents										
	% stating they wear wearing PPE	Items worn by applicators who wear PPE (% wearing)								
		Gloves	Overalls	Glasses	Respirator	Mask	Boots/shoes	Long-sleeved shirt	Long pants	Other
Cambodia	67	70	0	5	0	92	38	97	94	0
China	74	3	5	0	2	2	7	90	88	8
India, Andhra Pradesh	1	1	1	1	1	1	0	*71	*7	1
India, Orissa	6	0	0	0	0	0	*34	*97	*98	8
Malaysia, Perak	96	95	94	68	61	33	99	99	99	31
Malaysia, Sarawak	19	43	21	14	14	29	79	71	71	0
Philippines	94	5	0	0	0	43	21	99	98	10
Sri Lanka	16	69	13	0	19	19	13	63	63	6
Vietnam, An Giang	94	3	1	22	56	10	1	97	95	1
Vietnam, Nam Dinh	80	68	58	13	1	97	74	76	74	24

* This is a percentage of all farmers interviewed in Orissa and exceeds those who indicated they wear PPE: either they did not consider items as PPE or they understood the question to mean something different.

Table 3.6. Reasons given by pesticide applicators for not wearing PPE (%)				
Country	Uncomfortable	Not available	Expensive	Other reasons
Cambodia	19	11		
China	3			
India, Andhra	3	31	42	
India, Kerala	12			
India, Orissa		80		
Malaysia, Perak		2		
Malaysia, Sarawak	22	28	21	32*
Philippines	6			
Sri Lanka	41	25	35	
Vietnam, An Giang	3			
Vietnam, Nam Dinh	11	7	5	
* Other reasons included 'don't know, never been told, never seen before' etc.				

Both are indicative of the widespread lack of PPE usage when handling and using pesticides and chemicals.

Examples (also from *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*)



Spraying is carried out in a haphazard manner, Tanzania (Photo: AGENDA, May 2007)

Photographs such as the one above are not permitted to be put on pesticide containers and/or related products under the Code of Conduct, as they are misleading. They create an idealized idea that one can just purchase a pesticide and spray away, neither labourer is wearing any PPE. It is also showing unsafe application practices as both are spraying directly across each other.

A photograph from the rear potentially could reveal this:



Pesticide leaking from equipment onto a producer spraying without wearing any protection, Tanzania (Photo: AGENDA, May 2006)

However a photograph such as the one below is permitted to be shown on a pesticide container under the FAO Code of Conduct. As it shows the labourer donned in proper PPE and the manner of application is not incorrect (such as shown in the first picture).



Source:

<http://www.knowledgebank.irri.org/landprep/images/stories/landprep/pestapp.jpg>

Next Steps

From the data gathered in the monitoring section one must decide what their ultimate goal is. Under the Code of Conduct “International organizations and public sector groups should call attention to departures from this Article” (Article 11.3). Thus all found departures from the Code of Conduct are required to be reported to the FAO. If country and/or industry are found to be departing from the Code of Conduct then they should be made aware as well.

Checklist

Date: _____

Name of Product: _____

Manufacturer: _____

Active Ingredient (%): _____

	Goggles	Rubber Suit	Rubber Gloves	Respirator	Mask	Boots	Long-sleeve Shirt/Pants
Required for use							
Literature says/shows							
Actual product shows/illustrates							

Additional Comments: _____

Date: _____

Country: _____

FAO Article Text	Addressed in law? (Y/N)-Cite	Penalties? (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite
3.6						
3.11						
5.3.1						
5.5.1						
6.1.1						
11.1						
11.2						

Additional
Comments: _____

Storage and Disposal

Aims/Purpose

The storage and disposal of pesticides is one of the most paramount issues that the FAO Code of Conduct tackles; many communities are laden with stockpiles of ‘disposed’ pesticides and pesticides are often stored in inappropriate locales until use, such as within a close proximity to children, food and/or water supplies.



Pesticides stored on top of a drinks fridge in PDR Laos, © Elliott Cannell, 2011

The Code of Conduct aims to mitigate unnecessary and preventable exposure to pesticides. It addresses this predominately by giving governments’ regulatory oversight, in terms of the kind of containers used and the organization of pesticide collection points. As is static throughout the Code of Conduct, governments and industry are to work together in cooperation in order to ensure the full and complete implementation of the Code of Conduct.

Relevant Articles

- 1.1** The objectives of this Code of Conduct are to establish voluntary standards of conduct for all public and private entities engaged in or associated with the distribution and use of pesticides, particularly where there is inadequate or no national legislation to regulate pesticides.

1.7 The standards of conduct set forth in this Code of Conduct:

1.7.5 Adopt the “life-cycle” approach to management of pesticides to address all major aspects related to the development, registration, production, trade, packaging, labelling, distribution, storage, transport, handling, application, use, disposal and monitoring of pesticides and pesticide residues as well as management of pesticide waste and pesticide containers;

5.1 Governments should:

5.1.8 with the cooperation of pesticide industry, limit the availability of pesticides that are sold to the general public through non-specialized outlets, to low hazard products (WHO Class U) or low risk and ready to use products that require no dilution or other preparation, and can be applied with limited need of personal protective equipment;

5.1.9 require that pesticides be physically segregated from other merchandise to prevent contamination or mistaken identity and where appropriate, require that pesticides are clearly marked as hazardous materials. Every effort should be made to publicize the dangers of storing pesticides and foodstuffs together;

5.2 Even where a control scheme is in operation, pesticide industry should:

5.2.4 Make every reasonable effort to reduce risks posed by pesticides by:

5.2.3.4 Using returnable and refillable containers where effective container collection systems are in place;

5.2.3.5 Using containers that are not attractive for subsequent reuse and promoting programmes to discourage their reuse, where effective container collection systems are not in place;

5.2.3.6 Using containers that are not attractive to or easily opened by children, particularly for domestic use products;

5.3 Government and industry should cooperate in further reducing risks by:

5.3.2 Making provisions for safe storage of pesticides at wholesale, retail, warehouse and farm level (26, 27);

5.3.3 Establishing services to collect and safely dispose of used containers and small quantities of left-over pesticides (28);

10.2 Industry should use labels that:

10.2.6 Clearly show the release date (month and year) of the lot or batch (21), expiry date (as appropriate) and contain relevant information on the storage stability of the product.

10.3 Pesticide industry, in cooperation with government, should ensure that:

10.3.1 Packaging, storage and disposal of pesticides conform in principle to the relevant FAO, UNEP, WHO guidelines or regulations (34, 35, 47, 49, 50) or to other international guidelines, where applicable;

10.5 Governments, with the help of pesticide industry and with multilateral cooperation, should inventory obsolete or unusable stocks of pesticides and used containers, establish and (23) implement an action plan for their disposal, or remediation in the case of contaminated sites (40), and record these activities.

10.7 Pesticide industry should, with multilateral cooperation, assist in disposing of any banned or obsolete pesticides and of used containers, in an environmentally sound manner, including reuse or recycling, with minimal risk where approved and appropriate.

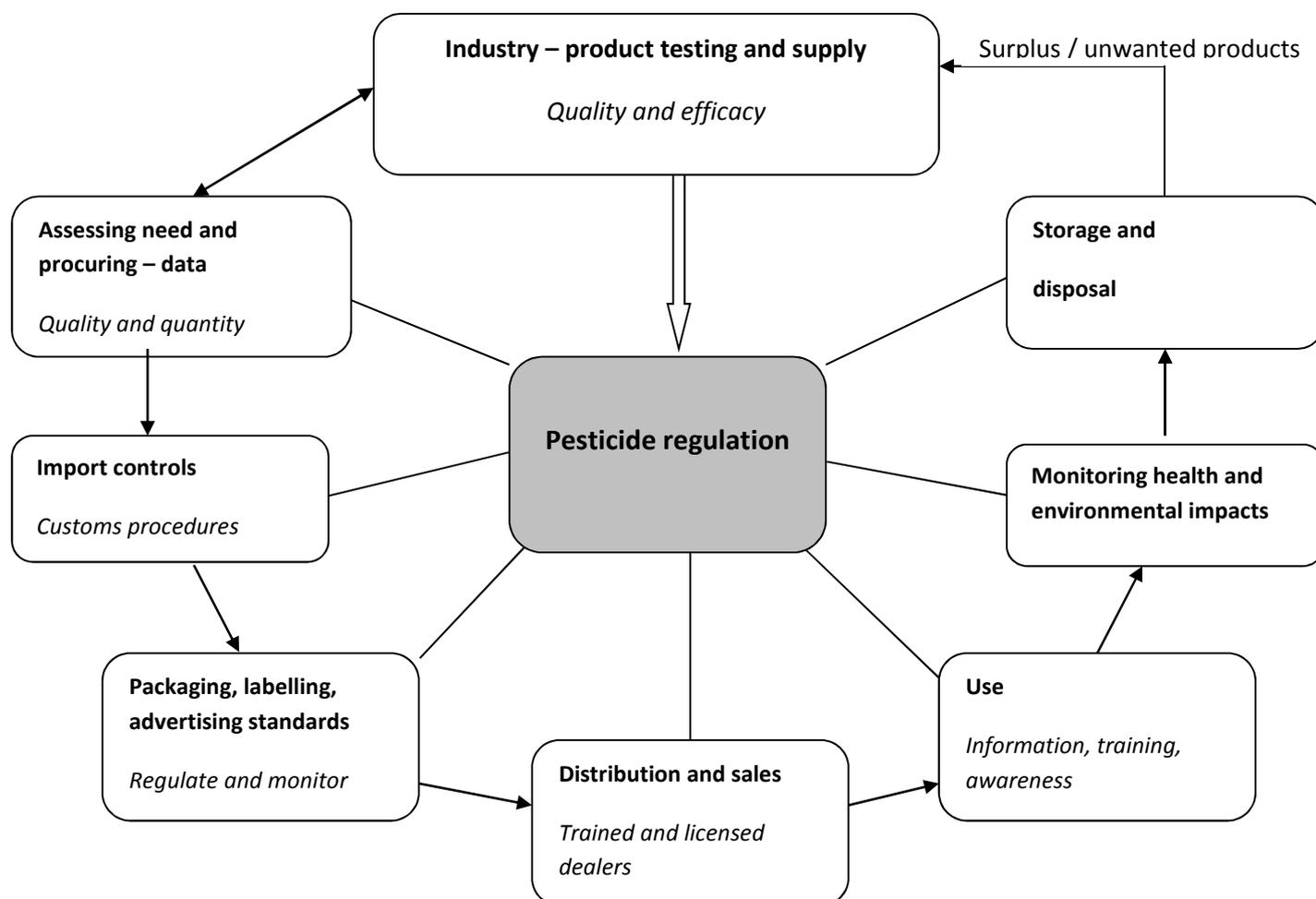
10.8 Governments, pesticide industry, international organizations and the agricultural community and vector control programmes should implement policies and practices to prevent the accumulation of obsolete pesticides and used containers (36).

Monitoring

- Is Community-based Pesticide Action Monitoring (CPAM) implementation occurring, assisted by Pesticide Risk Management (PRM) trained advisors?
- Does a culture of assumption exist? (Company A must be doing everything in its power to ensure safe pesticide use and storage/disposal practise: it is only right)
- Contact government regulatory agency concerning pesticides
- Ask to see statues related to storage and disposal of pesticides/chemicals
- Check date of passage of the statute
- Compare statutes with Code of Conduct
- Investigate penalties for disobeying statutes
- Ask if government has any guidance and/or direct assistance for industry on implementing Code of Conduct
- Contact industry related companies and ask for proof of Code of Conduct being implemented in companywide policies
- Also enquire if the government has offered any assistance/ guidance
- Check government programmes or policies for the management of pesticides in its entire life cycle

Charts/ Tables

Figure 1. Regulation: setting standards for sound management throughout the pesticide life-cycle



*Chart/Table from: *Preventing pesticide problems: A practical manual for sound management and sustainable strategies*, by: Barbara Dinham

Implementation and consideration of the life cycle is the only way to effectively lower and minimize the risk of pesticides to humans and the environment. Pesticides which are improperly stored or in inadequate containers can compromise food and water supplies, in addition to human and environmental welfare. Finally, containers and unused pesticides must be sufficiently **contained** and disposed to prevent short term, and more importantly long term damage alike.

Below are the tabulated results from two surveys performed for the 2010 PAN publication *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*

Table 3.7 Storage locations for unused pesticides (%)					
	Field	Shed	Garden	Home	Other
Cambodia	4	15	15	56	10 (e.g. hung on a tree)
China	3	79	12	4	3
India, Andhra Pradesh	23	9	11	71	0
India, Kerala	23	47	2	23	14
India, Orissa	0	0	0	97	0
Malaysia, Perak	22	65	0	11	16
Malaysia, Sarawak	28	31	5	12	29 (e.g. store room, farm)
Philippines	4	23	0	32	51 (container, box, sack, store room)
Sri Lanka	32	31	17	43	1
Vietnam, An Giang	0	21	0	59	15 (e.g. outside house, under bed)
Vietnam, Nam Dinh	0	13	18	7	67 (e.g. kitchen, toilet, animal housing)

Examples



Accumulation of empty containers creating disposal problem.



Pesticides and protective gear stored in local stores



Local stores contain food, cooking pots, and kittens.

*Above photographs from: *Preventing pesticide problems: A practical manual for sound management and sustainable strategies*, by: Barbara Dinham



Pesticides stored inside the house, Andhra Pradesh. (Photo: Saharivasa, October 2008)



Pesticides and spray equipment in a home; stored near food and accessible to children. Ross Bethio, Senegal (Photo: PAN Africa, August 2008)



Disposal of pesticide containers, among other rubbish, in open field- Hai Hau, Vietnam
 (Photo: CGFED, September 2008)

Above are photographs for the PAN from the 2010 PAN publication *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*.

As you can see from the table, chart, and photographs the Code of Conduct has not been implemented adequately. The life cycle of pesticides is being ignored, and exposure to pesticides by all life forms is not being minimized. The life cycle of pesticides must be fully considered when implementing regulatory legislation.

Next Steps

From the data gathered in the monitoring section one must decide what their ultimate goal is. Under the Code of Conduct “International organizations and public sector groups should call attention to departures from this Article” (Article 11.3). Thus all found departures from the Code of Conduct are required to be reported to the FAO. If the country and/or industry are found to be departing from the Code of Conduct then they should be made aware as well. In this particular section, strong emphasis on the ‘life cycle’ should be desired and in mind.

Checklist

Date: _____

Country: _____

State/Province: _____

County: _____

Village: _____

	Field	Shed	Garden	Home	Storeroom	Other
--	--------------	-------------	---------------	-------------	------------------	--------------

Storage Location (tally)						
Totals						

Additional

Remarks: _____

Date: _____

Country: _____

State/Province: _____

County: _____

Village: _____

	Return	Bury	Burn	Trash	Throw in Field	Other
Location of Disposal for Empty Pesticide Containers (tally)						
Totals						

Additional

Remarks: _____

Date: _____

Country: _____

FAO Article	Addressed in law? (Y/N)-Cite	Penalties? (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite
1.1						
1.7						
5.1						
5.2						
5.3						
10.2						
10.3						
10.5						
10.6						
10.7						
10.8						

Additional

Remarks: _____

Steps to Restrict Sale

Aims/Purpose

The Code of Conduct aims to prevent pesticides falling into the hands of untrained and unqualified operators. Allowance of such an occurrence could be dangerous to the operator, the environment, and other life inhabiting the area. Additionally it aims to restrict the stockpiling of unused pesticides, and/or discourage the use of more pesticides. Such examples of this would be 'buy one get one free' deals, which would create an incentive for pesticide purchases. This in turn will create stockpiles and/or encourage an increase in pesticide usage, causing even more detrimental exposure to life forms. Exposure to any aspect of the environment will affect the whole environment and everything inhabiting it.

Relevant Articles

1.1 The objectives of this Code of Conduct are to establish voluntary standards of conduct for all public and private entities engaged in or associated with the distribution and use of pesticides, particularly where there is inadequate or no national legislation to regulate pesticides.

1.7 The standards of conduct set forth in this Code of Conduct:

1.7.1 Encourage responsible and generally accepted trade practices;

3.1 Governments have the overall responsibility to regulate the availability, distribution and use of pesticides in their countries and should ensure the allocation of adequate resources for this mandate.

3.2 Pesticide industry should adhere to the provisions of this Code of Conduct as a standard for the manufacture, distribution, sale and advertising of pesticides. This is particularly important in those countries that have not yet established or are unable to effectively operate adequate regulatory schemes and advisory services.

4.2 Each country should possess or have access to facilities to verify and exercise control over the quality of pesticides offered for sale or export, to establish the quantity of the active ingredient or ingredients and the suitability of their formulation, according to FAO or WHO recommended specifications or national specifications, when available (21). Where a country lacks suitable facilities, access to laboratories in another country should be considered.

4.5 Pesticide industry and governments should collaborate in post-registration surveillance or conducting monitoring studies to determine the fate of pesticides and their health and environmental effects under operational conditions (31).

5.1 Governments should:

5.1.2 regularly review the pesticides marketed in their country, their acceptable uses and their availability to each sector of the public, and conduct special reviews when indicated by scientific evidence;

5.1.8 with the cooperation of pesticide industry, limit the availability of pesticides that are sold to the general public through non-specialized outlets, to low hazard products (WHO Class U) or low risk and ready to use products that require no dilution or other preparation, and can be applied with limited need of personal protective equipment;

5.1.9 require that pesticides be physically segregated from other merchandise to prevent contamination or mistaken identity and where appropriate, require that pesticides are clearly marked as hazardous materials. Every effort should be made to publicize the dangers of storing pesticides and foodstuffs together;

5.2 Even where a control scheme is in operation, pesticide industry should:

5.2.5 Halt sale and recall products as soon as possible when handling or use pose an unacceptable risk under any use directions or restrictions and notify the government.

6.1 Governments should:

6.1.11 collect and record data on the import, export, manufacture, formulation, quality, quantity and use of pesticides in order to assess the extent of any possible effects on human and animal health and/or the environment, and to monitor trends in pesticide use for economic and other purposes;

6.1.12 Permit pesticide application equipment and personal protective equipment to be marketed only if they comply with established standards (5, 8, 9);

6.1.13 detect and control counterfeiting and illegal trade in pesticides through national inter-agency and intergovernmental cooperation and information sharing;

6.2 Industry should:

6.2.7 Provide their national governments with clear and concise data on export, import, manufacture, formulation, sales, quality and quantity of pesticides.

7.3 availability of pesticides may be restricted by the responsible authority in different ways, such as not registering a product or, as a condition of registration, restricting the availability to certain groups of users or certain uses in accordance with a national assessment of the hazards involved in the use of the product.

7.4 Governments and industry should ensure that all pesticides made available to the general public are packaged and labelled in a manner which is consistent with the FAO/WHO or other relevant guidelines on packaging and labelling (3) and with appropriate national or regional regulations.

7.5 Prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if, based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment.

8.1 Governments should:

8.1.1 Develop legislation and implement licensing procedures relating to the sale of pesticides, so as to ensure that those involved are capable of providing buyers with sound advice on risk reduction, as well as judicious and efficient use;

8.1.2 encourage, to the extent possible, a market-driven supply process, as opposed to government purchasing, to reduce the potential for accumulation of excessive stocks. However, when governments, parastatals, aid programmes or other agencies purchase pesticides, the procurement should be based on established FAO and WHO guidance on tender and procurement for pesticides (4, 5);

8.1.3 Ensure that any pesticide subsidies or donations do not lead to excessive or unjustified use which may divert interest from more sustainable alternative measures.

8.2 Pesticide industry should:

8.2.1 Take all necessary steps to ensure that pesticides traded internationally conform at least to:

8.2.1.1 relevant international conventions and regional, sub-regional or national regulations

8.2.1.2 Relevant FAO or WHO recommended specifications, where such specifications have been developed;

8.2.1.3 Principles embodied in GHS and relevant FAO, and/or WHO guidelines on classification and labelling;

8.2.1.4 Rules and regulations on packaging, marking and transportation laid down by the UN Recommendations on the Transport of Dangerous Goods (46), and by international organizations concerned with specific modes of transport (e.g. ICAO, IMO, RID, ADR and IATA – see end of page 68 for explanation).

8.2.2 ensure that pesticides manufactured for export are subject to the same quality requirements and standards as those applied to comparable domestic products;

8.2.3 ensure that pesticides manufactured or formulated by a subsidiary company meet appropriate quality requirements and standards. These should be consistent with the requirements of the host country and of the parent company;

8.2.4 encourage importing agencies, national or regional formulators and their respective trade organizations to cooperate in order to achieve fair practices as well as marketing and distribution practices that reduce the risks posed by pesticides, and to collaborate with authorities in stamping out any unethical practice within the industry;

8.2.5 recognize that a pesticide may need to be recalled by a manufacturer and distributor when its use, as recommended, represents an unacceptable risk to human and animal health or the environment, and act accordingly;

8.2.6 endeavour to ensure that pesticides are traded by and purchased from reputable traders, who should preferably be members of a recognized trade organization;

8.2.7 ensure that persons involved in the sale of pesticides are trained adequately, hold appropriate government permits or licences (where such licences exist) and have access to sufficient information, such as material safety data sheets, so that they are capable of providing buyers with advice on risk reduction as well as judicious and efficient use;

8.2.8 provide, consistent with national, sub-regional or regional requirements, a range of pack sizes and types that are appropriate for the needs of small-scale farmers and other local users, in order to reduce risks and to discourage sellers from repackaging products in unlabelled or inappropriate containers.

8.2.9 not knowingly supply pesticides that are restricted for use by particular groups of users, for sale to unauthorized users.

8.3 procurers of pesticides should establish purchasing procedures to prevent the oversupply of pesticides and consider including requirements relating to pesticide storage, distribution and disposal services in a purchasing contract (4, 5).

ICAO: **International Civil Aviation Organization.**

IMO: **International Maritime Organization.**

RID: **Regulations concerning the international carriage of dangerous goods by rail.**

ADR: **European Agreement concerning the international carriage of dangerous goods by road.**

IATA: **International Air Transport Association.**

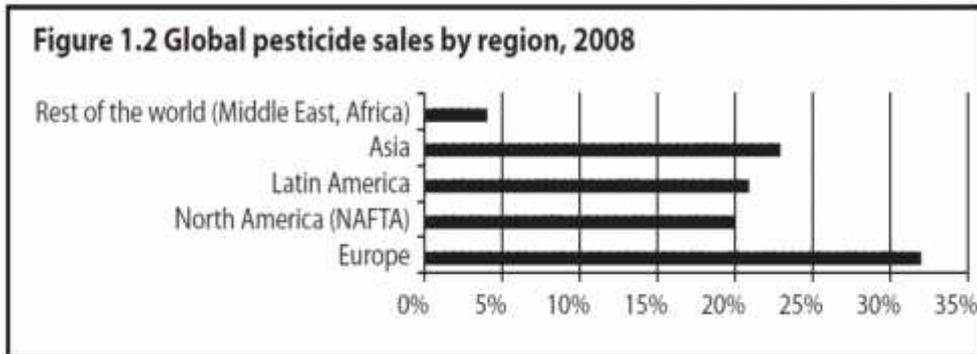
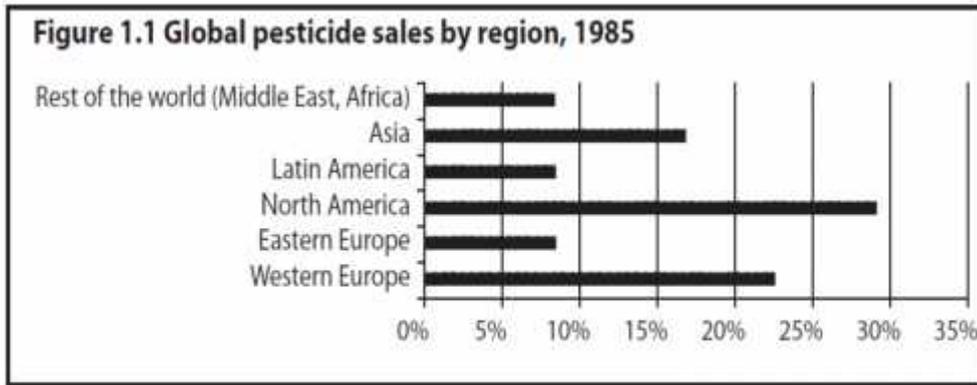
Monitoring

- Test vendors to see if they are willing to sell harmful pesticides without any presentation of your qualifications to do so
- Inquire about importing pesticides from another country
- Contact the government regulatory agency concerning pesticides
- Ask to see statutes related to PPE and pesticides/chemicals
- Check date of passage of the statutes
- Compare statutes with Code of Conduct
- Investigate penalties for disobeying statutes
- Ask if government has any guidance and/or direct assistance for industry on implementing Code of Conduct
- Contact industry related companies and ask for proof of Code of Conduct being implemented in company wide policies
- Also enquire if the government has offered any assistance/ guidance

Surveys

Year	Sales US\$m	% Change
1999	30,000	0
2000	29,200	-4.5
2001	26,780	-8
2002	25,150	-6
2003	26,710	6
2004	30,725	15
2005	31,190	1.5
2006	30,425	-2.5
2007	33,390	10
2008	40,475	21

Sources: 1999-2002 Wood MacKenzie reported in Crop Protection Association (UK) annual reviews; 2003-2008 Phillips McDougall reported on CropLife International website and in 'Facts and figures – The status of global agriculture', CropLife International 2009. www.croplife.org



Sources: 1985 Wood MacKenzie reported in Crop Protection Association (UK) annual review; 2008 Phillips McDougall in 'Facts and figures – The status of global agriculture'; CropLife International 2009, p10. www.croplife.org Source: figures from Agrow journals 1986 and CropLife International www.croplife.org

As the data above shows pesticide sales are increasing rather than decreasing. Regulations are needed now more than ever to curb the incentives and ease of buying pesticides. The Code of Conduct (which was designed as a minimum) of regulation certainly is a start at curbing pesticide sales.

Table 3.12 Selected feedback from interviews with pesticide retailers				
	No. stores	Training received	PPE sold	Licence held
Africa				
Mali	35	16 had received training mainly on precautions for mixing and storing pesticides	Between 19-23% stocked some PPE: gloves, overalls, boots or shoes, eye masks, glasses, masks, respirators	63% held relevant licence
Asia				
Cambodia	2	1 from government 1 from company	Limited PPE stocked: gloves and face masks	One held licence
China	10	Routine training from government on PPE, storage, relevant regulations	Not available in pesticide stores, but said it could be bought elsewhere	All
India (Kerala)	9	Not known (n/k)	2 stocked some PPE, but do not advise farmers to wear it	n/k
India (Orissa)	7	No training	None stocked	No licence
Indonesia (Garung)	4	Training from meetings with chemical companies	n/k	n/k
Indonesia (Kejajar)	7	No training; pesticides are sold from display cases in people's homes	No	No
Malaysia (Perak)	7	No training, retailers do not consider pesticides to be hazardous	No	n/k
Malaysia (Sarawak)	6	5 received company training; 5 received government training	6 stocked gloves; 5 stocked overalls, glasses, goggles, masks; 3 stocked a respirator	5 had licence
Asian total	52			
Total	87			

This tabulated survey shows that the Code of Conduct is not being fully and/or adequately being implemented across the globe.

Above are results from four surveys found in the 2010 PAN publication *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*

Examples



Pesticides being sold in street in Mali by man with skin exposed, wearing only a vest (Photo: PAN Mali, July 2009)



Pesticides being sold next to entrance of a restaurant in market at Sikasso, Mali; woman is cooking for her family within centimetres of the stall (Photo: PAN Mali, July 2009)



Sale of pesticides in a food market in Bolivia (Photo: RAPAL, January 2010)

These photographs further illustrate the lack of Code of Conduct implementation.

Above are photographs for the PAN from the 2010 PAN publication *Communities in Peril: Global report on the health impacts of pesticide use in agriculture*.

Next Steps

Illustrating the availability of pesticides through field testing is a potential next step. The compilation and presentation of this data would certainly be a powerful lobbying tool. However from the data gathered in the monitoring section one must decide what their ultimate goal is. Under the Code of Conduct “International organizations and public sector groups should call attention to departures from this Article” (Article 11.3). Thus all found departures from the Code of Conduct are required to be reported to the FAO. If country and/or industry are found to be departing from the Code of Conduct then they should be made aware as well.

Scorecard

Annexes

1. Resources

The following is a short list of some websites that will be of interest in furthering your knowledge of the Code of Conduct and the surrounding issues:

Website of the Stockholm Convention at <http://www.pops.int>

Website of the Rotterdam Convention at <http://www.pic.int>

Website of Montreal Protocol at <http://ozone.unep.org/>

Pesticide Action Network Asia Pacific <http://www.panap.net/>

2. Consolidated selection of checklists included in the document

Government Regulation

Article	YES	NO
5.1.1 Is there a pesticide registration and control system along the lines set out in Article 6 in place in your country or across the region?	If yes complete the following check list to see if it complies with the guidelines in the Code. State whether it is local or regional	If no monitoring is complete
Is there legislation in place for regulating pesticides?		
Is there a pesticide registration scheme in place?		
Is there an official risk assessment or risk		

management system for pesticides in place?		
Are there regionally harmonized pesticide registration requirements?		
Are approved pesticides reviewed on a regular basis?		
Is data on import, export, manufacture, formulation, quality and quantity of pesticides recorded and available?		
If recorded what is the information used for?		
Is the sale of Personal Protective Equipment (PPE) regulated to ensure only those products that meet established standards are available?		
Are there measures in place to control the illegal trade in pesticides?		

Article 7 Availability and Use

	YES	NO
Is there a pesticide registration authority in your country or regionally?		
Are there any voluntary measures in place?		
Have you a list of all potentially hazardous pesticides and products currently available in your		

country?		
Have you identified those which are causing problems?		
Have you established a case history for each pesticide of concern?		

Article 11 Advertising

Name of the Product:

Manufacturer:

Active ingredient:

Date:

Article text	Container	Packaging	Additional literature
11.2.1 All statements used in advertising are technically justified;			
11.2.2 Advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the "safety" of the product, its nature, composition or suitability for use, official recognition or approval;			
11.2.4 no company or individual in any one country simultaneously markets different pesticide active ingredients or combinations of ingredients under a single brand name;			
11.2.5 advertising does not encourage uses other than those specified on the approved label		X	
11.2.7 advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess;			
11.2.8 claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic", "environmentally friendly" or "compatible with IPM/ IVM," are not made on labels, pamphlets or other publicity material, with or without a			

qualifying phrase such as "when used as directed". [However, reference to use within specified IPM/IVM programmes may be included if validated by the regulating authority, and the claim is qualified accordingly];			
11.2.10 no misleading statements are made concerning the effectiveness of the product;			
11.2.11 no guarantees or implied guarantees, such as "more profits with..." or "guarantees high yields," are given unless definite evidence to substantiate such claims is available			
11.2.14 technical literature provides adequate information on correct practises, including the observance of recommended application rates, frequency of applications and pre-harvest intervals in language that is understandable to end users;			

Notes of the infractions should be made on a separate sheet to explain why you believe the section marked with an X is in violation of the Code of Conduct.

For Evidence ensure that you include original packaging and / or photographs of packaging, container and any additional literature which clearly show any suspected breach of the Code of Conduct

Advertising – General Advertising Checklist

Name of the Product:

Manufacturer:

Active ingredient:

Date:

Article text	TV	Radio	Internet	Newspaper / magazine
11.2.1 All statements used in advertising are technically justified;				
11.2.2 Advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the "safety" of the product, its nature, composition or suitability for use, official				

recognition or approval;				
11.2.3 pesticides which are legally restricted to use by trained or registered operators are not publicly advertised through journals other than those catering for such operators, unless the restricted availability is clearly and prominently shown				
11.2.6 promotional material does not include recommendations at variance with national regulatory decisions;				
11.2.7 advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess				
11.2.8 claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic", "environmentally friendly" or "compatible with IPM/ IVM," are not made on labels, pamphlets or other publicity material, with or without a qualifying phrase such as "when used as directed". [However, reference to use within specified IPM/IVM programmes may be included if validated by the regulating authority, and the claim is qualified accordingly];				
11.2.9 statements comparing the risk, hazard or "safety" of different pesticides or other substances are not made				
11.2.10 no misleading statements are made concerning the effectiveness of the product				
11.2.11 no guarantees or implied guarantees, such as "more profits with..." or "guarantees high yields," are given unless definite evidence to substantiate such claims is available				
11.2.12 advertisements do not contain any visual representations of potentially dangerous practises, such as mixing or application without sufficient protective clothing, use near food or use by or in the vicinity of children				
11.2.13 advertising or promotional material draws attention to the appropriate warning				

phrases and symbols as laid down in the GHS and FAO/WHO labelling guidelines ²				
11.2.15 false or misleading comparisons with other pesticides are not made				
11.2.17 advertisements encourage purchasers and users to read the label carefully or have the label read to them if they cannot read				

Insert the name of the programme / website / publication in the box where the relevant infraction is believed to have occurred.

Notes of the infractions should be made on a separate sheet to explain why you believe the section marked with an X is in violation of the Code of Conduct.

For Evidence ensure that you include original advertisement if possible and / or photographs or recordings of the advert which clearly show any suspected breach of the Code of Conduct.

Packaging and labelling – Halt Sale/Recall

Article of Code	Yes	No	Notes
5.2.4.2 Do they have ready to use products available?			
5.2.4.3 Are application methods and equipment available that will reduce the chances of exposure to pesticides			
5.2.4.4 Are containers returnable or refillable and is there a system in place to return or refill empty containers?			
5.2.4.5 If no return system is in place are there measures to make reuse unattractive?			
5.2.4.6 Are the containers child proof?			
5.2.4.7 Is the labelling clear and concise?			
8.2.8 Is there a range of			

² Revised guidelines on good labelling practise for pesticides. FAO, Rome. 1995.

different size packs available of a particular product to ensure the correct amounts are purchased by the end user?			
LABELS			
10.2.1 Do the labels comply with registration requirements			
10.2.2 Are pictograms with their signal words or hazard and risk phrases used alongside written safety instructions and warnings?			
10.2.3 Do they comply with national or international labelling requirements for dangerous goods in international trade and, if appropriate, clearly show the GHS, FAO/WHO hazard classification of the contents?			
10.2.4 Include in the appropriate language warnings about reuse of containers and instructions for safe disposal and decontamination?			
10.2.5 Identify each lot or batch of the product in numbers or letters that can be understood without the need for additional code references?			
10.2.6 Clearly show the release date (month and year) of the lot or batch (21) and contain relevant information on the storage stability of the product?			
Halt Sale/Recall			
5.2.5 Is there a system			

in place either by industry or government that allows for the halt sale/recall of a product?			
7.5 Is there a system in place to prohibit the importation, distribution sale and purchase of highly hazardous pesticides if no other effective control measures are in place?			

Personal Protective Equipment (PPE)

Date: _____

Name of Product: _____

Manufacturer: _____

Active Ingredient (%): _____

	Goggles	Rubber Suit	Rubber Gloves	Respirator	Mask	Boots	Long-sleeve Shirt/Pants
Required for use							
Literature says/shows							
Actual product shows/illustrates							

Additional Comments: _____

Date: _____

Country: _____

FAO Article Text	Addressed in law? (Y/N)-Cite	Penalties? (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite
3.6³						
3.11⁴						
5.3						
5.5						
6.1						
11.1⁵						
11.2						

³ Pesticides whose handling and application require the use of personal protective equipment that is uncomfortable, expensive or not readily available should be avoided, especially in the case of smallscale users and farm workers in hot climates⁽⁶⁾.

⁴ Governments, pesticide industry and the application equipment industry should develop and promote the use of pesticide application methods (7, 8, 9, 10,11) and equipment (12, 13, 14, 15, 16) that minimize the risks from pesticides to human and animal health and/or the environment and that optimize efficiency and cost effectiveness, and should conduct periodic practical training in such activities (17). The application equipment industry should also provide users with information on proper maintenance and use of application equipment.

⁵ Governments should approve and implement legislation to regulate the advertising of pesticides in all media to ensure that it is in line with the conditions of registration as regards label directions and precautions, particularly those relating to proper maintenance and use of application equipment, appropriate personal protective equipment, special precautions for vulnerable groups and the dangers of reusing containers (45).

Additional

Remarks: _____

Date: _____

Country: _____

State/Province: _____

County: _____

Village: _____

	Return	Bury	Burn	Trash	Throw in Field	Other
Location of Disposal for Empty Pesticide Containers (tally)						
Totals						

Additional

Remarks: _____

Date: _____

Country: _____

FAO Article	Addressed in law? (Y/N)-Cite	Penalties? (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite	Government guidance/assistance available? (Industry) (Y/N)-Cite	Government guidance/assistance available? (Farmers) (Y/N)-Cite
1.1						
1.7						
5.1						
5.2						
5.3						
10.2						
10.3						
10.5						
10.6						
10.7						

10.8						
------	--	--	--	--	--	--

Additional

Remarks: _____

Toolkit for PIC Monitoring

A tool-kit to facilitate the process of listing a severely hazardous pesticide formulation as per the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

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List of Acronyms

Rotterdam Convention.....	RC
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Prior Informed Consent.....	PIC
Chemical Review Committee.....	CRC
Decision Guidance Document.....	DGD
Conference of Parties.....	COP
Severely Hazardous Pesticide Formulation.....	SHPF
Designated National Authority.....	DNA
Personal Protective Equipment.....	PPE

[Background: The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade](#)

Context

With a constantly growing market in chemicals and pesticides it was recognised that many governments did not have adequate infrastructure to safely manage pesticides. With the extensive human and environmental damage possible due to improper use, inadequate storage and other mismanagement related problems of pesticides a need was felt for an international partnership to collaborate on shared responsibility to contribute towards environmentally sound usage of pesticides. The North - South dilemma wherein wealthier countries with better research banned certain pesticides and yet continued to sell it abroad and the reality that often less advantaged importing countries lacked the means to manage hazardous chemicals were important criteria that led to the formulation of this Convention.

Aims

The Rotterdam Convention (RC) came into force in February, 2004 with an aim to facilitate shared responsibility and co-operation in international trade of certain hazardous chemicals. It aims to protect human health and environment by facilitating information exchange about characteristics of various chemicals, providing a national decision making process on their import and export and by disseminating these decisions to all parties.

How does it work?

The Convention allows for international trade in certain identified chemicals to be more transparent and facilitates regular communication across parties sharing relevant concerns and regulatory decisions. It recognises that countries have differing capacities to manage hazardous pesticides and hence some may be better equipped to use them safely. To mitigate the inequalities in knowledge and capacity whilst dealing with the most hazardous pesticides the Convention provides technical assistance to help build capacity, put systems in place to provide uniformity in knowledge sharing when trading and research support to investigate reported hazardous chemicals. Governments that agree to implement the Convention are called the 'Parties'⁶ to it.

Under the Prior Informed Consent (PIC) procedure if a member country decides not to import a particular chemical or pesticide covered by the PIC procedure other Parties agree not to export it to

⁶ The Parties are listed at <http://www.pic.int/Countries/Parties/tabid/1072/language/en-US/Default.aspx>. There were 143 countries as of June 2011.

that country. Exporting Parties have to respect the decisions of the importing Party regarding any limits that they want to place on the trade of that pesticide. **Annex III of the Convention lists the pesticides subject to the PIC procedure.** There are two routes for proposing the inclusion of a severely hazardous pesticide formulation under PIC. **Article 5** of the convention requires a notification from at least two parties from different PIC regions⁷ that a certain pesticide has been banned or severely restricted in their countries. **Article 6** provides a route for a developing country or a country with an economy in transition facing problems whilst using a particular pesticide product under conditions of use normal to that country⁸. This toolkit is aimed at describing the second route, including supporting resources and a case study.

Article 6: Procedures for Severely Hazardous Pesticide Formulations

Article 6 allows any Party that is a developing country or a country with an economy in transition to propose to the Secretariat the listing of a severely hazardous pesticide formulation that is causing problems under conditions of use in its country. Once the Secretariat verifies that all the information required for the proposal, as listed in **Part 1 of Annex IV of the Convention**, has been received, it forwards a summary of the information to all parties through the PIC Circular⁹, initiates collection of additional information to meet the requirements of part 2 of Annex IV, then refers the proposal to the Chemical Review Committee (CRC)¹⁰. The CRC reviews the proposal and recommends whether the pesticide formulation should be included under the PIC procedure. If the CRC recommends for its inclusion it will prepare a draft Decision Guidance Document (DGD)¹¹ that is circulated amongst all Parties. At the next meeting of all Parties (Conference of Parties - COP) the CRC's recommendations are considered and a final decision is made on whether or not to include the chemical under the PIC process by a process of adoption by consensus. Once a decision is taken to list a chemical under PIC and the DGD is approved by the COP, the information is circulated by the Secretariat to all Parties.

Annex IV: Information and Criteria for Listing Severely Hazardous Pesticide Formulations in Annex III

Part 1

Documentation required from a proposing Party

A proposal submitted in accordance with Article 6 requires a party to include the following information:

- a) Name of the hazardous pesticide formulation;
- b) Name of the active ingredient or ingredients in the formulation;
- c) Relative amount of each active ingredient in the formulation;
- d) Type of formulation;
- e) Trade names and names of the producers, if available;
- f) Common and recognised patterns of use of the formulation within the proposing Party;

⁷ For clarity in implementation of Article 5 PIC regions are listed at <http://www.pic.int/Countries/PICRegions/tabid/1070/language/en-US/Default.aspx>.

⁸ Hence, not including accidental spillages or deliberate mismanagement

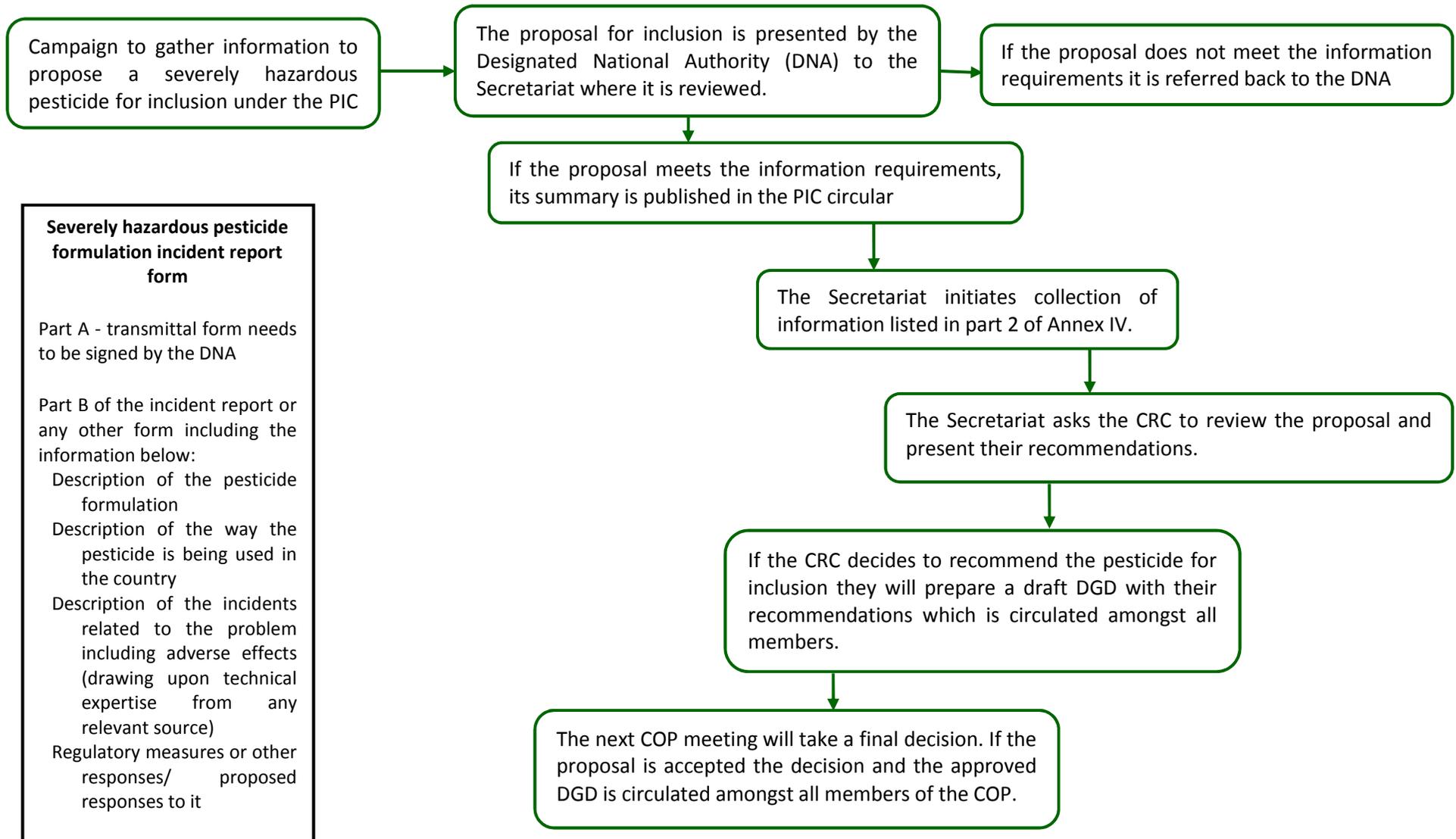
⁹ A biannual document that is critical to the implementation of many sections of the RC as it provides a platform for information sharing across all Parties.

¹⁰ The Chemical Review Committee is a body of the Rotterdam Convention formed to review chemicals and pesticide formulations and make recommendations to the Parties for listing.

¹¹ Draft Guidance Document is the report submitted by the CRC with its recommendations on the proposed pesticide formulation or chemical to the Parties.

- g) A clear description of incidents related to the problem, including the adverse effects and the way in which the formulation was used;
- h) Any regulatory, administrative or other measures taken, or intended to be taken, by the proposing Party in response to such incidents.

The Process Flowchart



The Severely Hazardous Pesticide Formulation (SHPF) Programme case study

One of the RC's objectives is to provide technical assistance to build capacities for countries less able to manage risks associated with hazardous pesticides. To that end the SHPF programme aims to

- Facilitate a national awareness raising workshop for representatives from key ministries, NGOs and farmers
- Collect information on pesticides in use and related occurrences of poisoning
- Organise a national meeting to evaluate the findings and decide on the next step

The Secretariat of the RC implemented a SHPF pilot programme in Burkina Faso in the summer of 2010 providing technical and financial assistance. A training workshop was organised in May for the data collection campaign that was to follow in the months noted to have the highest pesticide use – June and July. The campaign was conducted in three regions- Cascades, Hauts Bassins and la Boucle du Mouhoun. This was followed by the final workshop to evaluate the results, raise awareness regarding the benefits of Article 6 for developing countries, strengthen the capacities of various relevant bodies on pesticide poisoning data collection and assist the DNA to make a SHPF proposal to the Secretariat.

Methodology: The study was carried out using retrospective and prospective surveys conducted among different stakeholders like farmers, pesticide distributors/ retailers and health officials through structured and semi-structured interviews. Interview factsheets were formulated on the basis of the forms prepared by the RC. Before finalising the questionnaires they interviewed a few retailers and farmers and rewrote any questions that did not come across clearly. Training was held to help build surveying techniques and knowledge of various tools amongst the interviewers. With the farmers they used retrospective surveys to document cases of intoxication and related details whilst prospective questions lead to documenting knowledge and attitude towards agricultural practices involving pesticides.

Samples amongst farmers for the surveys were decided on the basis of the size of their landholding; they were divided into four groups accordingly and it was ensured that each group was adequately represented in the final sample interviewed. All pesticide retailers/ distributors in small villages were included and in the bigger towns they were included on the basis of their geographical location. All health centres in the area were included. Finally the data was collated in a report for analysis. The active ingredients in the pesticide formulations and their concentration were identified. The researchers went on to research the chemical family, the hazard class under World Health Organisation's classification and relevant regulations to strengthen their case. Their report was forwarded to the DNA who filled out Part A of the form and submitted it to the Secretariat. Currently the proposal is with the CRC where the DGD is being developed to be discussed in the COP meeting in 2013.

Findings: 650 farmers were surveyed and 296 poisoning cases from pesticide application were recorded. Pesticide formulations containing Paraquat (Gramoxone Super, Calloxone, Gramoquat super, Benaxone) were found to cause 59 incidents. From 42 health care centres 922 poisoning cases were recorded but only in 22 cases was it possible to identify the pesticide formulation implicated and the circumstances of the exposure, out of which 2 were related to Gramoxone Super. It was also found that farmers did not follow good agricultural practice vis-à-vis personal protective equipment (PPE); only 0.31% of those interviewed wore the recommended PPE whilst spraying. Important contributing factors identified were: 60.5% of the population interviewed had had no education at all and poor literacy meant they were unable to read the labels; and the inappropriateness of the PPE to hot climate. Only 37% of the distributors interviewed had warehouses to store the pesticides and of them only 30% had trained warehouse keepers. In some rural towns it was found that the

retailers stored the pesticides in their sleeping rooms. The study also discovered that none of the farmers received any healthcare related to the pesticide exposure. The healthcare officials had no information on pesticides and any healthcare the farmers wanted had to be borne at their own costs. Paraquat has no specific antidote and the lack of training for the healthcare officials led to inappropriate treatment of the intoxication. The most crucial backdrop to their case was the fact that Paraquat was banned by the Sahelian Pesticide Committee, its decision being taken in 2006 and hence should not have been in use at all whilst this study was carried out in 2010.

The proposal: The detailed study went into preparing a well drafted proposal with annexes covering all required fields of information for each of the 53 cases documented for Gramoxone Super intoxication. The incident reports for each recorded incident included details such as:

- Date
- Location
- Sex
- Age
- The activity being pursued whilst exposure
- Attitude post intoxication
- Use of PPE

Recommendations for a SHPF awareness raising campaign

The preceding sections should have thrown light on the objectives and the process of proposing a severely hazardous pesticide formulation under the PIC process. The following section aims to provide useful checklists for planning your campaign and conducting your research. These checklists are in no way meant to be exhaustive but by ensuring that all those areas are covered you would have covered all the necessary bases to execute a strong campaign and produce a well researched proposal for a severely hazardous pesticide formulation. At this point, it is good to note that the following lists are only to provide guidance to the interviewers in drafting their questionnaires. Eventually the questionnaire should be determined by the target audience and the context of the problem and be very specific and targeted as opposed to covering all the suggested points. Collecting more information than necessary could lead to a larger task than necessary to sift out the useful.

It is also important to note that it is necessary to provide documented evidence in a number of cases to submit a proposal and while the Burkina Faso case is a good inspiration on how it is done it is also recognised that the Burkina Faso campaign was supported by the Secretariat. Hence they had access to various resources to carry out their work on a large scale in terms of numbers of people interviewed etc and it is not expected for every proposal to have that level of detail or such large samples.

Important activities for your campaign:

- Reviewing and understanding Article 6 and Part 1 of Annex IV for all involved in the campaign.

- Researching any past relevant studies conducted in your country or globally on the specific pesticide you are looking into (this can provide a good basis for making decisions on geographical areas to focus the campaign or the right time in the year for the research).
- Identify your geographical area and the time period you want to conduct your campaign (a good period could be during the months of highest frequency of treatment).
- Whilst conducting this study to gather information on pesticide related incidents to prepare a proposal for inclusion to the PIC procedure one could use that opportunity of engagement to raise awareness about the issues (importance of PPE, importance of safe handling techniques, documentation and reporting of incidents of detrimental impact on health and environment).
- Contact the SHPF programme if you would like to raise funds to support your endeavour – you could seek financial and technical assistance (training for your staff, feedback on your questionnaires and proposal).
- Conduct a training on the objective of the campaign, research methods (interview techniques, a uniform documentation method) and community engagement for your field workers, interviewers and any members of the local community who would be involved (translators, local contacts) in the campaign.
- Identify different stakeholders in the region – farmers (both groups using pesticides or following organic ways of production), health services, pesticide retailers and relevant local authorities.
- Plan a data collection strategy (could be through individual interviews or community workshops and facilitated sessions): draft questionnaires, conduct a brief pilot to verify the clarity and communicability of your strategy and incorporate feedback.
- Plan a data capturing strategy – uniformity in systems used by different interviewers is important when information is transferred for analysis. For e.g. deciding what format the information is going to be collated guides the interviewer to keep that in mind when capturing responses from the various interviewees.
- Brainstorm on known limitations for alternatives and be aware of possible unavoidable deviations in the plan to accommodate things needing urgent attention.
- Conducting the research/ awareness raising campaign.
- Compile results and draft proposal – using Part B of the form or using it as guidance whilst using any other preferred format or form. But do ensure that you cover all the areas of information required in Annex IV. You can use information from any source to support your case – so other similar studies, academic articles in journals etc.
- Take the results back to the communities – conduct meetings/ workshops to share the findings.
- Share the results with relevant agencies – local authorities, environmental protection authority (if any).
- **Send your findings and proposal to your DNA for endorsement. Ideally try to engage and work with the government from the beginning as the DNA's endorsement is essential to submit the proposal before the Parties of the RC. You might need to lobby for the DNA to**

endorse the proposal and forward it to the Secretariat. For this you can mobilise support from the communities you conducted the campaign with and hence taking the findings back and raising awareness about the problem could be very important steps.

- Inspire the DNA to endorse the proposal by filling Part A of the form and forwarding to the RC Secretariat.
- If your campaign recommends banning or severely restricting the use of a pesticide you can carry on your campaigning, sharing your findings and mobilising support towards the recommended action within your country whilst the PIC process pans out.

Limitations from past experiences to be aware of:

- Choosing periods where the maximum amount of treatment is being carried on can also mean a time period where farmers are very busy and may not be inclined to get involved. You need to plan your meetings around their schedules – so it might mean late evenings or early mornings. You might also need to inspire interest in the subject – could use creative means, e.g. community theatre, to engage interest in the issue.
- People may not be very keen to talk about pesticides. This could be due to many factors, e.g. they are aware that they are not following good practice, they may be buying their pesticides from the black market and are aware of implications of illegal trading or could just be uncomfortable talking about the issue. The pesticide companies may have a strong presence in the community and may inspire a sense of fear. Be prepared with ice breaking activities or ways to inspire trust for people to engage about their dealings with pesticides. Local contacts could prove very beneficial to this end.

Guidelines for preparing questionnaires:

There are three main groups of stakeholders that you need to approach – farmers, health officials and pesticide retailers/ distributors. You could also contact local authorities to seek information on whether any complaints have been registered pertaining to pesticides and what actions, if any, have been taken as a response.

Whilst preparing questionnaires for the three main groups some areas of information that you are seeking might overlap but there are some distinct questions for each group. The following lists of areas reflects the main topics in which information is needed from people in each group but feel free to prepare more exhaustive questionnaires seeking more information. You can also refer to the questionnaires used in the Campaign in Burkina Faso (please see annexes). For guidance you can also refer to the RC Incident report form for submitting a proposal for PIC with incidents impacting human health or environmental health. Certain points would need to be left out or tweaked accordingly depending on whether the incident being reported is an impact on human health or environmental health. This checklist covers areas for both scenarios. It is very important that all data collected is dated i.e. date of the interview, date of the incident etc. Where possible do take relevant photographs for your proposal, e.g. of PPE, the labels of the pesticides in use and the like.

Information sought from farmers:

- Demographics of farmer – age, sex, literacy level
- What formulations are they using? When and how often? On which crops?
- Where do they get the pesticides from? Are they given any advice on PPE or suggested ways of application from the source?

- How are they doing the treatment – equipment, PPE, in original containers or requiring transferring to a different container or dissolving? Was the product used as purchased? Was it used immediately after purchasing? If stored then for how long and where was it stored?
- When procured do the pesticides have labels? What language are the labels in? Can they read and understand the information? Does the label give advice on safety precautions and PPE?
- Are they aware of any associated risks of using those pesticides?
- Have they experienced or witnessed incidents of exposure – human or environmental? What kind of incidents? How did the exposure occur? What were the visible symptoms? Was there any impact recorded on local biodiversity or health of pets/ farm animals? Record description of environment (soil, air, water etc) affected with size of area or number of known species affected? What action was taken? Were any steps taken to clean up the area after exposure or seek help to manage problem? If yes, from whom and what was the reaction?
- Have they had any medical or local authority follow up post the incident/s?
- What do they do with the empty pesticide containers? Are they advised on any appropriate action towards them? What do they do with leftover pesticides?
- Do they use any PPE? What kind? What do they feel about PPE?
- How many treatments do they carry out in a year? How much pesticide do they use in that period? During the treatment how much pesticide would they be dealing with in a day?
- Have they received any training on handling pesticides? If yes, from whom? What was the content of the training? Was it useful?
- Where is the nearest water source? What is its distance from the area of treatment?
- What do they feel about pesticide use? Are they aware of any relations between the use of pesticides and health/ environmental health?

Information sought from pesticide dealers:

- Do they have records of what pesticides they store, their active ingredients, suppliers, country of origin, date of expiration and quantities sold in a year?
- Do they have warehouses to keep the pesticides? Are they and their staff trained on handling pesticides? Do they keep records on toxicity, safe usage, recommended manner of disposal for each formulation they stock?
- Do they get any unused pesticides returned from the farmers? What do they do with them?
- What do they do with empty packaging? What do they do with pesticides that have gone over their use – by date?
- Do they provide information on proper handling, ways of disposal? Are there any trainings available for farmers on such issues? Are there fees involved in those trainings?
- Do they sell PPE? Do they give advice on recommended PPE for each product?

- Are they aware of the risks involved in handling pesticides? Do they get any feedback from farmers? Have they heard of incidents related to health or environmental impacts due to pesticide exposure?
- What other sources for pesticides and relevant information are there for farmers?

Information sought from health officials:

- Are they aware of what pesticides are used in the area? Are they aware of impacts on human health if people are exposed to those pesticides? Environmental impacts like water contamination/ soil contamination?
- Have they received any training on dealing with exposure to pesticides? Details of the training?
- Have they heard of the specific pesticide you are investigating? Are they aware of any exposure cases in relation to that product? If yes, then how many cases in a year? Are they aware of the problem through other channels (in the community/ hearsay)?
- Can they provide descriptions of the reported cases? What are the documented symptoms? What treatment is offered? Have any cases needed to be hospitalised?

Preparing the proposal:

- Collate data and decide on whether you want to use your own format for reporting to the DNA or want to use Part B of the form.
- If the incident is a result of exposure to more than one formulation then the section on Product identity needs to be done separately for each formulation.
- Research any other relevant studies to identify other documented experiences of exposure to the relevant chemical and/ or reaction.
- Research the formulations' status vis-a-vis registrations or permissible or restricted uses in other parts of the world.
- Provide as detailed a report as possible, using the space of annexes to provide any extra information that you deem relevant. Attach a copy of the label if possible.

Useful links

For more information about the Rotterdam Convention, see:

www.pic.int

For information regarding toxicity of formulation

http://www.who.int/ipcs/publications/pesticides_hazard/en/

Ask the manufacturer for a Manufacturers Safety Data Sheet

www.pesticideinfo.org

Annex 1: Questionnaire used in Burkina Faso study for Pesticide retailers/ distributors

QUESTIONNAIRE		
<i>“Study on Agro-chemical Poisoning in Agriculture (Burkina Faso Pilot Study)”</i>		
Form aimed at pesticide distributors/retailers		
Date: /__/__/ - /__/__/ - 2010	Sheet n° /__/__/	Location code: /__/__/
	Investigator code /__/__/	Department:
1. RESPONDENT IDENTITY		
Occupation:	Structure name:	
2. PRODUCT IDENTITY		
See Form in Annex		
3. PESTICIDE MANAGEMENT		
3.1. Do you have unused pesticides that have been returned by farmers in your building? Yes /__/ no /__/		
3.1.1. If yes, what do you do with them?.....		
3.2. Do you know of any other sources of pesticide supply for farmers? Yes /__/ no /__/		
3.2.1. If yes, which ones?		
3.3. Do you have a pesticide warehouse? Yes /__/ No /__/		
If yes: 3.3.1. Is the storage facility appropriate? Yes /__/ No /__/		
3.3.2. What type of storage is it? Segregated /__/ Unsegregated/__/		
3.3.3. Do you have a trained warehouse person?: Yes /__/ No /__/		
3.3.4. Is there a storage data sheet? Yes /__/ No /__/		
3.4. Is there a safety data sheet: Yes /__/ No /__/		
3.5. How are pesticide stocks managed? packaging/__/ repackaging/__/		
3.6. Is there a First-Aid-Kit? Yes /__/ no /__/		
3.6.1. If yes, what does it contain?		
3.7. What do you do with empty pesticide packagings?		
4. PREVENTION AND PROTECTION MEASURES		
4.1. Do you know about any potential risks related to the use of pesticides (or the exposure to pesticides)? Yes /__/ no /__/		
4.1.1. If yes, which ones?.....		
4.2. Do you provide your customers with information on:		
4.2.1. The risks associated with the use of pesticides? Yes /__/ no /__/		
4.2.2. Proper pesticide handling techniques? Yes /__/ no /__/		
4.3. Are there any training sessions on the use of pesticides aimed at farmers? Yes /__/ no /__/		
4.3.1. If yes, with which frequency (number of times per year)?		
4.3.2. Are the training sessions free? Yes /__/ no /__/		
4.4. Is there any personal protective equipment made available to customers? Yes /__/ no /__/		
4.4.1. If yes, which ones? Gloves /__/ boots /__/ aprons /__/ overalls /__/ glasses /__/ Cartridge masks /__/ dust masks /__/ other /__/		
4.5. Do you think that these products have adverse effects on health? Yes /__/ No /__/		
4.5.1. If yes, why?		
4.5.2. If not, why?		

4.6. Do you think that these products pose a threat to the environment? Yes /__/ No /__/

4.6.1. If yes, why?

4.6.2. If not, why?

5. SUGGESTIONS AND RECOMMENDATIONS

5.1. Please provide your suggestions/recommendations regarding the use of pesticides in general

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Thank you for your attention!!!

Questionnaire aimed at pesticide distributors/retailers (Separate part)

Sheet n° /__/_/_/

Formulation	Type of formulation*	Name and concentration of active ingredients	Suppliers	Country of origin	Date of expiry	Amount sold	
						2009/2010	2008/2009
1.		----- ----- -----				2009/2010	2008/2009
						-----	-----
		----- ----- -----				2007/2008	2006/2007
						-----	-----
2.		----- ----- -----				2009/2010	2008/2009
						-----	-----
		----- ----- -----				2007/2008	2006/2007
						-----	-----
3.		----- ----- -----				2009/2010	2008/2009
						-----	-----
		----- ----- -----				2007/2008	2006/2007
						-----	-----
4.		----- ----- -----				2009/2010	2008/2009
						-----	-----
		----- ----- -----				2007/2008	2006/2007
						-----	-----
5.		----- ----- -----				2009/2010	2008/2009
						-----	-----
		----- ----- -----				2007/2008	2006/2007
						-----	-----

*EC, WP, DP, SP, ULV, TA, GR ...